



When others are doing better or worse: Responses from the heart and the head



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Chapter 1

Introduction



Human beings do not live in a social void but are surrounded by other people and interact with them. Human beings are social creatures par excellence. Social psychology focuses on the individual in his social environment and investigates the various phenomena and processes that may occur when individuals interact with their social environment. Social comparison theory is a typical social psychological theory as it deals with issues such as how people evaluate themselves against others, what kinds of feelings people experience in response to seeing others doing better or worse, whether people seek or avoid others who are doing better or worse, what kind of information people prefer to receive about others, what motives people may have to compare themselves with others, and with whom they prefer to compare themselves. The present dissertation focused particularly on how people may react when they encounter others who are doing better or worse than they are. In this first chapter, I give a brief overview of the literature on social comparison, and I will outline the theoretical basis of the issues that were investigated in the present thesis.

A brief overview of social comparison theory

Different motives for choosing a comparison other.

In the early studies of social comparison, three different motives for comparison were distinguished, which can be characterized as serving cognitive, affective, or behavioral goals. Firstly, people may compare themselves with others in order to be able to evaluate themselves, which may be characterized as a cognitive goal of social comparison. In the original formulation of social comparison theory, Festinger (1954) stated that people have a drive for an accurate evaluation of their abilities and opinions. In the absence of objective standards, people will compare themselves with others, preferably with others who are somewhat better off. This preference for comparison with better-off others (upward comparison) was found in studies using the rank-order paradigm. In these studies, participants were asked to choose whose test-score they wanted to see, that of a person who outperformed them or that of a person who scored lower (e.g., Gruder, 1977, Wheeler et al., 1969). Secondly, the motive of self-enhancement was identified, stating that people may compare themselves with others in order to feel better about themselves (e.g., Thornton & Arrowood, 1966). This motive may be characterized as an affective goal of social comparison. Research into this motive has shown that particularly comparison with worse-off others

(downward comparison) can serve the goal of self-enhancement, especially for people who experience some form of threat or who experience negative affect. Social comparison may then function as a way of “sustaining or reasserting the favorability of the individual’s self-regard” (Hakmiller, 1966, p. 37; see also Wills, 1981). Thirdly, self-improvement was recognized as a motive for social comparison (Berger, 1977, Wood, 1989), which may be characterized as a behavioral goal of social comparison. Upward others can serve as models for self-improvement, because one can learn from observing them (Berger, 1977), or one can be inspired by their example (Brickman & Bulman, 1977). Taylor and Lobel (1989) suggested that people may prefer different kinds of comparisons to serve different purposes. People under stress prefer to evaluate themselves against downward others to serve the motive of self-enhancement, but they prefer contact with and knowledge of upward others to serve the self-improvement motive.

From choices of comparison others to responses to exposure to upward and downward others.

Having first focused on the choice of comparison others, in the past decades, the focus of social comparison research has shifted to people’s responses to forced social comparisons. As Brickman and Bulman (1977) noted, people may be confronted with comparison information that they would rather not encounter. How are people affected by these forced comparisons with upward and downward others? Morse and Gergen (1970) were probably the first to investigate the effects of forced social comparison. They had job-applicants wait for their interviews together with an applicant whose personal appearance was either highly desirable (Mr. Clean) or very undesirable (Mr. Dirty). The results showed that people who waited together with Mr. Dirty experienced an increase in self-esteem, while those who waited together with Mr. Clean experienced a decrease in self-esteem. Later, research was conducted in which participants were presented with a bogus interview with a person who faced a situation similar to that of the participants, but who performed better or worse on the comparison dimension (e.g., Ybema & Buunk, 1995; Lockwood & Kunda, 1997, 1999). In general, studies using this bogus interview paradigm have demonstrated that no simple answer can be given to the question of how people are affected by forced upward and downward comparisons. Either direction appeared to have its ups and downs (e.g., Buunk, Collins, Taylor, VanYperen, & Dakof, 1990, see also Brickman & Bulman, 1977). Comparison with better-off others, for example,

may not only offer the opportunity to learn about how to improve oneself, but may also emphasize one's inferior status. Likewise, exposure to downward others may offer the opportunity for a self-enhancing self-evaluative comparison, but may also show how one's own situation may deteriorate. Researchers have identified a number of factors that may influence whether people are positively or negatively affected by exposure to upward and downward others, for example, the perceived vulnerability to the fate of the comparison other (e.g., Lockwood, 2002), the personal importance of the comparison dimension (e.g., Tesser, 1988), the distinctness of others and the mutability of selves (Stapel & Koomen, 2000), psychological closeness (e.g., Pelham & Wachsmuth, 1995), and the well-being of the comparer (e.g., Buunk, Ybema, Gibbons, & Ipenburg, 2001c; VanderZee, Buunk, & Sanderman, 1998a).

The present dissertation

A Focus on the underlying processes from a dual-process perspective

In order to understand and predict people's responses to exposure to better- and worse-off others, in the present dissertation I focused on the processes that underlie these responses. Depending on how people process the information about the other, either assimilative or contrastive responses may occur. Assimilation means that upward exposure evokes more positive responses than does downward exposure, whereas contrast means that downward exposure evokes more positive responses than does upward exposure. As a framework or metaphor, we applied a dual-process perspective (Chaiken & Trope, 1999). Dual-process models assume that people process information using two independent, interactive systems. Epstein (see Epstein & Pacini, 1999; Epstein, 2003) distinguishes between a systematic or cognitive system and a holistic or experiential system. The cognitive system is a conscious system that operates by rules of logic, and it is analytic, effortful, relatively slow, affect-free, and highly demanding on cognitive resources. The experiential system, in contrast, operates by rules of affect, that is, it is oriented towards facilitating pleasure and avoiding pain. Furthermore, it operates associatively and holistically, processing information rapidly, and it is difficult to change. When people encounter others who are either better or worse off, both systems may be involved in determining their responses to the exposure. That is, two fundamentally different processes may occur simultaneously and in parallel when people are exposed to others. Furthermore, the processes in each system

may underlie fundamentally different kinds of responses, and steer them in opposite directions. It was predicted that, in the cognitive system, people would engage in a social comparison process in which the self and the other person were systematically compared with each other. This process was predicted to lead to a contrastive response, particularly to self-evaluative responses. In the experiential system, it was predicted that people would respond holistically and affectively and would feel more or less connected with the other person or, in other words, would identify themselves with the other. This process was predicted to lead to an assimilative response, particularly to affective responses.

The social comparison process.

Following Wood (1996), social comparison was defined as the process in which people think about information about the other person in relation to the self by looking for and pointing out similarities and differences between themselves and the other. This search for similarities and differences is assumed to be a cognitive process in which the self and the target are systematically compared. The social comparison process probably consists of two stages. In the first stage, primarily similarities between the self and the other are assessed to determine whether the self and the target are comparable. There needs to be some degree of similarity between the self and the comparison target (see also Festinger, 1954). In the second stage, primarily differences are assessed. This is in line with the theory put forward by Gentner and Markman (1997), who suggested that, especially when a pair of items is similar, their differences are likely to be important. This assessment of differences results in a contrastive evaluation of the self. Studies of psychophysical judgment also typically showed that, when a target is compared with a relevant anchor, contrast effects are found. For example, in a study by Brown (1953), the participants were asked to judge a series of weights. It was found that participants contrasted the weights with an anchor that was considered relevant. When the anchor was too different from the stimulus weights, no contrast effects were found. In the present dissertation, it was hypothesized that after comparing themselves with a downward target people would evaluate themselves more positively, and that after comparing themselves with an upward target people would evaluate themselves more negatively. A study by Martin and Gentry (1997) offers some direct support for this hypothesis. They manipulated the motives of people viewing advertisements with highly attractive models by giving them instructions before they were handed the ads and by altering the

advertising headlines. When the motive of self-evaluation was induced, partly by an advertising headline saying 'Who is better?' and an advertising copy saying 'Compare yourself... Are you as beautiful?', participants' self-evaluations were less positive in response. Thus, the literal instruction to compare themselves led to a contrastive self-evaluative response (for similar results, see also Cattarin, Thompson, Thomas, & Williams, 2000). It must be noted that, in rare cases, the social comparison process may result in a perception of similarity between the self and the other, when no differences can be found.

The identification process.

The second process that may occur when people are exposed to others is the identification process. Through holistic and affective processing in the experiential system, people may identify themselves with an other person. Instead of reducing the situation to a one-dimensional comparison situation, people may perceive the other person in his or her totality, and may feel connected with the other person. This feeling is similar to the feelings one may have when reading a book or watching a movie and empathizing with one of the characters. Identification is considered an automatic process that occurs without effort. The degree to which one identifies oneself with an other person is usually not volitional; rather, it is something that happens to a person, similar to one's preferences (e.g., Zajonc, 1980). The identification process was expected to influence the affective responses to upward and downward exposure. We predicted that identification would lead to an assimilative affective response. That is, identification with an upward target was predicted to evoke primarily a positive affective response, and identification with a downward target was predicted to evoke primarily a negative affective response (see also Buunk et al., 2001c; Buunk, VanderZee, & VanYperen 2001b; Ybema & Buunk, 1995; Ybema, Buunk, & Heesink, 1996).

Social comparison and identification are considered to be two fundamentally different processes by which people may respond to the experiences of others, leading to fundamentally different kinds of responses. Furthermore, social comparison and identification are assumed to occur simultaneously and to operate in parallel, similar to the cognitive and experiential systems (see Epstein, 2003). This implies that, when people are exposed to upward and downward others, assimilative and contrastive responses may occur simultaneously, but to different aspects (affect and self-evaluation). This simultaneous occurrence of assimilative

and contrastive responses has been reported before. In a study of marital satisfaction, Buunk and Ybema (2003) found that exposure to a description of a happily or an unhappily married woman resulted in an assimilative response to affect and a contrastive response to self-evaluation (see also Bui & Pelham, 1999). Although social comparison and identification may occur simultaneously and operate in parallel, the affective responses are assumed to occur prior to the cognitive, self-evaluative responses. According to Epstein (2003), the experiential system is a more rapidly reacting system than the cognitive system. This assumption of the primacy of the experiential system is also in line with Zajonc's theory of affective primacy (1980), which holds that affective reactions are basic, automatic, and autonomous, occurring prior to and separate from cognitive responses. Consequently, first measuring people's affective responses and, next, their self-evaluative responses would follow the sequence of their experiences most directly. We investigated, therefore, whether the strongest responses to exposure to upward and downward others would be found when the affective responses were assessed first and the self-evaluative responses next.

Other theoretical perspectives.

Other researchers also focused on the processes underlying the responses to upward and downward exposure. Below, I briefly outline these different theories, and indicate how the present theory relates to them. Firstly, Buunk and Ybema (1997; see also Buunk and Ybema, 2003) proposed the identification-contrast model to explain the affective responses to upward and downward exposure. According to Buunk and Ybema, people generally strive for a sense of relative superiority. Therefore, people generally attempt to identify themselves with upward others, that is, to regard the other's fate as their own actual or possible fate and to recognize themselves in the other. In addition, people attempt to contrast themselves with downward others, that is, to focus on differences with the other. Upward identification and downward contrast are expected to evoke positive affect, whereas downward identification and upward contrast are expected to evoke negative affect. Secondly, Tesser (1988) proposed the Self-Evaluation Maintenance Model. This model describes two processes that may occur when people are confronted with the outstanding performance of an other person (upward other): reflection and social comparison. Reflection occurs when the performance is not relevant to a person's self-definition. One may then bask in the reflected glory of the other's performance and, thereby, increase one's

self-evaluation. Social comparison occurs when the performance is relevant to a person's self-definition and results in a contrast-effect on self-evaluation. The self-evaluative effects are expected to be reflected in affect (Tesser, Millar, & Moore, 1988). Thirdly, Gilbert, Giesler, & Morris (1995) proposed two successive processes that may occur in a comparison situation. First, people will automatically compare themselves with others, resulting in contrastive responses. Next, they may or may not undo the comparison depending on how logically appropriate they find the comparison. Fourthly, Stapel and Suls (2003) distinguished between an interpretation process and a comparison process (see also Stapel & Koomen, 2000, 2001). These researchers argued that the consequences of exposure to others depend on how people use the information about the other. In the interpretation process, the information about the other is used to define or interpret the self, such that the information is included in the self, resulting in assimilative responses. In contrast, in the comparison process, the information about the other is used as a reference point to evaluate the self against, such that the information is excluded from the self and contrast is the typical result. Finally, Mussweiler (2003; see also Mussweiler & Strack, 2000) proposed that people may engage in a process of either similarity testing or dissimilarity testing when they are exposed to upward or downward others. In the process of similarity testing, people test the hypothesis that they are similar to the comparison target, which leads to a selective increase in the accessibility of knowledge, indicating that they are in fact similar. This process results in assimilative responses. In the process of dissimilarity testing, people test the hypothesis that they are dissimilar to the comparison target, which leads to a selective increase in the accessibility of knowledge indicating that they are in fact dissimilar. This process results in contrastive responses.

What these different theories have in common is that they all distinguish between two processes, mostly one process underlying assimilative responses and the other underlying contrastive responses. The identification process of Buunk and Ybema and the interpretation process of Stapel seem to describe a similar process, comparable to the identification process we proposed. Yet, in contrast to them, we proposed that the identification process is an automatic and primary process, underlying specifically affective responses. The reflection process that Tesser describes seems to be of a different order than the identification process. Basking in the reflected glory of a close other has more to do with taking pride in the performance of the other, and with benefiting from being associated with

that outstanding other, and does not influence one's own self-evaluation on the specific comparison dimension. The contrast process of Buunk and Ybema seems similar to the comparison process of Stapel and Tesser, and to the comparison process we proposed. In all theories, social comparison is the process in which the self is compared with an other person, resulting in a contrastive response. Our model explicitly states that this process operates according to the rules of the cognitive system, and specifically underlies self-evaluative responses. In contrast to Gilbert's et al. theory, our model assumes that the social comparison process is a deliberate process and not an automatic process, and that instead identification is an automatic process, leading to assimilative responses to affect. The processes of similarity and dissimilarity testing of Mussweiler, we propose, are both part of the social comparison process. As outlined above, it seems that different words are sometimes used for processes that are similar. In addition, we argue that the various perspectives may be complementary. The various theories may all add to our understanding of how people are influenced by seeing others who are doing better or worse. For example, the theories put forward by both Mussweiler and Stapel are grounded in an informational perspective on comparison processes in social judgment, and theory of and research into knowledge accessibility effects (for references, see Mussweiler, 2003; Stapel & Koomen, 2000; 2001). Such theories may help to direct research to the more fundamental processes that take place at a micro-level, that is, at the cognitive level at which the processes occur in people's minds. Our theorizing adds by proposing that it is important to distinguish between different kinds of responses, and that one process may be more primary and automatic, and that another process may be a more controlled and analytic process (but see also Gilbert, Giesler, & Morris, 1995).

