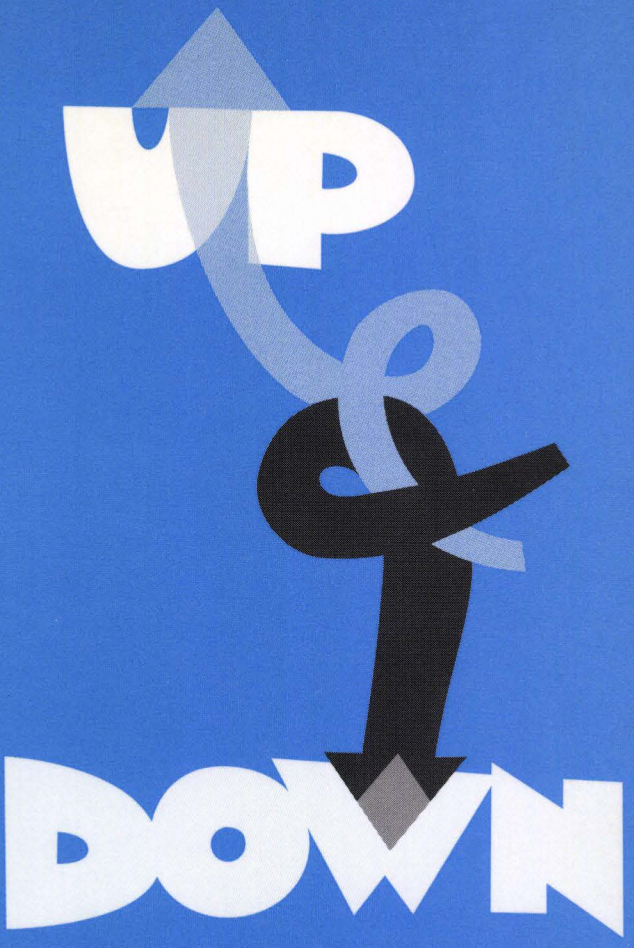

Affective responses to social comparison

Jan Fekke Ybema

UP & DOWN

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Stellingen

Behorende bij het proefschrift van Jan Fekke Ybema:
UP & DOWN: Affective responses to social comparison

1 Voor mensen die stress ervaren, is neerwaartse vergelijking alleen geruststellend wanneer zij verschillen op de vergelijkingsdimensie als min of meer onveranderlijk beschouwen. Veel vaker toont neerwaartse vergelijking hen echter een schrikbeeld van hun eigen toekomstige functioneren.

2 De wijdverbreide aanname dat opwaartse vergelijking leidt tot negatief affect gaat niet op voor mensen onder stress die hun positie op de vergelijkingsdimensie als beheersbaar beschouwen. Zij ontlenen veelal positief affect aan opwaartse vergelijking doordat zij optimistischer worden over hun eigen toekomst.

3 De empirische steun voor de gedachte dat neerwaartse vergelijking prettiger is dan opwaartse vergelijking is voor een belangrijk deel terug te voeren op twee tekortkomingen in de aangeboden vergelijkingsinformatie. Ten eerste wordt doorgaans expliciet de eigen relatieve positie beschreven waardoor het contrasteren met de ander wordt bevorderd. Ten tweede is de beschrijving van de vergelijkingspersoon vaak onvoldoende levensecht, waardoor identificatie met de ander wordt belemmerd.

4 Aangezien het invullen van een checklist een minder grote cognitieve belasting is dan het invullen van rating-schalen, is een checklist een meer geschikte maat voor affect dan de — veel vaker gebruikte — rating-schalen.

5 Experimenteel veldonderzoek is doorgaans superieur aan laboratorium-experimenteel onderzoek, aangezien het verlies aan controle over storende variabelen ruimschoots wordt gecompenseerd door de winst in levensechtheid van de bestudeerde processen.

6 Goethals, Messick en Allison (1991) meten de *uniqueness bias* door het verschil te nemen tussen het percentage mensen dat aangeeft zelf een sociaal wenselijke actie te ondernemen en de gemiddelde *schatting* van het percentage mensen in de populatie dat deze actie onderneemt. Dit levert geen informatie op over de mate waarin mensen hun eigen goede eigenschappen als uniek beschouwen.

7 Het schrijven van wetenschappelijke artikelen is als schaatsen op natuurijs: Je kunt vertrouwen op betrouwbare stukken, maar je moet zwakke plekken mijden.

8 Voor mensen met weinig tijd leest een bundel met verhalen vaak prettiger dan een roman. Het is daarom verstandiger een proefschrift als een bundel losse artikelen te presenteren dan als één verhandeling.

9 De werktijd die onderzoekers besteden aan informele contacten met collega's draagt in positieve zin bij aan de kwaliteit van hun wetenschappelijke arbeid.

10 Naarmate het lidmaatschap van een groep belonender is, is het onaangenamer om als buitenstaander met die groep te worden geconfronteerd.

11 Veel beginnende zeilers die weet hebben van hun eigen beperkte vaardigheden proberen een illusie van controle te behouden door volstrekte orde aan boord te verlangen.

Goethals, G.R., Messick, D.M., & Allison, S.T. (1991). The uniqueness bias: Studies of constructive social comparison. In J.M. Suls & T.A. Wills (Eds.), *Social Comparison: Contemporary Theory and Research* (pp. 317-345). Hillsdale, NJ: Lawrence Erlbaum Associates.

Rijksuniversiteit Groningen

UP & DOWN

Affective responses to social comparison

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door

Jan Fekke IJbema
geboren op 11 juni 1966
te 's-Gravenhage

Promotor

Prof. dr. A.P. Buunk

Voorwoord

Dit proefschrift is tot stand gekomen na vier jaar van intensieve samenwerking met verscheidene mensen. Ik ben hen allen veel dank verschuldigd. Zonder hen was het schrijven van een proefschrift een onmogelijke opgave geweest. Met hen was het slechts bij uitzondering een zware taak. Gezamenlijk hebben zij mij in staat gesteld om binnen de daarvoor gestelde termijn en op een prettige wijze dit proefschrift te produceren.

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Jan Fekke Ybema

Contents

Chapter 1

Introduction

Mark, a senior college student, is somewhat dissatisfied with his academic performances. He is an average student, who passes most exams, but not with high grades. The papers he turns in are not quite good. Although he really would like to do better, he has a hard time to motivate himself to study more. His professors do not particularly stimulate him either. One of his peers, Peter, is a very bright student. Peter studies for long hours, and passes all exams with high marks. He has very good ideas, and his papers are outstanding. He is even doing some extra research with his professor, and he is regarded an outstanding student. Another of their fellow students, John, is the opposite of Peter in all respects. John does not seem to study at all, he fails most exams, and thinks of quitting college.

How would you respond to Peter if you were Mark? You may feel bad, and be envious of his success. You may feel that your own work is inferior. You may derogate his social life, and think of him as an antisocial being. You may emphasize that you are a better sportsman, and regard basketball as much more important to you than academics. However, you may also feel good, and get inspired by his energy and accomplishments. You may try to benefit from his knowledge, and observe his behavior in order to improve your own work.

And what would you think about John? You may feel good, and be satisfied with your own performance. Indeed, he shows that your own work is superior. You may derogate his academic performances, and think of him as a ridiculous fool. However, you may also pity him. You may see that your own performance is only slightly better. You may fear that your own future is similar to his present work, and you may get depressed from his lack of energy and miserable position.

When Mark compares his own academic performances with those of Peter or John, this is called *social comparison*. Social comparison theory deals with a large range of issues, for example, whether Mark would prefer information about Peter or about John, whether he would avoid or seek contact with them, how he evaluates his position against those of Peter and John, how he is biased in his perception of himself and the others, and how he reacts when he meets Peter or John. The present dissertation focuses on the *affective responses* to upward and downward social comparison information. In other words, the central question in this research is how Mark feels when he is confronted with information about Peter, a so-called upward comparison target, or about John, a downward comparison target. The literature on the

affective responses to social comparison is reviewed in this introductory chapter, but first some general social comparison issues are considered. These issues include: why people compare with others, with whom they compare, and how social comparison activity is measured. In addition, the role of self-improvement in the choices for comparison others is examined.

Social Comparison: A Brief Review of the Literature

Motives for Social Comparison

Why do people compare with others, and with whom do they compare? The first motive for social comparison is *self-evaluation*. Festinger (1954) stated in the original formulation of social comparison theory that people have a drive to accurately evaluate their abilities and opinions. When more objective, non-social standards for evaluation are absent, people try to obtain social comparison information to assess the value of their abilities and opinions. Schachter (1959) extended social comparison theory to the domain of emotions. When people are uncertain about the appropriateness of their emotions, they tend to reduce this uncertainty by socially comparing and adjusting their emotional reactions to those of others (Gerard, 1963; Schachter & Singer, 1962). Both Festinger (1954) and Schachter (1959) maintained that people prefer social comparison with similar others, because this would provide them with the most accurate social standards for evaluating their performances, emotions or attitudes.

The second major motive for social comparison is *self-enhancement* (Hakmiller, 1966; Thornton & Arrowood, 1966). Especially when people experience some type of threat, they may selectively evaluate their attributes in order to regulate their emotions and feel better about themselves. There is some evidence that especially people who are dissatisfied with their performance compare upward as to confirm that they are close in ability to a superior comparison target (Thornton & Arrowood, 1966; Wheeler, 1966). However, a more frequent finding is that people under threat try to uplift their spirits by comparing themselves with others whose position is worse (e.g., Hakmiller, 1966; Wills, 1981). Indeed, such a downward comparison may make a person feel better about his or her own situation. Wills assumed in his *downward comparison* theory that both temporary and chronic decreases in well-being would elicit downward comparison. Thus, especially individuals chronically low in self-esteem who experience temporarily negative affect as a result of a misfortune or disappointment would use downward comparison to enhance their subjective well-being. Wills (1981) distinguished several forms of downward comparison. Most notably, downward comparison could be a passive process in which one evaluates oneself against, or seeks contact with available worse-off others. It could also be an active process in which one creates

opportunities for downward comparison by derogation or causing harm to a person.

More recently, *self-improvement* has been recognized as a third motive for social comparison (Berger, 1977; Wood, 1989). In skill acquisition, people may compare upward in order to learn from superior others what constitutes appropriate behavior, and what defines standards of competent performance (Butler, 1992; Ruble & Frey, 1991). Comparing upward to improve oneself can be considered as problem-focused coping (Lazarus & Folkman, 1984). Indeed, especially when people are under stress, they will be motivated to obtain information from superior models to improve the controllable aspects of their own position (Taylor & Lobel, 1989). Taylor and Lobel suggested that people under stress would prefer to evaluate themselves against less fortunate others (*downward evaluation*), but to seek contact with, and information about, more fortunate others (*upward contacts*). Superior others may serve as a role model and create opportunities to improve one's coping strategies (Bandura, 1982). In addition, upward contacts may be inspiring, motivating and encouraging (Taylor & Lobel, 1989). The value of upward comparison for self-improvement is widely recognized, even by researchers who emphasize that people are primarily motivated to seek the pleasant and avoid the painful information in social comparison (Brickman & Bulman, 1977), and by those who favor downward comparison theory (Wills, 1991).

Measuring Social Comparison

In the preceding section, evaluating oneself against other people, seeking contact with them, and obtaining information about them were all considered as manifestations of social comparison. As social comparison is essentially a cognitive process that cannot be directly observed, a large number of different measures for social comparison have been constructed. These measures do not always converge in predictions and findings (*cf.* Taylor & Lobel, 1989), which implies that measurement of social comparison processes is an important issue. Measures for social comparison can be divided into four broad categories (Wood, 1989). In the first place, social comparison can be measured by asking *direct questions*. Subjects can directly be asked how often they compare with others, with whom they compare, and what consequences these social comparisons have. Such introspective and retrospective measures have been used frequently in social comparison research (e.g., Buunk, Collins, Taylor, VanYperen & Dakof, 1990; Wheeler & Myake, 1992), and can provide some insight in social comparison processes. However, this approach has several weaknesses, including frequent irritation about these questions among subjects, and socially desirable answers. Indeed, people often feel uncomfortable about social comparison (Brickman & Bulman, 1977; Wills, 1981). Comparing oneself to others seems to be regarded as an activity that is not fully appropriate or desirable. Moreover, social comparison activity will not always be fully conscious, and retrieval of previous social comparisons may be blurred

and biased.

A second way of measuring social comparison is to register *spontaneous social comparisons* in unstructured interviews (*cf.* Wood, Taylor & Lichtman, 1985). Especially in stressful situations, people may frequently refer to the status of others. The amount, direction, and setting of such spontaneous comparisons may indicate the importance and function of social comparison in that situation. Assessing spontaneous expressions of social comparison is a much less reactive way of measuring social comparison activity than asking direct questions. However, it may be problematic to standardize the procedures in the interviews such that social comparisons are truly spontaneous. Moreover, it will be highly strenuous to categorize the interviewees' responses in a meaningful and reliable fashion.

A third way of measuring social comparison, is to assess *comparative ratings* of oneself relative to a prototype (e.g., the typical or average college student) or relative to a target that is presented to the subjects (Alicke, 1985; Crocker, Thompson, McGraw & Ingerman, 1987; Devellis et al., 1990, 1991; Gibbons, Gerrard, Lando & McGovern, 1991; Wood & Taylor, 1991). Especially when positions on the comparison dimension cannot be directly observed, people tend to rate themselves as superior to a target or a prototype. The extent to which this happens is taken as a measure for downward comparison. In a similar paradigm, the affective reactions to social comparison targets can be assessed (Aspinwall & Taylor, 1993; Gibbons, 1986; Gibbons & Gerrard, 1989). The central question in research on the affective responses to social comparison involves whether people respond more positively to superior or to inferior targets. This issue will be considered in more detail later. A problem with assessing comparative ratings is that the researcher usually decides who the comparison target is. This restricts the subjects in comparing freely upward or downward.

A fourth approach concerns the *selection of a target* to obtain information from or to interact with. The preference for a certain target in information seeking and affiliation is considered as an indication of social comparison with that comparison target. Most social comparison research has focused on such preferences for information and affiliation.

Information seeking in response to feedback on a task has primarily been studied within the *rank-order paradigm* (Gruder, 1977; Wheeler et al., 1969) in which subjects can obtain information about where they stand on a certain dimension. Typically, subjects may choose to see the score of a fellow subject by indicating his or her position in the rank-order of the group on a certain attribute. The most common pattern of choices is that subjects first try to determine the meaning of the attribute in question by choosing the highest or lowest in rank. When the range of scores is known, often someone close in ability is chosen (Arrowood & Friend, 1969; Gruder, 1977; Wheeler et al., 1969). Although most choices in the rank-order paradigm have been found to be

upward, there is some evidence that in threatening conditions subjects choose the best off other less often and make downward choices more often than in nonthreatening conditions (Friend & Gilbert, 1973; Hakmiller, 1966; Smith & Insko, 1987). For example, Hakmiller's (1966) subjects were told that, based on a previous test, they probably ranked fifth in a group of six subjects on a highly negative (high threat) or a slightly negative (low threat) trait. Next, a second test – a more precise measure of the quality – was taken, on which each subject received a higher (less desirable) score than they probably expected. In the high-threat condition, more subjects chose to see the score of the person who would probably – on the basis of the previous test – have the highest (least desirable) score than in the low-threat condition. This was viewed as evidence for defensive, downward comparison in threatening situations. In line with these studies in the rank-order paradigm, Buunk, Schaufeli and Ybema (1994) recently found that nurses preferred information about colleagues who were more competent and more experienced than they were themselves. However, these upward tendencies were reduced among nurses high in burnout.

In addition to information seeking, *affiliation* with others has often been studied as an operational definition of the need for social comparison (Wheeler, 1974). The *fear-affiliation paradigm* (Schachter, 1959) has been applied in numerous studies to examine the effects of fear, uncertainty, ambiguity, and embarrassment on the desire to affiliate with similar others (e.g., Darley & Aronson, 1966; Gerard & Rabbie, 1961; Sarnoff & Zimbardo, 1961; Teichman, 1973, 1987; Zimbardo & Formica, 1963). A few of these studies have examined the direction of affiliation by asking subjects if they preferred contact with others who were more, equally, or less fearful. Research on this issue has shown that affiliation with others who react in a similar way is preferred to affiliation with dissimilar others, and that the most anxious others are avoided (Gerard, 1963; Rabbie, 1963). A second paradigm in which affiliation as an operationalization of social comparison has been examined, concerns *partner preferences* in task situations. In this paradigm, the direction of affiliation is usually examined. Miller and Suls (1977), for example, reported on a series of experiments in which they found that in competitive situations there was a strong preference for opponents of similar ability. In cooperative situations, their subjects preferred partners of superior ability when they would interact in a large group, whereas they preferred partners of similar ability when they would interact in a dyad. It must be noted, however, that Wheeler et al. (1969) argued that assessing partner preferences is not an adequate way to study social comparison because too many different processes, such as the expectation of a rewarding interaction and the wish to see what a person with a certain score is like, might work together in determining the eventual choice of a partner.

To what extent are information seeking and affiliation equivalent indicators of social comparison preferences, and in what ways do they differ? These indicators of

social comparison may be similar in most respects and equally responsive to the need to evaluate, improve or enhance oneself (*cf.* Taylor & Lobel, 1989). Like information seeking, people under stress may affiliate primarily upward, and especially so when they believe they can improve their standing. Nevertheless, affiliation and information seeking may not be upward in the same *degree*. For example, Wilson and Benner (1971) found that the highest ranking person was more often chosen in a private situation, in which information about a target was obtained by observation, than in a public situation, in which the subject interacted with and competed against the target. Similarly, Smith and Insko (1987) found that in a private situation, in which the other's score and test material were obtained, subjects more often preferred information about the highest ranking other than in a public situation, in which one affiliated and talked about the test with another subject. Especially when interaction with others is anticipated, people may shun high scoring persons to avoid feelings of shame and loss of esteem (Brickman & Bulman, 1977; Cialdini & Richardson, 1980). Therefore, choices for affiliation would be less upward than choices for information seeking (Buunk, in press; Buunk & Schaufeli, 1993).

Self-Improvement and Social Comparison Preferences

A limitation of many current measures of social comparison is that they are rather unsuitable for examining the motive of self-improvement, which is particularly salient in stressful situations. Especially studies in the rank-order paradigm are rather limited with respect to the information that subjects can obtain. In these studies, merely information about where subjects stand on a certain dimension is offered. However, social comparison in real life often has a much higher informational value (Samuel, 1973). In many cases, individuals do compare themselves with others, not particularly to find out how good or bad they are, but to find out why and how the other person did better. This notion of self-evaluation is slightly different from the way social comparison is usually understood. One could argue that finding out the way in which another person has performed, does not constitute social comparison in the real sense. However, evaluating oneself in this way can be regarded as a necessary first step in learning from the comparison target how to improve one's own position. Individuals cannot improve themselves by just seeing another person's score on a test. In line with Taylor and Lobel (1989), it may be expected that subjects under stress will have strongly upward comparison preferences when they have the opportunity to examine information that is valuable for improvement.

A study by Butler (1992) is a positive exception to the general rule that possibilities for self-improvement are highly restricted in research on the preferences for social comparison under stress. Butler (1992) studied comparison preferences among children in whom either a mastery (self-improvement) goal, or an ability (self-

evaluation or self-enhancement) goal was induced. As predicted, she found that the former subjects spent more time assessing information that was relevant for learning about the task, whereas the latter were more interested in information that demonstrated they had performed well. A second exception is a study by Ybema and Buunk (1993a) which examined target selection for information and affiliation after the motive of self-improvement was made salient by using a new experimental paradigm.

The subjects in this study were 121 college students who took a bogus test that presumably assessed leadership ability. After the test was completed, the subjects received success, average, or failure feedback. Next, the subjects were told they could examine the completed test of another subject which would contain beliefs and arguments for the choices made. Such information may be useful for improving oneself. In addition, the subjects selected a target to affiliate with for evaluating the test. The subjects made their choices by indicating what score the target should approximately have. These preferences were first asked in a *restricted range* of scores, in which possible choices for information seeking and affiliation were limited to a subset around the subject's own score. This can be viewed as a *local* process of social comparison with comparable others. Secondly, these preferences were assessed in the *free range* of scores, in which subjects could choose from all possible scores. Here, a more *general* process of comparing one's own performance with those of all others in the population was stimulated (*cf.* Miller, Turnbull & McFarland, 1988). Following the reasoning of Taylor and Lobel (1989), the desire to improve oneself would be stronger as subjects experienced more stress. It was therefore predicted that information seeking and affiliation would be more upward among subjects who failed than among subjects who succeeded. Secondly, it was predicted that information seeking would be more upward than affiliation.

The results of this study were in line with the predictions. In the restricted range, subjects selected targets for both information and affiliation more upward after failure than after success. In the free range of scores, it was found that subjects – regardless of their own score – sought information at the top: about targets who excelled on the comparison dimension. Subjects preferred to affiliate with targets who performed equally well or better than themselves. These preferences for affiliation were less upward than those for information.

From this study it can be concluded that – when possibilities for self-improvement are not artificially restricted – social comparison preferences are strongly upward, and even more so after failure than after success. Individuals experiencing failure are apparently more motivated to obtain valuable information for evaluating or improving themselves than subjects experiencing success. This conclusion is in line with the Taylor and Lobel (1989) model which suggests that persons are inclined to seek out information and contacts in upward direction when threatened. The results of the

Ybema and Buunk (1993a) study were, however, in sharp contrast to Wills's (1981) theory about the preference for downward comparison in threatening situations. The results do not even support the weaker version of Wills's theory which maintains that in such situations social comparison with others who are as bad off as oneself is preferred.

Although Ybema and Buunk (1993a) found interesting results regarding the *preferences* for social comparison after failure and success, they did not investigate the *consequences* of these choices for subjective well-being. Until recently, virtually no research had been done on the affective responses to social comparison. An exception was an early study by Morse and Gergen (1970). They found that self-esteem was lowered when job-applicants were confronted with a competitor for the job who appeared highly capable and tidy (Mr. Clean), whereas self-esteem was increased when confronted with a competitor who appeared insecure and dishevelled (Mr. Dirty). This finding suggests that individuals who select upward targets to obtain information about, and to affiliate with, do so despite the (supposedly) inevitable negative affective responses to such upward comparison. Their upward preferences would solely be based on the informational value of upward comparison, i.e., for self-improvement and self-evaluation (Wills, 1991). However, more in line with Ybema and Buunk (1993a), recent studies have found that upward comparison can be inspiring (Helgeson & Taylor, 1993), and may encourage the perspective of a better future for oneself (Buunk et al., 1990). As noted before, especially for people under stress, upward comparison with a positive model may on the one hand induce feelings of inferiority, but on the other hand promote inspiration and motivation (*cf.* Bandura, 1982; Taylor & Lobel, 1989).

Concordant and Discordant Responses to Social Comparison

The various affective responses to social comparison may be better understood by distinguishing between responses that are concordant and responses that are discordant to those of the target (Heider, 1958). *Concordant* responses refer to positive mood following another's success (upward comparison), and to negative mood following another's failure (downward comparison). A number of related cognitive processes are supposed to foster concordant reactions. In the first place, *empathy* leads to concordant emotions between a person and a target (Brickman & Bulman, 1977; Heider, 1958). In empathy, a person reacts to the target with sympathy and compassion. A target's success is rejoiced, and his or her failure is pitied. The person's own position relative to the target is not considered, people solely focus on the target's lot. A slightly different notion is *identity of feelings*. A person's own feelings may be identical in kind to those of the target as a result of emotional contagion or from imagining oneself — somewhat indulgingly — in the other person's situation (Heider, 1958). Joining a merry

party may result in joy, and the presence of a depressed person may make one feel bad (*cf.* Schachter & Singer, 1962). Another concordant reaction results when a target's performance sets *expectations* and aspirations for oneself. The target may represent a possible future self (Markus & Nurius, 1986). People may believe that they share the target's ability level (*cf.* Wheeler, 1966), and may view the target's performance as attainable for themselves. Although the target's momentary performances may be better or worse than their own, people may assume similarities on the underlying ability dimension (Mettee & Riskind, 1974; Mettee & Smith, 1977). Upward comparison may foster hope and inspiration when the other's success is regarded attainable for oneself (Buunk et al., 1990; Major et al., 1991), whereas downward comparison may cause anxiety about a worse own future when the target's current failure is perceived as a possible future for oneself (Wills, 1991). Finally, the target's performance may draw *attention* to similar aspects of one's own performance. Upward comparison may be inspiring because subjects see their own performances in a more positive light, whereas downward comparison may focus subjects on their own failures (*cf.* Clark & Isen, 1982).

Discordant responses refer to positive mood following another's failure (downward comparison), and to negative mood following another's success (upward comparison). Feelings may be discordant as a result of *hostility* or aggression (Wills, 1981). The person begrudges or envies the target's success in upward comparison. Similarly, the person may wish the target to fail, and may derive malicious pleasure (Schadenfreude) from downward comparison (Heider, 1958). Feelings may also be discordant as a result of explicit *competition*. In explicit competition, accomplishments are measured by *relative* performances. Being better than the other constitutes success, and the target's success defines one's own failure. Closely related is the concept of *contrast*, or implicit competition (Mettee & Smith, 1977). People evaluate their performances in the light of the performances of significant others. These others set a standard or norm for one's own performance (Seta, 1982). A performance is mediocre in contrast to those of superior others, but may be outstanding at the background of others' worse performances. Finally, especially when people feel threatened, discordant reactions may follow from changes in perceived *deviance* (Gibbons & Gerrard, 1991). Upward comparison may result in perceiving oneself as an inferior exception among incomparable others. In downward comparison, perceived deviance may diminish as a result of companionship in misery (*cf.* Schachter, 1959). Seeing similar and worse off others may provide a solace for people under threat (Gibbons & Boney-McCoy, 1991; Wills, 1991).

Perspectives on the Affective Responses to Social Comparison

There are a number of theoretical perspectives that deal with concordant and discordant

affective responses to social comparison. The first of these is Wills's (1981) downward comparison theory that was described before. This theory only deals with the emotional benefits of *downward comparison*. Basically, Wills assumed that individuals under stress will feel a need to *contrast* their situation with those of worse-off others. Wills's theory has inspired research that further examined the conditions under which downward comparison generates positive affect. Most notably, Gibbons and his colleagues showed in a number of studies (Gibbons, 1986; Gibbons & Boney-McCoy, 1991; Gibbons & Gerrard, 1989) that downward comparison may enhance positive mood when people experience a threat. For example, Gibbons (1986) asked his subjects to write about a recent event that had had a significant impact on them. Next, the subjects read a bogus description of an event that had happened to another subject, in which the target experienced very much negative affect. This downward comparison alleviated the mood of subjects who were depressed, but had no effect on nondepressed subjects. Gibbons and Boney-McCoy (1991) found that only low self-esteem subjects who were threatened by negative feedback on a test, experienced an improvement of affect after downward comparison on a second dimension. Downward comparison did not lead to positive affect for high self-esteem subjects who were threatened, nor for nonthreatened subjects. In a similar vein, Aspinwall and Taylor (1993) recently studied the affective responses to social comparison of academic success among college students in whom a positive or a negative mood was induced. They found that upward comparison generated more positive affect than downward comparison for most subjects. However, in line with Gibbons and Boney-McCoy (1991), downward comparison appeared to increase positive mood among subjects low in self-esteem in whom a negative mood was induced. In addition, Aspinwall and Taylor (1993) found that academic threat influenced the affective responses to social comparison. Typically, among subjects low in self-esteem who recently had experienced an academic setback, downward comparison resulted in more hope, less frustration, and higher expectations of future success than upward comparison.

A second perspective on the affective responses to social comparison is the self-evaluation maintenance model by Tesser and his colleagues (Tesser, 1988; Tesser, Millar & Moore, 1988). In contrast to Wills's theory, Tesser's model primarily deals with the affective responses to *upward comparison*. He argued that the affective responses to social comparison are determined by three factors: relative performance, closeness to the comparison other, and relevance of the comparison dimension. Tesser et al. (1988) found in their studies that especially upward comparison with a close other (i.e., a friend) led to strong affective responses. Upward comparison with a close other on a *relevant* dimension generated a discordant reaction. Subjects experienced negative affect, because their own performance would pale in contrast to their friend's superior performance. Upward comparison with a close other on an *irrelevant*

dimension generated a concordant response. Subjects experienced positive affect, because they could bask in the reflected glory of their friend's success (*cf.* Cialdini & Richardson, 1980). From a similar perspective, Nadler, Jazwinski, Lau and Miller (1980) had their male subjects either be rejected or not be rejected as a working partner by an attractive female (confederate) in favor of a male competitor (upward comparison) who was either similar or dissimilar in attitudes. Consistent with Tesser's model, their subjects experienced more negative affect and a lower self-evaluation when they were rejected than when they were not rejected in favor of a competitor who was similar in attitudes. No such effect was found for rejection in favor of a dissimilar competitor.

The third perspective on the affective responses to social comparison is Major's model. Major et al. (1991) argued that *perceived control* of one's future position on the comparison dimension is an important variable that may moderate the affective responses to social comparison. In their model, they distinguished between changeability and controllability of the relative position on a comparison dimension. When the position on the comparison dimension is regarded as *not changeable* (stable), downward comparison would generate more positive and less negative affect than upward comparison. In such a case, discordant responses may prevail because people regard the position of the better-off other as unattainable, which generates a negative reaction, whereas they are reassured by observing a worse-off other. When, on the other hand, the position on the comparison dimension is *changeable* (variable), perceived control of changes on the dimension would determine the affective responses to social comparison. When the changes are regarded as *controllable*, upward and downward comparison would generate an equal amount of mainly positive affect. People perceiving high control may respond concordantly to an upward target, because they regard the position of the better-off other as attainable for themselves, whereas they may contrast themselves to a downward target, and may be reassured when they find out that their own position is superior. However, when changes are *uncontrollable*, upward and downward comparison would lead to an equal amount of primarily negative affect. People low in control may contrast themselves to an upward target because the target's superior position cannot be attained by efforts, whereas the position of the worse-off other may be regarded as a possible own future.

Major and her colleagues provided some empirical support for their model. Testa and Major (1990) studied the effects of perceived control on depression, hostility, and persistence on a task following social comparison. In an experimental study, subjects received failure feedback on a task. Perceived control was manipulated by telling half the subjects that a second task was strongly related to the first, and improvement of one's performance over tasks would be very improbable (stable position, low control). The other subjects were told that the second task was only

moderately related to the first, and improvement of one's performance over tasks would be possible by exercise (variable position, high control). Next, the performances of five previous subjects were shown. The others had either all performed better or all performed worse than the subject did. As was predicted, only in the low control condition, upward comparison generated more depression and hostility, and less persistence than downward comparison. In the high control condition, upward and downward comparison generated similar persistence, and an equal (small) amount of negative affect.

However, the Testa and Major (1990) study has a number of limitations. First, the manipulation of perceived control in this study involved relatedness of the first task to a second task in the experiment. This manipulation of perceived control seems somewhat limited. Perceived control does not necessarily imply the possibility of immediate improvement within the experiment, but rather the general feeling that one will be capable of exerting a decisive influence on one's future performances. A second limitation of the Testa and Major (1990) study is that only negative affect was measured. Positive and negative affect are two separate, more or less independent dimensions, and not the two ends of one bipolar dimension (Warr, Barter & Brownbridge, 1983; Watson, Clark & Tellegen, 1988). The absence of positive affect not necessarily implies the presence of negative affect, and vice versa. Indeed, people may simultaneously experience negative affect (e.g., feeling inferior), and experience positive affect (e.g., feeling hope) as a result of social comparison, or may experience neither positive nor negative affect (i.e., be indifferent). Therefore, Ybema and Buunk (1993b) conducted two studies that attempted to replicate Testa and Major's findings in a paradigm without these limitations.

In the first of these studies, 80 subjects took a bogus test on leadership ability on which they presumably performed slightly below average. In the feedback, perceived control was manipulated by indicating that they could or could not improve their leadership ability. Next, the subjects were shown the feedback of a target that performed much better (upward), or much worse (downward) than the subject. In the second study, 115 subjects followed the same procedure, but the social comparison information was either strongly upward, slightly upward, slightly downward, or strongly downward. In line with Testa and Major, it was predicted that downward comparison would generate more positive and less negative affect than upward comparison in conditions of low control, but not in conditions of high control.

The results of these two studies were similar. Downward comparison generated more positive and less negative affect than upward comparison, regardless of the manipulation of perceived control. Perceived control yielded an additive main effect: most positive affect was experienced by subjects high in perceived control who compared downward, and most negative affect was experienced by subjects low in

perceived control who compared upward. The distance to the comparison other, which was added in the second study, had no effect on positive or negative affect. Apparently, the target was seen as either worse or better, with no further distinction in slightly versus highly superior or inferior.

A possible explanation of the results is that subjects were given both their own and the comparison target's exact position on the comparison dimension. This probably resulted in a situation that was implicitly competitive, which may have stimulated *contrasting* one's own score with the other's score (Mettee & Smith, 1977). The external validity of presenting subjects with such exact positions on the comparison dimension is somewhat limited. In most real-life situations, no such explicit relative positions are known. People generally have just a vague notion of their own status when they are confronted with the performances or positions of others. As a result, they may either emphasize the similarities between their own and the target's position (identification), or emphasize the differences (contrast) (Mettee & Smith, 1977). Therefore, in the present research a paradigm that enabled both identification and contrast with the target was employed.

The Present Research

The present dissertation examines the affective responses to upward and downward social comparison information in a real-life setting. Subjects are presented with the performance of a realistic target, without explicit reference to their own relative position. In line with Taylor and Lobel (1989), the potential benefits of upward comparison for well-being are focused on. The main thesis in the present dissertation is that *upward comparisons are generally more advantageous than downward comparisons in promoting well-being*. Such concordant responses to social comparison may dominate because upward comparison may foster long-term adjustment, and may even provide immediate encouragement that surpasses the possible solace that is provided by downward comparison. This main thesis is in sharp contrast to Wills's (1981) downward comparison theory. Of course, the predicted advantage of upward comparison over downward comparison is contingent on certain conditions. This dissertation aims at identifying these conditions, and focuses on three factors that may determine the affective responses to upward and downward comparison. These factors are experienced stress, perceived control, and identification with the comparison target.

Experienced Stress

In line with Lazarus and Folkman (1984; Folkman, 1984; Folkman & Lazarus, 1985) stress is considered as a characteristic of the relation between person and environment.

Individuals experience stress when they appraise the demands of a situation as taxing or exceeding their resources. Stress is experienced in response to particular demanding circumstances, and does not refer to just any kind of negative affect. It does not involve, for example, global anxiety or depression (Pearlin & Schooler, 1978). As people experience more stress, they will be more motivated to evaluate and improve their position on the comparison dimension, and to enhance their well-being by social comparison (Taylor & Lobel, 1989; Wills, 1981). As a result, the affective responses to social comparison information will be augmented when stress is experienced. These affective responses may still be either positive or negative. On the one hand, people under stress may be focused on the negative implications of social comparison. As people experience more stress, they may infer that they are more different from upward targets (contrast), and that they are (or will be) more similar to downward targets (identification). Indeed, Buunk et al. (1990) found that uncertainty and dissatisfaction enhanced negative affect from both upward and downward comparison. On the other hand, especially when stress is high, people may be motivated to emphasize both similarities with upward targets and dissimilarities with downward targets. Whether people succeed in these self-serving social comparisons may primarily depend on the level of perceived control.

Perceived Control

The extent to which people perceive control of their position on the comparison dimension may in two ways be relevant for the affective responses to social comparison. In the first place, lack of control may be regarded as a *stressor*. People high in control will generally experience less stress than those low in control. Thus, lack of control may – similarly as other stressors – augment the affective responses to social comparison information. In addition, perceived control may *moderate* the effects of experienced stress on the affective responses to social comparison. The present perspective on the moderating effects of perceived control diverges somewhat from Major's (1991) model, which was described before. When people experience stress but nonetheless think that they can regulate their own position (*high control*), especially upward comparison may be inspiring and may lead to positive affect. These individuals will regard the position of the upward comparison target as attainable for themselves (Taylor & Lobel, 1989). Under conditions of high control, downward comparison will generate a less positive response than upward comparison. Although information about an inferior target indicates that one is relatively well off, and that one can maintain this position, it lacks the possible inspiring value of upward comparison. When, on the other hand, people think they cannot influence their future position, and their position may deteriorate (*low control*), especially downward comparison may be threatening and may lead to negative affect. A downward comparison target may then represent a

realistic own future standing (Wills, 1991). Upward comparison will generate a less negative affective reaction than downward comparison in conditions of low control. Although information about an upward target indicates that one is relatively bad off, and that one cannot attain the target's superior position, it lacks the depressing association with a worse future which downward comparison has. Only when relative positions on the comparison dimension are considered as *stable*, downward comparison will generate more positive affect than upward comparison. Neither an upward nor a downward comparison target will then represent a possible future self. Indeed, people will focus on the stable differences, and primarily contrast their own position to those of inferior and superior targets.

The extent to which subjects perceive control of their position on a comparison dimension is determined by a number of factors. In the first place, people differ in perceived control as a result of *individual differences* in personality and former experiences. Perceived control in a particular situation partly results from generalized beliefs about one's own personal influence on events (Folkman, 1984; Rotter, 1975). People who are high in self-esteem, nondepressed, optimistic, and have an internal locus of control are more likely to perceive high control of their position on any comparison dimension than people who are low in self-esteem, depressed, pessimistic, or have an external locus of control (Major et al., 1991). Such generalized beliefs of control seem especially important in novel or ambiguous situations (Rotter, 1975). When an individual is familiar with a particular situation, generalized beliefs about control only marginally influence perceived control, and situational expectations of control are much more important. These situational expectations of control result from an individual's perceptions of that particular situation.

Perceptions of control are not only determined by individual differences, but may also be influenced by certain features of the social comparison information. In the first place, perceived control may depend on the *comparison dimension*. Comparison dimensions differ in the extent to which they are considered as controllable. For example, for persons with severe illnesses, the severity and possible deterioration of most health problems are considered beyond personal control (e.g., Affleck, Tennen, Pfeiffer & Fifield, 1987), whereas coping with these problems is an ability which – at least to a certain degree – can be learned by observing others (Bandura, 1982). The nature of the comparison dimension may thus influence the situational appraisal of the possibilities for control (Folkman, 1984; Major et al., 1991). Secondly, perceived control of relative positions on the comparison dimension may depend on *attributions* for the target's failure or success (*cf.* Goethals & Darley, 1977; McFarland & Ross, 1982; Weiner, 1985; Wills, 1991). Subjects who attribute an upward target's performance to his or her superior *ability* will regard the position of the target as hardly attainable for themselves, whereas subjects who attribute such superior

performance to the target's *effort* may expect to acquire a similar position when trying harder.

Identification

A last factor which may influence the affective responses to social comparison is identification with the target. Especially when identification with a comparison target is high, social comparison may generate strong affective reactions. Indeed, Miller et al. (1988) argued that people are interested in particularistic social comparison, in which they evaluate their position relative to those of others whom they feel related to, rather than in universalistic comparisons with all others in society. Tesser and his colleagues argued from a similar perspective that especially when feeling closely related to someone, social comparison would lead to strong affective responses (Tesser et al., 1988).

Identification with a comparison target is not a clearly defined concept. Mettee and Smith (1977) conceptualized identification as assumed similarity on the focal comparison dimension. However, the term identification may be used in a much broader sense, including closeness to the target (Tesser, 1988), forming a unit or bond with the target (Heider, 1958; Miller et al., 1988), and being similar in personality (Wills, 1991). An advantage of such a broader definition is that it corresponds more closely to what usually is understood by identification. In the present dissertation, such a broader definition of identification is used. Identification is considered to be a mix of perceiving oneself as a similar person and being attracted to the target. When people identify with a comparison target, the target's performance may set expectations about their own future performances. Identification with an upward target may be inspiring and motivating, whereas identification with a downward target may present subjects with a devastating image of their own possible failures.

Paradoxally, Tesser's (1988) model suggests that people primarily contrast their performances on self-relevant tasks with those of close others. However, these contrasting social comparisons may be limited to situations in which both the subject's and the target's exact positions on the comparison dimension are given explicitly. Although identification and contrast processes may alternate or occur simultaneously, identification with the comparison target is then likely to be inhibited. Indeed, contrast processes may dominate to such an extent that emphasizing similarities to the target is regarded as fooling oneself (*cf.* Mettee & Riskind, 1974). In order to stimulate identification with the comparison target, in the present research only the position of the target is described (*cf.* Aspinwall & Taylor, 1993; Devellis et al., 1991; Gibbons & Boney-McCoy, 1991; Gibbons & Gerrard, 1989). Depending on the perception of their own position on the comparison dimension, subjects would regard the target as less or more upward or downward.

Overview

In this dissertation, the affective responses to social comparison are examined. Effort is taken to identify the determinants of affect following social comparison, focusing on the effects of experienced stress, perceived control, and identification with the comparison target. The major thesis of this dissertation is that upward comparisons are generally more beneficial for well-being than downward comparisons, and that this effect is especially valid for people who simultaneously experience a high level of stress, perceive high control, and identify with the target. This prediction goes well beyond most current literature on the affective responses to social comparison, and is opposite to Wills's hypothesis that people who are threatened enhance their well-being by comparing downward.

The next chapters describe four field experimental studies on the affective responses to social comparison. In these studies, a questionnaire assessed individual differences on either experienced stress or perceived control, prior to presenting the subjects with social comparison information. The experimental part of the questionnaire consisted of a transcript of a fictitious interview with a target that was either very successful or fortunate (upward comparison), or very unsuccessful or unfortunate (downward comparison). Following this social comparison information, positive and negative affect were measured. In addition, identification with the target was assessed by measuring similarity and attraction to the target.

Chapter 2 deals with a study among individuals who had recently lost their jobs in a collective discharge of employees of several organizations. In this study, the level of experienced stress was measured, using a general health questionnaire. After that, the subjects were presented with upward or downward comparison information about the coping success (controllable dimension) or the social support (uncontrollable dimension) of another unemployed person. The moderating effects of the comparison dimension, experienced stress, and identification with the target on the affective responses to social comparison were examined.

In Chapter 3, a study among individuals who were unable to work as a result of their disabilities is described. In this study, individual differences in perceptions of control were measured. Next, the subjects were presented with upward or downward comparison information about the coping success (controllable dimension) or the problem severity (uncontrollable dimension) of another disabled person. The moderating features of the comparison dimension and perceived control were examined, and the extent to which identification mediated the effects of perceived control was regarded.

Chapter 4 reports on a study among female secretaries of two industrial organizations. In this study, the level of job stress was measured by a scale that assessed appraisals of the job as stressful. The subjects were presented with upward or

downward comparison information about the job success of another secretary, whose success or failure was attributed to her ability (low control) or her effort (high control). The extent to which the induced attribution and job stress moderated the affective responses to social comparison was examined. In addition to a general affect measure, positive and negative feelings for oneself, and empathic and hostile feelings for the target were assessed.

Chapter 5 deals with a study among college students. In this study, the level of academic stress was measured by a scale that resembled the job stress measure in Chapter 4. Next, the subjects were presented with upward or downward comparison information about the academic success of another student, whose success or failure was attributed to ability (low control) or to effort (high control). The moderating effects of the induced attribution and job stress on the affective responses to social comparison were examined. In addition, the effects of perceived similarity and attraction (identification) were considered.

In Chapter 6, the concluding section of this dissertation, the main results of these empirical chapters are summarized, and similarities and differences between the four studies are discussed. Furthermore, theoretical and practical implications of this empirical work are considered.

Chapter 2[1]

Affect and Identification in Social Comparison after Loss of Work

People who lose their jobs have to cope with a situation that is threatening in a variety of ways. They often experience changes in lifestyle, in environmental pressures and supports, and in general health (Warr, 1987). Jahoda (1982) argued that the negative psychological effects of unemployment arise from the fact that unemployed people are deprived of several psychological benefits of paid work. These benefits include, for example, earning one's living, enjoying personal status and identity, having a structured daily schedule, having contacts with people outside the family, and pursuing goals and purposes beyond one's own. Next to the loss of these psychological values of paid work, unemployment is likely to result in a strongly reduced income, that may affect well-being through subjectively appraised financial strain and life-style deprivation (Whelan, 1992). People who lose their jobs generally have no guarantee of getting a new job, and when they remain unemployed for a prolonged time, they have to find a different way of living. The negative effects of unemployment on well-being are especially manifest among unemployed individuals who fail to spend their spare time in purposeful social activities (Winefield, Tiggemann & Winefield, 1992). In addition, loss of a job may result in strains and conflict in one's relations with close others (e.g., Thomas, McCabe, & Berry, 1980; Madge, 1983). Thus, many people who move into unemployment feel uncertain about their future (Payne, Warr & Hartley, 1984), feel threatened in their self-esteem (Warr & Jackson, 1983), and experience a significant drop in well-being (Jahoda, 1982; Warr, 1987).

Social comparisons may be highly important for people in such a threatening situation, and may have major effects on their mood and on the way they evaluate themselves (Festinger, 1954; Schachter, 1959; Wills, 1981). People who are threatened may affiliate with others who share their fate in order to evaluate the nature of their situation, and the appropriateness of their reactions (Schachter, 1959). In addition, people under stress may join self-help groups and may seek peer support for reasons of self-improvement (Medvene, 1992), i.e., in order to learn from others how to deal with their situation. Moreover, in self-help groups, self-enhancement may be furthered through passive downward comparison with available worse-off group members, or through distancing oneself from the prototype by derogating the typical person in a

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[1] This chapter is based on Ybema, J.F., Buunk, B.P., & Heesink, J.A.M. (under review). *Affect and identification in social comparison after loss of work.* Manuscript submitted for publication.

similar situation (Gibbons et al., 1991). Thus, obtaining information about the situation and reactions of similar others may help people who have lost their jobs to adapt to this situation, which may facilitate both emotion-focused and problem-focused coping (Taylor, Buunk & Aspinwall, 1990; Taylor & Lobel, 1989). However, these social comparison processes may also have detrimental effects on well-being (Brickman & Bulman, 1977; Buunk, 1990). Both upward and downward comparison may direct the attention of individuals under stress to their own inabilities and shortcomings. Upward comparison may lead them to conclude that they are inferior, whereas downward comparison may induce concerns about their own present or future failures.

The present study examines the affective responses to upward and downward social comparison among individuals who recently became unemployed. The central issue in this research concerns the effects of the direction of social comparison, i.e., comparing upward or downward. Do people who have lost their jobs feel better after reading about an upward other who is fortunate or successful in dealing with his situation, or do they derive more comfort from reading about a downward other who is doing poorly compared to themselves?

In general, social comparison with others worse off — downward comparison — is supposed to generate positive feelings and to contribute to well-being (Hakmiller, 1966; Taylor et al., 1990; Wills, 1981; Wood et al., 1985), whereas social comparison with others better off — upward comparison — is portrayed as leading to negative affective responses. In line with this general prediction, upward comparison has been found to result in envy (Salovey & Rodin, 1984) and in lowered self-evaluation (Morse & Gergen, 1970). In addition, Wills (1981) argued in an influential article that, particularly when experiencing a threat to self-esteem, people are motivated to compare themselves downward to enhance their subjective well-being. Several studies by Gibbons and his colleagues (Gibbons, 1986; Gibbons & Boney-McCoy, 1991; Gibbons & Gerrard, 1989) were in line with Wills's downward comparison theory. For example, Gibbons and Gerrard (1989) had college students read a statement from a fellow student they would meet in a simulated support group. They found that low self-esteem subjects experienced an improvement of affect after reading about someone who had much trouble adjusting to college life although he or she faced only minor difficulties. Both subjects high and low in self-esteem reacted positively to someone with severe problems who coped well with them.

However, downward comparison may also lead to negative affect, and upward comparison may result in positive affect. When comparing downward, people may lose their initial good feelings about themselves when they empathize or identify with the inferior other (Brickman & Bulman, 1977). Similarly, Buunk et al. (1990) argued that although downward comparison may indicate relative superiority, it may also induce anxiety about a possible worse future. Molleman, Pruyn and Van Knippenberg (1986)

examined social comparison processes among cancer patients, and found that interaction with fellow cancer patients who were worse off than the subject (downward comparison) generated more negative feelings than interaction with others who were better off than the subject (upward comparison). Indeed, upward comparison may be inspiring (Helgeson & Taylor, 1993), may encourage the perspective of a better future for oneself (Buunk et al., 1990), and may foster motives of self-improvement (Wood, 1989). Especially people under stress may on the one hand feel inferior, and on the other hand get inspired and motivated by upward comparison with a positive model.

One of the variables that may influence the extent to which subjects derive positive and negative affect from social comparison is the nature of the comparison dimension (Gibbons & Gerrard, 1989). Informal interviews with fired individuals indicated that two comparison dimensions are especially important. The first dimension is *coping success*. This includes the extent to which unemployed individuals are able to deal successfully with their new situation and with the resulting stress, whether they are optimistic, and can find a new and meaningful daily routine. A second important dimension concerns the reactions of their social environment, and – most importantly – their partners and children. Fired individuals may fear that their partners will react negatively and will blame them for losing their jobs. Such conflicts and criticizing (social undermining) in close relationships are important determinants of unemployed persons' psychological health (Vinokur & Van Ryn, 1993). Thus, *social support* (or social undermining) is a second relevant comparison dimension.

For people who have lost their jobs, upward comparison of both coping success and social support may be inspiring because it presents them with a positive image of their own (present or future) functioning (*cf.* Markus & Nurius, 1986). In contrast to Wills's (1981, 1991) position, it is assumed that upward comparison of both coping success and social support will generally result in more positive affect than downward comparison. Although information about an inferior target indicates that one is relatively well off, it lacks the possible inspiring value of upward comparison. In particular, social comparison with a target that copes successfully presents the subjects with a model whose behavior can be copied in order to improve themselves. Indeed, coping is an ability that – at least to some extent – can be learned by observing others (Bandura, 1982). This additional merit of upward comparison is less manifest for social support. Observing a socially fortunate similar other will not generally be regarded as directly helpful for improving one's relations with close others.