Individual differences

Besides investigating the influence of the processes underlying people's responses to better- and worse-off others, in the present dissertation the influence of two individual differences measures was investigated. First, people may differ in the degree to which they are inclined to compare themselves with others or to base the evaluation of their own characteristics on how others are doing. These individual differences are captured by social comparison orientation (SCO). Second, people's responses to others doing better or worse may also partly depend on how well they are doing themselves, that is, on their subjective well-being

Social comparison orientation.

In research into social comparison, it was originally assumed that there is a universal drive in the human organism to evaluate one's opinions and abilities through comparison with others (Festinger, 1954). Later, researchers noted some inconsistencies in people's claims about their social comparison activities. For example, in a study by Wood, Taylor, and Lichtman (1985) among women suffering from breast cancer, many patients expressed comparisons with fellow patients in open interviews while they did not admit them when asked directly. Therefore, researchers assumed that people may be reluctant to admit comparing themselves with others because they consider it socially undesirable to do so, or because they are unaware of their social comparisons (cf., Brickman & Bulman, 1977, Wills, 1981; Wood, et al., 1985; Wood, 1996). However, Gibbons and Buunk (1999) argued that the extent to which people compare themselves with others may actually vary from one individual to the next. They developed a scale measuring individual differences in social comparison orientation, the Iowa-Netherlands Comparison Orientation Measure (INCOM). This scale consists of questions assessing people's orientation towards comparing themselves with others and towards basing the evaluation of their characteristics primarily on how others are doing. Research using this measure showed that SCO may strongly influence people's social comparison activities and the degree to which people are affected by comparison with others. Firstly, SCO has been shown to be related to an increased interest in information about others facing a similar situation. In a study by VanderZee, Oldersma, Buunk, & Bos (1998b), for example, cancer patients were given the opportunity to read short interviews with fellow patients about their experiences. It was found that, as participants had higher SCO, they read more interviews. In another study, it was found that test-takers with higher SCO were more interested in the test-scores of previous test-takers than were participants low in SCO (Gibbons & Buunk, 1999). Secondly, SCO has been found to be related to a higher frequency of comparison with worse- and better-off others (Buunk, Zurriaga, Gonzalez-Roma, & Subirats, 2003). Thirdly, SCO has been found to influence identification with others. Buunk et al. (2001c) found that SCO influenced the degree of identification with an upward target. However, Brenninkmeijer (2002) found that SCO did not influence the degree of identification with either an upward or a downward target. Instead, she found that SCO moderated the effect of upward identification on affect. That is, SCO was found to enhance the degree of positive affect people derived from identify-

ing with the upward target. Although SCO thus appears to affect identification with others, the findings are not unequivocal. Fourthly, SCO has been found to influence people's responses to comparison with particularly worse-off others. In one study (Buunk, et al, 2001c), SCO was found to enhance the assimilative response to exposure to worse-off others, that is, high-SCO individuals experienced more negative affect following downward exposure than did low-SCO individuals. In another study, it was found that particularly individuals high in SCO reported increases in relationship satisfaction when they were instructed to name features in which their relationship was better than that of others, when they were initially relatively dissatisfied (Buunk, Oldersma, & DeDreu, 2001a). Finally, in a study of relative deprivation among nurses (Buunk et al., 2003), it was found that SCO enhanced adverse responses to comparison with both upward and downward colleagues. The study showed that particularly nurses with a high SCO who derived negative feelings from comparison with worse-off colleagues felt more relatively deprived nine to ten months later. However, comparing themselves with upward colleagues, and deriving either positive or negative feelings from that, also increased feelings of relative deprivation particularly among nurses high in SCO.

To conclude, SCO unmistakably influences how people respond to upward and downward others, as it increases interest in and comparison with others, influences identification with others, and influences affective and self-evaluative responses to upward and downward exposure. However, the precise influence of SCO is not yet fully understood, as the results do not unequivocally show under what conditions people are either more positively or more negatively affected by upward and downward exposure, depending on their SCO levels. This may partly be explained by the fact that diverse types of social comparison were investigated. In the study by Buunk et al. (2003), for example, the participants were retrospectively asked about their comparisons with colleagues, whereas, in the study by Buunk et al. (2001a), downward comparison was installed by asking the participants to mention features of their relationship in which they considered their relationship to be better than that of most others. However, also within a single paradigm, the results are not clear-cut. Therefore, in the present dissertation, the mechanisms through which individual differences in SCO influence people's reactions to social comparison were investigated. In the model that we have outlined above, there are two possible ways in which SCO may influence people's responses to upward and downward exposure. One possibility is that

SCO influences the information processing, that is, the degree to which people compare and identify themselves with others. The other possibility is that SCO influences the degree to which people are influenced by comparing or identifying themselves with others. That is, it may be that particularly people with high SCO change their self-evaluation when they compare themselves with others, and derive negative feelings from downward identification and positive feelings from upward identification. In the present dissertation, both possibilities were investigated. As described in Chapter 4, it was particularly hypothesized that SCO may enhance identification with upward and downward others, and the effects of that identification. This hypothesis was partly based on the conclusion of Gibbons and Buunk (1999) that, based on various relations of SCO with other scales, the prototypical comparer may be characterized as a person who is interpersonally more than introspectively oriented and sensitive to the behavior of others. That is, people with high SCO relate more to other people than people with low SCO, and may thus identify themselves more with others, and may be more sensitive to the degree to which they identify themselves with others. Furthermore, previous research showed that people with a high SCO are more interested in comparing their qualities and characteristics with those of others and do so more often than do people with a low SCO (Buunk et al., 2003; Gibbons & Buunk, 1999; VanderZee et al., 1998b). Apparently, individuals with higher SCO more often consider others to be suitable comparison others. Suitable usually means more similar. As Festinger (1954) noted, making a comparison between oneself and another person requires that the other person is not too divergent from oneself. In addition, Mussweiler (2003) argued that, in most comparison situations, people are likely to initially focus on fundamental ways in which the target and the standard are similar. Therefore, we assumed that individuals high in SCO, in general, are more inclined to regard others as similar to themselves, or in other words, to identify themselves with others than individuals low in SCO.

Subjective well-being.

Subjective well-being was the second individual difference variable whose influence on responses to upward and downward others was investigated. According to Wills (1980), people who are low in subjective well-being may use comparison with others as a way to enhance their subjective well-being, specifically through comparison with worse-off others. Many studies have shown that people who are under threat may benefit from comparison with worse-off others (e.g.,

Affleck, Tennen, Urrows, Higgins, & Abeles, 2001; Aspinwall & Taylor, 1993; Buunk, et al., 2001a; Gibbons, 1986, Gibbons, Lane, Gerrard, Reis-Bergan, Lautrup, Pexa, & Blanton, 2002; Wood, Michela, & Giordano, 2000; for a review, see Tennen, McKee, & Affleck, 2000). However, other studies have shown that exposure to a downward target may also affect people negatively (e.g., Ybema, et al., 1996). In this dissertation, we proposed that the responses to exposure to a downward other depend on the way in which the information about the other is processed, that is, on whether people compare or identify themselves with the downward other. We expected that, when threatened people compare themselves with the downward other, they may feel better afterwards. However, we expected that, when they identify themselves with the downward others, they may be negatively influenced. Furthermore, because threatened people resemble the downward target, that is, they are both doing poorly, it may be that threatened people are more inclined to identify themselves with a downward target than to compare themselves with the downward target. Indeed, several studies have shown that people with low subjective well-being identify themselves more with downward others than do people with high subjective well-being, and concurrently respond with more negative affect to downward exposure. For example, Buunk et al. (2001c) found that therapists with higher levels of burnout identified themselves more with a downward target than did those with a lower level of burnout. Furthermore, when those high in burnout were also high in SCO, they concurrently derived more negative affect from downward exposure. Likewise, in a study among people who had recently lost their jobs, Ybema, et al. (1996) found that when people experienced more stress they identified themselves more with the downward target and experienced less positive affect in response to downward exposure (for similar results, see also VanderZee, et al., 1998a). However, when people with a low subjective well-being compare, rather than identify, themselves with the downward target, for example, when they are instructed to do so, we predicted that they may benefit from it. A study by Buunk et al. (2001a) of relationship satisfaction is noteworthy in this respect. Their study showed that people who were relatively discontent with their relationship, in other words, those who were low in subjective well-being, could enhance their satisfaction through downward comparison. Because the participants in the downward comparison condition were instructed to list features of their relationship in which they considered their relationship to be better than that of most others, we assume that it was particularly a comparison

process that brought about these beneficial effects. It must be noted that only those who were high in SCO benefited from this downward comparison, and not those low in SCO. In the present dissertation, therefore, we further investigated the role of SCO in this respect. We hypothesized that in respect of people who are low in subjective well-being, particularly those with a high SCO may benefit from comparing themselves with a downward other, not only when they purely cognitively compare themselves with worse-off others, as in the study of Buunk et al. (2001a), but also when they are exposed to a downward target. These predictions were investigated as recounted in Chapters 4 and 5. Furthermore, as described in Chapter 5, we investigated whether comparison with a downward target would be beneficial not only for people with a low subjective well-being, but, more generally, for people for whom the comparison dimension is personally important.

In the majority of studies in this dissertation, the comparison dimension was social integration among first-year students. Social integration is an important topic for most people when they start their studies, since they usually move to an unfamiliar city where they do not know many people. Therefore, as a conceptual analogue to subjective well-being measures in other studies, participants' feelings of loneliness were assessed, and the role of loneliness in the responses to exposure to worse-off others was investigated, as described in Chapters 4 and 5.

Overview of the chapters

To summarize, in the present dissertation, we investigated people's affective and self-evaluative responses to exposure to an upward or a downward target, and expected these responses to be fundamentally different. Central in our investigation was the distinction between two processes that we expected to underlie these responses, namely, a social comparison process and an identification process. In addition, the influence of individual differences in people's inclination to compare their characteristics with those of others was assessed, as was the influence of individual differences in subjective well-being. The following chapters are briefly outlined below:

Chapter 2.

From a dual-process approach, we investigated people's responses to exposure to upward and downward others. We distinguished between a social comparison

process that we assumed to operate according to the rules of a cognitive system, and an identification process that we assumed to operate according to the rules of an experiential system. The social comparison process was expected to underlie the contrastive self-evaluative responses, and the identification process was expected to underlie assimilative affective responses. Two experiments were conducted. In the first experiment, the degrees to which the participants had compared and identified themselves with the targets were retrospectively assessed and related to their affective and self-evaluative responses. In the second experiment, social comparison and identification with the targets were experimentally manipulated by giving the participants instructions before they read the information about the upward or downward target. In addition, the influence of individual differences in social comparison orientation was investigated.

Chapter 3.

The interplay between the affective and the self-evaluative responses to exposure to others who are either better off or worse off was investigated. It was assumed that the affective reactions are primary and that the self-evaluative reactions are secondary. Therefore, it was predicted that the strongest effects on both the affective and the self-evaluative responses would be found when the affective responses were assessed first and the self-evaluative responses next. In addition, individual differences in social comparison orientation were expected to moderate the responses to upward and downward exposure.

Chapter 4.

The influence of individual differences in social comparison orientation on responses to upward and downward exposure was further investigated. It was predicted that people high in SCO would identify themselves more with upward and downward others than would people low in SCO and, therefore, respond more positively to upward exposure and more negatively to downward exposure. We expected that people's low levels of well-being, loneliness in this research, would moderate these effects. We predicted that people high in SCO would identify themselves more with a downward target, particularly when they were relatively lonely, and consequently respond more negatively to downward exposure than people low in SCO. Likewise, we predicted that people high in SCO would identify themselves more with an upward target than would people low in SCO, particularly when they were not lonely, and consequently respond more positively to upward exposure.

Chapter 5.

We investigated how, when, and for whom exposure to a lively description of a downward target would be beneficial. Concerning the question of how, it was investigated whether a social comparison process or an identification process would lead to more beneficial effects on the self-evaluative or the affective responses. Concerning the question of when, it was examined whether it is particularly when people are low in subjective well-being, (cf., Wills, 1981), or, more generally, when people find the comparison dimension personally important that downward comparison is beneficial. Concerning the question of who, we predicted that only people with a high social comparison orientation would benefit from downward comparison.

Chapter 6.

In the last chapter, the main findings of the studies in this dissertation are integrated and discussed. In addition, the implications of these findings for theory of and research into social comparison issues, as well as some practical implications, are outlined.

Finally, it should be noted that the following chapters comprise submitted research articles that can be read on their own, independent of the other chapters. As a consequence, there is some overlap in the theoretical introductions and method sections of these chapters. Also, in contrast to the other Chapters, dual process theory was not explicitly used in the theoretical introductions of Chapters 4 and 5. Instead, in Chapter 6 it is discussed how the research of those Chapters can be integrated into a dual process approach.



Chapter 2 

Doing worse than others,
but feeling happy:

The dual response to comparison
and identification with others



Abstract - Taking a dual-process perspective, we investigated people's responses to exposure to others who are better or worse off. We distinguished between a social comparison process that we assumed to operate according to the rules of a cognitive system and an identification process that we assumed to operate according to the rules of an experiential system. We predicted that the social comparison process would lead to a contrastive self-evaluative response and that the identification process would lead to an assimilative global affective response. In the first experiment, involving 197 participants, correlational evidence was found to support these predictions. In the second experiment, involving 148 participants, additional support was found when identification and social comparison were experimentally manipulated. Individual differences in social comparison orientation predicted both the degree of comparison and the degree of identification and, in Experiment 1, social comparison orientation enhanced the responses to identification with the upward target.

Imagine that on a lazy afternoon you are drinking a cup of tea and reading a magazine. In this magazine is an interview with a student who recently moved to a different city to start her studies at the university there, just like you recently did. She says that she is rather unhappy because she has hardly any friends to visit and feels lonely. How would reading this interview make you feel and how would it influence your evaluation of your own social life? Likewise, if she told that she was very happy because she had made many new friends and had a very good social life, how would reading the interview make you feel then and how would it influence your evaluation of your own social life?

Reading such an interview may evoke strong responses in people, for example when it evokes positive or negative feelings or changes the evaluation of their own situation. Several studies have been conducted that investigated people's responses to these forced exposure to others who are either better (upward others) or worse off (downward others). In general, these studies have demonstrated that no simple answer can be given to the question how people respond to these forced exposures to upward and downward others. Either direction appeared to have its ups and downs (e.g., Buunk, Collins, Taylor, VanYperen, & Dakof, 1990, see also Brickman & Bulman, 1977; for reviews, see Suls & Wheeler, 2000; and Blanton, 2001). Exposure to better-off others, for example, offers both the opportunity to be inspired, but may also emphasize one's inferior status. Likewise, exposure to downward others may show that one is relatively well-off, but may also show how one's own situation may deteriorate. To get more insight in the responses to upward and downward exposure, researchers have begun to focus on the underlying processes. Depending on how people process

This chapter is based on: Grootjof, H.A.K., Buunk, A.P., & Siero, F.W. (2003). *Doing worse than others, but feeling happy: The dual response to comparison and identification with others*. Manuscript submitted for publication.

the information about the other, assimilative or contrastive responses may occur. Assimilation means that upward exposure evokes positive responses and downward exposure evokes negative responses, whereas contrast means that upward exposure evokes negative responses and downward exposure evokes positive responses. For example, Mussweiler (2003) proposed that people may engage either in a process of testing for similarity between the self and the other or in a process of testing for dissimilarity. Similarity testing would typically result in assimilative responses while dissimilarity testing would typically result in contrastive responses. Stapel and Suls (2003) distinguished between an interpretation and a comparison process (see also Stapel & Koomen, 2000, 2001) depending on whether people use the information about the other to interpret the self or to evaluate the self against. Interpretation would typically result in assimilative responses and comparison in contrastive responses. The present research also focussed on the processes underlying assimilative and contrastive responses to upward and downward exposure. Similar to Stapel and colleagues, and Mussweiler we distinguished between two processes, one underlying assimilative responses and one underlying contrastive responses. However, in contrast to them, we applied a dual-process perspective (Chaiken & Trope, 1999), implying that we distinguished between two fundamentally different kinds of processes that occur simultaneously and operate in parallel, underlying fundamentally different kinds of responses.

Dual-process approach.

Most dual-process theories assume that people process information by two independent, interactive systems. Epstein (2003; see also Epstein & Pacini, 1999) distinguishes between a systematic or cognitive system and a holistic or experiential system. The cognitive system is a conscious system that operates by rules of logic and it is analytic, effortful, relatively slow, affect free, and highly demanding on cognitive resources. The experiential system, in contrast, is an affective system oriented at facilitating pleasure and avoiding pain. Furthermore, it operates in an associative and holistic way, processing information rapidly. When people encounter others who are either better-off or worse-off both systems are involved in determining people's responses to the exposure. Within the cognitive system people may systematically compare themselves with the other. When people compare themselves with another person they are thinking about information about the other person in relation to the self by looking for and

pointing out similarities and differences between the self and the other (Wood, 1996). This analytic search for similarities and differences we expected to eventually result in a conclusion about their standing vis-à-vis the other person. In other words, we hypothesized that when people compare themselves with someone else, they use the other as a reference-point to evaluate the self against (see also Mussweiler, 2001; Stapel & Koomen, 2000; Tesser, 1988) and will come up with a self-evaluative response. Furthermore, we expected that this self-evaluative response would be contrastive, that is, we predicted that after comparison with a downward target, people would evaluate themselves more positively and after comparison with an upward target more negatively.

Within the experiential system people may identify themselves with someone else, that is, they may recognize themselves in the other and feel a bond between themselves and the other. Identification is primarily an affective and spontaneous process. Unlike the social comparison process, identification does not occur sequentially but more rapidly and holistically. Instead of reducing the situation to a one-dimensional comparison situation people may perceive the other person in his or her totality and feel connected with the other person. The identification process we expected to influence the global affective responses to upward and downward exposure. We predicted that identification would lead to assimilative affective responses, that is, identification with upward targets would evoke positive feelings and identification with downward targets would evoke negative feelings. Several other researchers have linked identification to assimilative responses on affect (Brenninkmeijer, 2002; Buunk, VanderZee, VanYperen, 2001b; Buunk, Ybema, Gibbons, & Ipenburg, 2001c; Ybema & Buunk, 1995; Ybema, Buunk, & Heesink, 1996), and a study by Ybema (1994) provides direct support for our hypothesis. His study showed that the more participants identified themselves with an upward target, the more positive affect the upward exposure evoked and that the more participants identified themselves with the downward target, the more negative affect the downward exposure evoked. In sum, social comparison and identification are two fundamentally different processes that we expected to occur simultaneously when people encounter others, leading to fundamentally different kinds of responses in opposite directions.

Social comparison orientation.

People differ in the degree to which they tend to compare themselves and their situation with others and in the degree to which they base the evaluation of their characteristics on how others are doing. Gibbons and Buunk (1999) developed

a scale for measuring people's Social Comparison Orientation (SCO). Research including SCO has, in general, shown that people with higher SCO are more interested in information about others (Gibbons & Buunk, 1999; VanderZee, Oldersma, Buunk, & Bos, 1998b) and compare themselves more frequently with others doing better or worse (Buunk, Zurriaga, Gonzalez-Roma, Subirats, 2003). In addition, among people with a high SCO, exposure to others doing better or worse has been found to evoke stronger responses than among people with a low SCO (Buunk et al., 2001c). For example, Buunk, Oldersma & DeDreu (2001a) found that people who were dissatisfied with their intimate relation and who were high in SCO benefited from comparing characteristics of their intimate relationship with characteristics of the relationship of couples who were worse-off. In conclusion, SCO is a measurable concept that amplifies responses to upward and downward exposure. An important question, however, remains at which point SCO exerts this amplifying influence. One possibility is that SCO amplifies the information processing, that is, the degree to which people compare and identify themselves with upward and downward others. The other possibility is that SCO amplifies the degree to which people are influenced by comparing and identifying themselves with others. In fact, a study by Brenninkmeijer (2002) showed that SCO enhanced the amount of positive affect people derived from identifying with the upward target. The present research investigated both possibilities, and tried to replicate the finding of Brenninkmeijer.

Overview of the present research.

We did two experiments in which we investigated the role of two processes on the responses to exposure to upward and downward others; social comparison and identification. In both experiments the participants were exposed to an interview with either an upward or a downward target. The comparison dimension was the social life of first-year students. Starting a study in an unknown city is for many people an important transitional time in which forming new friendships and building up a new social network have high priority. Comparison and identification with others who are either more or less successful in that respect may evoke strong responses in first-year students. In Experiment 1, we assessed the degree to which the participants compared and identified themselves with the targets and related that to their affective and self-evaluative responses. We predicted that the more they compared themselves, the more positive their self-evaluative responses would be after downward exposure, and the more negative their

self-evaluative response would be after exposure to the upward target. In addition, we predicted that the more people identified themselves, the more positive affect upward exposure would evoke and the more negative affect downward exposure would evoke. In Experiment 2, social comparison and identification with the upward and downward targets were experimentally manipulated. We predicted that the comparison instruction would enhance the contrastive self-evaluative response, and that the identification instruction would enhance the assimilative affective response. In both experiments, social comparison orientation was included to further investigate its effect.

Experiment 1

Method

Participants and procedure

During an obligatory first-year psychology course, 197 students participated in the paper-and-pencil experiment. The average age of the participants was 20 years ($SD = 1.73$). First, some demographic questions were asked, followed by the measure of SCO.

Social comparison orientation.

Individual differences in SCO were measured using the Iowa-Netherlands Comparison Orientation Measure (Gibbons & Buunk, 1999). This scale consists of 11 items such as "I always pay a lot of attention to how I do things compared with how others do things" and "I never consider my situation in life relative to that of other people" (reversed). The items were measured using 5-point scales ($1 = \textit{strongly disagree}$, $5 = \textit{strongly agree}$). Internal consistency of the scale was very good ($\alpha = .80$).

Interview fragment.

To ensure realism, we based the description of the upward and downward target on actual in-depth interviews with first-year students and presented them as newspaper-articles. The articles describe an interview with first-year student about his or her social life (the sex of the target was not specified). In the upward version, the student is very positive about his or her social life. The student has become acquainted with many fellow-students, has formed good friendships with some of them, gets along with roommates, and can always find someone to have fun with or have a good conversation with. In the downward version,

the student is rather negative about his or her social life. The student has no real friends and tells of standing alone during breaks at college, having hardly any contact with roommates, and being alone often, watching TV, or studying.

Preliminary test of the interviews

To test whether people could actually relate the information about the upward and downward target⁽²⁾ to themselves and whether they could compare and identify themselves with them we conducted a pre-study using a thought-listing method. The 56 participants each typed on average 11 lines of text on the computer. In both the upward and the downward conditions, most participants made statements concerning themselves. In the upward condition, 85% of the participants listed thoughts and feelings concerning themselves and 52% made statements concerning solely themselves. In the downward condition, 70% listing thoughts and feelings concerning themselves and 22% made statements solely concerning themselves. These statements reflected both social comparison processes and identification processes. For example, the social comparison response of a participant who read the upward interview:

"I also found it rather scary to start my studies, but I was also looking forward to it. I worried about feeling lonely in my room. That is why I stayed with my parents at first. I did not make very close friends in Groningen; it is very nice though.

I also want to find a sideline

I do have some friends but they are not always around when I feel like doing something nice, I think that's a pity, but I can also have fun on my own"

Other participants clearly stated whether they could identify with the target. Examples are:

"Very recognizable"

"I remember feeling exactly the same when I started my studies."

"I find it recognizable that you have the feeling of getting lonely, to have less social contacts than you used to have."

In conclusion, the thought listing showed that the participants' dominant response to upward and downward exposure was to relate the information about the target to themselves, either through comparing or identifying themselves.

²⁾ There were actually four versions of the interview fragments in the thought-listing study, as effort was included as an extra factor. At the end of the interview, the student made a statement about how much effort he or she had put into building up a new social network (high or low). Because effort was not a central factor in our study, we decided to leave it out in our later experiments by simply removing the last few lines of text in the interviews and not to discuss it here.

Dependent measures

Affective response.

Participants' positive and negative affective responses were measured by asking; "To what extent does this fragment arouse positive feelings in you?" and "To what extent does this fragment arouse negative feelings in you?". Answers were given on a 5-point scale (1 = *not*, 5 = *very strongly*). The correlation between both items was $-.79$ ($p < .001$). They, therefore, could be combined into one scale, with higher values indicating a more positive affective response.

Self-evaluative response.

Participants' self-evaluative response to the interviews was measured using 4 items. One example of such an item is "after reading this interview fragment, to what extent do you worry more or less about your own social life, or has nothing changed?". Answers were given on a 9-point scale (1 = *much more worried*, 5 = *no change*, and 9 = *much less worried*). Higher scores indicated that the participants' evaluative response was more positive. Internal consistency was good (alpha $.81$). Because people may be reluctant to admit being affected by upward or downward exposure (see Wood, 1996), a short introduction was given in which it was explained that it is quite common for most, but not all, people to be affected by information about others. Nevertheless, 23.3% of the participants indicated that their self-evaluations had not changed (i.e., answered 5 on every question).

Degrees of social comparison and identification.

The degree of social comparison was measured using the following items: "To what extent did you start thinking about yourself and your own social life?", "To what extent did you compare your own situation with that of this person?", "To what extent did you look for differences and similarities between yourself and this person?", and "To what extent were you inclined to assess how good or bad your social life is?". Identification with the target was measured using the following items (see also Brenninkmeijer, 2002): "Could you recognize yourself in this person?", "Did you think you resemble this person?", and "To what extent did you think that in the future things might become (or stay) the same for you as for this person?". Answers were given on 5-point scales (1 = *not*, 5 = *very strong*). The internal consistency of both scales was very good; Cronbach's alpha was $.92$ for the social comparison scale and $.84$ for the identification scale.

Manipulation check.

To check whether participants actually perceived the upward target as better off and the downward target as worse-off, they were asked to indicate on a 9-point scale how they rated the target's social life in comparison with their own social lives (1 = *much worse*, 5 = *about the same*, and 9 = *much better*).

Results³⁾

Manipulation check.

A Univariate Analysis of Variance (ANOVA) revealed that, in comparison with their own social lives, participants rated the target's social life as higher in the upward condition than in the downward condition ($M = 5.2$, $SD = 1.34$ vs. $M = 3.1$, $SD = 2.48$; $F(1,191) = 49.34$, $p < .001$). However, only the mean rating in the downward condition differed significantly from 5, the point at which the target's social life is equally good as the participants' own ($t(97) = -7.45$, $p < .001$). Thus, the participants did evaluate the downward target as inferior, but did not evaluate the upward target as superior, but as equally well-off. Although we now, of course, can not draw conclusions on how people respond to genuinely upward others, this limitation does not impede the testing of the main hypotheses. In fact, this situation offers a more stringent test on whether identification will evoke an assimilative response on affect and whether comparison will evoke a contrastive response on self-evaluation.

Degrees of social comparison and identification with the upward and downward target

In order to investigate the effects of direction of exposure, and SCO on the degree to which participants compared and identified themselves, a series of hierarchical regression analyses were performed. In the first step of these analyses, the main effects of direction of exposure, and SCO were entered. In the second step, the interaction between both predictors was entered. Following Aiken and West (1991) the continuous independent variable (SCO) was standardized and the B-values will be reported instead of the β -values.