The affective responses to social comparison will in part depend on the degree of *stress* individuals experience. As subjects are higher in stress, they may be more motivated to improve themselves when they compare upward and perceive control of their position on the comparison dimension. Thus, especially upward comparison of coping success will generate positive affect among subjects under stress. On the other

hand, comparing downward may generate negative affect especially among subjects under stress, because it may lead them to realize that they might experience similar failure or distress in future. This may be true in particular for downward comparison of social support, because individuals under stress may regard the quality and possible deterioration of their relationships with their partners as beyond their personal control. This will generally result in more negative affective responses to social comparison (Major et al., 1991).

In addition to positive and negative affect, the extent to which unemployed individuals *identify* with the comparison target is examined (Brickman & Bulman, 1977; Mettee & Smith, 1977), i.e., whether they see the target as someone similar to themselves, recognize their own situation in the target, and feel attracted to the target. The extent to which people identify upward or downward will depend on the level of experienced stress. As subjects are higher in stress, they will generally identify more with the downward comparison targets, and less with the upward comparison targets. Indeed, subjects low in stress will be more similar to an upward target, and less similar to a downward target than subjects high in stress. However, this effect may be moderated by the comparison dimension. In line with the previous argument, it is predicted that experienced stress will affect identification with the target in social comparison of social support, but not in social comparison of coping success. When subjects high in stress are confronted with a similar target who is fortunate in social support, they would most often realize that their own social situation is much less favorable. However, when presented with someone who copes in a superior way, subjects high in stress may assume that they can obtain the target's position, and identify with such a successful unemployed person.

Affect following social comparison is assumed to be primarily moderated by identification with the comparison target. People who have lost their jobs may find inspiration in comparing with a target who is superior in coping or social support when they find themselves similar and attracted to the target. These individuals may be encouraged by upward comparison because they can relate to this superior position, and may expect to acquire a similar future position. On the other hand, downward social comparison may generate negative affect when identification with the target is high. People who identify with a downward target may understand that their own present or future state could be similar to the target's miserable position. For individuals who identify downward, the target's unsupportive social environment or his failure in coping may thus represent a devastating image of their own situation.

To summarize, the present study examines affect and identification following upward or downward comparison of coping success or social support among individuals who recently lost their jobs. It is predicted that upward comparison will generate more positive and less negative affect than downward comparison. Secondly,

social comparison of coping success is predicted to generate more positive affect (in upward comparison) and less negative affect (in downward comparison) than social comparison of social support. Thirdly, it is predicted that these effects will be stronger as subjects experience more stress. With respect to identification, subjects are predicted to identify more downward and less upward as they experience more stress, and this effect is predicted to be stronger for social comparison of social support than for social comparison of coping success. Finally, it is predicted that upward comparison will generate more positive affect, and downward comparison will generate more negative affect as subjects identify more with the comparison target.

Method

Sample

The subjects were 172 former employees of several organizations who had lost their jobs in a collective dismissal of personnel. They all received a questionnaire about their perceptions of the loss of their jobs within three months after the dismissal procedure started. The subjects were 14 females and 158 males, and their age ranged from 21 to 59 years (M = 40, SD = 10).

The Questionnaire

The questionnaire consisted of several measures for stress reactions, negative affect, social support, and coping styles. The measure of *experienced stress* that was used in the present study, involved a translated and shortened version of the General Health Questionnaire (Goldberg, 1972). This measure consists of 12 questions with 4-point scales about health complaints in the last few weeks, coded in such a way that a high score corresponds to high stress and a low score to low stress (range: 1.1 to 3.9; M = 2.12, SD = .59; Cronbach's α = .91). The questions were positive and negative statements about whether the subjects lately could concentrate, felt under pressure, enjoyed daily activities, and felt unhappy and depressed.

The last part of the questionnaire was an *experimental part* in which social comparison information was presented to the subjects. Each subject read a bogus interview fragment that contained upward or downward comparison information about another fired employee. In the interview that contained downward comparison information of coping success, the target was depressed and irritated, and did not know how to find a new job. In the interview that contained downward comparison information of social support, the target's wife and children did not support the target, and urged the target to find a new job and to stay away from home. In the interview that contained upward comparison information of coping success, the target was

optimistic about his prospects for finding a new job, tried hard to get one, and enjoyed himself in the meantime. In the interview that contained upward comparison information of social support, the target's wife and children supported the target very well, and the target could start a new job at the firm of an acquaintance. A 2 × 2 design was employed with direction of comparison (downward or upward) and the comparison dimension (coping success and social support) as between-subjects factors. The subjects in the four resulting conditions did not differ in number of questionnaires they returned (X^2 (3) = 1.0, *ns*), in gender (X^2 (3) = 3.0, *ns*), in age (F (3, 166) = .2, *ns*), or in experienced stress (F (3, 166) = 1.0, *ns*).

Affect. After reading the social comparison information, the subjects were given a list of 20 adjectives that described possible feelings. Of these adjectives, 10 concerned positive affect, and 10 concerned negative affect. The adjectives for *positive affect* were: grateful, reassured, cheerful, relaxed, hopeful, calm, strengthened, encouraged, enthusiastic, and relieved. The adjectives for *negative affect* were: worried, angry, depressed, dissatisfied, sad, discouraged, ashamed, irritated, tense, and listless. These adjectives were in part a translation of the Multi-Affect Adjective Checklist (Zuckerman, 1960; Zuckerman, Lubin, Vogel & Valerius, 1964). The subjects were asked to indicate all adjectives that described feelings they felt while reading the social comparison information. The measures of positive and negative affect were respectively the number of indicated positive and negative adjectives. Positive and negative affect correlated strongly negatively (r = -.52, $p < .001$).

Identification. Four items followed the affect measures that concerned the perception of the target. These items were measured on 5-point scales ranging from 1 = *not at all* to 5 = *very much*, and combined to a scale for *identification* (range: 1.0 to 5.0; M = 2.37, SD = .96; Cronbach's α = .87). These items were: "Do you recognize something of yourself in the person in this interview?", "Do you think you resemble this person?", "Do you find this person likable?", and "Would you like to meet this person?".

Manipulation checks. Finally, the extent to which the subject regarded himself as better or worse off than the target, and the extent to which the subject coped better or worse with his situation than the target were assessed. The checks were: "Do you think you are better or worse off yourself than the person in this interview?", and "Do you think you cope better or worse with your situation than the person in this interview?". These questions were assessed on 5-point scales ranging from 1 = *much worse*, through 3 = *as well*, to 5 = *much better.*

Analyses

The present study examines the effects of social comparison direction and social comparison dimension on affect and identification, and the moderating effects of experienced stress. Thus, *interaction effects* between the comparison direction and experienced stress are examined. As experienced stress is a continuous variable, hierarchical regression is the most appropriate way to analyze these data (Cohen & Cohen, 1983). In addition, the moderating influence of identification with the comparison target on the affective responses to social comparison are studied. Identification was a continuous predictor in these analyses that involved another set of hierarchical regressions.

Results

Manipulation Check

Inspection of Table 2.1 makes clear that in the downward comparison conditions, subject thought they were better off in comparison to the target than in the upward comparison conditions (F (1, 159) = 78.9, $p < .001$). There was a marginally significant interaction effect between the direction and the dimension of social comparison (F (1, 159) = 3.2, $p < .10$). As would be predicted, the effect of the direction of social comparison was somewhat stronger for comparison of social support than for comparison of coping success. Similarly, subjects thought they were coping better in comparison to the target after comparing downward than after comparing upward (F (1, 159) = 83.9, $p < .001$). However, this was true regardless of the comparison dimension (F (1, 159) = 1.2, *ns*). Thus, the manipulation of the social comparison dimension failed to have a substantial effect on the manipulation checks. It seems as though subjects did not make a sharp distinction between coping success and social support. In upward comparison, subject thought they were as well off (t (78) = -.5, *ns*) and coped as well (t (78) = 1.1, *ns*) as the target (position 3). In downward comparison, however, one's own social support (t (86) = 13.6, $p < .001$) and coping (t (86) = 15.4, $p < .001$) were rated as much better than the social support and coping success of the target. Although the perceived relative positions on the comparison dimensions differed between the upward and downward conditions, comparison with the target in the upward conditions was generally perceived as a lateral comparison rather than as an upward comparison. Therefore, upward comparison is referred to as comparison with a positive (or successful) target and downward comparison as comparison with a negative (or unsuccessful) target.

Table 2.1 *Manipulation Checks*

	Downward		Upward	
	coping success	social support	coping success	social support
Better or worse off than target?	4.2_b	4.5_b	3.1_a	2.8_a
Cope better or worse than target?	4.4_b	4.4_b	3.2_a	3.0_a

Note: In each row, values not sharing a common subscript differ on a 5% level.

Effects of Social Comparison

Positive affect. It was predicted that social comparison with a successful target would generate more positive affect than social comparison with an unsuccessful target. Secondly, it was predicted that social comparison with a target that was successful in coping would generate more positive affect than social comparison with a target that was fortunate in social support. Moreover, both effects would be stronger as subjects experienced more stress. With hierarchical regression[2], the effects of the direction of social comparison, and the comparison dimension (factors with two levels), and the moderating influence of experienced stress (continuous variable) on positive affect were examined. Entering the main effects of both factors and experienced stress into the regression of positive affect yielded a highly significant portion of explained variance (R^2 = .29, F (3, 153) = 20.5, p < .001). As predicted, the subjects derived more positive affect from comparison with a successful target than from comparison with an unsuccessful target (β = .51, p < .001). In addition, more positive affect was experienced following social comparison as the subjects were lower in stress (β = -.18, p < .01). Neither entering the two-way interactions into the regression equation (R^2_{Ch} = .01, F (3, 150) = 1.0, *ns*), nor subsequently entering the three-way interaction (R^2_{Ch} = .01, F (1, 149) = 2.7, *ns*) yielded a significant increase in explained variance. Thus, regardless of the comparison dimension, and independent of the level of experienced stress, social comparison with a positive target generated more positive affect than

[2] In these hierarchical regression analyses, first the main effects of the direction of social comparison, the comparison dimension (dummy variables), and experienced stress (a continuous variable) were entered in the regression equation. Next, all three two-way interaction terms were entered. Finally, the three-way interaction term was entered. The β-weights of the main effects involved the analysis in which only the main effects were entered, β-weights of the two-way interactions involved the analyses in which main effects and two-way interactions were entered, and β-weights of the three-way interaction involved the analyses in which all main and interaction effect were entered (Cohen & Cohen, 1983). To facilitate interpretation of β-weights, these analyses were conducted with centered variables.

social comparison with a negative target.

Negative affect. It was predicted that – especially among subjects high in stress – social comparison with a negative target would generate more negative affect than social comparison with a positive target. Moreover, social comparison with an inferior target would generate more negative affect when the comparison dimension involved social support rather than coping success. The hierarchical regression of negative affect again yielded highly significant main effects of the predictors (R^2 = .30, F (3, 153) = 21.5, p < .001). As for positive affect, these main effects were due to the direction of social comparison (β = -.39, p < .001) and experienced stress (β = .40, p < .001). As predicted, social comparison with a negative target generated more negative affect than social comparison with a positive target. In addition, as subjects were higher in stress, they experienced more negative affect after social comparison. As was the case for positive affect, neither entering the two-way interaction effects into the regression equation (R^2_{Ch} = .01, F (3, 150) = .7, *ns*), nor subsequently entering the three-way interaction (R^2_{Ch} = .01, F (1, 149) = 3.2, *ns*) yielded a significant increase in explained variance. Thus, comparison with an inferior target generated more negative affect than comparison with a successful target, regardless of whether the social comparison dimension was coping success or social support. In addition, as subjects experienced more stress, they reported more negative affect after reading social comparison information.

Identification. It was predicted that subjects would identify more with the negative target and identify less with the positive target to the degree that they experienced more stress, and that this effect would be stronger for social comparison of social support than for social comparison of coping success. The hierarchical regression yielded a significant joint contribution of the main effects of the direction of social comparison, the comparison dimension, and experienced stress to identification (R^2 = .16, F (3, 153) = 9.4, p < .001). This effect was fully due to the direction of social comparison (β = .37, p < .001): Subjects identified more with a positive than with a negative target. Entering the two-way interactions into the regression equation yielded a significant increase in explained variance (R^2_{Ch} = .17, F (3, 150) = 13.0, p < .001). The interaction between the direction of social comparison and experienced stress (β = -.41, p < .001), and the interaction between the social comparison dimension and experienced stress (β = .15, p < .05) were significant. The three-way interaction did not significantly contribute to identification (R^2_{Ch} = .01, F (1, 149) = 2.7, *ns*).

Additional regressions were carried out within the experimental conditions to further clarify the two-way interactions. In Figure 2.1 it can be seen that as subjects experienced more stress, they identified more with the negative targets (coping success:

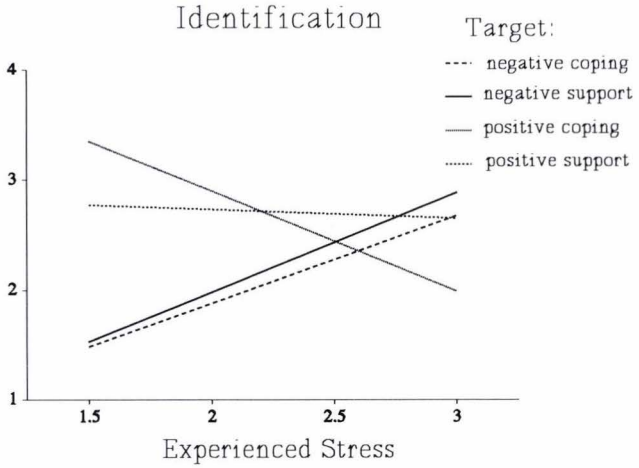

Figure 2.1 Regression of identification on experienced stress for social comparison of coping success and social support with the positive and the negative targets.

β = .61, p < .001, and social support: β = .55, p < .001), and identified less with the target that coped successfully (β = -.51, p < .001). Identification with the positive target who received proper social support was independent of experienced stress (β = -.05, *ns*). As was predicted, subjects higher in stress identified more with a negative comparison target, and less with a positive comparison target. However, this was not true for comparison with a target who enjoyed superior social support. In contrast to the predictions, this suggests that subjects under stress may especially be inspired by observing similar others that are well off socially.

The Effects of Identification on Affect

Next, some analyses to determine the effect of identification with the target on the affective responses to social comparison were conducted. In our view, the extent to which subjects identified with the target would be a major determinant of affect following social comparison. When a subject identified with a positive target, this would generate positive affect because the target's position would be regarded as similar to the subject's present or future position. Similarly, comparison with a negative target was predicted to generate more negative affect as subjects identified more with the target, because the undesirable position of the negative target would then be regarded as similar to the subject's present or future position. To examine these processes, another series of hierarchical regression analyses of positive and negative

affect on the direction of social comparison, the comparison dimension, and identification, and the two-way and three-way interactions between these predictors were conducted[3].

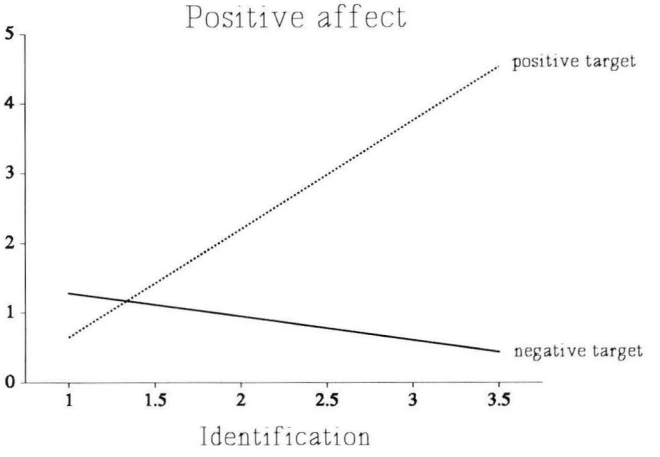

Figure 2.2 Regression of positive affect on identification for social comparison with the positive and the negative targets.

Positive Affect. The hierarchical regression of positive affect following social comparison on the main effect of the comparison direction, the comparison dimension, and identification with the target yielded a highly significant effect (R^2 = .33, F (3, 154) = 25.0, p < .001). Both the direction of social comparison (β = .40, p < .001), and identification with the target (β = .29, p < .001) made a significant unique contribution to positive affect. Entering the two-way interactions (R^2_{Ch} = .13, F (3, 151) = 11.9, p < .001), strongly increased the portion of explained variance. This was fully attributable to the two-way interaction between the direction of social comparison and identification with the target (β = .34, p < .001), that qualified the two main effects. Entering the three-way interaction yielded no significant contribution to positive affect (R^2_{Ch} = .01, F (1, 150) = 1.7, *ns*). As can be seen in Figure 2.2, the more subjects identified with a successful target, the more positive affect they derived from social comparison (β = .58, p < .001). Regardless of the level of identification with the target,

[3] When the main and interaction effects of experienced stress were included in the regression of positive and negative affect, the results of the analyses were similar as those reported below. Experienced stress only had additional main effects in both the regression of positive affect (β = -.21), and in the regression of negative affect (β = .41), as was shown in the previous analyses.

subjects experienced relatively little positive affect after social comparison with an unsuccessful target (β = -.17, *ns*).

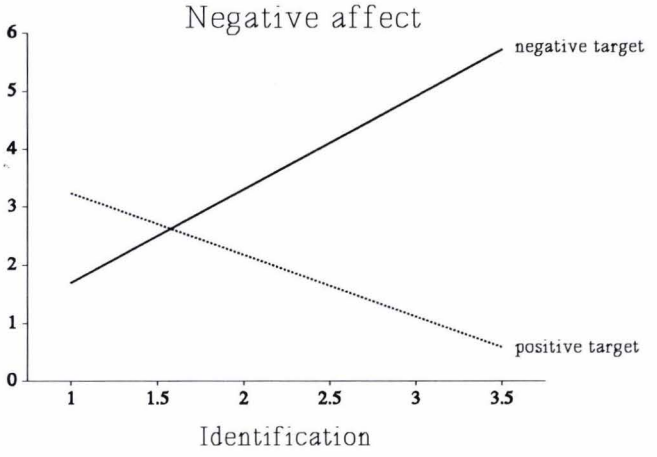

Figure 2.3 Regression of negative affect on identification for social comparison with the positive and the negative targets.

Negative Affect. The hierarchical regression of negative affect following social comparison on the main effects of the comparison direction, the comparison dimension, and identification with the target was significant (R^2 = .14, F (3, 154) = 8.6, p < .001). Only the direction of social comparison (β = -.37, p < .001) uniquely contributed to negative affect: Social comparison with an unsuccessful target generated more negative affect than social comparison with a successful target. Entering the two-way interactions (R^2_{Ch} = .19, F (3, 151) = 14.1, p < .001), yielded a substantial increase in explained variance. As was the case for positive affect, this was fully attributable to the two-way interaction between the direction of social comparison and identification with the target (β = -.42, p < .001). Entering the three-way interaction (R^2_{Ch} = .01, F (1, 150) = 3.3, *ns*) yielded no significant contribution to negative affect. As can be seen in Figure 2.3, as subjects identified more with a negative target, they derived more negative affect from social comparison (β = .46, p < .01). As subjects identified more with a successful target, they experienced less negative affect following social comparison (β = -.46, p < .001).

Perception of the Positive Target

The manipulation checks indicated that the subjects definitely regarded social

comparison with a negative target as a downward comparison. However, the positive target was not regarded as upward by most subjects. Therefore, some additional analyses were done to examine the effects of the extent to which social comparison with the *positive target* was regarded as an upward, a lateral, or a downward comparison. First, both manipulation checks were combined, because they failed to distinguish between the manipulations of social comparison of coping success and of social support, and because they correlated highly (r = .77), even within the positive target conditions (r = .53). This combined measure nicely divided the subjects into three categories: those who perceived the positive target as upward (n = 25), as lateral (n = 27), or as downward (n = 27). As could be expected, these three groups of subjects differed in the level of stress they experienced (F (2, 75) = 4.3, $p < .05$), with subjects who perceived the positive target as truly upward being higher in stress (M = 2.46) than those who perceived the target as lateral (M = 2.05) or downward (M = 2.02).

Table 2.2 *Affect and Identification following Comparison with a Positive Target, Perceived as Downward, Lateral, or Upward.*

	Perception of Positive Target		
	Downward	Lateral	Upward
Positive affect	2.6_a	4.5_b	2.8_{ab}
Negative affect	1.0_a	$.9_a$	2.2_a
Identification	2.4_a	3.3_b	2.6_a

Note: In each row, values not sharing a common subscript differ on a 5% level.

The affective responses to social comparison with the positive target were reanalyzed, using a 2 × 3 analysis of variance design with the comparison dimension (social support or coping success) and the perception of the positive target (upward, lateral or downward) as between-subjects factors[4]. The perception of the positive target had significant main effects on *positive affect* (F (2, 73) = 5.6, $p < .01$), on *negative affect* (F (2, 72) = 3.6, $p < .05$), and on *identification* with the positive target (F (2, 68) = 6.4, $p < .01$). The comparison dimension yielded no significant main or interaction

[4] A preliminary hierarchical regression in which main and interaction effects of experienced stress were entered yielded no interaction effects between stress and the perception of the positive target. The effects of the perception of the target on positive affect and identification, reported below, were independent of effects of stress.

effects for either positive affect, negative affect or identification with the target ($F < 2.9$, *ns*). As can be seen in Table 2.2, subjects who perceived comparison with the positive target as a *lateral* comparison experienced more positive affect, and identified more with the target than those who perceived it as a downward or as an upward comparison. Negative affect seemed to be experienced most by those who regarded social comparison with a successful target as a truly upward comparison. This effect was fully due to the enhanced level of stress among this group of subjects. Indeed, when the level of stress was controlled for, perception of the target had no effect on negative affect (F (2, 70) = 1.3, *ns*).

Discussion

The present study examined the effects of experienced stress and the comparison dimension on the affective responses to social comparison among people who had recently lost their jobs. The subjects received a questionnaire in which they were presented with a fictitious interview with a fellow unemployed person. This interview contained positive (upward) or negative (downward) social comparison information either on how successful the target was in coping or on the quality of social support he received. It was hypothesized that social comparison with a positive target would generate more positive affect and less negative affect than comparison with a negative target, and that this effect would be stronger as subjects experienced more stress. Second, it was predicted that — again especially for those high in stress — social comparison of coping success would generate more positive and less negative affect than social comparison of social support. These predictions were partly confirmed: Comparison with a successful target generated more positive affect and less negative affect than comparison with an unsuccessful target. However, these effects were independent of the effects of experienced stress and of the induced comparison dimension.

According to the manipulation checks, the subjects did not recognize whether the target was superior or inferior in coping or whether he was better or worse off. Apparently, the subjects did not distinguish between someone coping better and someone receiving more social support, and similarly, between someone coping worse and someone receiving less social support. Maybe, the subjects just viewed a positive target as well off and the negative target as bad off on some general dimension like overall well-being. In addition, not finding an effect of the comparison dimension on the manipulation checks may originate from the wording of the manipulation check for social support. The subjects were asked how well off they were relative to the target. This may be a sub-optimal way of assessing the relative level of social support.

A second limitation of the current research was that — according to the manipulation checks — subjects did not regard social comparison with a positive target as a truly upward comparison. This problem is encountered frequently in research that presents subjects with social comparison information. Information about upward targets is often perceived as either unrealistically positive, or as lateral or even downward comparison (e.g., Aspinwall & Taylor, 1993; Devellis et al., 1991; Taylor, Aspinwall, Giuliano, Dakof & Reardon, 1993). In the present study, a target's superior coping success or social support could easily be denied, which may have resulted in assimilation of the positive target's position. Possibly, people find it hard to admit that they cope worse than someone else, or that they are less successful in obtaining social support, even when this is quite evident. Additional analyses showed that comparison with a positive target generated most positive affect and most identification with the target when it was regarded as a *lateral comparison*. Apparently, social comparison with a successful target was most inspiring and beneficial for well-being when subjects regarded their own position on the comparison dimension as similar to the target's position.

With regard to *identification*, it was predicted that subjects would identify more with the negative target and identify less with the positive target to the degree that they experienced more stress, and that this effect would be stronger for social comparison of social support than for social comparison of coping success. Indeed, identification with the positive targets was stronger among subjects low in stress, and identification with negative targets was stronger among subjects high in stress. However, contrary to the prediction, this was found especially for social comparison of coping success, and less so for comparison of social support. Regardless of the level of experienced stress, subjects identified strongly with the target who received superior social support. This suggests that the level of stress that subjects experienced was largely unrelated to their social support. Probably, as these subjects only recently lost their jobs, most of them had not experienced deterioration of the social relations with their families, which might change for a number of them in a later stage of their unemployment.

The occurrence of positive and negative affect after social comparison was largely determined by the direction of social comparison and identification with the target. Subjects who identified with the positive target derived most positive affect from social comparison, whereas some negative affect was experienced by those who did not identify with a positive target. Apparently, when subjects observed a successful target whom they could relate to, they were encouraged by his success, whereas they were discouraged when they could not relate to such a target. Subjects who identified with the negative target derived most negative affect from social comparison. This suggests that observation of a similar or attractive downward target provoked anxiety for one's own future. An additional explanation is that such a miserable target induced

empathic feelings like pity or compassion when identification to the target was high.