Degree of social comparison.

There was a main effect of SCO on social comparison ($B = .37$, $p < .001$), indicating that respondents with higher SCO compared themselves more. In addition,

³⁾ All p-values below .10 were given and the accompanying effects were discussed when we had one-sided hypotheses concerning those effects. P-values above .10 were considered not significant.

a main effect of direction of exposure was found ($B = -.22, p = .001$), indicating that participants compared themselves more with the downward target than with the upward target. The two-way interaction was not significant (R^2 -change $< .001$; $F < 1$).

Degree of identification.

There was a main effect of SCO ($B = .18, p = .005$), indicating that identification was higher among participants with higher SCO. In addition, there was a main effect of direction ($B = .18, p = .004$), indicating that participants identified themselves more with the upward target than with the downward target. The two-way interaction was not significant (R^2 -change = .002; $F < 1$).

The affective and self-evaluative responses to comparison and identification with upward and downward others

We predicted that comparison would result in contrastive responses on self-evaluation and that identification would result in assimilative responses on affect. In addition, it was investigated whether SCO moderated these responses. To test these hypotheses, two series of hierarchical regression analyses were performed separately for the prediction of the affective and the self-evaluative response using direction of exposure, SCO, and degree of identification or degree of social comparison as predictors. First, the three main effects were entered. Next, three regressions were run in which each two-way interaction was entered next to the main effects, to see whether each two-way interaction significantly contributed to the prediction of the dependent variable. After the three two-way interactions were entered into the equation, the three-way interaction was added.

The self-evaluative responses to upward and downward social comparison.

There was a significant main effect of direction ($B = -.43, p < .001$), indicating that participants' self-evaluative responses were more positive after downward exposure than after upward exposure (contrastive response). In the second step, the expected two-way interaction between direction and social comparison was significant (R^2 -change = .034, $F(1,180) = 8.40, p = .004$). Inspection of the simple slopes revealed that, in line with our predictions, the more participants compared themselves with the downward target, the more positive their self-evaluative responses were ($B = .21, p = .037$). Also, the more they compared themselves with the upward target, the more negative their self-evaluative responses were

($B = -.18, p = .042$) (see Figure 1). Thus, both upward and downward comparison increased the contrastive self-evaluative response. No main or interaction effects of SCO were found, indicating that SCO did not enhance the self-evaluative response to comparison with the upward and downward target.

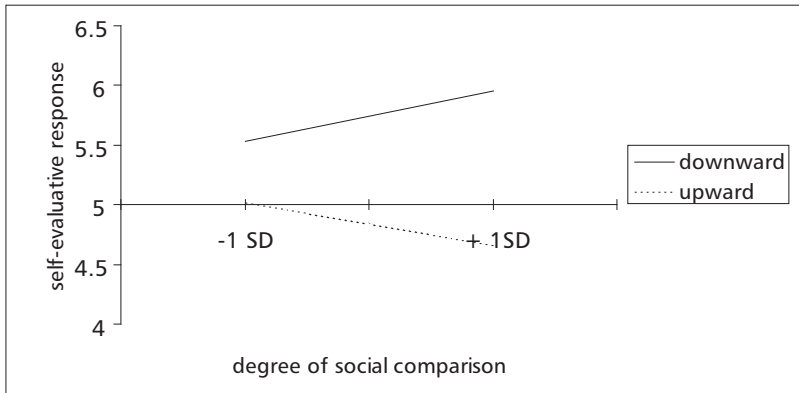


Figure 1.
Self-evaluative response to upward and downward exposure as a function of degree of social comparison.

The affective responses to upward and downward identification.

There was a main effect of direction of exposure ($B = 1.02, p < .001$), indicating that the participants derived more positive affect from exposure to the upward target than from exposure to the downward target (assimilative response). In addition, a main effect of identification was found ($B = .14, p = .026$), indicating that identification was associated with more positive affect. Unexpectedly, the predicted interaction between direction and degree of identification was not found ($R^2\text{-change} = .001; F < 1$), but was qualified by the three-way interaction with SCO ($R^2\text{-change} = .006; F(1,187) = 3.47, p = .064$). Further analyses revealed that only among participants high in SCO the predicted interaction between direction and identification was found ($p = .069$), and not among those low in SCO. Inspection of the simple slopes revealed that among those with a high SCO, in line with the predictions, upward identification was associated with more positive affect ($B = .33, p = .001$). However, in contrast to the predictions, identification with the downward target did not influence the affective response ($B = .034, ns$) (see Figure 2a). Among those with a low SCO, neither upward ($B = -.006, ns$) nor downward ($B = .20, ns$) identification influenced the amount of positive affect (see Figure 2b). In sum, partial support was found for our

hypotheses. As predicted, for those with a high SCO, upward identification was associated with higher levels of positive affect. Also, SCO was found to enhance the effect of identification with the upward target, but not of identification with the downward target.

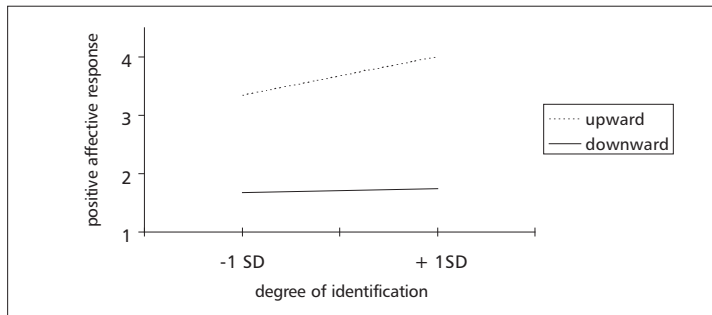


Figure 2a.
Positive affective response to upward and downward exposure as a function of degree of identification for participants high in SCO.

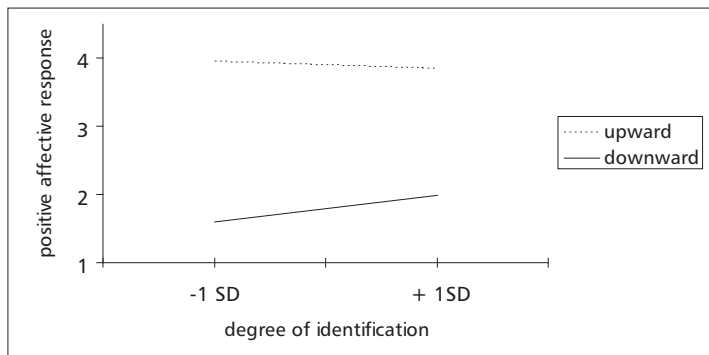


Figure 2b.
Positive affective response to upward and downward exposure as a function of degree of identification for participants low in SCO.

Next, two analyses were performed to test whether the identification process would not influence the self-evaluative responses in the same manner as the social comparison process did, and whether the social comparison process would not influence the affective responses in the same manner as the identification process did. SCO was also included as predictor.

The affective responses to upward and downward comparison.

Besides the main effect of direction ($B = 1.02, p < .001$), only a main effect of social comparison was found ($B = -.15, p = .021$), indicating that comparison was associated with less positive affect. Since no interaction between direction and social comparison was found, it can be concluded that social comparison did not influence the assimilative affective responses.

The self-evaluative responses to upward and downward identification.

Besides the main effect of direction ($B = -.44, p < .001$), a main effect of identification was found ($B = -.15, p = .039$), indicating that identification led to overall less positive self-evaluations. However, this effect was qualified by an, unexpected, two-way interaction between direction and identification ($R^2\text{-change} = .037; F(1,190) = 9.40, p = .002$). No other two-way interaction was found ($R^2\text{-change}'s < .008; F's < 2.0, p's > .16$), however, the three-way interaction was marginally significant ($R^2\text{-change} = .011; F(1,187) = 2.85, p = .093$). Further analysis showed that the two-way interaction between direction and identification was only significant for those with a high SCO ($p < .001$), and not for those with a low SCO. Inspection of the simple slopes of this interaction revealed that, among those with a high SCO, downward identification was associated with relatively less positive self-evaluations ($B = -.64, p < .001$) while upward identification was not associated with changes in the self-evaluative response ($B = .064, ns$) (see Figure 3a). Among those low in SCO, neither identification with the upward ($B = .096, ns$) or downward target ($B = -.01, ns$) influenced the self-evaluative response (see Figure 3b). Thus, identification also influences the self-evaluative response, however in opposite direction as the social comparison process: identification with the downward target decreased the contrastive self-evaluative response, especially for those with a high SCO. This latter finding means that SCO moderated the effect of downward identification on self-evaluation.

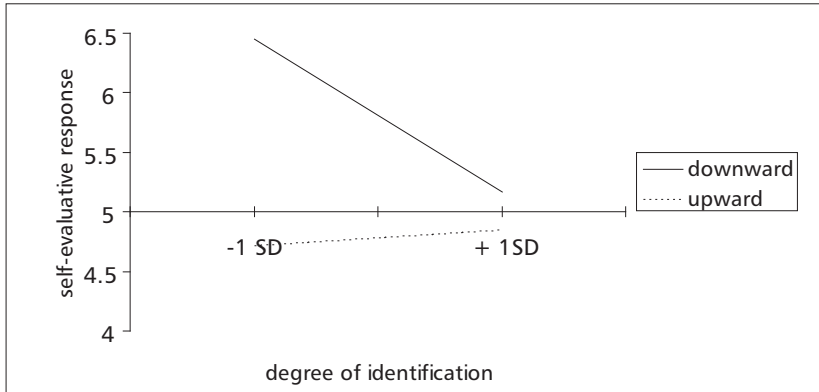


Figure 3a. Self-evaluative response to upward and downward exposure as a function of degree of identification for participants high in SCO.

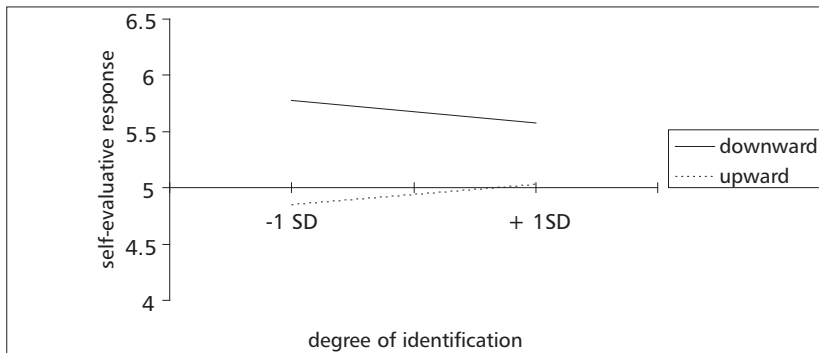


Figure 3b. Self-evaluative response to upward and downward exposure as a function of degree of identification for participants low in SCO.

Discussion

Using a dual-process framework, we investigated people's responses to exposure to better and worse-off others. We expected that an identification process, operating according to the rules of an experiential system, would underlie the assimilative affective responses. Also, we expected that a social comparison process, operating according to the rules of a cognitive system, would underlie the contrastive self-evaluative responses. Social comparison and identification we thus considered being two fundamentally different kinds of processes that may

occur when people are exposed to others, leading to fundamentally different kinds of responses. In a preliminary thought listing, we found that social comparison and identification were indeed naturally occurring processes when people are exposed to upward and downward others. Experiment 1 subsequently showed that these processes influence people's affective and self-evaluative responses to these exposures. As predicted, the more the participants compared themselves with the upward target the less positive their self-evaluative response was, and the more they compared themselves with the downward target the more positive their self-evaluative response was. Furthermore, social comparison only influenced the self-evaluative response, and not the affective response. The support concerning the role of identification was somewhat less strong. In line with our predictions, among those with a high SCO, identification with the upward target was associated with a more positive affective response. Unexpectedly, identification with the downward target was not associated with a less positive affective response. Also, the influence of the identification process was not restricted to the affective response, as identification with the downward target decreased the contrastive response on self-evaluation among participants with a high SCO.

Other findings concerning social comparison and identification.

Firstly, participants overall compared themselves more with the downward target and identified themselves more with the upward target. The former finding contradicts Festingers' (1954) proposition that people have a drive to compare upward, however both findings can be interpreted in the light of people's drive to facilitate pleasure and to avoid pain, or, phrased differently, as a self-defensive reaction. Both downward comparison and upward identification lead to positive outcomes, whereas upward comparison and downward identification lead to negative outcomes. Thus, people compared and identified themselves more with the targets when it led to positive outcomes and they compared and identified themselves less when it led to negative outcomes. Secondly, social comparison was associated with less positive affect, and identification was associated more positive affect. This finding is consistent with the findings of Clore, Schwarz, & Conway (1994) showing that negative affect is related to analytic processing, and that positive affect is related to automatic and heuristic information processing (see also Bless & Schwarz, 1999). Thus, although the present research does not offer direct evidence on the nature of the comparison and the identification process, the way they were related to positive and negative affects suggests that

social comparison may indeed be a more analytic process and identification a more holistic process.

Social comparison orientation.

We investigated whether people with a higher SCO would respond stronger to upward and downward exposure. SCO was indeed associated with the participant's responses, particularly the identification response and to a lesser degree the comparison response. Specifically, SCO influenced the identification process at two points. Firstly, a high SCO increased the degree to which people identified themselves with both the upward and the downward target. Secondly, SCO was associated with the responses to upward and downward identification: particularly people with higher SCO derived positive affect from identifying themselves with upward others, replicating the finding of a study by Brenninkmeijer (2002). Also, people with higher SCO, had a less positive self-evaluative response to downward exposure when they identified themselves with the downward target. Concerning the influence of SCO on the social comparison process, SCO increased the degree to which participants compared themselves with both the upward and the downward target, confirming the validity of the scale (see also Buunk et al., 2003; VanderZee et al., 1998b). SCO did not influence the degree to which people were affected by these comparisons, implying that, once people compare themselves with others, people high and low in SCO change their self-evaluations to the same extent. It thus appears that SCO particularly influenced the identification process, a finding that is compatible with the conclusion of a study by Gibbons and Buunk (1999). On the basis of various relations of SCO with other measure they concluded that the typical comparer may be characterized as an individual who is interpersonal more than introspectively oriented and sensitive to the behavior of others. It thus appears that people with higher SCO feel more related to other people, and thus identify themselves more with others and are more sensitive to the degree to which they identify themselves with others.

The upward and downward target.

Whereas the participants evaluated the downward target as being worse off, they did not evaluate the upward target as being better off. This is more often the case in the bogus-interview paradigm (e.g., Ybema, et al., 1996). We suppose that people may be reluctant to see the upward target as better off, because they were trying to avoid to pain associated with it, similar as the self-defensive pat-

tern we found for the degree to which the participants compared and identified themselves with both targets. In fact, on average, participants' self-evaluations were not changed after the exposure to the upward target. However, even if the upward target genuinely did not have a better social life than the participants, this did not undermine the testing of the main hypotheses, but rather offered a more stringent test of the hypotheses. If the upward target had been evaluated as better-off, the results may have been even stronger.

Experiment 2

Whereas Experiment 1, for the most part, supported the hypotheses, the results only showed that degree of social comparison and identification were correlated with the affective and self-evaluative responses, not that they were causally related to these responses. Therefore, in Experiment 2, degree of social comparison and identification were experimentally manipulated by instructing participants to either compare or identify themselves with the upward or downward target. We expected that in the comparison condition, the contrastive self-evaluative response would be most pronounced, and that in the identification condition the assimilative affective response would be most pronounced. SCO was again included. Finally, we used a different measure to check for the manipulation of direction of exposure. Asking participants to evaluate the social life of the target compared to their own social life, as we did in Experiment 1, in fact is a measure of the effect of the exposure. Therefore, we asked the participants how positively or negatively they perceived the targets to ensure that they did perceive the upward target as positive and the downward target as negative.

Method

Participants and design

During an obligatory first-year psychology course, 153 psychology students participated in our paper-and-pencil study. Five students were excluded from the data because they were 40 years or older. The average age of the resulting 148 participants was 20 years ($SD = 1.87$). Participants were randomly assigned to one of four conditions of the 2 (direction of exposure: upward, downward) X 2 (instruction: identification, social comparison) design.

Questionnaire

The first part of the questionnaire consisted of demographic questions and the measurement of SCO using the INCOM ($\alpha = .84$). In the second part of the questionnaire the participants were presented either the upward or the downward bogus newspaper article. In contrast to Experiment 1, the participants were now explicitly instructed to either compare or to identify with the target.

The social comparison instructions read as follows:

*When someone tells something about himself, for example, about how things are going with his studies or about an experience which he had, a common reaction of listeners is that they **compare** themselves with the other. Many people start thinking about their **own experiences** when someone tells them something that might also happen to them.*

*On the next page, you will find an interview with a first-year student that appeared in the media last year. The section in which this person tells about his or her social life will offer people who are also first-year students many opportunities for **comparison**.*

*When you read this interview in a minute, **compare** yourself as much as possible with this person.*

*With reference to this student's story, think about your own social life and try to assess how your social life is at this moment, **compared** to this student.*

Please take your time reading the interview. Afterwards, you may continue with the rest of the questionnaire.

The identification instructions read as follows:

*When someone tells something about himself, for example, about how things are going with his studies or about an experience which he had, a common reaction of listeners is that they **recognize** themselves in the other. Many people realize that they **have a lot in common** with other people and that they **resemble others** in many ways.*

On the next page, you will find an interview with a first-year student that appeared in the media last year. The section in which this person tells about his or her social life will sound very familiar to people who are also first-year students.

When you read this interview in a minute, pay the most attention to things you

have in common with this person. Assume that the other is someone just like you. When you don't recognize much of yourself in the other, imagine that in the future things might be the same for you as for this person.

Please take your time reading the interview. Afterwards, you may continue with the rest of the questionnaire.

Next, the same measures were taken as in Experiment 1. The correlation between the positive and negative affective response was $-.85$ ($p < .001$), and they were, therefore, again combined into one scale with higher values indicating a more positive affective response. Alpha's were $.85$ for the self-evaluative response (with $.79$ for degree of identification and $.91$ for degree of social comparison. Finally, the following question was asked: "How positive or negative is the image that the person in the interview portrays of his or her social life?" (1 = very positive, 9 = very negative) to check for the manipulation of direction of exposure.

Results and Discussion

Initial analyses

Manipulation check on the direction of exposure.

A Univariate Analysis of Variance (ANOVA) revealed that the participants found that the upward target described his or her social life more positively ($M = 2.3$, $SD = 1.39$) than the downward target ($M = 7.8$, $SD = 1.02$; $F(1,142) = 760.95$, $p < .001$). In addition, both ratings differed significantly from 5, the scale's neutral midpoint. The upward target was evaluated as giving a positive impression ($t(69) = -16.6$, $p < .001$) and the downward target was evaluated as giving a negative impression of his or her social life ($t(73) = 23.7$, $p < .001$).

Degree of social comparison.

Degree of social comparison was regressed on direction of exposure, instruction, and SCO, using the same procedures as in Experiment 1. Three main effects were found. Firstly, there was a main effect of direction ($B = -.12$, $p = .082$), indicating that, similar as in Experiment 1, participants compared themselves somewhat more with the downward target than with the upward target. Secondly, the predicted main effect of instruction was found, albeit rather weakly ($B = .12$, $p = .088$), indicating that comparison was somewhat higher in the comparison condition than in the identification condition. This main effect was qualified, however, by an interaction between direction and instruction ($R^2\text{-change} = .030$;

$F(1, 139) = 5.64, p = .019$). Inspection of the simple slopes revealed that only in the downward condition comparison was higher in the comparison condition than in the identification condition ($B = .22, p = .039$) and not in the upward condition ($B = -.081, ns$). Thus, the manipulation of social comparison appeared to be successful in the downward condition, and not in the upward condition. Thirdly, the main effect of SCO was replicated ($B = .38, p < .001$): participants who were higher in SCO compared themselves more with the targets. This main effect was qualified, however, by an interaction between direction and SCO ($R^2\text{-change} = .023; F(1, 139) = 4.34, p = .039$). Inspection of the simple slopes revealed that particularly in the upward condition, SCO predicted the degree of comparison ($B = .53, p < .001$), and to a lesser degree in the downward condition ($B = .24, p = .019$). The two-way interaction between instruction and SCO was not significant, neither was the three-way interaction ($R^2\text{-change} < .004, F < 1$).

Degree of identification.

Similar regression analyses with degree of identification as the dependent variable revealed a main effect of direction ($B = .17, p = .006$). This effect indicated that, similar as in Experiment 1, participants identified themselves more with the upward than with the downward target. Secondly, the predicted main effect of instruction was found ($B = -.15, p = .017$), indicating that identification was higher in the identification condition than in the comparison condition. Thus, the manipulation of identification appeared successful. Thirdly, the main effect of SCO was replicated ($B = .17, p < .001$): participants with a higher SCO identified themselves more with the upward and downward target. Further analyses revealed no significant two- or three-way interactions (all $R^2\text{-change}$'s $< .003$; F 's < 1).

Main analyses

To investigate the self-evaluative and affective responses to upward and downward exposure in the comparison and identification conditions, two series of regression-analyses were run. First, the self-evaluative response was regressed on direction, instruction, and SCO, using the same procedure as above, and next the affective responses. These analyses showed no main or interaction effects involving SCO. This means that the findings of Experiment 1, showing that SCO enhanced the effect of upward identification on the affective response and the effect of downward identification on the self-evaluative response were not repli-

cated. Since no effects of SCO were found, below simpler Analyses of Variance (ANOVA's) are reported with only direction of exposure and instruction as independent variables.

Self-evaluative response.

A 2 (direction of exposure: upward and downward) X 2 (instruction: social comparison and identification) ANOVA with the self-evaluative response as the dependent variable revealed a main effect of direction ($F(1,144) = 13.36, p < .001$). Similar as in Experiment 1, a contrastive response was found: participants' self-evaluative response was more positive after the downward exposure than after the upward exposure ($M = 5.7$ vs. $M = 5.1$). No main effect of instruction was found ($F(1,144) = 1.18, ns$), however, the predicted interaction between direction and instruction was found ($F(1,144) = 3.36, p = .069$). Inspection of the simple main effects revealed that, in accordance with our hypothesis, the contrast effect on the self-evaluative response was only found in the comparison condition ($M = 5.9$ vs. 5.1 ; $F(1,144) = 15.91, p < .001$), and not in the identification condition ($M = 5.5$ vs. 5.2 ; $F(1,144) = 1.58, ns$) (see Figure 4).

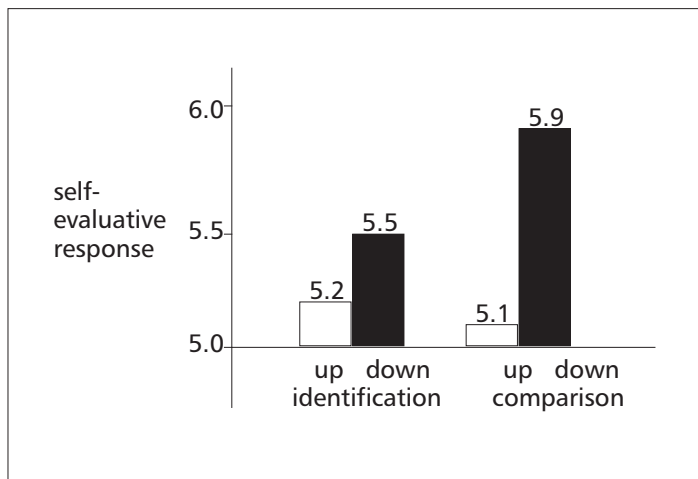


Figure 4.
Self-evaluative response to upward and downward exposure
in the identification condition and in the comparison condition.

Affective response.

A second 2 (direction of exposure: upward and downward) X 2 (instruction: social comparison and identification) ANOVA with the positive affective response as dependent variable revealed a significant main effect of direction ($F(1,141) = 248.43, p < .001$). Similar as in Experiment 1, an assimilative response was found: participants experienced more positive affect after upward exposure than after downward exposure ($M = 3.8$ vs. $M = 1.7$). No main effect of instruction was found ($F(1,141) = 1.28, ns$), but, as predicted, the interaction between direction and instruction was found ($F(1,141) = 4.92, p = .028$). Inspection of the simple main effects revealed that, in accordance with our hypothesis, the assimilation effect on the affective response was more pronounced in the identification condition ($M = 4.1$ vs. $M = 1.7$; $F(1,141) = 151.24, p < .001$) than in the comparison condition ($M = 3.6$ vs. $M = 1.8$; $F(1,141) = 98.48, p < .001$) (see Figure 5).

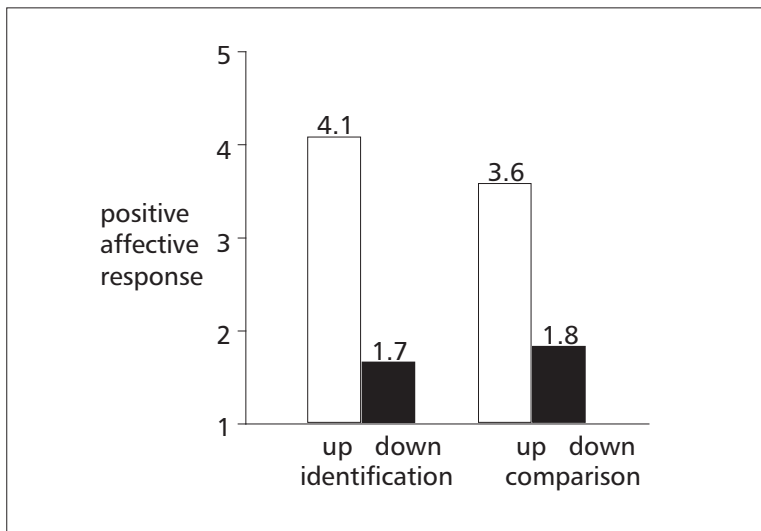


Figure 5.
Positive affective response to upward and downward exposure in the identification condition and in the comparison condition.

In sum, Experiment 2 replicated and extended the findings of Experiment 1. As predicted, the contrastive self-evaluative response was most pronounced in the comparison condition whereas the assimilative affective response was most pronounced in the identification condition. However, whereas in Experiment 1 the

results concerning the affective responses to upward identification were relatively weak, in Experiment 2, the results concerning the self-evaluative responses were only marginally significant. Combined however, the findings in general support the hypotheses that identification underlies the affective responses to exposure to an upward or downward target and that social comparison underlies the self-evaluative responses, and that the two are thus two qualitatively different kinds of processes, leading to qualitatively different kinds of responses.

It must be noted that the manipulation of social comparison was only partially successful. Whereas the comparison instruction successfully increased the degree of comparison with the downward target, it did not increase comparison with the upward target. We suppose that this may again be an indication of a self-defensive reaction. Would the instruction have successfully increased the degree of social comparison with the upward target, it might have led to a negative self-evaluative response. After all, Experiment 1 had shown that upward comparison was associated with a less positive self-evaluative response. Now the self-evaluative response was practically unchanged. In a similar vein, participants again compared themselves somewhat more with the downward target and identified themselves more with the upward target, replicating the self-defensive pattern of Experiment 1. Finally, similar as in Experiment 1, SCO was found to increase both the degree of comparison and degree of identification with the targets. However, the finding that SCO moderated the effect of upward identification on the affective response and the effect of downward identification on the self-evaluative response was not replicated. A possible explanation is that the identification process is different when one is instructed to identify oneself than when it spontaneously occurs. After all, identification we assumed to operate according to the rules of the experiential system, implying, among other things, that identification is a spontaneous process. Finally, whereas in Experiment 1, the participants did not evaluate the upward target as being better off, they did find that the upward target gives a positive impression, just as the downward target gives a negative impression. Thus, whereas the present findings may not apply to exposure to an upward target they do apply to exposure to others who are doing well.