These findings are theoretically quite important because they are not compatible with one of the major perspectives on social comparison under stress, i.e., Wills's (1981) downward comparison theory. This theory would predict that for those under stress, downward comparisons with similar others would improve subjective well-being. Although there is some empirical support for this prediction (e.g., Aspinwall & Taylor, 1993; Gibbons & Boney-McCoy, 1991), the present findings contradict it in two ways. First, in the present sample of individuals under stress, downward comparisons led in general to less positive and to more negative affect than upward comparisons. Second, downward comparison generated more negative affect as subjects identified more with the downward target. These findings indicate that for people under stress, and particularly for those who regarded the comparison other as similar to themselves, realistic information about someone worse off may be felt as a threat rather than a relief, because the fate of the other is seen as one's own possible future fate (*cf.* Wills, 1991).

The present study illustrates that people who have lost their jobs, may benefit more from comparison with a successful target than from downward comparison. Indeed, comparison with a similar other who is fortunate in social support or successful in coping, generated positive affective responses, and especially so among those who identified with the target. This study complements the growing evidence that upward comparison is beneficial for people in threatening situations. Indeed, other research indicates that problem-focused coping may be furthered by observing superior models (Bandura, 1982; Berger, 1977; Taylor et al., 1990), and that especially people high in stress are interested in upward social comparison (Buunk, VanYperen, Taylor & Collins, 1991; Ybema & Buunk, 1993a). It can be concluded that providing information about someone in a similar situation, who is successful in receiving social support, and who copes with his situation in a superior way may be the best strategy for enhancing well-being in individuals who have lost their jobs. These individuals may recognize themselves in such a successful target, and may find this kind of information inspiring and hopeful (Taylor & Lobel, 1989).

Chapter 3[1]

Affective Responses to Social Comparison: A Study among Disabled Individuals

The situation of individuals receiving payments under the Disablement Insurance Act in the Netherlands is stressful in many ways, owing to, among other things, health problems, a reduced income level, and the loss of work. Moreover, work related forms of disability constitute a serious problem of immense proportions that has generated considerable political discussion. No less than 850,000 individuals received payments under the Disablement Insurance Act in 1991. In recent years, there has been a growing awareness that the Disablement Insurance Act has to be changed, and various proposals have been put forward to limit the number of people who are diagnosed as disabled for work. These proposals generated extensive public discussion and much attention in the media for individuals receiving payments under the Disablement Insurance Act. As a result, many disabled persons felt uncertain about their future financial status, and repeatedly experienced threats to their self-esteem by critical political statements about disabled persons in general. Especially when people feel uncertain about their abilities, opinions, or emotions, and when they experience a threat to their self-esteem, social comparison information may have major effects on how people feel and evaluate themselves (Festinger, 1954; Schachter, 1959; Wills, 1981). In general, social comparison with others worse off — downward comparison — is supposed to generate positive feelings and to contribute to well-being (Hakmiller, 1966; Taylor et al., 1990; Wills, 1981; Wood et al., 1985), whereas social comparison with others better off — upward comparison — is portrayed as leading to negative affect (Morse & Gergen, 1970; Salovey & Rodin, 1984).

Recent research and theory suggest that the positive effects of downward comparison and the negative effects of upward comparison are especially found when people are under some kind of stress. Wills (1981) argued in an influential article that, particularly when experiencing a threat to self-esteem, people are motivated to compare themselves in a downward direction to enhance their subjective well-being. Several studies by Gibbons and his colleagues (Gibbons, 1986; Gibbons & Boney-McCoy,

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[1] This chapter is based on Ybema, J.F., & Buunk, B.P. (in press). Affective responses to social comparison: A study among disabled individuals. *British Journal of Social Psychology*.
A shortened Dutch version of this manuscript was published as: Ybema, J.F., & Buunk, B.P. (1994). Affect en identificatie na sociale vergelijking: Een onderzoek onder arbeidsongeschikten. In: N. Ellemers, A.P. Buunk, W.A. van der Kloot & N.K. de Vries (Eds.), *Fundamentele Sociale Psychologie* (Vol. 8, 201-216). Tilburg: Tilburg University Press.

1991; Gibbons & Gerrard, 1989) were in line with Wills's downward comparison theory. For example, Gibbons and Boney-McCoy (1991) found that only low self-esteem subjects who were threatened by negative feedback on a test experienced an improvement of affect after downward comparison on a second dimension. Following a similar procedure, Aspinwall and Taylor (1993) recently studied the affective responses to social comparison of academic success among college students after a positive or a negative mood was induced. In line with Gibbons and Boney-McCoy (1991), they found that downward comparison increased positive mood for subjects low in self-esteem in whom a negative mood was induced, but not for subjects high in self-esteem or for subjects in whom a positive mood was induced.

However, downward comparison may also lead to negative affect among individuals under stress. When comparing downward, people may lose their initial good feelings about themselves when they empathize or identify with the inferior other (Brickman and Bulman, 1977). Indeed, Buunk et al. (1990) argued that, although downward comparison may indicate relative superiority, it may also induce anxiety about a possible worse future. In their research, Buunk et al. (1990) asked cancer patients and married individuals to indicate how often upward and downward comparison generated positive and negative affect. They found that cancer patients low in self-esteem reported more negative affect as a result of both upward and downward comparison than those high in self-esteem. Similarly, married individuals reported more negative affect following both upward and downward comparison as they were higher in marital dissatisfaction. In a similar vein, Molleman et al. (1986) examined social comparison processes among cancer patients. They found that interaction with fellow cancer patients who were worse off than the subject (downward comparison) generated even more negative feelings than interaction with others who were better off than the subject (upward comparison).

The affective responses to upward comparison have received less attention than those of downward comparison. Upward comparison may result in envy (Salovey & Rodin, 1984) and lowered self-evaluation (Morse & Gergen, 1970). However, Chapter 2 demonstrated that upward comparison may generate more positive and less negative affect than downward comparison. Indeed, upward comparison may also be inspiring (Helgeson & Taylor, 1993), may encourage the perspective of a better future for oneself (Buunk et al., 1990), and may foster motives of self-improvement (Wood, 1989). Especially for people under stress, upward comparison may both induce feelings of inferiority, and promote inspiration and motivation by presenting them with a positive model (*cf.* Bandura, 1982).

Although Buunk et al. (1990) demonstrated that the affective responses to social comparison are not inherent to the direction of social comparison, they did not untangle the factors that were responsible for the occurrence of positive and negative affect after

social comparison among individuals under stress. Moreover, the research by Buunk et al. (1990) was correlational in nature, preventing any conclusions about causality. In the present study, the main focus will be on the conditions under which disabled individuals derive positive feelings from upward comparison, to supplement studies on the beneficial effect of upward comparison on behavior and self-efficacy (Bandura, 1982; Berger, 1977). Recent theory on the affective responses to social comparison recognizes *perceived control* as a central moderator (Major et al., 1991). When people under stress think they are capable of exerting a decisive influence on their future position (*high control*), upward comparison may be inspiring and may lead to positive affect. They will regard the position of the upward comparison target as attainable for themselves (Taylor & Lobel, 1989). Under conditions of high control, downward comparison will generate a less positive response than upward comparison. Although information about an inferior target indicates that one is relatively well off, and that one can maintain this position, it lacks the possible inspiring value of upward comparison. When, on the other hand, people think they cannot influence their future position, and their position may deteriorate (*low control*), especially downward comparison will be threatening and will lead to negative affect. A downward comparison target may then represent a realistic own future standing (Wills, 1991). In conditions of low control, upward comparison will generate a less negative affective reaction. Although information about an upward target indicates that one is relatively bad off, and that one cannot attain the target's superior position, it lacks the depressing association with a worse future of downward comparison. Thus, in the first place, it is predicted that upward comparison will generate more positive affect than downward comparison, and that this effect will be stronger as subjects are higher in perceived control. Second, it is predicted that downward comparison will generate more negative affect than upward comparison, and that this effect will be stronger as subjects are lower in perceived control.

The extent to which subjects perceive control of their position on a comparison dimension is determined by at least two factors. In the first place, people differ in perceived control as a result of *individual differences* in personality and particular circumstances. In addition, the nature of the comparison dimension may have a substantial impact on the extent to which people perceive control of their position on the dimension. Following Gibbons and Gerrard (1989, 1991), the present study distinguishes between social comparison of *problem severity* and social comparison of *coping success*. It can be argued that disabled persons will in general perceive higher control of the way they cope with their situation than of the severity of their health problems. The severity and possible deterioration of most health problems are beyond personal control, whereas coping is an ability that – at least to some extent – can be learned by observing others (Bandura, 1982). Inducing either problem severity or

coping success as the salient social comparison dimension may thus affect the extent to which people perceive control of their position on the dimension, and consequently influence the affective responses to social comparison. In line with the predictions concerning perceived control, it is predicted that upward comparison will generate more positive affect than downward comparison when social comparison of coping success is induced, whereas downward comparison will generate more negative affect than upward comparison when social comparison of problem severity is induced.

Through which processes will perceived control influence the affective responses to social comparison? In our view, perceived control affects the extent to which subjects *identify* with the comparison target, i.e., see the target as someone similar to themselves, recognize their own situation in the target, and see the target as a likable person. Subjects perceiving *high control* will identify with upward comparison targets, but not with downward comparison targets. These subjects will be encouraged by upward comparison because they can relate to the superior target's position, and they will not be negatively affected by downward comparison. On the other hand, subjects perceiving *low control* will most often fail to identify with upward targets, but will identify with downward targets. These subjects cannot associate with the upward target's position, but understand that their own future may be similar to the downward target's miserable position, which leads to negative affect. Thus, it is predicted that when perceived control is high, and when comparison of coping success is induced, subjects will identify more with the upward target than with the downward target, whereas when perceived control is low, and when comparison of problem severity is induced, subjects will identify more with the downward target than with the upward target.

Method

Sample

The initial sample consisted of 195 individuals who were on disability payments, and who participated in a primary study (Buunk, in press). After a year, 180 of these 195 persons could be contacted again, and were asked to fill out a second questionnaire (for the present study). Of these subjects, 112 (70% male, 30% female) participated, a response rate of 62%. The subjects' age ranged from 29 to 64 years (M = 50.3; SD = 7.5), and they had received payments under the Disablement Insurance Act for 1 to 22 years (M = 7.1; SD = 4.4). For most subjects (n = 93), the original diagnosis on which they were classified as medically unfit for work was available. The disabilities in the sample included internal diseases (9%), mental instability and nervous disease (37%), coronary disease (6%), diseases of the vertebrate system (41%), and psychosomatic

complaints (8%). This distribution of disabilities in the sample was largely similar to the one in the general population of disabled persons in the Netherlands (X^2 (4) = 3.5, *ns*).

The Questionnaire

All subjects received a questionnaire that consisted of two parts. The first part contained questions assessing the degree of perceived control and self-esteem. The measure of *perceived control* was a scale of 7 items with 5-point scales, concerning perceived control of the severity and consequences of the disability, and the ability to cope with the situation (range: 1.7 to 5.0; M = 3.47, SD = .68; Cronbach's α = .79). *Self-esteem* was measured by a translated version of the Rosenberg (1965) Self-Esteem scale, consisting of 10 items with 4-point scales (range: 1.0 to 3.8; M = 2.65, SD = .61; Cronbach's α = .81). Perceived control and self-esteem were strongly positively correlated (r = .63), and had comparable effects on the dependent measures. However, the results for perceived control were stronger and more consistent, therefore, effects of self-esteem are not considered[2].

As in Chapter 2, the second part of the questionnaire was an *experimental part* in which social comparison information was presented to the subjects. Each subject read a bogus interview fragment which contained upward or downward comparison information. In half of the interviews, a disabled person told about the severity of his health problems: This target person either had very severe problems, lived in a wheelchair, and was much in pain (downward target), or had only mild problems, could do almost anything, and felt all right (upward target). In these conditions, no references to the target's coping with the situation were made. In the other half of the interviews a disabled person told about his coping success: This target faced moderate health problems and either had much problems in coping, was depressed and frustrated about his situation (downward target), or had no problems at all in coping with his situation, was optimistic and had a lot of hobbies (upward target). Effort was taken to hold problem severity constant in these descriptions. In this study a 2 × 2 design was employed with comparison dimension (problem severity or coping success) and direction of comparison (downward or upward) as between subjects factors.

Affect. After reading the social comparison information, the subjects were presented with a checklist of 44 adjectives that described possible feelings. Of these adjectives, 18 concerned positive affect, and 19 concerned negative affect. The 7 remaining

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[2] It can be argued that in real life perceived control and self-esteem are not associated this strongly. Therefore, we also analyzed the effects of perceived control after partialling out its variance shared with self-esteem. When using these residual scores, the effects of perceived control on affect and identification were similar to those reported below.

adjectives were not definitely positive or negative. The adjectives for *positive affect* were: grateful, hopeful, reassured, good-humored, content, relaxed, pleasant, proud, self-confident, encouraged, energetic, enthusiastic, inspired, calm, strengthened, comforted, optimistic, and cheerful. The adjectives for *negative affect* were: angry, confused, depressed, discouraged, dissatisfied, uncertain, sad, worried, anxious, nervous, uneasy, offended, ashamed, tense, pessimistic, irritated, frustrated, aggressive, and listless. These adjectives were in part a translation of the Multi-Affect Adjective Checklist (Zuckerman, 1960; Zuckerman et al., 1964). The subjects were asked to indicate all adjectives that described feelings they felt that moment or had felt while reading the social comparison information. Preliminary analyses revealed high correlations among the positive parts of subscales for hostility, anxiety, and depression, and similarly, among the negative parts of these subscales. Moreover, the positive and the negative part of each subscale were largely unrelated, supporting the notion that positive affect and negative affect are independent dimensions (e.g., Warr et al., 1983). Therefore, separate measures of positive and negative affect were constructed. These measures were respectively the number of indicated positive and negative adjectives. Positive and negative affect correlated slightly negatively ($r = -.17$, $p < .05$).

Identification. Four items followed the affect measures to assess identification with the target. These items were: "Do you find this person likable?", "Would you like to meet this person?", "Do you recognize something of yourself in this person?", and "Do you think you resemble this person?". All four items were measured on 7-point scales, ranging from 1 = *not at all* to 7 = *very much*. These items combined to a reliable scale for *identification* (range: 1.5 to 7.0; $M = 3.84$, $SD = 1.28$; Cronbach's $\alpha = .85$).

Manipulation checks. Finally, the extent to which the social comparison information was regarded as upward or downward was assessed. The subjects were asked how they rated (1) the severity of their own medical problems, and (2) their own way of coping with their situation compared to the target. Subjects could indicate on 7-point scales whether their health and coping were better or worse then the target's health and coping (1 = *much better*, 4 = *the same*, 7 = *much worse*).

Results

Manipulation Check

Table 3.1 presents the mean values for the manipulation checks. The direction of social comparison had a significant effect on the rating of the *severity* of one's health problems compared to the target's health problems ($F(1, 101) = 101.9$, $p < .001$). This

main effect was qualified by an interaction effect with the comparison dimension (F (1, 101) = 36.0, $p < .001$). As can be seen in Table 3.1, subjects rated their own health problems compared to those of the target as worse after upward comparison than after downward comparison, but – as intended – this was true only for social comparison of problem severity. The ratings of one's own health problems compared to those of the target did not significantly differ between the conditions of upward and downward comparison of coping success.

Table 3.1 *Manipulation Checks*

	Downward		Upward	
	problem severity	coping success	problem severity	coping success
Health problems	1.7_a	2.9_b	5.5_c	3.9_b
Success in coping	3.5_b	2.2_a	3.8_b	4.1_b

Note: In each row, values not sharing a common subscript differ on a 5% level.

The direction of social comparison also had a significant effect on the rating of one's own success in coping compared to the target (F (1, 101) = 26.8, $p < .001$). Unexpectedly, the dimension of social comparison had a significant main effect (F (1, 101) = 5.1, $p < .05$). These main effects were again qualified by an interaction effect between the comparison dimension and the comparison direction (F (1, 101) = 13.9, $p < .001$). Subjects rated their own success in *coping* compared to the target's coping as worse after upward comparison than after downward comparison, but – as intended – this was true only for social comparison of coping success. The ratings of one's own success in coping compared to the target's coping did not significantly differ between conditions of upward and downward comparison of problem severity. This means that the manipulations were successful in varying social comparison of problem severity and social comparison of coping success as more or less independent dimensions.

Moreover, to verify whether the upward comparison target was regarded as superior to oneself in coping or health, and whether the downward comparison target was regarded as inferior to oneself, it was tested whether the ratings deviated from 4, the target's position. Subjects that were presented with *downward* comparison of problem severity rated their own health as better than the target's health (t (26) = -13.7, $p < .001$), and subjects who received *upward* comparison information about problem severity rated themselves as worse off than the target (t (26) = 7.7, $p < .001$). Subjects

who read *downward* information about coping success rated their own coping behavior as superior to the target's coping behavior (t (25) = -9.32, $p < .001$), but subjects who read *upward* information about coping success rated their own coping behavior as equally successful to the target's coping behavior (t (25) = .86, *ns*).

Effects of Perceived Control and Social Comparison

Positive affect. It was predicted that upward comparison would generate more positive affect than downward comparison, and that this effect would be stronger as subjects were higher in perceived control and for those who were induced to compare their coping success. Because perceived control is a continuous variable, the predicted interaction effects are best analyzed with hierarchical regression analyses[3]. The regression of positive affect on the main effects of perceived control, and the dimension and direction of social comparison was significant (R^2 = .16, F (3, 100) = 6.5, $p < .001$). Individual β-weights were significant for the direction of social comparison (β = .31, $p < .01$) and perceived control (β = .26, $p < .01$). Entering the two-way interaction terms into the regression equation, yielded a significant increase in explained variance (R^2_{Ch} = .07, F (3, 97) = 2.8, $p < .05$). This effect was fully attributable to the interaction between perceived control and the direction of social comparison (β = .22, $p < .05$). Entering the three-way interaction into the regression equation yielded no significant addition in explained variance (R^2_{Ch} = .01, F (1, 96) = 1.0, *ns*). As predicted, Figure 3.1 indicates that upward comparison generated more positive affect than downward comparison only when subjects perceived high control. Indeed, among subjects confronted with an upward comparison, perceived control was positively related to positive affect (β = .39, t (52) = 3.0, $p < .01$), whereas perceived control was not significantly related to positive affect generated by downward comparisons (β = .12, t (50) = .9, *ns*). In contrast to the predictions, the comparison dimension (problem severity versus coping success) did not generate either main or interaction effects in the regression of positive affect.

Negative affect. It was predicted that downward comparison would generate more negative affect than upward comparison, and that this effect would be stronger as subjects were lower in perceived control and for subjects who were induced to compare

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[3] In these hierarchical regression analyses, first the main effects of the direction of social comparison, the comparison dimension (dummy variables), and perceived control (a continuous variable) were entered in the regression equation. Next, all three two-way interaction terms were entered. Finally, the three-way interaction term was entered. The β-weights of the main effects involve the analysis in which only the main effects were entered, β-weights of the two-way interactions involve the analyses in which main effects and two-way interactions were entered, and the β-weight of the three-way interaction involves the analyses in which all main and interaction effect were entered (Cleary & Kessler, 1982; Cohen & Cohen, 1983). To facilitate interpretation of β-weights, these analyses were conducted with centered variables.

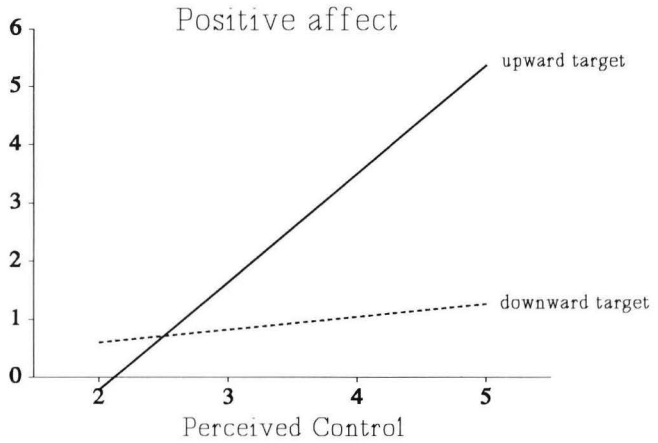

Figure 3.1 Regression of positive affect on perceived control for subjects comparing upward and subjects comparing downward.

their problem severity. In the hierarchical regression, the main effects of perceived control, the comparison dimension and the direction of social comparison significantly contributed to negative affect (R^2 = .18, F (3, 100) = 7.4, p < .001). The direction of social comparison (β = -.26, p < .01), and perceived control (β = -.31, p < .01) made a significant contribution to negative affect. However, neither entering the two-way interactions (R^2_{Ch} = .01, F (3, 97) = .3, *ns*), nor subsequently entering the three-way interaction (R^2_{Ch} = .01, F (1, 96) = 1.2, *ns*) yielded a significant increase in the proportion of explained variance. Thus, the predicted interaction effects between the direction of social comparison on the one hand, and perceived control and the comparison dimension on the other did not approach significance for negative affect. The main effects indicate that downward comparison generated more negative affect than upward comparison, independent of the level of perceived control and the comparison dimension. Furthermore, more negative affect was experienced following social comparison as subjects were lower in perceived control.

Identification. It was predicted that subjects high in control and subjects confronted with information about the coping success of another individual would identify more with the upward target than with the downward target, whereas subjects low in control and those comparing their problem severity would identify more with the downward target than with the upward target. In the hierarchical regression of identification, the main effects of perceived control, comparison direction, and comparison dimension

yielded a significant portion of explained variance (R^2 = .11, F (3, 100) = 4.1, p < .01). Only the direction of social comparison had a significant unique contribution to identification (β = .27, p < .01). Entering the two-way interaction terms into the regression equation, yielded a highly significant increase in explained variance (R^2_{Ch} = .20, F (3, 97) = 9.3, p < .001). All three interaction effects significantly contributed to identification with the target. In addition to the predicted interaction effects between the direction of social comparison and perceived control (β = .31, p < .001), and between the comparison direction and the comparison dimension (β = .20, p < .05), there was a significant interaction between perceived control and the comparison dimension (β = -.21, p < .05). Moreover, a significant three-way interaction among perceived control, the direction of social comparison and the comparison dimension (β = .24, R^2_{Ch} = .06, F (1, 96) = 8.7, p < .01) qualified these main and interaction effects. Additional regression analyses showed that among subjects in the *upward* comparison conditions, perceived control was positively associated with identification for both comparison of relative coping success (β = .45, t (23) = 2.4, p < .05) and comparison of problem severity (β = .40, t (26) = 2.2, p < .05). Among subjects who were confronted with a *downward* comparison with an inferior coping target, perceived control was negatively related to identification (β = -.64, t (23) = -4.0, p < .001). However, among subjects comparing with a target who experienced worse health problems, perceived control was not significantly related to identification. (β = .29, t (24) = 1.5, *ns*).

Figure 3.2 clarifies the precise meaning of these effects. As predicted, subjects experiencing a high degree of control identified in general more strongly with the upward than with the downward targets, and subjects who felt a lack of control identified more with the downward targets than with the upward targets. Although not directly predicted, but in line with the theoretical argument, this pattern was much more pronounced when coping success was the induced comparison dimension than when problem severity was the comparison dimension. Thus, those experiencing high control of their situation identified with others better off, and especially with someone who coped well with his or her situation. In contrast, subjects low in control identified most with the target who coped in an inferior way. Thus, especially when coping success was the comparison dimension, subjects high in perceived control identified more with the superior than with the inferior target, whereas subjects low in perceived control identified more with the target who was doing worse than with the target doing better.