General discussion

In the present study, we took a dual-process perspective (Epstein & Pacini, 1999; Epstein, 2003) in investigating people's responses to exposure to others who are better or worse off. We distinguished between a social comparison process

that we assumed to operate according to the rules of a cognitive system and an identification process that we assumed to operate according to the rules of an experiential system. More specifically, we predicted that the social comparison process, in which both similarities and differences between the self and the other are systematically assessed, would lead to a contrastive self-evaluative response. In addition, we predicted that the identification process, in which one perceives the other holistically and feels a bond with the other person, would lead to an assimilative global affective response. Social comparison and identification we thus considered being two fundamentally different kinds of processes that may occur when people are exposed to others, leading to fundamentally different kinds of responses.

In both a correlational and an experimental experiment, these hypotheses were in general supported. Comparing oneself with the lonely and unhappy student increased satisfaction with one's own social life, while, simultaneously, identification with this student evoked a negative affective response. Comparing oneself with the happy and socially active student decreased satisfaction with one's own social life, whereas identifying oneself with this student evoked a positive affective response. Thus, as expected, the social comparison and identification processes appeared to influence different kinds of responses in opposite directions. Noteworthy, although the participants in Experiment 2 were literally instructed to compare themselves, not to contrast themselves, it appeared that this instruction led to contrastive responses on self-evaluation. This finding is similar to that of Martin and Gentry (1997) and Cattarin, Thompson, Thomas, and Williams (2000) who found that when females were instructed to compare themselves with attractive models in ads or commercials, the self-perceptions of their own appearance were lowered. Our finding that identification is associated with assimilative responses is in line with the research of several other researchers (Brenninkmeijer, 2002; Buunk, et al, 2001b; Buunk, et al., 2001c; Ybema & Buunk, 1995; Ybema, et al., 1996). Moreover, the present study demonstrates that the assimilative effects of identification are limited to global affective responses and do not apply to the self-evaluative responses.

Social comparison orientation.

Individual differences in social comparison orientation proved to be an important factor in determining people's responses to exposure to upward and downward others. Firstly, SCO enhanced the processing of the information about the

targets. People with a high SCO both compared and identified themselves more with the upward and the downward target. Secondly, SCO enhanced the effects of spontaneous identification with the targets: particularly people with a high SCO derived positive affect from identifying themselves with the upward target (see also Brenninkmeijer, 2002).

Limitations.

First, although the upward target was rated as giving a positive impression of his or her social life, the participants did not evaluate the target as being better off. Therefore, strictly speaking, the present findings do not apply to exposure to better-off others but to exposure to well-off others. It remains an empirical question whether the affective and particularly the self-evaluative responses would have been stronger if the target was actually upward, as we would predict. Second, we supposed that people may have responded often in a self-defensive fashion (for similar findings see Stapel & Koomen, 2001). Since this is an ad hoc explanation, it should be investigated directly in future research. Third, one may argue that the dependent variables could be susceptible to demand characteristics. That is, because the questions assessing the responses to upward and downward exposure directly referred to the targets, one may argue that participants may try to guess the researcher's interest and adjust their answers accordingly. However, we believe that a demand characteristic explanation is not possible, as it can not account for the complexity of the results. A demand characteristic explanation, for example, cannot explain why, in Experiment 1, only high-SCO individuals reported affective responses to identifying with the upward target. In addition, if a demand characteristic explanation were correct, we would expect that in Experiment 2, the self-evaluative responses following the comparison or identification instruction would also differ in the upward condition and not only in the downward condition.

Conclusions.

Applying a dual-process perspective to the study of responses to upward and downward exposure proved to be fruitful. Affective and self-evaluative responses appear to be caused by two fundamentally different processes. Furthermore, depending on what kinds of responses are considered, people may respond either positively or negatively to exposure to others. A practical implication may be that people can be learned to focus on the positive responses of exposure to others who are better or worse-off, by learning them to compare downward to identify

upward. Future research may be aimed at studying more directly the analytic nature of the social comparison and the holistic nature of the identification process, and at studying possible interactions between both processes.



Chapter 3
Affective and self-evaluative responses
to exposure to others:
Investigation of an order effect



Abstract - In the present study ($n = 96$), the interplay between affective and self-evaluative reactions to exposure to others who are either better off or worse off was investigated. It was assumed that affective reactions are primary and that self-evaluative reactions are secondary. Therefore, it was predicted that the strongest effects on both mood and self-evaluation would be found when mood was assessed first and self-evaluation next. In line with this prediction, affective effects were found only when they were measured first, and not when they were measured after self-evaluation. However, the effects on self-evaluation were the same whether they were measured first or last. Furthermore, individual differences in social comparison orientation were found to enhance self-evaluative reactions, but not affective reactions. We concluded that affective and self-evaluative reactions to exposure to others who are better-off or worse-off are qualitatively different and cannot be considered interchangeably.

We live in a social world. This means, among other things, that we are often informed about the ups and downs of other people, not only of people whom we know personally, but also of celebrities or of 'ordinary people' whose stories are, for example, depicted in magazine articles. Because we are social creatures, these stories and encounters may affect us. Learning about the positive or negative experiences of others may, on the one hand, affect our mood, by evoking either a positive or a negative feeling. On the other hand, our views of ourselves may alter, because we may compare ourselves with the other. Within social psychology, numerous studies have been conducted that showed that people's affect and self-evaluation may be influenced by others. For example, Morse & Gergen (1970) showed that the actual presence of someone else, who appears either to be superior or inferior, might influence a person's self-esteem. Job applicants who encountered another applicant who appeared to be well mannered and professional experienced a decrease in self-esteem, while those who encountered a dishevelled and slovenly appearing applicant experienced a self-esteem increase. In addition, thinking about or imagining others who are worse-off has been suggested as a coping mechanism when one's self-esteem is threatened (Wills, 1981). Indeed, Wood, Taylor, and Lichtman (1985) showed that women suffering from breast cancer often compared themselves mentally with worse-off cancer patients. More recently, research has shown that written accounts of others who are either more or less fortunate can also influence people's mood and self-evaluation. It must be noted, however, that in most studies in which the responses of people to better-off or worse-off others were investigated, either only the affective or only the self-evaluative reactions were considered (for some exceptions see Bui & Pelham, 1999; Buunk & Ybema, 2003; Stapel & Koomen,

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2000). Yet, research including both kinds of reactions seems important, as they both may have distinct qualities, and they may influence each other.

The primacy-of-affect theory.

In 1980, Zajonc presented his theory of affective primacy, which holds that affective reactions are basic, automatic, and autonomous, occurring prior to and separate from cognitive responses. Several studies support the hypothesis that affective reactions are prior to and occur separately from nonaffective reactions (see Zajonc 1980, 1998). For example, research by Stapel, Koomen, and Ruys (2002) showed that affective information is detected earlier than nonaffective information, although it was a matter of fractions of seconds. We applied the idea of affective primacy to our research question and assumed that, when people are exposed to a better-off (upward) or worse-off (downward) other, they initially experience a shift in their affective state and that only subsequently do people infer implications for their self-evaluation. Thus, we assumed the affective reaction to be primary and the cognitive, self-evaluative reaction to be secondary. The implication of this assumption is that the order in which affective and self-evaluative reactions are assessed may be important. First assessing individuals' mood states and then their self-evaluations follows the sequence of individuals' experiences most directly, whereas measuring first self-evaluations and then mood states may interfere with this 'natural' sequence. When mood is assessed first, the individuals' attention is directed to something that they are experiencing at that very moment. The following question about their self-evaluation may subsequently also be easier to answer, because people may base their answers on their previously reported mood states. As Schwarz's mood-as-information model (Schwarz, 2001) explains, when asked to evaluate a certain target, people may ask themselves "How do I feel about it?". Thus, first assessing mood and then self-evaluation, instead of first assessing self-evaluation and then mood, we propose, represents a situation in which the effects of exposure to an upward or downward target can be measured without interference between mood and self-evaluation and will, therefore, offer the strongest effects on both mood and self-evaluation.

When individuals are first asked about their self-evaluations and then about their mood states, the ordering of the questions will interfere with the sequence of their experiences. We expected that particularly the assessment of mood might be impeded by this interference. The question assessing self-evaluation causes

considerable reflection. Zajonc (1980) stated that “Preferences need no inferences” but we propose that preferences may even be obscured by too many inferences. When feelings are given too much thought, we propose, the experience of a feeling or emotion may become more difficult to retrieve. Therefore, we expected to find an effect of upward and downward exposure on individuals’ moods only when it was assessed before and not when it was assessed after the self-evaluation measurement. This line of reasoning is similar to that of Wilson, Dunn, Kraft, and Lisle (1989), who reviewed studies showing that asking people to explain their preferences leads to a lower correspondence between their preferences and their subsequent behaviour. In one experiment, for example (Wilson, Dunn, Bybee, Hyman, & Rotondo, 1984), participants were given the opportunity to play with 5 different kinds of puzzles. For those who had to explain why they preferred one puzzle to another, there was a sharp reduction in consistency between their reported preferences and the puzzles they eventually played with. In addition, Swann, Griffin, Predmore, and Gaines (1987) report results that are in line with our hypothesis. Participants received either favourable or unfavourable social feedback after which their affective and cognitive reactions were measured. In line with our hypothesis, affective reactions were only found when they were measured before the cognitive reactions and not when they were measured afterwards. We expected that the assessment of self-evaluation would not be impeded when it was measured before, instead of after, mood. As the earlier described ‘mood-as-information effect’ would not now occur, we predicted that the self-evaluative reaction may be somewhat weaker when it is measured before instead of after mood.

Effects on mood and self-evaluation.

Concerning the specific effects on mood and self-evaluation, we predicted that individuals would experience more positive moods and feel better about themselves after exposure to a downward target rather than after exposure to an upward target. Thus, on both affect and self-evaluation we predicted a contrast effect. We predicted this because we assumed that, when people are exposed to a description of an upward or downward other, they compare themselves with this person, using the other person as a reference point to evaluate themselves against. Research has shown that this process is most likely to result in contrastive effects (Chapter 1; Mussweiler, 2001). It must be noted that assimilation effects of exposure to an upward or downward target are sometimes

found, mainly on affect (e.g. Bui & Pelham, 1999; Buunk, VanderZee, & VanYperen, 2001b; Buunk, Ybema, Gibbons, & Ipenburg, 2001c; Chapter 1; VanderZee, Buunk & Sanderman, 1998a; Ybema & Buunk, 1995). However, in these studies, a different affect measure was used than in the present study. In the studies in which assimilative effects on affect were reported, the participants were either asked to indicate what they had felt 'while reading the information about the upward or downward target' or 'to what extent the target information aroused certain feelings'. Both formulations refer to the target. However, in studies in which a contrast effect on affect was reported (e.g. Gibbons, 1986; Gibbons & Boney McCoy, 1991), participants were asked to indicate their moods on a scale, without referring to the target. It might be that this difference in measurement causes the conflicting findings. Perhaps, when a reference to the target is made, an identification process is induced, which seems to be related to assimilative effects of exposure to an upward or downward target (e.g. Brenninkmeijer, 2002; Buunk, et al., 2001b; Buunk, et al., 2001c; Chapter 1; Ybema & Buunk, 1995). In sum, within the present paradigm, a contrast effect was expected on both affect and self-evaluation.

Social Comparison Orientation.

Individual differences in interest in social comparison are also an important factor in determining the reactions to exposure to an upward or a downward target. Recently, Gibbons and Buunk (1999) developed a measure for these individual differences in social comparison orientation (SCO). Several effects of SCO have been reported. Firstly, it has been shown that SCO is a good predictor of interest in social comparison information. In a study by VanderZee, Oldersma, Buunk, and Bos (1998b), for example, cancer patients were given the opportunity to read short interviews with fellow patients about their experiences. It was found that participants who had higher SCO read more interviews (see also Gibbons & Buunk, 1999). Secondly, SCO has been found to enhance the effects of upward and downward exposure (e.g., Brenninkmeijer, 2002; Buunk et al., 2001c). For example, Buunk, Oldersma, and DeDreu (2001a) found that, especially for high-SCO individuals, downward comparison was a successful way to enhance satisfaction with one's relationship. Thus, on the one hand, SCO has been shown to increase people's interest in social comparison and, on the other hand, it has been shown to enhance people's reactions to upward and downward comparison. Thus, SCO seems to work as a magnifier. Therefore, we predicted that the

hypothesised effects would be found particularly for participants who were high in SCO. Thus, firstly, we expected that SCO would enhance the expected contrast effects on mood and self-evaluation. Secondly, we expected that, especially for those high in SCO, the order of assessment of mood and self-evaluation would be important. We expected that those high in SCO would think more about the exposure. As we explained above, contemplation may make it more difficult to retrieve one's affective reactions. Therefore, we expected that, especially for people high in SCO, affective reactions would only be found when they were measured before instead of after the self-evaluation measurement.

Method

Participants and design

One-hundred-and-three students participated in our paper-and-pencil study during obligatory first-year medicine class-meetings. Seven participants were excluded, because their responses to the mood or self-evaluation measures were extreme ($> 2 SD$ above or below the mean). The average age of the 96 participants was nearly 20 years ($SD = 1.55$). The participants were randomly assigned to one of four conditions of the 2 (direction of exposure: upward, downward) X 2 (order: affect - self-evaluation, self-evaluation - affect) design.

Questionnaire

To separate the measurement of the moderating variables from the experimental part, the questionnaire was presented as if it contained two independent studies. The first study was called 'Personality and Study' and the second study was called "Perception of articles in the media'. The first part of the questionnaire consisted of demographic questions and individual difference measures. The second part of the questionnaire contained the bogus interview and the dependent measures.

Social comparison orientation.

Individual differences in social comparison orientation were measured using the Iowa-Netherlands Comparison Orientation Measure (Gibbons & Buunk, 1999). This scale consists of 11 items such as "I always pay a lot of attention to how I do things compared with how others do things" and "I never consider my situation

in life relative to that of other people" (reversed). The items were measured using 5-point scales (1 = *strongly disagree*, 5 = *strongly agree*). Cronbach's alpha was .83.

Interview fragment.