Finally, some exploratory analyses were done to examine if perceived control influenced the affective responses to social comparison through a process of identification with the target. The previous analyses indicated that only the occurrence of positive affect after upward comparison was influenced by perceived control. It

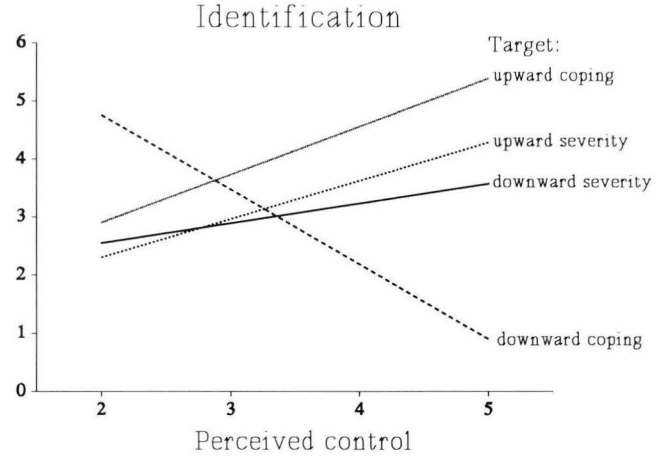

Figure 3.2 Regression of identification on perceived control for upward and downward comparison of coping success and problem severity.

would seem likely that this effect was caused by the fact that subjects high in perceived control identified most strongly with an upward target, which in turn would generate positive affect. To test whether this effect of perceived control is indeed mediated by identification, three regression analyses were applied in the *upward* comparison conditions (Baron & Kenny, 1986). The first two of these analyses were largely similar to those reported above. First, identification was regressed on perceived control. This analysis showed that perceived control significantly contributed to the regression of identification ($\beta = .46$, $t\ (51) = 3.7$, $p < .001$, $R^2 = .21$). Second, positive affect was regressed on perceived control, and this effect was also significant ($\beta = .38$, $t\ (51) = 3.0$, $p < .01$, $R^2 = .15$). Third, positive affect was regressed on both perceived control and identification. A mediator effect would be characterized by a lower effect of perceived control in this regression equation than in the second equation. Indeed, in this equation, perceived control no longer contributed to positive affect ($\beta = .21$, $t\ (50) = 1.6$, *ns*), and only identification had a significant effect ($\beta = .37$, $t\ (50) = 2.7$, $p < .01$, $R^2 = .25$). Moreover, the indirect path of perceived control via identification to positive affect was significant ($t\ (50) = 2.14$, $p < .05$) (Baron & Kenny, 1986).[4] Thus, as predicted, the effect of perceived control upon positive affect after upward comparison is mediated by identification with the comparison target. Apparently,

[4] Regression analyses in which also the main and interaction effects of the comparison dimension were entered had identical results, and yielded no significant effects of the comparison dimension.

individuals high in control identify more with others doing better, and it is primarily this upward identification that generates the positive affect[5].

Discussion

The present study examined the effects of social comparison among disabled persons by presenting a part of a fictitious interview with another disabled person containing upward or downward social comparison information. It was hypothesized that upward comparison would generate more positive affect than downward comparison, and that this effect would be stronger as subjects were higher in perceived control. Downward comparison would generate more negative affect than upward comparison, and this effect would be stronger as subjects were lower in perceived control. These predictions were largely supported. In line with the work of Major et al. (1991), upward comparison resulted indeed in more positive affect than did downward comparison among subjects high in control, but not among subjects low in control. Only partly in line with the hypotheses, downward comparison generated more negative affect than upward comparison, regardless of the level of perceived control.

These findings are theoretically quite important because they are not compatible with one of the major perspectives on social comparison under stress, i.e., Wills's (1981) downward comparison theory. This theory would predict that for those under stress, and particularly for those feeling a lack of control, downward comparisons would improve subjective well-being. Although there is some empirical support for this prediction (e.g., Gibbons & Gerrard, 1991; Aspinwall & Taylor, 1993), the present findings contradict it in two ways. First, in the present sample of individuals under stress, downward comparisons led in general to more *negative* affect than upward comparisons. Second, although upward comparisons were indeed less helpful for those experiencing little control, downward comparisons did not contribute more to the well-being of those feeling little control. These findings indicate that for people under stress, and particularly for those who lack control of their possibly worsening situation, confrontation with someone worse off may be felt as a threat rather than as a relief, because the other's current fate is seen as one's own possible future. The findings of

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[5] After partialling out self-esteem from perceived control (see footnote 2), perceived control contributed significantly to both identification (first equation: $\beta = .45$, $t\ (48) = 3.5$, $p < .01$, $R^2 = .20$) and positive affect (second equation: $\beta = .45$, $t\ (48) = 3.5$, $p < .01$, $R^2 = .20$) after upward comparison. In the third equation, both perceived control ($\beta = .31$, $t\ (47) = 2.2$, $p < .01$) and identification ($\beta = .30$, $t\ (47) = 2.2$, $p < .01$; $R^2 = .27$) contributed significantly to the regression of positive affect after upward comparison. Thus the direct effect from perceived control remained significant, whereas the indirect path from perceived control via identification to positive affect was only marginally significant ($t\ (47) = 1.79$, $p < .10$).

Molleman et al. (1986) on the affective responses to social comparisons among cancer patients point in the same direction. In general, there is considerable evidence that actual contact with others worse off is felt as aversive (Taylor & Lobel, 1989). The results of the present study were fully in line with the study among individuals who lost their job, that was described in Chapter 2. However, the present study goes beyond the previous chapter in clarifying the role of perceived control in determining the affective responses to social comparison.

It could be argued that the present results are in line with the perspective of Taylor and Lobel (1989) who have emphasized the benefits of upward comparisons for problem-focused coping. In that perspective, especially upward comparison of coping success would generate positive affect. However, the findings do not directly support this interpretation either. The affective responses to social comparison did not depend on the comparison dimension. One explanation for this findings may be that the difference between both dimensions was not induced strongly enough. It is also possible that subjects did not distinguish sharply between someone who is coping better and someone who is better off. Subjects may classify both upward targets as superior and both downward targets as inferior on a more general social comparison dimension like well-being or overall status. However, the manipulation checks suggest that the subjects recognized whether the target was superior (or inferior) in *health* or in *coping*. Thus, the present study was apparently successful in orthogonally manipulating social comparison of coping success and social comparison of problem severity.

It must be noted that, according to the manipulation checks, the subjects did not regard the target in the condition of upward comparison of coping success as coping in a superior way, but as coping as well as they did themselves. This problem is encountered frequently in research that presents subjects with social comparison information. Information about upward targets is often perceived as either unrealisticly positive, or as lateral or even downward (e.g., Aspinwall & Taylor, 1993; Devellis et al., 1991; Taylor et al., 1993). In the present study, a target's superior coping success can easily be denied, which may have resulted in assimilation of the upward target's position. Possibly, people find it hard to admit that they cope worse than someone else, even when this is quite evident. Indeed, in a study among rheumatic arthritis patients, Devellis et al. (1991) found that their subjects would not admit inferiority on a direct measure in which one's own coping behavior is evaluated relative to the coping of an upward target. However, in an indirect measure, in which the position of the target and of one's own coping behavior were rated independently and in separate parts of the questionnaire, superiority of such a target was acknowledged. In the present study, the affective reactions to upward comparison of coping success and to upward comparison of problem severity were similar. These reactions differed from those to downward comparison of both problem severity and coping success. This suggests that, although

Chapter 4[1]

Affective Responses to Social Comparison of Performance at Work

Most working individuals frequently engage in social comparison with colleagues who perform better or worse than they do themselves. Such social comparison may serve both informational and emotional needs (Taylor & Lobel, 1989; Wood, 1989). Informational needs that may be satisfied by social comparison refer to self-evaluation and self-improvement. People who feel threatened may affiliate with others similar in fate in order to evaluate the nature of their situation, and the appropriateness of their reactions (Schachter, 1959). Such affiliation provides social information that may be used to reduce uncertainty about one's own emotional reactions and to adjust these reactions to those of others (Gerard, 1963; Schachter & Singer, 1962). In addition, people may seek peer support and may join self-help groups for reasons of self-improvement (Medvene, 1992). Indeed, social comparison with superior others, i.e., upward comparison, may be helpful in learning how to deal with one's situation (Bandura, 1982; Berger, 1977; Buunk et al., 1991). Emotional needs may also be satisfied by social comparison. People may try to regulate their emotions by comparing themselves with other people who are worse off (Pearlin & Schooler, 1978; Wills, 1981). These so-called downward comparisons may make one's own situation appear less severe and may enhance well-being. For example, self-enhancement may be furthered through passive downward comparison with available worse-off targets, or through distancing oneself from the prototype by derogating the typical person in a similar situation (Gibbons et al., 1991).

Obtaining information about the situation and reactions of similar others may thus facilitate both emotion-focused and problem-focused coping (Taylor et al., 1990; Taylor & Lobel, 1989). However, others may also be avoided to protect oneself against possible detrimental effects of social comparison on well-being (Brickman & Bulman, 1977). For example, Buunk and Schaufeli (1993) found that nurses who were high in stress had a higher need to affiliate with their colleagues, but at the same time avoided these colleagues in order to protect feelings of self-worth (*cf.* Sarnoff & Zimbardo, 1961). Indeed, people may often react negatively to social comparison information that is unavoidable or forced upon them (Mettee & Smith, 1977). The present study focuses

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[1] This chapter is based on Ybema, J.F., Buunk, B.P., & Roest-Bong, F. (under review). *Affective responses to social comparison of performance at work: A study among secretaries.* Manuscript submitted for publication.

on the affective responses to such forced social comparison of performance at work. This study aims at identifying under what conditions individuals react positively or negatively to social comparison information. More in particular, the role of the direction of social comparison, of the attributions made for the performance of the other, and of job stress are examined here.

Comparison Direction

A major determinant of the affective responses to social comparison information is the comparison direction, i.e., whether individuals are presented with upward information about others who are successful, or with downward information about others who fail relative to themselves. Most social comparison research suggests that downward comparison generates positive feelings and contributes to well-being (Hakmiller, 1966; Taylor et al, 1990; Wills, 1981; Wood et al., 1985). However, downward comparison may also lead to negative affect. When comparing downward, people may lose their initial good feelings about themselves when they empathize or identify with the inferior other (Brickman & Bulman, 1977). Buunk et al. (1990) argued that although downward comparison may indicate relative superiority, it may also induce anxiety about a possible worse future. Thus, downward comparison may on the one hand bolster feelings of superiority, and on the other hand induce concern about one's upcoming lot.

Upward comparison is usually portrayed as resulting in feelings of inferiority (Brickman & Bulman, 1977), in envy (Salovey & Rodin, 1984), and in lowered self-evaluation (Morse & Gergen, 1970). However, upward comparison may also be inspiring (Helgeson & Taylor, 1993), may encourage the perspective of a better future for oneself (Buunk et al., 1990), and may foster motives of self-improvement (Wood, 1989). In upward comparison, people may be responsive to both the negative implication that one is inferior, and to the positive implication that one may benefit from observing a positive model.

Attributions for the Target's Performance

As yet, little is known about the conditions under which either upward comparison or downward comparison is more beneficial for well-being. The *attributions* people make for the performance of the target may be crucial in this context (Goethals & Darley, 1977; Weiner, 1985; Wills, 1991). These attributions may – to a certain extent – determine whether relative positions on the comparison dimension are perceived as controllable. When an upward target's superior performance is attributed to his or her *effort*, the subject may expect to acquire the target's position when trying harder. In such a case, upward comparison may be motivating and inspiring, and may be nonthreatening because people think they can improve their position on the comparison dimension (Major et al., 1991; Testa & Major, 1990). Upward comparison presents

them with a positive image of their own possible future self (Markus & Nurius, 1986; Taylor & Lobel, 1989). Although information about an inferior target whose performance is due to a lack of effort indicates that one performs relatively well, the emotional value of this information is limited because the other will be perceived as someone who could have performed better. Indeed, Chapter 3 showed that when people perceive high control of their position on the comparison dimension, upward comparison generated more positive affect than downward comparison.

When the target's superior performance is attributed to his or her *ability*, the position of the target will be regarded as hardly attainable for the subject. Such upward comparison will generate little positive affect. However, downward comparison that is attributed to the target's lack of ability may generate a quite positive response, because it demonstrates that one's superior performance reflects a stable difference between the subject and the target. Therefore a two-way interaction is predicted, such that upward comparison will generate more positive affect than downward comparison when attribution to effort is induced, whereas downward comparison will generate more positive affect than upward comparison when attribution to ability is induced.

It must be noted that when attribution to ability is induced, the performance of the target may also be attributed to uncontrollable external factors (Weiner, 1985), such as chance or working conditions. Although such attributions would be different than intended, the predictions would remain the same. When the target's performance in social comparison is attributed to luck or to uncontrollable working conditions, the position of a superior target will not generally be regarded as attainable for the subject. Upward comparison will then generate little positive affect. Downward comparison that is attributed to the target's bad luck or unfortunate working conditions will generate a more positive response, because it suggests that one is lucky to be better off.

Job Stress

The present study was conducted among secretaries of two industrial organizations. Secretaries generally have a strenuous job, with rapidly changing demands and roles. For example, introduction of personal computers resulted in a major change of secretaries' tasks in most organizations. They generally spend less time typing, and may take on tasks that were previously done by the management (Briner & Hockey, 1988). Accordingly, a secretary's job may have become more challenging, but may also include more ambiguous and conflicting roles. Spector (1987) found that job satisfaction among clerical workers depended highly on such role-related variables. In addition, secretaries have to deal with the immediate demands of their bosses or supervisors. This may result in a job in which highly demanding and boring periods alternate frequently. Moreover, clerical jobs are generally lowly paid, and are characterized by little opportunity for advancements (Turnage & Spielberger, 1991).

In line with these observations, Garrison and Eaton (1992) found that secretaries were more likely to experience major depression, and more frequently stayed away from their work than other women. In the Framingham Heart Studies, Haynes and Feinleib (1980) longitudinally studied the development of heart diseases in healthy individuals over an eight year period. They found that the prevalence of heart diseases among secretaries and other female clerical workers was almost twice as high as among other working women and housewives. However, not in line with these observations is a study by Peeters, Buunk and Schaufeli (1992) which suggests that secretaries do not generally encounter many stressful experiences.

It is hypothesized that the affective responses to social comparison are especially evident among people high in stress, because possible improvement and relative superiority will be more important for these subjects than for those low in job stress. Indeed, Wills (1981) argued that particularly when people experience a threat to their subjective well-being, they are motivated to compare themselves downward to restore this well-being. The predictions on the positive affective responses to upward and downward comparison may be true especially for secretaries high in job stress. Thus, a three-way interaction is predicted: Especially among secretaries high in job stress, upward comparison will generate more positive affect than downward comparison when attribution to effort is induced, whereas downward comparison will generate more positive affect than upward comparison when attribution to ability is induced.

Positive and Negative Affect

Chapter 3 demonstrated that positive and negative affect should be regarded as two separate, more or less independent dimensions, and not as the two ends of one bipolar dimension (*cf.* Warr et al., 1983; Watson et al., 1988). The absence of positive affect not necessarily implies the presence of negative affect, and vice versa. Indeed, people may simultaneously experience negative affect (e.g., feeling inferior), and experience positive affect (e.g., feeling hope) as a result of social comparison, or may experience neither positive nor negative affect (i.e., be indifferent). Therefore, the predictions concerning negative affect following social comparison are not necessarily opposite to those of positive affect. Upward comparison is predicted to generate more negative affect than downward comparison both when the target's performances are attributed to effort, and when they are attributed to ability. The threatening possibility of deterioration of one's own performance to the downward target's level will only be salient when relative positions on the comparison dimension are attributed to variable and uncontrollable circumstances. Upward comparison, on the other hand, may indicate inferiority that cannot easily be abolished in stressful situations. This will be true especially for upward comparison on a stable ability dimension. When the superior position of the target is attributed to effort, the possibility of improvement towards the

superior target's position may console the subjects (*cf.* Testa & Major, 1990). Thus, it is predicted that upward comparison will generate more negative affect than downward comparison, and that this effect will be stronger when attribution to ability is induced than when attribution to effort is induced.

To summarize, the aim of the present study is to clarify under what conditions upward comparison generates more positive or negative affect than downward comparison. Specifically, the possible moderating effects of job stress and the attribution of the target's position to ability or effort are examined. It is predicted that upward comparison will generate more *positive affect* than downward comparison when attribution to effort is induced, whereas downward comparison will generate more positive affect than upward comparison when attribution to ability is induced. These effects of the direction of social comparison and attribution will be stronger as subjects experience more job stress. With respect to *negative affect* it is predicted that upward comparison will generate more negative affect than downward comparison, and this effect will be stronger when attribution to ability is induced than when attribution to effort is induced.

Locus of the Affective Responses

Thus far, the affective responses to social comparison were portrayed as resulting from implications of the social comparison information for one's own present or future position on the comparison dimension. Indeed, social comparison may result in positive affect because it is encouraging for oneself, or in negative affect because it is discouraging for oneself. In addition, positive and negative affect may result from feelings for the target (*cf.* Brickman & Bulman, 1977; Heider, 1958). In the first place, people may respond with *empathy*, i.e., desire positive outcomes for the target. Individuals may experience negative affect because they feel compassion for a downward target, and they may experience positive affect because they rejoice in an upward target's success. In this case, the subject's feelings are concordant to those of the target. However, the subject's and the target's feelings may also be discordant. This will be the case when people respond with *hostility*, i.e., favor negative outcomes for the target. Positive affect may then result from malicious pleasure about the downward target's failure, and negative affect may result from resentment of an upward target's success. Therefore, in addition to a general measure for positive and negative affect, feelings for the target and feelings for oneself are examined.

Method

Sample

The subjects were 110 female secretaries of two industrial organizations who were asked to participate in a study on job stress. They filled out a questionnaire that was distributed and gathered by their personnel workers, who sent them back to the researchers. Most subjects (69%) in the sample worked full-time (38 hours a week or more). The age of the subjects ranged from 21 to 58 years (M = 34, SD = 9).

The Questionnaire

In the questionnaire, *job stress* was measured[2]. This measure was constructed by the authors, and concerned a scale of 9 items with 5-point scales, coded in such a way that a high score corresponded to high stress and a low score to low stress (range: 1.0 to 2.8; M = 1.82, SD = .40; Cronbach's α = .74). This measure consisted of both positive and negative statements about whether the subjects felt they worked in a right way, about whether they could uplift their spirits when something in their job went wrong, and about whether they felt uncertain about how to do their job. The range and the mean of the job stress scale show that the subjects in the present study generally experienced little stress in their jobs.

As in the previous chapters, the second part of the questionnaire was an *experimental part* in which social comparison information was presented to the subjects. Each subject read a bogus interview that contained upward or downward comparison information about another secretary. A 2 × 2 design was employed with direction of comparison (downward or upward) and attribution of the target's position on the comparison dimension (effort or ability) as between-subjects factors. In the interview that contained downward comparison information, attributed to (lack of) effort, the target was quite negative about her job, worked little and failed to complete her tasks satisfactorily. As a result, she had trouble with her boss and would never get a promotion. In the interview that contained downward comparison information, attributed to (lack of) ability, the target tried very hard to get good results, but she did not succeed and failed to do her job right. She also had trouble with her boss and had no perspectives on a satisfying career. In the interview that contained upward comparison information, attributed to effort, the target was highly motivated and quite positive about her job, worked very hard and performed well. This resulted in many compliments from her boss, and in outlook on a promotion. In the interview that

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[2] Some of the items in this job stress measure resembled items of the perceived control measure in Chapter 3, but were coded inversely (as lack of control). In addition to job stress, Rosenberg (1965) Self-Esteem was assessed in the first part of the questionnaire. As self-esteem did not moderate the affective responses to social comparison, its effects are not considered.

contained upward comparison information in which attribution to the target's ability was induced, the target only worked little, but succeeded in doing her job right. She also got a lot of positive feedback from her boss and she would get a promotion.

Affect[3]. After reading the social comparison information, the subjects were given a list of 45 adjectives that described possible feelings. Of these adjectives, 19 concerned positive affect, and 19 concerned negative affect[4]. The 7 remaining adjectives were not definitely positive or negative. The subjects were asked to indicate all adjectives that described feelings they felt that moment or had felt while reading the social comparison information. The adjectives were in part a translation of the Multi-Affect Adjective Checklist (Zuckerman, 1960; Zuckerman et al., 1964). The measures of positive and negative affect were respectively the number of indicated positive and negative adjectives. Positive and negative affect correlated moderately negative (r = -.36, $p < .001$).

Feelings for oneself and for the target. In addition to these general affect measures, four questions were asked to distinguish between feelings for oneself and feelings for the target. Feelings for oneself were assessed by two questions: "To what extent do you find it pleasant or encouraging to read about this person?", and "To what extent do you find it unpleasant or discouraging to read about this person?". Questions concerning feelings for the target differed between upward and downward comparison. After *upward* comparison, these questions were: "To what extent are you glad that this person is doing a good job, because you wish her the best?", and "To what extent are you sad that this person is doing a good job, because you begrudge her this success?". After *downward* comparison these questions were: "To what extent are you glad that this person is doing a bad job, because you wish her to fail?", and "To what extent are you sad that this person is doing a bad job, because you feel sorry for her?". These items were measured on 5-point scales ranging from 1 = *not at all* to 5 = *very much*.

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[3] In addition to these affect measures, similarity and attraction to the target were measured to assess identification with the target (see previous chapters). However, similarity and attraction correlated only weakly, and diverged in findings. Moreover, neither attraction nor similarity were clearly associated with the affective responses to social comparison. Therefore, these measures were ignored in the present chapter.

[4] The adjectives for *positive affect* were: grateful, hopeful, reassured, good-humored, content, relaxed, pleasant, proud, self-confident, encouraged, energetic, enthusiastic, inspired, calm, strengthened, comforted, optimistic, cheerful, relieved. The adjectives for *negative affect* were: angry, confused, depressed, discouraged, dissatisfied, uncertain, sad, worried, anxious, nervous, uneasy, offended, ashamed, tense, pessimistic, irritated, frustrated, aggressive, listless.

Manipulation checks. Finally, the extent to which the social comparison information was regarded as upward or downward, and the attributions of the target's position to effort and ability were assessed. The checks on the direction of social comparison were: "How well do you think the preceding period was for this person, compared to your own?", and "How well do you think this person's job results were, compared to your own?". These questions were assessed on 5-point scales ranging from 1 = *much worse than mine*, through 3 = *as well as mine*, to 5 = *much better than mine*. As a check of the manipulation of attribution, the subjects were asked to what extent the target's success or failure in her job was due to her (lack of) effort and to what extent this was due to her (lack of) ability. In addition, attributions to (bad) luck, and to the circumstances were assessed. These questions were measured on 5-point scales ranging from 1 = *not at all*, to 5 = *very much*.

Results

Manipulation Check

Inspection of Table 4.1 makes clear that the direction of social comparison had a highly significant effect on the rating of how successful the preceding period was for the target, compared to one's own (F (1, 96) = 175.8, $p < .001$), and on how the target's job results compared to one's own (F (1, 96) = 286.2, $p < .001$). The manipulation of attribution yielded no significant main or interaction effects on these manipulation checks ($F < 2.0$, *ns*). After downward comparison, both the preceding period for the target (t (53) = 22.0, one-tailed $p < .001$), and her job results (t (53) = 61.4, $p < .001$) were rated as much worse than one's own position (the midpoint of the scale: 3). In the upward comparison conditions, the target's preceding period (t (54) = 3.3, $p < .01$), and her job results (t (54) = 1.9 $p < .05$) were rated as better than one's own. Indeed, the subjects regarded the upward comparison target as somewhat more successful, and the downward target as much less successful than themselves.

When attribution to effort was induced, the target's failure or success in her job was attributed more to (lack of) *effort* (F (1, 101) = 208.9, $p < .001$) than when attribution to ability was induced. The direction of social comparison had no main effect on attribution to effort, but there was a significant interaction between the manipulations (F (1, 101) = 6.3, $p < .05$) that indicated that especially in downward comparison, the induced attribution was effective in the extent to which the target's failure was attributed to her effort. Surprisingly, the induced attribution had no effect on whether the target's job success or failure was attributed to her (lack of) *ability* (F (1, 101) = .1, *ns*). The direction of social comparison had no effect on this manipulation check either, but there was a significant interaction between the manipulations (F

Table 4.1 *Manipulation Checks*

	Downward		Upward	
	ability	effort	ability	effort
Target's preceding period	1.1_a	1.2_a	3.3_b	3.6_b
Target's job results	1.1_a	1.0_a	3.0_b	3.4_b
Attributed to effort	1.7_a	4.7_b	2.0_a	4.1_b
Attributed to ability	3.9_a	3.4_a	3.5_a	3.9_a
Attributed to (bad) luck	2.7_{ab}	2.1_a	3.3_b	2.8_{ab}
Attributed to circumstances	3.4_b	2.4_a	3.9_b	3.6_b

Note: In each row, values not sharing a common subscript differ on a 5% level.

(1, 101) = 4.1, $p < .05$), indicating that in downward comparison, the manipulation seemed successful, but in upward comparison, the target's success in her job was somewhat more attributed to her ability when attribution to effort was induced than when attribution to ability was induced. Thus, the attempt to induce attribution to ability in upward comparison was unsuccessful. As can be seen in Table 4.1, when attribution to ability was induced, the target's job success was more attributed to luck (F (1, 101) = 6.5, $p < .05$) and to her job circumstances (F (1, 101) = 8.3, $p < .01$) than when attribution to effort was induced. In addition, in upward comparison, the target's performance was more attributed to luck (F (1, 101) = 11.1, $p < .01$), and to the circumstances (F (1, 101) = 16.8, $p < .001$), than in downward comparison. Apparently, when a target was successful despite her lack of effort, subjects did not only attribute her success to superior ability, but to luck and favorable circumstances as well. Ability, luck and working conditions are all uncontrollable attributional dimensions. Although these dimensions differ in locus and stability, they nicely contrast to the controllable effort dimension. Thus, the manipulation of attribution of the target's performance was successful in distinguishing between conditions in the extent to which success or failure was attributed to effort, to luck, and to the job conditions, but not in the extent to which it was attributed to ability.

Positive Affective Responses to Social Comparison

It was predicted that, especially among those high in job stress, upward comparison would generate more positive affect than downward comparison when attribution to effort was induced, whereas downward comparison would generate more positive affect

than upward comparison when attribution to ability was induced.

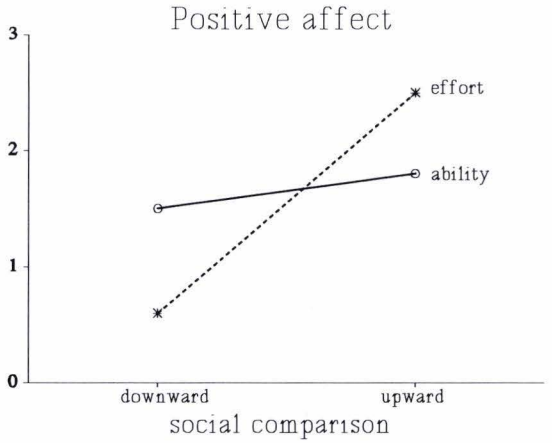

Figure 4.1 General positive affect following upward or downward comparison when attribution to ability or to effort was induced.

General positive affect. First, the amount of positive affect according to the checklist was analyzed. Analysis of variance yielded a significant main effect of the direction of social comparison (F (1, 101) = 6.2, $p < .05$), that was qualified by a marginally significant interaction with the induced attribution (F (1, 101) = 3.4, $p < .10$). Largely in line with the hypothesis, Figure 4.1 shows that upward comparison generated more positive affect than downward comparison when attribution to effort was induced, but not when attribution to ability was induced. Thus, only for subjects who thought that the difference on the comparison dimension between themselves and the target was mostly due to variations in effort, upward comparison generated a more positive reaction than downward comparison. However, there was no evidence that downward comparison generated more positive affect than upward comparison when attribution to ability was induced. A hierarchical regression[5], in which the moderating influence of job stress (a continuous variable) on positive affect was examined, yielded no main or interaction effects of job stress ($-.07 < \beta < .07$, *ns*). Thus, the positive affective

[5] In these hierarchical regression analyses, first the main effects of the direction of social comparison, the induced attribution (dummy variables), and job stress (a continuous variable) were entered in the regression equation. Next, all three two-way interaction terms were entered. Finally, the three-way interaction term was entered (Cohen & Cohen, 1983). To facilitate interpretation of β-weights, these analyses were conducted with centered variables.

responses to social comparison were fully independent of the level of job stress.

Positive feelings for oneself. Next, the extent to which subjects found it pleasant and encouraging for themselves to read about the target was analyzed. Analysis of variance yielded a highly significant main effect of the direction of social comparison (F (1, 102) = 42.6, $p < .001$), that was qualified by a significant interaction with the induced attribution (F (1, 102) = 4.4, $p < .05$). Fully in line with the findings for general positive affect, Table 4.2 shows that subjects regarded upward comparison as more encouraging for themselves than downward comparison when attribution to effort was induced, and not significantly so when attribution to ability was induced. Thus, when explicitly asked for consequences of social comparison for themselves, the results were even stronger than those on the general positive affect measure. Especially when subjects thought that the difference on the comparison dimension between themselves and the target was mostly due to variations in effort, upward comparison was regarded as more pleasant and encouraging for themselves than downward comparison.

Positive feelings for the target. Because positive affect for the target in upward comparison (empathic joy) and in downward comparison (malicious pleasure) are quite different, the effects of attribution of the target's performance are considered separately for upward and downward comparison. In upward comparison, the induced attribution of the target's success had no effect on the extent to which subjects felt glad for the target (t (53) = 1.5, *ns*). In downward comparison, slightly more malicious pleasure about the target's failure was experienced when her performance was due to lack of effort than when her performance was attributed to lack of ability (t (29.7) = 1.8, $p < .10$)[6]. Subjects may hold the former target more responsible for her low performance than the latter, what may make such malicious pleasure more acceptable.

Finally, general positive affect following social comparison was regressed on positive feelings for oneself and positive feelings for the target to examine whether general positive affect was more related to implications of social comparison for oneself or to implications for the target. In upward comparison, the regression was significant (R^2 = .15; F (2, 50) = 4.4, $p < .05$), with a significant contribution of positive feelings for oneself (β = .35, $p < .01$), but not for positive (empathic) feelings for the target (β = .15, *ns*). In downward comparison, the regression of general positive affect on positive feelings for oneself (β = .26, $p < .10$) and positive (malicious) feelings for the target (β = -.05, *ns*) was not significant (R^2 = .07; F (2, 49) = 1.9, *ns*).

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[6] This t-test was done with separate variance estimates because variances differed significantly between conditions.

Table 4.2 *Affective Responses to Social Comparison*

	Downward		Upward	
	ability	effort	ability	effort
General positive affect	1.5_{ab}	$.6_{a}$	1.8_{ab}	2.5_{b}
Encouraging for oneself	1.5_{ab}	1.3_{a}	2.1_{bc}	2.5_{c}
Glad, wish target to fail	1.1_{a}	1.4_{a}		
Glad, wish target to succeed			3.2_{b}	3.6_{b}
General negative affect	2.1_{a}	2.4_{a}	1.9_{a}	1.0_{a}
Discouraging for oneself	2.1_{a}	2.0_{a}	2.3_{a}	2.3_{a}
Sad, feel sorry for target	3.3_{c}	2.3_{b}		
Sad, begrudge target's success			2.1_{ab}	1.5_{a}

Note: In each row, values not sharing a common subscript differ on a 5% level.

Negative Affective Responses to Social Comparison

It was predicted that upward comparison would generate more negative affect than downward comparison, and more so when attribution to ability was induced than when attribution to effort was induced.

General negative affect. As for positive affect, general negative affect according to the checklist was analyzed first. Analysis of variance yielded a marginally significant main effect of the direction of social comparison (F (1, 101) = 3.5, $p < .10$). Contrary to the hypothesis, comparing downward was followed by slightly more negative affect than comparing upward (see Table 4.2). Neither the effects of the induced attribution ($F < 1$, *ns*) nor the predicted interaction between the manipulations (F (1, 101) = 1.9, *ns*) were significant for negative affect. The level of job stress yielded no significant main or interaction effects in a hierarchical regression of negative affect ($-.01 < \beta < .04$, *ns*).

Negative feelings for oneself. Analysis of variance indicated that the direction of social comparison and the induced attribution had no effects on the extent to which the subjects felt unpleasant and discouraged as a result of the social comparison ($F < 1.8$, *ns*).

Negative feelings for the target. With regard to negative feelings for the target, similar tests for significance were carried out as for positive feelings for the target. As can be

seen in Table 4.2, the target's success in upward comparison was more begrudged when attribution to ability was induced than when attribution to effort was induced (t (29.7) = 2.1, $p < .05$)[7]. In downward comparison, the target was pitied more when her failure was attributable to low ability than when it was attributable to low effort (t (50) = 2.8, $p < .01$). Apparently, an upward target's success was more resented when it was accomplished by special talent, luck, or favorable circumstances than when it was gained through significant effort. Similarly, a downward target's failure was pitied only when she could not improve her performance by trying harder.

Finally, general negative affect following upward comparison was regressed on negative feelings for oneself and negative feelings (resentment) for the target. This regression was significant (R^2 = .24; F (2, 50) = 7.8, $p < .01$), with a significant contribution of negative affect for oneself (β = .49, $p < .001$), but not of negative affect for the target (β = -.04, *ns*). For downward comparison, this regression of negative affect on negative feelings for oneself (β = .19, *ns*) and negative feelings (pity) for the target (β = .03, *ns*) was not significant (R^2 = .04; F (2, 48) = .9, *ns*).

Discussion

The present study examined the effects of job stress and attribution of the target's performance on the affective responses to social comparison among female secretaries. The subjects received a questionnaire in which they were presented with a fictitious interview with another secretary. This interview contained upward or downward social comparison information, in which the target's performance was attributed to her effort or to her ability. It was hypothesized that, especially among subjects high in job stress, upward comparison would generate more positive affect than downward comparison when the target's performance was attributed to effort, whereas downward comparison would generate more positive affect than upward comparison when attribution to ability was induced. Largely in line with the prediction, when attribution to effort was induced, upward comparison generated more positive affect than downward comparison. After induction of attribution to ability, upward and downward comparison were similar in the extent to which positive affect was experienced. These findings were independent of the level of job stress, and held for both a general positive affect measure (checklist), and more strongly for an explicit measure of the positive implications of social comparison for oneself. Moreover, in upward comparison, general positive affect was more related to positive feelings for oneself than to

[7] This t-test was done with separate variance estimates because variances differed significantly between conditions.

empathic joy for the target. This suggests that social comparison with an upward target who acquired her superior position by effort may be inspiring because subjects find themselves capable of attaining a similar position. After downward comparison, variations in general positive affect were largely unrelated to positive feelings for oneself or to malicious pleasure about the downward target's failure.

It was predicted that upward comparison would generate more negative affect than downward comparison, and more so when attribution to ability was induced than when attribution to effort was induced. However, the occurrence of general negative affect after social comparison was only slightly affected by the nature of the social comparison information. Contrary to the prediction, downward comparison generated somewhat more negative affect than upward comparison. In upward comparison, the small amount of general negative affect was clearly related to negative implications for oneself, i.e., to feeling inferior, and unrelated to hostile feelings for the target. In downward comparison, experiencing negative affect was unrelated both to negative feelings for oneself, and to pity for the target. Therefore, it must be concluded that the nature of the affective responses to downward comparison is not completely clear in the present study. Nevertheless, an upward target's success was resented more, and a downward target's failure was pitied more when attribution to ability was induced than when attribution to effort was induced. Seemingly, when a target's success or failure was unrelated to her effort, subjects regarded her status as rather inappropriate.

The present study is in line with recent perspectives on the affective responses to social comparison (e.g., Major et al, 1991) and with the previous chapters of the present dissertation, which emphasize the emotional benefits of upward comparison. Especially when positions on the comparison dimension are controllable, upward comparison generates more positive affect than downward comparison. These recent perspectives are not compatible with Wills's (1981) downward comparison theory. However, the secretaries in the present study experienced surprisingly little job stress (*cf.* Peeters et al., 1992), which could partly explain the lack of evidence for Wills's theory, and for the unsupported prediction that downward comparison would generate more positive affect than upward comparison when relative positions reflected stable differences in ability. Indeed, these subjects would have had little need for enhancing their well-being by comparing downward. Still, Wills's theory could not explain why downward comparison generated somewhat more negative affect than upward comparison.

It must be noted that when attribution to ability was induced, subjects did not entirely ascribe the target's performances to her ability. Especially when a target was successful despite her lack of effort, subjects primarily attributed her success to luck and favorable circumstances. Although this was anticipated, and both luck and working conditions were assumed – like ability – to be regarded as uncontrollable attributional

dimensions, the predictions were not confirmed. Downward comparison would generate more positive and less negative affect than upward comparison when attribution to luck and job circumstances was salient. However, it was found that in this case, upward and downward comparison generated an equal amount of positive and negative affect. Fortune and job circumstances may have been considered as subject to uncontrollable changes, which would make downward comparison at least as threatening as upward comparison. Indeed, a downward comparison target may then represent a possible future self (*cf.* Markus & Nurius, 1986; Wills, 1991).

In conclusion, the findings suggest that the secretaries in the present study benefitted most from social comparison information about a colleague whose performances were superior as a result of her effort. Such an upward comparison on a controllable comparison dimension may have resulted in positive affect because it presented the subjects with an attainable positive model. Indeed, positive affect following upward comparison seemed to result primarily from encouragement for oneself. Although subjects empathized with the target to some extent, this played an insignificant role in determining whether positive affect or negative affect was experienced.

Chapter 5[1]

Affective Responses to Social Comparison of Academic Performance

In their daily contacts with others, in watching television, and in reading newspapers and periodicals, people are often confronted with large amounts of information about similar others. Especially when people feel uncertain about their abilities, opinions, or emotions, and when they experience a threat to their well-being, social comparison information may have major effects on how people feel and evaluate themselves (Festinger, 1954; Schachter, 1959; Wills, 1981). In general, social comparison with others worse off – downward comparison – is supposed to generate positive feelings (Hakmiller, 1966; Taylor et al., 1990; Wills, 1981; Wood et al., 1985), whereas social comparison with others better off – upward comparison – would generate negative feelings (Morse & Gergen, 1970; Salovey & Rodin, 1984).

More recent research and theory suggest that the positive effects of downward comparison and the negative effects of upward comparison are especially found when people are under some kind of stress. Wills (1981) argued in an influential article that, particularly when experiencing a threat to self-esteem, people are motivated to compare themselves downward to enhance their subjective well-being. Several studies by Gibbons and his colleagues (Gibbons, 1986; Gibbons & Gerrard, 1989; Gibbons & Boney-McCoy, 1991) were in line with Wills's downward comparison theory. For example, Gibbons and Boney-McCoy (1991) found that low self-esteem subjects who were threatened by negative feedback on a test experienced an improvement of affect after downward comparison on a second dimension. Downward comparison did not improve affect among high self-esteem subjects, nor among those who were not threatened.

However, downward comparison may also lead to negative affect among those under stress. When comparing downward, people may lose their initial good feelings about themselves when they empathize or identify with the inferior other (Brickman & Bulman, 1977). Indeed, Buunk et al. (1990) argued that although downward comparison may indicate relative superiority, it may also induce anxiety about a possible worse future. In their research, Buunk et al. found that both upward and downward comparison resulted in more negative affect among cancer patients as they

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[1] This chapter is based on Ybema, J.F., & Buunk, B.P. (under review). *Affective responses to social comparison of academic performance: The moderating effects of academic stress and attribution.* Manuscript submitted for publication.

were lower in self-esteem, and similarly among married individuals as they were higher in marital dissatisfaction. Molleman et al. (1986) examined social comparison processes among cancer patients, and found that interaction with fellow cancer patients who were worse off than the subject (downward comparison) generated more negative feelings than interaction with others who were better off than the subject (upward comparison).

A recent study by Aspinwall and Taylor (1993) illustrates that affect following social comparison does not merely depend on the comparison direction (Buunk et al., 1990). Aspinwall and Taylor studied the affective responses to social comparison of academic success among college students after a positive or a negative mood was induced. In line with Gibbons and Boney-McCoy (1991), they found that downward comparison increased positive mood for subjects low in self-esteem in whom a negative mood was induced. In addition, Aspinwall and Taylor (1993) found that academic threat influenced the affective responses to social comparison. Typically, among subjects low in self-esteem who recently had experienced an academic setback, downward comparison resulted in more hope, and less frustration and discouragement than upward comparison. For most subjects, however, upward comparison generated a higher positive mood, more hope, and less frustration than downward comparison. Indeed, although upward comparison may lead to feelings of inferiority, it may also be inspiring (Helgeson & Taylor, 1993), may encourage the perspective of a better future for oneself (Buunk et al., 1990), and may foster motives of self-improvement (Wood, 1989). Upward comparison may especially be motivating and inspiring, and nonthreatening when people think they can improve their position on the comparison dimension (Major et al., 1991; Testa & Major, 1990). Particularly for people under stress, upward comparison may on the one hand induce feelings of inferiority, and may on the other hand further inspiration and motivation by giving a positive model (*cf.* Bandura, 1982).

The Moderating Role of Attributions and Academic Stress

Buunk et al. (1990) demonstrated that the level of experienced stress can be important in determining the affective responses to social comparison. However, they did not untangle the factors that were responsible for the occurrence of positive and negative affect after social comparison among individuals under stress. As was argued in Chapter 4, the *attributions* which people make for the success and failure of a comparison other can function as important moderating variables (Goethals & Darley, 1977; Weiner, 1985, Wills, 1991). These attributions may — to a certain extent — determine whether the position on the comparison dimension is perceived as controllable. When an upward target's superior performance is attributed to his or her *effort*, the subject may expect to acquire the target's position when trying harder. Upward comparison may then be inspiring and lead to positive affect because it

presents individuals with a positive image of their own (present or future) functioning (*cf.* Major et al, 1991; Markus & Nurius, 1986; Taylor & Lobel, 1989). Although information about an inferior target indicates that one performs relatively well, it lacks the possible inspiring value of upward comparison.

When the target's performances in social comparison are attributed to his or her *ability*, however, the position of a superior target will be regarded as hardly attainable for the subject. Upward comparison will then generate little positive affect. Downward comparison that is attributed to the target's lack of ability may generate a more positive response, because it demonstrates that one's superior performance reflects a stable difference between the subject and the target. It is therefore predicted that upward comparison will generate more positive affect than downward comparison when attribution to effort is induced, whereas downward comparison will generate more positive affect than upward comparison when attribution to ability is induced.

In the present study, the affective responses to social comparison are examined in a sample of college students. Especially freshmen, who recently left their parents' home, may have trouble adjusting to college life. In addition, education at a university is quite different from education at a secondary school. This may generate relatively high levels of *academic stress*, including feelings of uncertainty and lack of control. The predictions on the positive affective responses to upward and downward comparison may be true especially for subjects high in academic stress, because possible improvement and relative superiority will be more important for these subjects than for subjects low in academic stress. Thus, a three-way interaction is predicted: Especially among subjects high in academic stress, upward comparison will generate more positive affect than downward comparison when attribution to effort is induced, whereas downward comparison will generate more positive affect than upward comparison when attribution to ability is induced.

As was argued in previous chapters, positive and negative affect are regarded as two separate, more or less independent dimensions, and not as the two ends of one bipolar dimension (Warr et al., 1983; Watson et al., 1988). The absence of positive affect not necessarily implies the presence of negative affect, and vice versa. Indeed, people may simultaneously experience negative affect (e.g., feeling inferior), and experience positive affect (e.g., feeling hope) as a result of social comparison, or may experience neither positive nor negative affect (i.e., be indifferent). Therefore, the predictions concerning negative affect following social comparison are not necessarily opposite to those of positive affect. Upward comparison is predicted to generate more negative affect than downward comparison in either attribution condition. Downward comparison is not likely to be threatening when either attribution to lack of ability or attribution to lack of effort is induced. As was argued in the discussion of Chapter 4, the possibility of deterioration of one's own performance to the downward target's

level would only be salient when relative positions on the comparison dimension are attributed to chance (bad luck) and to variable and uncontrollable circumstances. Upward comparison, on the other hand, may indicate inferiority that cannot easily be abolished in stressful situations. This will be true especially for upward comparison on a stable ability dimension. When the superior position of the target is attributed to effort, the possibility of improvement towards the superior target's position may console the subjects (*cf.* Testa & Major, 1990). Thus, it is predicted that upward comparison will generate more negative affect than downward comparison, and that this effect will be stronger when attribution to ability is induced than when attribution to effort is induced. Moreover, it is predicted that academic stress will result in more negative affect following social comparison, because people who experience strains are generally more sensitive to the negative information inherent in social comparison (Buunk et al., 1990).

Similarity and Attraction

A final issue in the present study concerns perceived similarity and attraction to the comparison target. As in Chapter 2 and Chapter 3, similarity and attraction are considered as aspects of identification with the target. Identification with a comparison target may lead to assumed similarity on the comparison dimension that underlies performance (Mettee & Smith, 1977). Although momentary performances differ, people who identify with a target may assume that they share the target's ability-level. For example, when subjects compare with an upward comparison target whose superior position is attained as a result of much effort, they may feel similar and attracted to the target, and view the target's ability-level as attainable for themselves. Upward comparison would then lead to positive affect. In this way, similarity and attraction with the target may mediate the affective responses to social comparison. However, the term similarity is used in a broad sense, and is not restricted to perceived similarity on the focal comparison dimension. Similarity may include perceived closeness to the target (Tesser, 1988), forming a unit or bond with the target (Heider, 1958; Miller et al., 1988), and being similar in personality (Wills, 1991).

Whom will the subject feel similar to? When people are under stress, they will generally perceive to be more similar to the downward targets and less similar to the upward targets. Particularly when attribution to *ability* is induced, subjects high in academic stress may feel similar to targets of low ability, because they recognize their own fruitless efforts in such an inferior performing target. The position of a highly able upward target, on the other hand, cannot be assimilated when academic stress is high. Such an upward target may represent an unattainable and discouraging standard of performance. However, when the position of a comparison target is attributed to his or her *effort*, subjects high in academic stress may feel similar to both an upward and

a downward target. Indeed, the position of someone who performs well because he or she is hard-working could be acquired through effort, even by subjects high in stress. Subjects under stress may also feel similar to downward targets whose inferior status is due to lack of effort. They may recognize their own lack of motivation in such a low performing target. With regard to attraction, people may generally feel attracted to those whom they perceive to be similar to (Byrne, 1971; Berscheid, 1985). Thus, it is predicted that subjects will feel more similar and attracted to the downward target and less to the upward target as they experience more stress, and that this pattern will be stronger when attribution to ability is induced than when attribution to effort is induced.

Overview

The aim of the present study is to clarify under what conditions upward comparison generates more positive or negative affect than downward comparison. Specifically, the possible moderating effects of academic stress and the attribution of the target's position to ability or effort are examined. It is predicted that upward comparison will generate more *positive affect* than downward comparison when attribution to effort is induced, whereas downward comparison will generate more positive affect than upward comparison when attribution to ability is induced. These effects of the direction of social comparison and attribution will be stronger as subjects experience more academic stress. With respect to *negative affect* it is predicted that upward comparison will generate more negative affect than downward comparison, and this effect will be stronger when attribution to ability is induced than when attribution to effort is induced. In addition, academic stress will result in more negative affect following social comparison. Finally, it is predicted that when attribution to ability is induced, subjects will feel more *similar* and *attracted* to the downward target than to the upward target as they experience more stress, whereas this pattern will be less pronounced, or even reversed, when attribution to effort is induced.

Method

Sample

The subjects were 187 students who were given a questionnaire after they did a final test for a freshman course in psychology or management science. The subjects were 28 female and 48 male students in management science and 76 female and 33 male students in psychology (missing values from two subjects). Sixty eight percent of the subjects were in their freshman year. Among the subjects a trip to Paris was raffled.

The Questionnaire

In the questionnaire, *academic stress* was measured[2]. This measure was constructed by the authors, and concerned a scale of 9 items with 5-point scales, coded in such a way that a high score corresponded to high stress and a low score to low stress (range: 1.0 to 4.6; $M = 2.28$, $SD = .60$; Cronbach's $\alpha = .81$). This measure consisted of both positive and negative statements about whether the subjects thought they would finish their study successfully, about whether they lacked control of their academic performance, and about whether they felt they studied in a right way.[3] To analyze the moderating effect of academic stress, subjects were divided into three groups based on their score on the academic stress measure, i.e., those low in stress (less than 2, $n = 52$), medium in stress (between 2 and 2.5, $n = 74$), and high in stress (more than 2.5, $n = 61$).

The second part of the questionnaire was the *experimental part* in which social comparison information was presented to the subjects. Each subject read a bogus interview that contained upward or downward comparison information about another freshman. A 2 × 2 × 3 design was employed with direction of comparison (downward or upward), attribution of the target's position on the comparison dimension (effort or ability), and academic stress (low, medium or high) as between-subjects factors. In the interview that contained downward comparison information, attributed to (lack of) effort, the target was quite negative about college, worked little and failed most tests as a result. In the interview that contained downward comparison information, attributed to (lack of) ability, the target tried very hard to get good results, but he did not succeed and failed most tests despite this effort. In the interview that contained upward comparison information, attributed to effort, the target was highly motivated and quite positive about college, worked very hard and performed well. In the interview that contained upward comparison information in which attribution to the target's ability was induced, the target only worked little, but succeeded in passing all exams with high marks. Subjects in the four experimental conditions differed not in academic stress ($F < 1$, *ns*).

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[2] This measure for academic stress was largely similar to the job stress measure in Chapter 4. In addition to academic stress, Rosenberg (1965) Self-Esteem was assessed in the first part of the questionnaire. As self-esteem did not moderate the affective responses to social comparison, its effects are not considered in this chapter.

[3] Academic stress concerned feelings of lack of control, pessimism, and uncertainty about study success. As a result, academic stress covaried with the position on the comparison dimension. Indeed, academic stress correlated highly with self-reports of academic performance, i.e., the proportion of freshman courses that were successfully completed, and the average grade (Multiple $R = .60$, $p < .001$). When these variables were partialled out, the effects of academic stress on the affective responses to social comparison were similar to those reported below.

Affect. After reading the social comparison information, the subjects were presented with a list of 45 adjectives that described possible feelings. Of these adjectives, 19 concerned positive affect, and 19 concerned negative affect[4]. The 7 remaining adjectives were not definitely positive or negative. The subjects were asked to indicate all adjectives that described feelings they felt that moment or had felt while reading the social comparison information. The adjectives were in part a translation of the Multi-Affect Adjective Checklist (Zuckerman, 1960; Zuckerman et al., 1964). The measures of positive and negative affect were respectively the number of indicated positive and negative adjectives. Positive and negative affect correlated slightly negatively ($r = -.22$, $p < .01$).[5]

Similarity and Attraction. Seven items followed the affect measures that concerned similarity and attraction to the target. These items were measured on 5-point scales ranging from 1 = *not at all* to 5 = *very much.* The first three items combined to a scale for *similarity* (range: 1.0 to 5.0; $M = 1.95$, $SD = .83$; Cronbach's $\alpha = .84$). These items were: "Can you recognize yourself in the person in this interview?", "Do you think you resemble this person?", and "Do you think you handle your study in a similar way as this person?". The next four items combined to a scale for *attraction* (range: 1.0 to 4.8; $M = 2.51$, $SD = .77$; Cronbach's $\alpha = .81$). These items were: "Do you feel sympathetic towards this person?", "Do you find this person likable?", "Would you like to meet this person?", and "Would you like to know more about this person?". Contrary to what was expected, similarity and attraction to the target correlated only slightly positively ($r = .23$, $p < .01$).