The participants were exposed to a bogus interview with a first-year student who tells about his or her experiences in forming friendships and building up a new social network, which is an important subject to first-year students. Based on in-depth interviews with first-year students, two interview fragments were written, an upward version and a downward version. In the upward version, the student is very positive about his or her social life (the sex of the target was not decided). The student has become acquainted with many fellow-students, has formed good friendships with some of them, gets along with roommates, and can always find someone to have fun with or to have a good conversation with. In the downward version, the student is rather negative about his or her social life. The student has no real friends and tells of standing alone during breaks at college, having hardly any contact with roommates, and being alone often, watching TV, or studying. We made the interviews as realistic as possible by giving them a newspaper-article layout.

Dependent variables.

Mood and self-evaluation were the main dependent variables and were assessed directly after the exposure, before any other measurement was taken. The order in which these two variables were assessed was randomly varied. Mood was measured using two questions; "How **positive** is your mood at this moment" and "How **negative** is your mood at this moment?". Answers were given on a 5-point scale (1 = *not or hardly*, 5 = *extremely*). Because the correlation between the two items was $-.34$ ($p = .001$), both items were combined into one scale⁽²⁾. Self-evaluations of the participants' own social lives were measured using 4 items ($\alpha = .65$). "How **satisfied** are you at this moment with your own social life?", "How **certain** are you at this moment about your social life?", "How **lonely** do you feel at this moment?" (reversed), and "How **concerned** are you at this moment about your social life? (reversed)". Answers were given on a 5-point scale (1 = *not or hardly*, 5 = *extremely*). To measure the successfulness of the manipulation of the direction of exposure, two questions were asked. First, the participants were asked to indicate on a 9-point scale how positively or negatively they felt

² Since positive and negative mood were only moderately correlated, we also performed separate analyses for positive and negative mood. These analyses did not yield substantially different results.

that the target portrayed his or her social life (1 = *very negatively*, 5 = *not negatively*, not positively, 9 = *very positively*). Secondly, the participants were asked how they perceived the target's social life in comparison with their own social lives (1 = *much worse*, 5 = *about the same*, and 9 = *much better*) in order to determine whether the upward target was really evaluated as being better-off and whether the downward target was really evaluated as being worse-off.

Results

Ratings of the target and manipulation check.

A Univariate Analysis of Variance (ANOVA) revealed that the participants found that the upward target gave a much more positive description of his or her social life than the downward target did ($M_{\text{upward}} = 8.2$, $SD = 1.35$ vs. $M_{\text{downward}} = 2.4$, $SD = 1.32$; $F(1,95) = 446.56$, $p < .001$). Furthermore, both ratings differed significantly from 5, the scale's neutral midpoint ($t_{\text{downward}}(28) = -14.05$, $p < .001$; $t_{\text{upward}}(47) = 16.11$, $p < .001$). A second ANOVA revealed that, compared to the upward condition, the participants in the downward condition rated the target as worse-off relative to themselves ($M_{\text{downward}} = 2.2$, $SD = 1.49$ vs. $M_{\text{upward}} = 5.4$, $SD = 1.08$; $F(1,89) = 132.53$, $p < .001$). Moreover, both ratings differed significantly from 5, the point at which the target's social life is evaluated as equally good as one's own ($t_{\text{upward}}(45) = 2.45$, $p < .01$, 1-tailed; $t_{\text{downward}}(44) = -12.37$, $p < .001$, 1-tailed), although it must be noted that the difference for the upward target was larger than for the downward target. This is more often the case in research using this paradigm (e.g. Ybema, Buunk, & Heesink, 1996). People find it harder to acknowledge that a person is better off than himself or herself than to acknowledge that a person is worse off. Thus, the participants found that the upward target gave a positive description of his or her social life, and they evaluated the target as better-off than themselves. In addition, the participants found that the downward target gave a negative description of his or her social life, and evaluated the target as worse-off than themselves. The manipulation of direction of exposure can be considered successful.

Mood and Self-evaluation

In order to test the hypotheses concerning mood and self-evaluation, regression analyses were conducted in which mood or self-evaluation was the dependent variable. Direction of exposure, order, and SCO, which is a continuous variable,

were the independent variables. In the first step of the analyses, the main effects were entered. Next, three regressions were run in which each of the three two-way interactions was entered, in order to investigate whether each interaction significantly contributed to the prediction of the dependent variable. In the last step, when all two-way interactions were added, the three-way interaction was added. Following Aiken and West (1991), the continuous independent variable was standardised and the B-values are reported instead of the β -values.

Mood.

In the regression analyses, no main or interaction effects of SCO were found. Therefore, a simpler model was tested using a 2 (direction of exposure: upward, downward) X 2 (order: mood - self-evaluation, self-evaluation - mood) Univariate Analysis of Variance (ANOVA). Neither the main effect of direction of exposure ($F(1,92) = 1.38, ns$), nor the main effect of order ($F < 1$) was significant. However, as expected, the interaction between direction and order was significant ($F(1,92) = 7.67, p < .01$). Inspection of the simple main effects revealed that, as expected, only in the Mood – Self-evaluation condition was a significant effect of direction of exposure found ($M_{\text{upward}} = 3.7$ vs. $M_{\text{downward}} = 4.1, F(1,92) = 8.12, p < .01$), and not in the Self-evaluation – Mood condition ($M_{\text{upward}} = 4.0$ vs. $M_{\text{downward}} = 3.9, F(1,92) = 1.22, ns$). The means are depicted in Figure 1. In the Mood – Self-evaluation condition, the predicted contrast effect was found: positive mood was higher after downward exposure than after upward exposure. Thus, convincing support was found for the prediction that order is important for the assessment of mood: the predicted contrast effect was only found when mood was assessed first and not when self-evaluations were assessed first. Unexpectedly, SCO did not enhance the contrast effect of exposure nor enhance the effect of order of measurement.

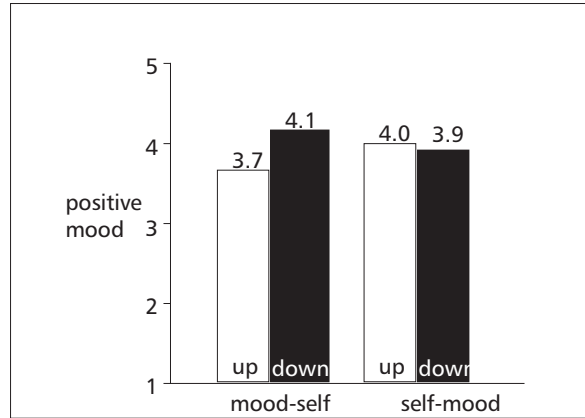


Figure 1.
Positive mood after upward and downward exposure in the mood – self-evaluation condition and the self-evaluation – mood condition.

Self-evaluation.

In the regression analyses, a main effect of direction of exposure was found ($B = -.18, p < .001$), indicating that self-evaluations were higher following downward exposure than following upward exposure. Thus, the predicted contrast effect on self-evaluation was found. This contrast effect was independent of order, because the two-way interaction between direction and order was not significant ($R^2\text{-change} = .001; F < 1$). Thus, the contrast effect on self-evaluation was found when self-evaluation was assessed before and after the mood assessment. This means that no support was found for our prediction that the contrast effect on self-evaluation would be enhanced by first assessing mood. The means are depicted in Figure 2. Further regressions revealed a marginally significant main effect of SCO ($B = -.077, p < .10$), which was qualified by a significant interaction between direction and SCO ($R^2\text{-change} = .046; F(1,91) = 5.65, p < .05$). Simple slope analyses revealed that the main effect of direction was only significant for those high in SCO (1 SD above average; $B = -.28, p < .001$), and not for those low in SCO (1 SD below average; $B = -.074, ns$). Thus, as can be seen in Figure 3, in which the means are depicted, the contrast effect on self-evaluation was only found for those high in SCO. No other two-way interaction was significant;

neither was the three-way interaction (all F 's < 1). In sum, the expected contrast effect on self-evaluation was found, and this contrast effect was, unexpectedly, not enhanced when mood was assessed first. In addition, consistent with our hypothesis, SCO enhanced the contrast effect of upward and downward exposure on self-evaluation.



Figure 2. Self-evaluation after upward and downward exposure in the mood – self-evaluation condition and the self-evaluation – mood condition.

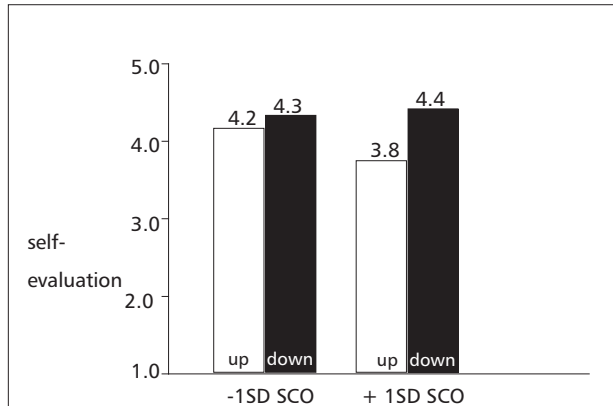


Figure 3. Self-evaluation after upward and downward exposure for those high and low in social comparison orientation.

Discussion

In the present study, it was assumed that exposure to an upward or a downward target would initially evoke a certain mood state, and that people would subsequently experience changes in their self-evaluation. It was, therefore, predicted that the order in which the affective and self-evaluative reactions are assessed would be important. More specifically, the strongest contrast effects on mood and self-evaluation were expected when mood was assessed first and self-evaluation next. It was predicted that the assessment of mood would be impeded when self-evaluations were assessed first, because the thinking about the self-evaluative consequences was expected to make it difficult for participants to retrieve their affective reactions. In addition, it was predicted that a stronger contrast effect on self-evaluation would be found when self-evaluation was measured after mood, because people might base their answers on their previously reported moods. Partial support was found for these predictions. As predicted, a contrast effect on mood was found only when mood was assessed directly after the exposure, and not when self-evaluation was assessed first. Thus, strong support was found for the prediction that order is important for the assessment of affective reactions and that first assessing a cognitive measure interferes with the assessment of mood. This result is in line with our assumption that, when people are exposed to an upward or a downward target, they first experience an affective reaction and only later a cognitive, self-evaluative reaction. In addition, it seemed that too much cognitive elaboration can make it difficult for people to retrieve their affective reactions. However, the present research does not offer unequivocal evidence that mood effects disappear after too much cognitive elaboration has taken place. An alternative explanation for not finding affective reactions when they are measured after the self-evaluation measurement is that this is a time effect. Because moods are transient, the time that was needed for answering the self-evaluation question may have led to the disappearance of the mood effect (see also Swann et al., 1987). In addition, it could be that mood effects are not found when they are measured after self-evaluative effects, because affective reactions occur more automatically than cognitive reactions and are therefore more easily disrupted (e.g., Zajonc, 1980; Epstein & Pacini, 1999). Additional research is needed to investigate these alternative explanations. No support was found for the prediction that the contrast effect on self-evaluation would be stronger when self-evaluation was measured after, instead of before, mood. Thus, order of measurement was not important for the assessment of

self-evaluation. However, it may have been easier for participants to report their self-evaluations after their moods had been made accessible. That is, perhaps participants were only faster in reporting their self-evaluations, as the first step in the mental process had already been taken by making their moods accessible. Measuring response latencies in future research may shed some light on this issue.

Social comparison orientation.

Individual differences in social comparison orientation were expected to work as a magnifier. Firstly, it was predicted that the contrast effects on mood and self-evaluation would be enhanced by SCO. Partial support was found for this prediction as SCO was found to enhance the contrast effect on self-evaluation. The higher participants were in SCO, the more their self-evaluations were affected by the exposure to the upward or the downward target. However, in contrast to the results of Brenninkmeijer (2002) and Buunk et al. (2001c), the effect on mood was not enhanced by SCO in our study. This might be explained by the fact that Brenninkmeijer and Buunk et al. referred to the target when they asked participants about their affective reactions, whereas we asked participants to report their moods without referring to the target. As outlined above, we think that these measures may assess somewhat different reactions. The finding that the self-evaluative, but not the affective, consequences were enhanced by SCO, seems to imply that affective and self-evaluative reactions have different qualities, as both are differentially influenced by SCO. Secondly, it was predicted that, especially for high-SCO individuals, affective reactions would only be found when they were measured first, because high-SCO individuals were expected to think more about self-evaluative consequences, which may make it more difficult to retrieve an affective reaction. However, no support was found for this prediction.

Implications and conclusions.

The results of our research suggest that the affective and the self-evaluative reactions to exposure to better- or worse-off others may display different qualities. Firstly, the order in which affective and self-evaluative reactions are measured proved to be important for affective reactions but not for self-evaluative reactions. Secondly, these data seem to imply that affective reactions to social comparison are more primary than cognitive reactions. However, alternative explanations for not finding affective reactions when they are measured after

self-evaluation need to be further investigated. Thirdly, individual differences in social comparison orientation seem to influence the degree to which people's self-evaluations are affected by exposure to an upward or a downward target, but not their affective reactions. Yet, both kinds of reactions were in the same direction as, overall, downward exposure evoked a more positive mood and a more positive self-evaluation than upward exposure. Thus, at least with the measures used in the present study, affective and cognitive measures lead to similar conclusions about how people are affected by upward and downward exposure.



Chapter 4

The Influence of Individual Differences
in Social Comparison Orientation

On Reactions to Upward and
Downward Comparisons



Abstract - In this chapter we present a study of the influence of individual differences in social comparison orientation (SCO) on the affective responses of exposure to better- and worse-off others. We tested the hypothesis that people with a high SCO identify themselves more with downward and upward others and will, therefore, be in a more negative mood after downward exposure and in a more positive mood after upward exposure, than those with a low SCO. In addition, we expected that people's low levels of well-being, loneliness in this research, would moderate these effects. The results concerning upward exposure were not in accordance with our hypotheses, or other existing evidence, and some directions for further research are suggested. In contrast, the results concerning exposure to a downward target, were largely in line with our predictions as we found that people who were high in both SCO and loneliness were in the least positive mood after downward exposure. In addition, applying a bootstrap technique to test for mediation, we found indications that the less positive reactions of individuals high in SCO to downward exposure may be partially attributed to their heightened identification with downward others.