Manipulation checks. Finally, the extent to which the social comparison information was regarded as upward or downward, and the attributions of the target's position to effort and ability were assessed. The checks on the direction of social comparison were: "How do you think this person's last academic year was, compared to your own?", and "How do you think this person's academic performances were, compared

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[4] As in Chapter 4, the adjectives for *positive affect* were: grateful, hopeful, reassured, good-humored, content, relaxed, pleasant, proud, self-confident, encouraged, energetic, enthusiastic, inspired, calm, strengthened, comforted, optimistic, cheerful, relieved. The adjectives for *negative affect* were: angry, confused, depressed, discouraged, dissatisfied, uncertain, sad, worried, anxious, nervous, uneasy, offended, ashamed, tense, pessimistic, irritated, frustrated, aggressive, listless.

[5] In addition to these general affect measures, the extent to which the subjects felt pleasant or unpleasant for themselves and to which they felt empathic or hostile feelings for the target were assessed (see Chapter 4). The social comparison information and experienced stress had no effects on these affect measures, which are therefore ignored. In line with the findings of Chapter 4, internal analyses showed that general positive and negative affect were more associated with feelings for oneself than with empathic or hostile feelings for the target.

to your own?". These questions were assessed on 5-point scales ranging from 1 = *much worse than mine*, through 3 = *as well as mine*, to 5 = *much better than mine*. As a check on the manipulation of attribution, the subjects were asked to what extent the target's academic success or failure was due to this person's (lack of) effort, and to what extent this was due to his or her (lack of) ability. Both questions were measured on 5-point scales ranging from 1 = *not at all*, to 5 = *very much*.

Results

Manipulation Check

Inspection of Table 5.1 makes clear that the direction of social comparison had a highly significant effect on how the subjects regarded the target's last academic year (F (1, 178) = 388.7, $p < .001$), and the target's academic performances (F (1, 178) = 381.0, $p < .001$) in comparison to their own. After downward comparison, both the target's last academic year (t (95) = 18.3, $p < .001$), and the target's academic performances (t (94) = 14.6, $p < .001$) were rated as worse than one's own position (the midpoint of the scale: 3). In the upward comparison conditions, the target's last academic year (t (87) = 10.4, $p < .001$) and his performances (t (86) = 13.2, $p < .001$) were rated as better than one's own. Indeed, the subjects regarded the upward comparison target as better off, and the downward target as worse off than themselves. The manipulation of attribution yielded no significant main or interaction effects on these manipulation checks ($F < 1$, *ns*).

Table 5.1 *Manipulation Checks*

	Downward		Upward	
	coping success	social support	coping success	social support
Target's last academic year	1.5_a	1.5_a	4.0_b	4.0_b
Target's academic performance	1.7_a	1.7_a	4.2_b	4.1_b
Attribution to effort	1.9_a	3.5_c	2.9_b	4.3_d
Attribution to ability	3.0_{ab}	2.8_a	3.8_c	3.5_{bc}

Note: In each row, values not sharing a common subscript differ on a 5% level.

When attribution to effort was induced, the target's academic failure or success was attributed more to (lack of) effort (F (1, 180) = 146.6, $p < .001$) and less to (lack of) ability (F (1, 180) = 6.0, $p < .05$) than when attribution to ability was induced. Thus, the manipulation of attribution of the target's performance was successful as well. The direction of social comparison also strongly influenced the extent to which the performance of the target was attributed to effort (F (1, 180) = 50.3, $p < .001$) and to ability (F (1, 180) = 32.7, $p < .001$). In upward comparison, the target's performance was attributed more to effort and more to ability than in downward comparison (to *lack* of effort and ability). Apparently, subjects felt a higher need to justify the superior performance than to justify the inferior performance of a comparison target. This may reflect a higher concern for upward comparison than for downward comparison. There were no interactions between the manipulations on these checks (F < 1.2, *ns*). Thus, both manipulations were successful.

Effects of Social Comparison

Positive affect. A three-way interaction was predicted, such that especially among subjects high in academic stress, upward comparison would generate more positive affect than downward comparison when attribution to effort was induced, whereas downward comparison would generate more positive affect than upward comparison when attribution to ability was induced. An analysis of variance[6] indicated that no main or two-way interaction effects were significant (F < 1.3, *ns*). However, the predicted three-way interaction between the direction of social comparison, the induced attribution, and academic stress was significant (F (2, 173) = 5.8, $p < .01$). As can be seen in Figure 5.1, especially among subjects high in stress, positive responses to social comparison depended on the comparison direction and the induced attribution.

To further clarify this three-way interaction, separate analyses of variance were run for subjects low, medium and high in stress. The interaction between the comparison direction and attribution was significant, and in the predicted direction among subject high in stress (F (1, 57) = 9.3, $p < .01$). Among subjects medium in stress the interaction was not significant (F (1, 69) < 1, *ns*), and among those low in stress the interaction between the comparison direction and induced attribution was marginally significant, but opposite to the prediction (F (1, 47) = 3.6, $p < .10$). Indeed, only among those high in stress, upward comparison generated more positive affect

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[6] In addition to these analyses of variance, hierarchical regressions of positive affect, negative affect, similarity, and attraction were employed. In these regressions, main and interaction effects of the direction of social comparison, the induced attribution (dummy variables), and academic stress (continuous variable) were analyzed. The results of the analyses of variance, and those of the hierarchical regressions were highly similar. Because the analyses of variance are more readily interpretable, and because we expected effects primarily among subjects high in stress, the analyses of variance are reported.

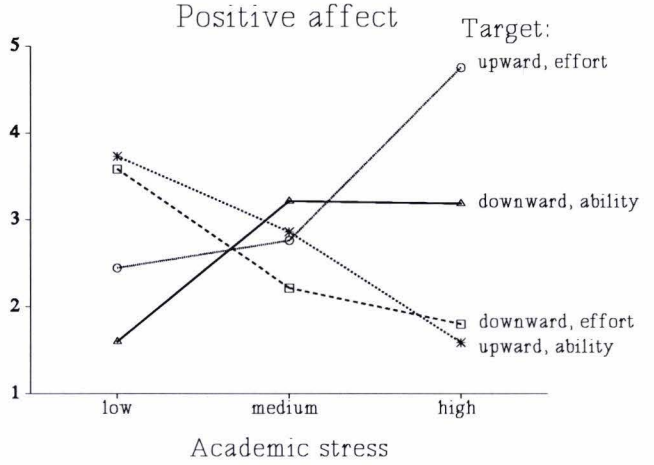

Figure 5.1 Average values of positive affect in conditions of upward and downward comparison with attribution to effort or to ability for subjects low, medium, and high in stress.

than downward comparison when attribution to effort was induced, whereas downward comparison generated more positive affect than upward comparison when attribution to ability was induced. Thus, subjects high in stress benefitted more from upward comparison than from downward comparison when the superior model's success was felt as attainable for themselves, whereas they reacted more positively to downward than to upward comparison when the performance of the other reflected a stable ability difference.

Negative affect. It was predicted that upward comparison would generate more negative affect than downward comparison. This effect would be more pronounced when attribution to ability was induced than when attribution to effort was induced. Moreover, social comparison would generate more negative affect as subjects were higher in academic stress. An analysis of variance yielded the predicted significant main effect of academic stress (F (2, 170) = 5.3, $p < .01$). Subjects high in stress experienced more negative affect (M = 2.1) following social comparison than subjects medium in stress (M = 1.1), or those low in stress (M = .6). No other main or interaction effects approached significance ($F < 1$, *ns*). Thus, the level of academic stress had a strong impact on negative affect after social comparison, but the nature of this comparison (i.e., direction and attribution) had no effects on experiencing negative affect.

Similarity. When the target's performance was attributed to ability, subjects were predicted to feel more similar to the downward target than to the upward target to the degree that more academic stress was experienced. This pattern would be less pronounced — or even reversed — when attribution to effort was induced. An analysis of variance yielded a significant main effect of the direction of social comparison (F (1, 169) = 6.2, $p < .05$), that was qualified by a two-way interaction between the direction of social comparison and academic stress (F (2, 169) = 8.8, $p < .001$). The predicted three-way interaction ($F < 1$, *ns*), and other effects of the induced attribution ($F < 2.2$, *ns*) were not significant. Figure 5.2 shows that as subjects experienced more academic stress, they felt more similar to the downward targets and less similar to the upward targets, regardless of the induced attribution of the target's performance.

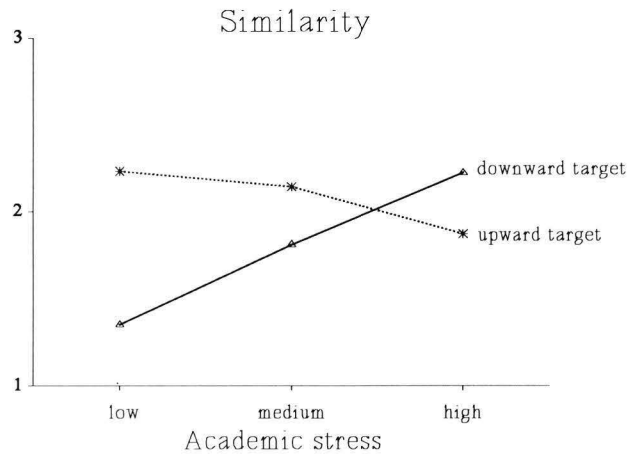

Figure 5.2 Average values of perceived similarity after upward and downward comparison for subjects low, medium, and high in stress.

Attraction. As for similarity, it was predicted that especially when differences in performance were attributed to ability, subjects would feel more attracted to the downward target than to the upward target to the degree that more academic stress was experienced. An analysis of variance yielded a significant main effect of the direction of social comparison (F (1, 169) = 5.3, $p < .05$). For attraction, this effect was qualified by a two-way interaction between the direction of social comparison and the induced attribution (F (1, 169) = 5.0, $p < .05$). Figure 5.3 indicates that subjects felt most attracted to the downward comparison target whose performance was due to low ability. The predicted three-way interaction ($F < 1$, *ns*), and other effects of academic

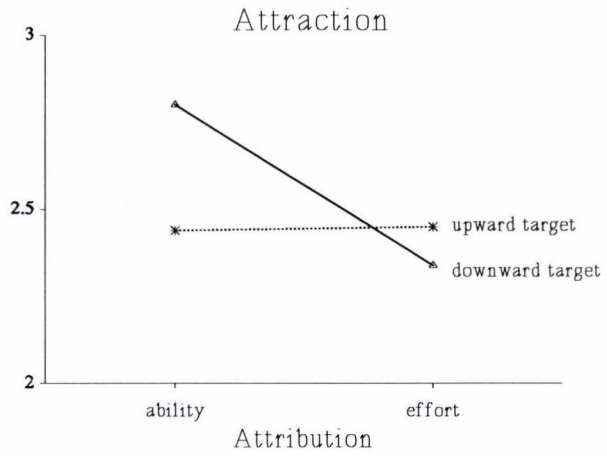

Figure 5.3 Average values of attraction to the target after upward and downward comparison with induced attribution to effort and ability.

stress ($F < 2.1$, *ns*) were not significant.

Effects of Similarity and Attraction on Affect

To examine how perceived similarity and attraction to the comparison target were related to positive and negative affect following social comparison, regressions of positive and negative affect on similarity, attraction, and academic stress were employed. Moreover, interactions between stress and similarity and between stress and attraction were tested. These regressions were carried out for downward and upward comparison of ability and effort separately.

Positive affect. The regression of positive affect on academic stress, perceived similarity and attraction to the target was not significant for downward comparison that was attributed to ability or effort ($F < 1$, *ns*), nor for upward comparison that was attributed to ability (F (3, 40) = 2.3, *ns*). Besides, there were no significant interaction effects in these conditions ($F < 1.9$, *ns*). However, for upward comparison that was attributed to effort, the regression of affect on academic stress ($\beta = .31$, $p < .10$), similarity ($\beta = .38$, $p < .05$) and attraction ($\beta = -.02$, *ns*), was significant ($R^2 = .19$, F (3, 38) = 3.1, $p < .05$). Entering the interaction effects between stress and similarity ($\beta = .28$, $p < .10$), and between stress and attraction ($\beta = -.25$, $p < .10$) yielded a significant increase in explained variance ($R^2_{Ch} = .14$, F (3, 36) = 3.7, $p < .05$). Especially subjects high in stress who perceived to be rather similar to the target but

did not feel particularly attracted to this individual experienced positive affect following social comparison with a superior person who attained this position as a result of his or her effort.

Negative affect. The regression of negative affect on academic stress, perceived similarity and attraction to the target was not significant for downward comparison that was attributed to effort ($F < 1$, *ns*). However, this regression was significant for downward comparison that was attributed to ability ($R^2 = .26$, $F\ (3, 45) = 5.4$, $p < .01$), upward comparison that was attributed to ability ($R^2 = .20$, $F\ (3, 40) = 3.4$, $p < .05$), and upward comparison that was attributed to effort ($R^2 = .21$, $F\ (3, 38) = 3.4$, $p < .05$). In all three significant regressions, academic stress uniquely contributed to negative affect ($.29 < \beta < .49$, $p < .05$). Similarity had an additional effect on negative affect following downward comparison when the target's performances were attributed to his or her low ability ($\beta = .28$, $p < .10$). Moreover, entering the interaction effects between stress and similarity ($\beta = .51$, $p < .01$) and between stress and attraction ($\beta = .08$, *ns*) yielded a highly significant increment of explained variance among subjects comparing downward with a target low in ability ($R^2_{Ch} = .27$, $F\ (2, 43) = 12.8$, $p < .001$). Indeed, subjects experienced a considerable amount of negative affect when they were high in stress and felt similar to a downward comparison target that could not improve his or her position by effort. Attraction to the target had no significant effect on negative affect in any of these regressions ($-.19 < \beta < .13$, *ns*), nor were there any other significant interactions ($F < 1.3$, *ns*).

Discussion

The present study examined the effects of academic stress and attribution of the target's performance on the affective responses to social comparison. The subjects received a questionnaire in which they were presented with a fictitious interview with a fellow student. This interview contained upward or downward social comparison information, in which performance was attributed to the target's effort or to the target's ability. It was hypothesized that, especially for subjects high in stress, upward comparison would generate more positive affect than downward comparison when the target's performance was attributed to effort, whereas downward comparison would generate more positive affect than upward comparison when attribution to ability was induced. The results supported this prediction. This suggests that especially for subjects under stress, social comparison with an upward target who acquired his or her superior position by effort may be inspiring because they find themselves capable of attaining a similar position. On the other hand, social comparison with an upward target who

acquired this superior position without much effort may reduce positive feelings relative to downward comparison because subjects under stress are unable to assimilate such a performance. Indeed, among subjects high in academic stress, downward comparison generated more positive affect than upward comparison when the difference in performance between the subject and the target represented a stable difference in ability.

It was predicted that upward comparison would generate more negative affect than downward comparison, and more so when attribution to ability was induced than when attribution to effort was induced. However, the occurrence of negative affect after social comparison was only affected by the level of academic stress, and not by the nature of the social comparison information. This could be interpreted as supportive evidence for the hypothesis that people under stress are more sensitive to the negative information in social comparison, regardless of its direction (Buunk et al., 1990). Reversely, it could be argued that it demonstrates that individuals focus more on their own experienced stress as a result of social comparison. However, the measures of affect were not explicitly attached to the social comparison information. Therefore, the finding can also be interpreted as merely evidence for the fact that people under stress generally experience more negative affect.

With regard to similarity to the comparison target, it was found that subjects felt more similar to the upward target as they experienced less academic stress, and felt more similar to the downward targets as they experienced more academic stress. As subjects experienced more stress, they actually were more similar to (one of) the downward targets and less similar to the upward targets (see footnote 3). Results on attraction diverged from those on similarity. Subjects felt most attracted to the downward comparison target who was low in ability. This indicates that attraction as measured in the present study primarily tapped empathic feelings for the target. Indeed, the description of someone who performed badly as a result of poor ability was the most pitiful of the targets. However, subjects under stress were also predicted to feel similar and attracted to the upward target when attribution to effort was induced. A mediation effect of similarity or attraction — as was found in Chapter 3 — would only be possible when academic stress and similarity or attraction to this upward target were positively associated (Baron & Kenny, 1986). No such effect was found in the current study, which means that similarity and attraction cannot explain why upward comparison that was attributed to effort generated positive affect for subjects high in stress.

The preceding argument does not imply that similarity was unrelated to the affective responses to social comparison. In combination with the level of academic stress, perceived similarity contributed to positive affect following upward comparison that was attributed to effort. Most positive affect was experienced by subjects who

were both high in academic stress and felt similar to the upward target whose position was attributed to his or her effort. Particularly for these subjects, the target represented a motivating and encouraging positive model. With regard to downward comparison, on the other hand, perceived similarity to the target of low ability enhanced negative affect among those high in stress. Recognizing oneself in a person who fails despite his or her substantial effort is discouraging, probably because one cannot escape such a miserable future lot oneself. Attraction to the target was generally unrelated to positive and negative affect following social comparison. When upward comparison was attributed to effort, attraction to such a superior target even *decreased* positive affect among subjects high in stress. Apparently, empathic feelings were largely unrelated to the affective responses to social comparison. It can be concluded that, although it did not mediate the effects of academic stress that were found in this study, perceived similarity to the target may be an important factor in determining the affective responses to social comparison.

There remains an issue of mediation: What process may explain the effects of attribution and academic stress on the positive affective responses to social comparison? Maybe, these responses were not so much mediated by attraction and person similarity, but more by assumed (present or future) similarity on the underlying ability dimension (Mettee & Smith, 1977). When people assume that they share the target's ability-level, a superior target may represent a *possible self* (Markus & Nurius, 1986), and may set expectations about their own future performances. The present study suggests that induced attributions of the target's performances may influence the level of perceived control of obtaining the target's position in the future (Major et al, 1991). Such perceived control seems to be a major determinant of whether an upward or a downward target represents a possible future self, which may be crucial in the interpretation of social comparison information and the ensuing affective reactions.

The present study is theoretically quite important, because it suggests that people under stress benefit most from upward comparisons on a controllable dimension (*cf.* Major et al, 1991). These results are in line with recent studies that showed that *choices* for social comparison on controllable dimensions are more upward as more stress is experienced, especially when social comparison can be informative for improving oneself (Buunk, in press; Ybema & Buunk, 1993a). Moreover, these results correspond to the perspective of Taylor and Lobel (1989) and Bandura (1982) who have emphasized the value of upward comparison for problem-directed coping. The results of the present study qualify Wills's (1981) downward comparison theory. Indeed, only when differences in performance reflected stable differences in ability, subjects high in stress responded more positively to downward comparison than to upward comparison (*cf.* Testa & Major, 1990). When these differences could be offset by effort, upward comparison generated more positive reactions than downward

comparison among those high in academic stress.

It is notable that the present study was successful in presenting the subjects with comparison information that was regarded as truly upward and downward. Several studies using a comparable paradigm encountered problems with this manipulation. Especially upward comparison on a controllable dimension (e.g., coping with problems) is often regarded as a lateral comparison by the subjects (*cf.* Buunk, in press; Devellis et al., 1991; Taylor et al., 1993). Moreover, the present study was more successful in inducing attributions to effort and ability than the study among secretaries in Chapter 4. However, subjects attributed the target's performance more to effort and more to ability when comparing upward than when comparing downward. This may reflect a higher interest in upward comparison than in downward comparison (*cf.* Ybema & Buunk, 1993a). In addition, the difference may originate from differences in wording the question: In upward comparison the subjects were asked to what extent the target's high performance was due to effort and ability, whereas in downward comparison they were asked to what extent the target's low performance was due to *lack* of effort and to *lack* of ability. Maybe the subjects in this study hesitated to conclude that the other lacked ability or effort because they did not feel entitled to criticize the comparison target. Finally, it cannot be concluded whether social comparison increased or decreased positive mood in the present study. Indeed, neither a pre-comparison mood measure nor a control condition were included in the design. Thus, the affective responses to social comparison cannot be compared to a baseline of positive affect, but only the effects of upward versus downward comparison can be considered.

To summarize, subjects under academic stress benefitted most from social comparison information about a fellow student whose academic performance was superior as a result of his or her effort. Observing such a superior performing peer presents people under stress with a model whose behavior can be copied in order to attain a similar position (Bandura, 1982). This present study highlights the possible merits of upward comparison, not so much for actual improvement of performance, but rather for its effects on mood. Indeed, this research shows that immediate positive mood may result from upward comparison when relative positions on the comparison dimension are deemed controllable.

Chapter 6

General Discussion

The introductory chapter started with a brief description of a college student, Mark, and his fellow students, Peter, who performed better, and John, who performed worse in college than Mark. The previous chapters dealt with the question whether Mark would respond with more positive affect when confronted with information about Peter or when confronted with information about John. Especially Chapter 5 suggests that when Mark experiences considerable academic stress but perceives his relative performance as controllable, he is more likely to respond positively to information about Peter than to information about John. This conclusion is opposite to what most social comparison literature suggests, i.e., that upward comparison generates negative affect and downward comparison generates positive affect (e.g., Morse & Gergen, 1970; Salovey & Rodin, 1984; Wills, 1981).

Summary of the Present Findings

The central thesis in this research was that the affective responses to social comparison would be more positive when information about an upward target rather than about a downward target was given. This advantage of upward over downward comparison would be contingent on the level of experienced stress, the level of perceived control, and the level of identification with the comparison target.

To briefly summarize the results: In Chapter 2 it was found that social comparison among individuals who had recently lost their jobs generated more positive affect and less negative affect when the target was successful than when he was unsuccessful in coping or in gaining social support. These effects were especially strong among subjects who identified with the target. Social comparison with a successful target generated most positive affect and most identification among subjects who regarded the social comparison as a lateral comparison. This general finding was qualified in Chapter 3, which showed that upward comparison generated more positive affect than downward comparison among disabled individuals high in perceived control. Downward comparison generated more negative affect than upward comparison, regardless of the level of perceived control. As subjects were higher in perceived control, they identified more with the upward target, and the effect of perceived control on positive affect following upward comparison appeared to be mediated by identification with the upward target. A different way of studying the effects of perceived control was applied in a study among secretaries in Chapter 4. Here, perceived control was manipulated by inducing attributions of the target's

performance to effort or to ability. The results indicated that subjects who regarded relative performances as controllable by effort experienced more positive affect following upward comparison than following downward comparison. Moreover, the affective responses to upward comparison were more related to feeling good or bad about oneself than to empathic or hostile feelings for the comparison target. The findings in the study among college students in Chapter 5 were even stronger. Subjects high in academic stress derived more positive affect from upward comparison than from downward comparison when the target's academic performance was attributed to effort, whereas they gained more positive affect from downward comparison than from upward comparison when the target's academic performance was attributed to ability.

Experienced Stress

The present research shows that a high initial level of experienced stress may enhance the affective responses to social comparison. This effect of stress is demonstrated both by differences *between* studies and by the effect of academic stress *within* the study among college students. The four studies in this dissertation differ greatly with regard to the *populations* under study. The studies among individuals who had recently lost their jobs (Chapter 2), and among disabled individuals (Chapter 3) concerned populations that were under considerable stress. In these studies, the effects of social comparison were quite strong and were in line with the general thesis that upward comparison generates more positive and less negative affect than downward comparison. The secretaries in Chapter 4, and the college students in Chapter 5 were drawn from populations in which relatively little stress was experienced. As a result, the effects of social comparison were generally much weaker than in the first two studies.

With regard to the level of experienced stress *within* studies, only in the study among college students (Chapter 5) an effect of experienced stress was found. In this study, three subgroups that differed in academic stress could be distinguished. In line with the predictions, it was found that only subjects high in academic stress reacted more positively to upward than to downward comparison when attribution to effort was induced, whereas they reacted more positively to downward than to upward comparison when attribution to ability was induced. Thus, only college students high in academic stress seemed to be motivated to benefit from social comparison in terms of enhancing and improving themselves. In the other studies in which the level of experienced stress was assessed, i.e., among individuals who lost their jobs (Chapter 2), and among secretaries (Chapter 4), no moderating effects of the level of experienced stress were found. It is not evident why experienced stress did not influence the affective responses in these studies. However, in the study among individuals who lost their jobs, the level of experienced stress may not have been adequately measured. Experienced stress concerned a measure for general well-being, i.e., the general health questionnaire

(Goldberg, 1972). This measure may have been too general and too much focused on stress-reactions instead of on the appraisal of the situation. In the studies among secretaries (Chapter 4) and among college students (Chapter 5), the employed measures of stress did involve the extent to which the situation was appraised as stressful. However, none of the secretaries in Chapter 4 experienced major job stress. The resulting restricted range of stress may explain why the affective responses to social comparison were independent of job stress in this study. In the study among disabled individuals (Chapter 3), effects of experienced stress were *not* considered. Instead, individual differences in perceived control were assessed. However, experienced stress and perceived control would have been reversely related, because some of the items of the stress measure in Chapter 4 and Chapter 5 closely resembled items for perceived control in Chapter 3. Indeed, in addition to the moderating role of perceived control that is described below, lack of control can be regarded as a stressor.

In conclusion, especially among people who experience a considerable amount of stress, social comparison seems to have a strong impact on well-being. As the level of experienced stress is higher, motives for social comparison – especially to enhance and to improve oneself – appear to be more salient. Thus, people high in stress may be more interested in information about others, and as a result be more affected by social comparison than people low in stress.

Perceived Control

The most consistent finding in the present studies was that upward comparison generated more positive affect than downward comparison when subjects regarded their position on the comparison dimension as controllable. Several ways of assessing the moderating role of perceived control on the affective responses to social comparison were used in the present research. In the first place, *individual differences* in perceptions of situational perceived control were measured among the disabled in Chapter 3. The extent to which disabled individuals felt they could influence their health problems, and could cope with their disability were measured. This measure of perceived control moderated the affective responses to social comparison. Only disabled individuals who were high in perceived control reacted more positively to upward comparison than to downward comparison. Secondly, in all studies, the level of perceived control was manipulated by varying the *comparison dimension* or the induced *attribution* between subjects. Varying the comparison dimension only had marginal effects on the affective responses to social comparison, and did not clearly influence the level of perceived control. Inducing attributions to ability or effort was evidently more successful in moderating affect following social comparison. Nevertheless, these two manipulations are somewhat related. Inducing the comparison dimension of coping success is rather similar to inducing attribution to effort on a more

general health or well-being dimension. Problem severity and social support were meant as uncontrollable, but variable dimensions. Relative positions on these dimensions would be attributed to chance or to uncontrollable and variable circumstances. In this respect, the study among secretaries (Chapter 4) may be regarded as an intermediate study. Induction of attribution to ability did not definitely affect the extent to which the target's performance was attributed to her ability, but rather the extent to which it was attributed to luck or to her job circumstances. Only in the study among college students (Chapter 5), attribution to a stable ability dimension was established beyond doubt.

Inducing attributions of the comparison target's performance may influence perceived control of one's own position on the comparison dimension in at least two ways. In the first place, inducing attribution of the target's success or failure to his or her effort may highlight the controllable effort-aspect of one's own performances, whereas inducing attribution to the target's ability may make the uncontrollable ability-aspect of one's own performances salient. Secondly, a kind of vicarious control (Bandura, 1982) may play a role. Subjects may reason that when the target can control his or her performance by effort, they can do this themselves as well. This process of vicarious control implies that subjects infer that they share the target's ability-level when attribution to effort is induced. Only when similarity in ability is assumed, reasoning that one could obtain the upward target's position by similar effort would seem valid. These two processes are largely similar and probably work together in promoting perceived control of one's position on the comparison dimension.

In conclusion, when perceived control of one's position on the comparison dimension is high, upward comparison generates more positive affect than downward comparison. This suggests that upward comparison may foster expectations for future success when people feel they can control their position. Indeed, an upward comparison target may then represent a positive image of one's own future performances. This merit of upward comparison is largely absent when relative positions are considered as stable or uncontrollable. When subjects perceive their positions on the comparison dimension as stable, downward comparison may generate more positive affect than upward comparison. Downward comparison may then boost well-being, because it indicates superiority, not only in present but also in future. When relative positions on the comparison dimension are variable, downward comparison may be threatening. Especially when perceived control is low, a downward target's position may be regarded as a possible future fate for oneself. When perceived control is high, a downward comparison shows that one is presently superior, but – assuming that the target could also control his or her position – one's relative advantage would only be regarded as a temporary gap that is easily bridged by the target. Only when differences on the comparison dimension are invariant, a downward comparison does not imply

a possible worse future, nor a difference that the target can easily master.

Identification

In the present research, identification with the target was assessed by measuring perceived similarity and attraction to the comparison target. These two concepts converged in the studies among individuals who lost their jobs (Chapter 2) and among disabled individuals (Chapter 3), and were called identification with the target. Among the college students (Chapter 5), perceived similarity and attraction diverged, and were dealt with separately. In Chapter 3, it was found that identification *mediated* the effects of individual differences in perceived control on the positive affective responses to upward social comparison. Disabled individuals who were high in perceived control derived positive affect from upward comparison as a result of heightened identification with the superior target. Moreover, especially in the study among people who lost their jobs (Chapter 2), identification *moderated* the affective responses to social comparison. Social comparison with a successful target generated much more positive affect and much less negative affect than downward comparison among subjects who identified with the comparison target, but not among those who did not identify with the target. Similar moderating effects were found in the study among college students (Chapter 5).

In conclusion, especially when identification with the target is high, upward comparison generates more positive affect and less negative affect than downward comparison. It was argued in the introduction that subjects who identified with the comparison target would perceive the position of the target as a *possible future* position for themselves (Markus & Nurius, 1986; Mettee & Smith, 1977; Wills, 1991), which would generate negative affect following downward comparison, and positive affect following upward comparison. However, a different interpretation might be that identification does not promote expectations and feelings for oneself, but rather promotes *empathic feelings* for the target. Indeed, the study among college students (Chapter 5) suggests that attraction to the target is primarily motivated by empathy for the comparison target. Perceived similarity to the target, on the other hand, seems more related to a possible future for oneself. In Chapter 5, similarity was related to the affective responses to social comparison, whereas attraction was not. This indicates that subjects are more influenced by possible implications of the social comparison for their own position than by empathic considerations. This reasoning is further supported by additional analyses in Chapter 4, which indicate that the affective responses to upward comparison are mostly due to implications of the comparison information for oneself. Although empathic and hostile feelings for the targets were experienced to some extent, these feelings were largely unrelated to general mood.

Still, other interpretations of the way identification influenced the affective

responses to social comparison are possible. Identification with the target may have enhanced *relevance* of the social comparison (Major et al., 1991; Miller et al., 1988; Tesser, 1988). Identification would then merely augment the effects of social comparison, and not qualify them. However, according to this perspective, downward comparison of ability in Chapter 5 should have generated more *positive affect* as subjects perceived to be more similar to the target (*cf.* Gibbons & Boney-McCoy, 1991), whereas it was found that it generated more *negative affect*. Furthermore, it could be argued that a third variable, i.e., one's own perceived *position* on the comparison dimension, caused the observed effects. Subjects who identified with a downward target would generally have a lower position on the comparison dimension than those who did not identify with a downward target. It may have been this inferior position which caused the negative affect, and not the social comparison. Similarly, both positive affect and identification with an upward target may have resulted from one's own superior position on the comparison dimension. However, against this interpretation it can be argued that effects of identification on the affective responses to social comparison were largely independent of the level of experienced stress, which may be regarded as an indicator of one's own position on the comparison dimension (see Chapter 2 and Chapter 5). It can therefore be concluded that the original interpretation best fits the results. Identification with a comparison target brings about feelings of future similarity, and sets expectations for one's own future performance or position. In the present research no measure of expectations for future success or failure were included to validate this reasoning. Additional research is needed to further clarify the role of such expectations in determining the affective responses to social comparison.

The Present Paradigm

The paradigm that was used in the present research has both potential strengths and weaknesses. In this paradigm, subjects were only presented with social comparison information about a successful or an unsuccessful target (*cf.* Gibbons & Gerrard, 1989). In contrast, in most other paradigms both the subject's and the target's position are explicitly given (e.g., Tesser et al., 1988). This leads subjects to contrast their own position to the target's position. The major advantage of the present paradigm is that such contrast was not induced: subjects could more or less freely emphasize similarities and differences to the target. This procedure has more ecological validity than presenting subjects explicitly with their own relative position. However, the reverse side of the medal is that the position of the target relative to one's own position was not firmly established, but depended on (biases in) the perception of these positions. Indeed, subjects did not always regard information about an upward target as a truly upward comparison. Especially in the study among individuals who lost their jobs

(Chapter 2), and – to a lesser extent – in the study among disabled individuals (Chapter 3), such information about a successful target was generally regarded as a lateral comparison. However, this limitation of the present research seems to be of minor importance, because such assimilation of an upward target reflects an active, self-enhancing social comparison process which is also evident in real life.

A second limitation of the present studies is that no pre-comparison mood measure or control-condition was included in the design. Only a post-comparison measure for affect was assessed. Therefore, no increase or decrease in positive or negative mood can be observed, but solely the effects of upward versus downward comparison can be considered. Future research should preferably provide a baseline for affect. When including a control-condition in the design, subjects could either be presented with neutral (non-comparison) information, or with no information at all. A pilot study among secretaries showed that when no information was given, the affect measure was regarded as a measure of strain or general positive affect. After being presented with comparison information, however, subjects regarded the affect measure as meant for a reaction on the comparison information. As a result, in the control-condition much more positive affect was reported than in the experimental conditions. This could not be interpreted as a negative effect of social comparison, but merely as an effect of differences in interpretation of the affect measure between the control-condition and the experimental condition. Providing subjects with 'neutral', non-comparison information to assess a baseline for affect raises the question what kind of information should be given. Presenting subjects with boring statistics may depress positive mood, and reading an interesting anecdote may elevate it. It must be concluded that a control-condition cannot be added to the design without considerable pretesting to determine how the dependent measures are interpreted in such a control-condition. A better way to assess a baseline for affect may be to use a pre-comparison mood measure. Such a repeated measures design gives specific information on the mood-change of each subject. However, this method may also have some problems. Indeed, asking the subjects to fill out a checklist for affect twice may lead to irritation, and may focus the subjects too much on such affective responses. Moreover, they may feel motivated to answer the two measures similarly, in order to appear consistent.

Theoretical Implications

Social comparison may present subjects with different kinds of information (Buunk et al., 1990). Two pieces of information seem most important. In the first place, social comparison indicates what relative position one *momentarily* occupies. Focussing on this aspect would generate an affective response that would be discordant to the target's response. Secondly, social comparison shows what *future* positions may be possible for oneself, which would lead to a concordant affective response. The present

dissertation shows that in general such a concordant response to social comparison dominates.

How do the present results relate to the various models of social comparison which were presented in the introduction? In the first place, the findings largely contradict Wills's (1981) downward comparison theory. Wills stated that people who experience a decrease in well-being would restore their well-being by comparing downward. The findings in the present research even go well beyond his revised version of downward comparison theory (Wills, 1991) which suggests that people under stress will in general try to find a balance between upward and downward comparison. According to Wills, people could then benefit from the valuable information provided by upward comparison, and alleviate negative affect by engaging in downward comparison. In contrast, the present research showed that for subjects under stress, upward comparison was more beneficial and less harmful for well-being than downward comparison, and especially so when these subjects perceived control of their position on the comparison dimension. Only when stable features were compared, downward comparison generated more positive affect than upward comparison. This finding qualifies Wills's downward comparison theory: the emotional benefits of obtaining information about worse off others seem restricted to situations in which relative positions on the comparison dimension are regarded as fixed. A downward comparison may then console people under stress because it indicates that they are superior, both at present and in future. However, as such fixed positions on a comparison dimension are uncommon in real life, the relevance of Wills's theory is limited.

The present findings have less bearing on Gibbons's (e.g., Gibbons & Gerrard, 1991) expansion of Wills's downward comparison theory. Gibbons argued that only subjects who are chronically low in well-being (e.g., low self-esteem, depressed), and who in addition experience a temporary decrease in well-being (e.g., fail a test) benefit from available downward comparison information. Aspinwall and Taylor (1993) called this the *double whammy hypothesis*: Only among the most threatened subjects downward comparison increased positive mood. In the present studies among disabled individuals (Chapter 3), among secretaries (Chapter 4), and among college students (Chapter 5), trait self-esteem was measured. However, self-esteem did not moderate the affective responses to social comparison in these studies. One explanation for this may be that situational stress, as measured in the present research can hardly be regarded as a *temporary* decrease in well-being. Indeed, most of these individuals were in this stressful situation for a prolonged time. Moreover, as the present research was not designed to test this *double whammy hypothesis*, these studies lacked the power to detect possible divergent effects of downward comparison among those low in self-esteem who were particularly high in stress.

Another condition under which downward comparison may generate a more positive response than upward comparison was *not* examined in the present research. When relative positions on the comparison dimension are explicitly given, people may predominantly contrast their performances to those of others (Mettee & Smith, 1977; Ybema & Buunk, 1993b). A comparison target may then set a standard for one's own performance. In the present research, only the target's performance was described. The other's performance may then set expectations for one's own future success or failure. Such a procedure seems to be more in line with most social comparison activity in real life, which underscores the relevance of the present findings.

Nevertheless, downward comparison may have emotional benefits that were not considered in the present dissertation. Indeed, Taylor and Lobel's (1989) model not only states that people under stress seek information about and contact with upward others, but also that they selectively evaluate themselves downward. People may cognitively construct others who are worse off, or invent comparison dimensions on which they excel (Taylor, Wood & Lichtman, 1983). Such downward evaluation processes may result from self-serving biases in general knowledge about oneself and others rather than from the perception of specific individual targets. These self-serving biases may be quite beneficial for well-being (Taylor & Brown, 1988). In addition to downward comparison with imagined abstract targets, people may actively compare downward by distancing themselves from a prototype (Gibbons & Gerrard, 1991), or by derogating individuals (Wills, 1981). The present research did not examine the effects of such active forms of downward comparison, but exclusively focused on the affective responses to (passive) social comparison with presented individual targets (*cf.* Gibbons & Gerrard, 1989). Although the present research clearly demonstrated that the emotional value of passive downward comparison with available targets is highly limited, people under stress may benefit from active downward evaluation processes.

The present research is mostly in line with Major's model of the affective responses to social comparison. However, Major et al. (1991) did not consider the effects of upward comparison relative to downward comparison. They solely suggested that in conditions of high control, both upward and downward comparison would generate positive effect, and that in conditions of low control and possible deterioration, both upward and downward comparison would generate primarily negative affect. Only when positions on the comparison dimension were considered as stable, upward and downward comparison were predicted to diverge in outcomes. Downward comparison would then generate positive responses, and upward comparison would generate negative responses. Although the present dissertation is largely compatible with this model, it was both predicted and found that upward comparison generated more positive affect than downward comparison when perceived control was high. Downward comparison generated more negative affect than upward comparison,

regardless of the level of perceived control. Thus, the present research goes beyond Major's model in finding that the affective responses to upward comparison are more positive than the responses to downward comparison, unless relative positions on the comparison dimension are considered as stable.

Provided that the comparison dimensions were considered as self-relevant, the findings on the effects of identification were opposite to the theoretical perspective of Tesser (1988). Identification with the comparison target can be regarded as a measure of closeness to the target. Tesser's perspective suggests that upward comparison on a self-relevant dimension with a close target would generate more negative affect than upward comparison with a distant target (Tesser et al., 1988). In contrast, the present research clearly showed that upward comparison generated more positive affect than downward comparison, and especially so when people identified with the target. Even when the comparison dimension would not have been regarded as self-relevant, the results do not support Tesser's theory. According to Tesser, upward comparison on an irrelevant dimension would lead to positive affect as a result of basking in the reflected glory of the close other (*cf.* Cialdini & Richardson, 1980). However, in the present research, positive affect following upward comparison seemed primarily related to enhanced expectations about one's own future success, rather than to feelings about the target. This process seems quite different from Tesser's notion of basking. It should therefore be concluded that no evidence for Tesser's theory was found in the present research.

Practical Implications

What practical relevance do the present findings have? Although the main issues in the present research were theoretical, some practical inferences can be drawn. A main conclusion might be that people should not be confronted with non-requested downward comparison information. Especially when people may interpret such information as representing a future status for themselves, downward comparison information may be debilitating. Indeed, Taylor et al. (1993) have shown that cancer patients may feel highly threatened by stories about other patients who died, stories which were told quite often by relatives and friends. The present research would suggest that people under stress may benefit from stories about others who do better than they do themselves, and especially so when this appears to be due to the target's efforts. Such upward comparisons may foster hope and encouragement, and in addition provide people under stress with information that may be valuable for improving their coping (Bandura, 1982).

Conclusion

As was hypothesized, the present dissertation shows that social comparison generally

leads to more positive affect when people are presented with an *upward* target rather than with a *downward* target. This is especially the case when people are simultaneously high in experienced stress, high in perceived control, and high in identification with the target. This general conclusion is highly important because it is opposite to Wills's (1981) downward comparison theory, a major approach to social comparison under stress. The findings in this dissertation are largely compatible with Taylor and Lobel's (1989) model which suggests that upward comparison can satisfy emotional needs and can inspire people under stress. More specifically, this research is in line with Major's (1991) model which states that upward comparison generates primarily positive responses when relative positions are perceived as controllable. However, the present dissertation goes beyond both Taylor and Lobel's and Major's position in predicting and finding that upward comparison is *superior* to downward comparison in promoting well-being.

Samenvatting

In dit proefschrift worden de affectieve reacties op aangeboden sociale vergelijkingsinformatie bestudeerd. Hierbij gaat het om de gevoelens die worden ervaren wanneer mensen zien dat anderen beter presteren dan zijzelf — opwaartse vergelijking — of slechter presteren dan zijzelf — neerwaartse vergelijking. De centrale hypothese in deze dissertatie is dat informatie over een opwaartse vergelijkingsander tot meer positieve affectieve reacties leidt dan informatie over een neerwaartse vergelijkingsander. Deze hypothese is strijdig met de neerwaartse vergelijkingstheorie van Wills (1981). Wills stelde dat mensen die een bedreiging van het welbevinden ervaren, gemotiveerd zijn om zich neerwaarts te vergelijken om zodoende hun welbevinden te herstellen. De centrale hypothese is meer in overeenstemming met het model van Taylor en Lobel (1989) dat stelt dat mensen in stressvolle situaties informatie zoeken over superieure anderen om hun positie te verbeteren en dat dergelijke opwaartse vergelijking motiverend en inspirerend kan zijn. In het bijzonder is de hypothese in overeenstemming met het model van Major et al. (1991) dat aangeeft dat opwaartse vergelijking vooral positieve effecten heeft wanneer mensen hun positie als beheersbaar beschouwen. De centrale hypothese in de huidige dissertatie gaat echter verder dan deze modellen van Major en Taylor en Lobel in de predictie dat opwaartse vergelijking superieur is aan neerwaartse vergelijking in het verbeteren van het welbevinden.

In het huidige proefschrift zijn vier experimentele veldonderzoeken beschreven die de centrale hypothese toetsen. In deze onderzoeken is middels een vragenlijst de mate van ervaren stress of de mate van ervaren beheersbaarheid gemeten. Daarop volgde een experimenteel gedeelte dat bestond uit een gefingeerd interviewfragment met een vergelijkingsander die ofwel zeer goed presteerde ofwel zeer slecht presteerde. Volgend op deze sociale vergelijkingsinformatie is positief en negatief affect gemeten en is nagegaan in hoeverre respondenten zich met de ander identificeerden.

Het eerste onderzoek vond plaats onder personen die recentelijk hun baan hadden verloren bij een collectief ontslag. In dit onderzoek werd de mate van ervaren stress gemeten en kregen respondenten opwaartse of neerwaartse sociale vergelijkingsinformatie aangeboden over het hanteringsgedrag of de sociale steun van een andere ontslagen persoon. In overeenstemming met de centrale hypothese werd gevonden dat respondenten meer positief en minder negatief affect ervoeren na opwaartse vergelijking dan na neerwaartse vergelijking. Deze effecten waren vooral sterk onder hen die zich identificeerden met de vergelijkingsander. Opwaartse vergelijking leidde vooral tot positief affect en tot identificatie met de ander wanneer de sociale vergelijking werd beschouwd als een laterale vergelijking. Mensen profiteerden dus het meest van opwaartse vergelijking wanneer zij veronderstelden dat hun eigen positie op de vergelijkingsdimensie gelijk was aan die van de ander.

In het tweede onderzoek stond de invloed van ervaren beheersbaarheid op de affectieve reacties op sociale vergelijking centraal. Dit betrof een onderzoek onder arbeidsongeschikten van wie de ervaren beheersbaarheid van (het omgaan met) hun gezondheidsproblemen werd gemeten. Vervolgens kregen zij opwaartse of neerwaartse vergelijkingsinformatie aangeboden over het hanteringsgedrag of de gezondheidsproblemen van een andere arbeidsongeschikte. Uit dit onderzoek bleek dat alleen arbeidsongeschikten die hun positie op de vergelijkingsdimensie als beheersbaar beschouwden meer positief affect ervoeren na opwaartse dan na neerwaartse vergelijking. Neerwaartse vergelijking leidde tot meer negatief affect dan opwaartse vergelijking, ongeacht de mate van ervaren beheersbaarheid. Naarmate mensen een hogere beheersbaarheid ervoeren, identificeerden zij zich meer met de opwaartse vergelijkingsander en het was vooral deze hogere identificatie met de ander die de toename in positief affect bewerkstelligde.

Het volgende onderzoek vond plaats onder secretaresses. In dit onderzoek is de ervaren beheersbaarheid van de relatieve werkprestatie gemanipuleerd door het succes of falen van de ander aan haar inspanning (hoge beheersbaarheid) of aan haar capaciteiten (lage beheersbaarheid) toe te schrijven. Wanneer de prestaties van de ander werden toegeschreven aan de mate waarin zij zich inspande, leidde opwaartse vergelijking tot meer positief affect dan neerwaartse vergelijking. Wanneer de prestaties van de ander werden toegeschreven aan haar capaciteiten (of aan andere onbeheersbare factoren) leidden opwaartse en neerwaartse vergelijking tot een gelijke mate van positief affect. Blijkbaar profiteren mensen alleen van opwaartse vergelijking wanneer zij veronderstellen dat zij hun relatieve prestatie kunnen beïnvloeden door zich in te spannen. Bovendien bleken de affectieve reacties op opwaartse vergelijking vooral gerelateerd te zijn aan de mate waarin de respondenten het voor henzelf prettig of onprettig vonden om over de ander te lezen en niet aan de mate waarin zij empathische of vijandige gevoelens voor de ander koesterden.

In het laatste onderzoek werd onder studenten de mate van studiestress gemeten en kregen de respondenten opwaartse of neerwaartse vergelijkingsinformatie aangeboden over het studiesucces van een andere student. Dit succes of falen van de ander werd wederom toegeschreven aan diens inspanning of aan diens capaciteiten. Studenten die weinig of matige studiestress ervoeren, reageerden niet verschillend op opwaartse of neerwaartse vergelijking. Alleen bij studenten die relatief veel studiestress ervoeren, was de aard van de vergelijkingsinformatie van belang. Bij attributie aan inspanning ervoeren zij meer positief affect na opwaartse dan na neerwaartse vergelijking en bij attributie aan capaciteiten ervoeren zij meer positief affect na neerwaartse dan na opwaartse vergelijking. Bovendien bleek dat naarmate respondenten de ander meer als gelijk aan henzelf beschouwden, zij meer positief affect ontleenden aan opwaartse vergelijking die werd toegeschreven aan de hoge inspanning van de

ander en meer negatief affect ervoeren na neerwaartse vergelijking die werd toegeschreven aan andermans gebrek aan capaciteiten.

Uit deze empirische hoofdstukken kan geconcludeerd worden dat — in overeenstemming met de centrale hypothese — opwaartse vergelijking meer positieve effecten heeft op het welbevinden dan neerwaartse vergelijking. Dit is met name het geval wanneer mensen zich in een stressvolle situatie bevinden, hun positie als beheersbaar beschouwen en zich met de ander identificeren. Ervaren stress lijkt motieven voor zelfverbetering en zelfverheffing te bevorderen. Ervaren beheersbaarheid bepaalt de mate waarin de positie van de opwaartse vergelijkingsander kan worden bereikt en die van de neerwaartse ander kan worden vermeden. Identificatie met de ander bepaalt de mate waarin de positie van de ander als een mogelijke eigen toekomst wordt beschouwd. De bevindingen in het laatste onderzoek geven aan dat de neerwaartse vergelijkingstheorie van Wills (1981) slechts onder bepaalde condities geldt. Uitsluitend wanneer stabiele verschillen in capaciteiten worden vergeleken, leidt neerwaartse vergelijking tot meer positief affect dan opwaartse vergelijking. Dergelijke stabiele verschillen op de vergelijkingsdimensie lijken in het dagelijks leven maar zelden te bestaan, waardoor de relevantie van Wills' theorie beperkt is.

De praktische implicatie van deze conclusie is dat mensen in stressvolle situaties niet ongevraagd moeten worden geconfronteerd met informatie over anderen die er nog slechter aan toe zijn dan zijzelf. Dergelijke informatie lijkt geregeld te worden geboden, maar kan angst voor een mogelijk verslechterende eigen positie versterken. Mensen die stress ervaren, profiteren veel meer van vergelijking met anderen die succesvol zijn in een situatie die overeenkomt met die van henzelf. Vooral wanneer andermans succes te danken is aan diens inspanningen kunnen zij hoop en inspiratie ontlenen aan dergelijke opwaartse vergelijking en kunnen zij bovendien leren van de informatie die een dergelijk positief model hen biedt.

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