How do people feel when they see that someone else is doing worse than they are? And how do they feel when they learn about someone else who is doing better? In the research into such issues of social comparison, it was originally assumed that merely the direction of the comparison, that is, whether one is comparing oneself with a better performing or upward other or whether one is comparing oneself with a worse performing or downward other, would determine whether the comparison would evoke either more positive or negative feeling (cf. Hakmiller, 1966; Wills, 1981). However, considerable research has now demonstrated that either direction has its ups and downs (e.g., Buunk, Collins, Taylor, VanYperen, & Dakof, 1990). Several researchers have identified a number of factors that moderate how people react to social comparison, for example, the perceived vulnerability to the fate of the comparison other (e.g., Lockwood, 2003), the personal importance of the comparison dimension (e.g., Tesser, 1988), the distinctness of others and the mutability of selves (Stapel & Koomen, 2000), or psychological closeness (e.g., Pelham & Wachsmuth, 1995), and the well-being of the comparer (e.g., Buunk, Ybema, Gibbons, & Ipenburg, 2001c; VanderZee, Buunk, & Sanderman, 1998a). In this study, we investigated people's reactions to comparison with an upward or downward target as a function of their dispositional inclination to compare their characteristics with others and as a function of their level of low well-being, loneliness in the present research.

This chapter is based on: Groothof, H.A.K., Siero, F.W., & Buunk, A.P. (2003). *The Influence of Individual Differences in Social Comparison Orientation on Reactions to Upward and Downward Comparisons*. Manuscript submitted for publication.

Social comparison orientation.

Not all people are to the same degree interested in comparing their own qualities and characteristics with those of others, and not everyone is to the same degree affected by observing that others are doing better or worse. In 1999, Gibbons and Buunk acknowledged these individual differences in social comparison and developed a scale for measuring them, the Iowa-Netherlands Comparison Orientation Measure (INCOM). This scale is used to measure the general tendency to compare oneself with others, and to base the evaluation of one's own qualities and characteristics upon comparison with others. People who score high on this scale of Social Comparison Orientation (SCO) tend to focus on how they are doing in comparison with others, and on how the experiences of others relate to themselves. Several studies have been conducted that included SCO and have shown that, in general, both people's interest in and their reactions to social comparison are enhanced by SCO. For example, VanderZee, Oldersma, Buunk, and Bos (1998b) offered cancer patients the opportunity to read short interviews with fellow patients about their experiences, and found that participants with higher SCO read more interviews. In addition, in a longitudinal study among nurses by Buunk, Zurriaga, Gonzalez-Roma, and Subirats (2003), it was found that those high in SCO indicated that they more frequently compared themselves with colleagues who were doing better or worse. In addition, this study showed that individuals high in SCO were more affected by engaging in social comparison, as, particularly for them, social comparison increased the perception of relative deprivation nine to ten months later (see also Brenninkmeijer, 2002; Buunk et al., 2001c; Buunk, Oldersma, and DeDreu, 2001a; VanderZee et al., 1998b for data showing that individuals high in SCO are more affected by social comparison and Gibbons & Buunk, 1999 for data showing that individuals high in SCO compare themselves more with others). However, the precise influence of SCO is not yet fully understood, as the results do not unequivocally show under what conditions people high in SCO are either more positively or more negatively affected by upward and downward comparison. These inconsistent findings may partly be explained by the fact that very diverse types of social comparison were investigated. In the study by Buunk et al. (2003), for example, the participants were retrospectively asked about their comparisons with colleagues, whereas in the study by Buunk et al. (2001a), downward comparison was installed by asking participants to generate features of their relationship in which they considered their relationship as better than that of most others. However, also within a

single paradigm, the results are not clear-cut. Therefore, we consider it necessary to investigate the mechanisms through which individual differences in SCO influence people's reactions to social comparison.

Social comparison orientation and Identification.

In the present research, we exposed people to a description of an upward or downward comparison other. We tested the hypothesis that people who are higher in SCO are more inclined to identify themselves with upward and downward others, and will, therefore, be in a more positive mood after exposure to an upward target and in a more negative mood after exposure to a downward target. People with a higher SCO are more interested in comparing their qualities and characteristics with those of others and do so more often than people with a lower SCO. Apparently, individuals with higher SCO more often consider others to be suitable comparison others. Suitable usually means more similar. As Festinger (1954) already noted, making a comparison between oneself and another person requires that the other person is not too divergent from oneself. In addition, Mussweiler (2003) argued that, in most comparison situations, people are likely to initially focus on fundamental ways in which the target and the standard are similar. Therefore, we assumed that individuals high in SCO, in general, are more inclined to regard others as similar to themselves, or in other words, to identify themselves with others. Identification is the process of recognizing one's own situation in the other and feeling one with the other person (see also Ybema, Buunk, & Heesink, 1996). Identification is sometimes used as an explanatory process for understanding the assimilative effects of social comparison. That is, upward comparison may evoke positive reactions because people identify themselves with the upward target, and downward comparison may evoke negative reactions because people identify themselves with the downward target (e.g., Brenninkmeijer 2002; Buunk et al., 2001a; Buunk et al., 2001c; Ybema & Buunk, 1995; Ybema et al., 1996). In fact, in a number of studies, the less favorable responses to social comparisons of people who were low in subjective well-being, could be attributed to their heightened identification with downward others and lessened identification with upward others (Brenninkmeijer, 2002; Ybema & Buunk, 1995; Ybema et al., 1996). In addition, a study by Groothof, Buunk, and Siero (2003a) clearly showed, using both correlational and experimental data, that the more people identified themselves with a target, the more positive their reactions were after upward exposure and the more negative after downward exposure (see Chapter 1).

Social comparison orientation and low subjective well-being.

The results of several studies indicate that the effects of SCO depend on people's subjective well-being, or the lack thereof, such as how burnt-out or neurotic a person is. The general finding seems to be that people who are both high in SCO and low in well-being respond more negatively to social comparison. For example, in a study among sociotherapists (Buunk et al., 2001c), it was found that individuals high in SCO experienced more negative affect in response to downward exposure than individuals low in SCO, when they were also high in burnout. In addition, Brenninkmeijer (2002) found that teachers high in burnout experienced less positive affect following comparison with an upward target, particularly when they were high in SCO (see also VanderZee et al., 1998b). In the present study, we investigated whether people's levels of loneliness would moderate the effect of SCO on upward and downward identification, and, therefore, on people's moods after upward and downward exposure.

We predicted that individuals high in SCO would identify themselves more with the downward target than individuals low in SCO, particularly when they were relatively lonely, when, after all, the actual resemblance between themselves and the target would be greater. Consequently, they would be in a more negative mood afterwards. Likewise, we predicted that individuals high in SCO would identify themselves more with the upward target than low SCO individuals, particularly when they were not lonely, when, after all, the actual resemblance between themselves and the target would be greater, and that they would consequently be in a more positive mood afterwards. Partly support for these hypotheses comes from studies indicating that people who are low in subjective well-being identify themselves less with an upward target and more with a downward target than those who are high in subjective well-being (e.g. Buunk et al., 2001c; Ybema et al., 1996; VanderZee et al., 1998a). To test our hypotheses, the participants were exposed to a description of either an upward target who was enjoying a good social life or to a downward target who suffered from loneliness. Beforehand, we assessed the participants' feelings of loneliness and, afterwards, their moods and the degree to which they identified themselves with the target.

Method

Participants and Design

One hundred and eleven first-year psychology students participated in our paper-and-pencil study during a mass testing session for which they received partial course credit. The participants were randomly assigned to either the upward or the downward conditions.

Questionnaire

To separate the measurement of the moderating variables from the experimental part, the questionnaire was presented as if it contained two independent studies. The first study was called 'Personality and study' and the second study was called 'Perception of articles in the media'. The first part of the questionnaire consisted of demographic questions and the measures of SCO and loneliness. The second part of the questionnaire contained the description of the comparison targets and the dependent measures.

Social comparison orientation.

Individual differences in social comparison orientation were measured using the Iowa-Netherlands Comparison Orientation Measure (INCOM, Gibbons & Buunk, 1999). This scale consists of 11 items such as 'I always pay a lot of attention to how I do things compared with how others do things', and 'I never consider my situation in life relative to that of other people' (reversed). The items were measured using 5-point scales (1 = *strongly disagree*, 5 = *strongly agree*; $M = 3.5$, $SD = .65$; $\alpha = .89$).

Feelings of loneliness.

Individual differences in feelings of loneliness were measured using a new scale based on items of the revised and translated version of Russell, Peplau, and Cutrona's 1980 UCLA Loneliness Scale (Gerritsen, 1997). We revised this scale because it measures severe loneliness while Dutch first-year students often experience milder forms of loneliness. Using a less extreme measure, we were better able to differentiate between the participants. The five items from the UCLA with the highest item-total correlation in a pre-study among first-year students were reformulated. For example, item 14 'I feel isolated from others' was changed into 'Sometimes I have the feeling that I am becoming a bit isolated from others'. The other items were 'Every now and then I lack companionship around me',

'I sometimes feel a bit lonely', 'There aren't that many people I feel close to', and 'Sometimes I feel left out'. Answers were given on a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*; $M = 2.5$, $SD = .82$; $\alpha = .82$).

Comparison targets.

The participants were exposed to a bogus interview with a first-year student who told about his or her experiences in forming friendships and building up a new social network, which is an important subject to first-year students. Based on in-depth interviews with first-year students, two interview fragments were written, an upward version and a downward version. In the upward version, the student was very positive about his or her social life (the sex of the target was not decided). The student had become acquainted with many fellow-students, had formed good friendships with some of them, got along with roommates, and could always find someone to have fun with or to have a good conversation with. In the downward version, the student was rather negative about his or her social life. The student had no real friends and told of standing alone during breaks at college, having hardly any contact with roommates, and being alone often, watching TV, or studying. We made the interviews as realistic as possible by giving them a newspaper-article layout.

Mood and identification.

Mood and identification were the main dependent variables and were assessed directly after exposure⁽²⁾. Mood was measured first using two questions; 'How **positive** is your mood at this moment' and 'How **negative** is your mood at this moment?'. Answers were given on a 5-point scale (1 = *not or hardly*, 5 = *extremely*). Because the correlation between the two items was $-.65$ ($p < .001$), the negative item was reversed and both items were combined in one scale of positive mood ($M = 3.6$, $SD = .75$). Degree of identification with the target was measured using the following items (see also Brenninkmeijer, 2002; Ybema & Buunk, 1995): 'Could you recognize yourself in this person?', 'Did you think you resemble this person?', and 'To what extent did you think that in the future things might become (or stay) the same for you as for this person?'. Answers were given on a 5-point scale (1 = *not*, 5 = *very strongly*; $M = 2.1$, $SD = 1.00$; $\alpha = .88$).

Ratings of the target.

To determine the successfulness of the manipulation of the direction of expo-

² Self-evaluations after upward and downward exposure were also assessed in a similar manner as in Chapter 3. However, no significant results were found concerning self-evaluation.

sure, two questions were asked. First, the participants were asked to indicate on a 9-point scale how positively or negatively they felt that the target portrayed his or her social life (1 = *very negatively*, 5 = *not negatively, not positively*, 9 = *very positively*). Secondly, the participants were asked how they perceived the target's social life in comparison with their own social lives (1 = *much worse*, 5 = *not worse, not better*, and 9 = *much better*) in order to determine whether the upward target was really evaluated as being better off and whether the downward target was really evaluated as being worse off.

Results

Ratings of the target.

A Univariate Analysis of Variance (ANOVA) revealed that the participants found that the upward target described his or her social life more positively than the downward target did ($M_{\text{upward}} = 8.2$, $SD = 1.2$; $M_{\text{downward}} = 2.1$, $SD = 1.4$; $F(1,106) = 580.90$, $p < .001$). Furthermore, both ratings differed significantly from 5, the scale's neutral midpoint ($t_{\text{upward}}(54) = 20.13$, $p < .001$; $t_{\text{downward}}(52) = -14.62$, $p < .001$). A second ANOVA revealed that, in comparison with their own social lives, the participants rated the target's social life as better in the upward condition than in the downward condition ($M = 5.3$, $SD = 1.2$ vs. $M = 2.2$, $SD = 1.2$; $F(1,104) = 180.57$, $p < .001$). Moreover, in both the upward and the downward conditions, the mean rating differed significantly from 5, the point at which the target's social life is evaluated as equally good as the participants' own ($t_{\text{upward}}(52) = 2.07$, $p < .05$; $t_{\text{downward}}(52) = -16.67$, $p < .001$). It must be noted that although both evaluations differed significantly from 5, the downward manipulation was stronger than the upward manipulation. This is a rather general finding using this paradigm, (e.g. Ybema, et al. 1996), it is hard to get people to acknowledge that a target is better off. Acknowledging this, we consider the manipulation of direction of exposure successful. The participants found that the upward target gave a positive impression of his or her own social life, and they evaluated the target as better off than themselves. In addition, the participants found that the downward target gave a negative impression of his or her own social life, and evaluated the target as worse off than themselves.

Regression Analyses

In order to test our hypotheses, regression analyses were conducted in which

either degree of identification or positive mood was the dependent variable. Direction of exposure, SCO, and feelings of loneliness were the independent variables. In the first step of the analyses, the main effects were entered. Next, three regression analyses were run in which each of the three two-way interactions was entered, in order to investigate whether each interaction significantly contributed to the prediction of the dependent variable. In the last step, when all two-way interactions were added, the three-way interaction was added. Following Aiken and West (1991), the continuous independent variables were standardized and the B-values are reported instead of the β -values.

Identification.

In the first step, a significant main effect of direction of exposure was found ($B = .53, p < .001$), indicating that the participants identified themselves more with the upward target than with the downward target. However, this main effect was qualified by a two-way interaction with SCO ($R^2\text{-change} = .052; F(1,105) = 8.16, p < .01$), and a two-way interaction with loneliness ($R^2\text{-change} = .114; F(1,105) = 19.77, p < .001$). Unexpectedly, the three-way interaction was not significant. Therefore, both two-way interactions were investigated independently of the third predictor. As depicted in Figure 1, inspection of the simple slopes for the interaction between direction and SCO revealed that, as expected, as participants were higher in SCO, they identified more with the downward target ($B = .27, p < .05$), but, unexpectedly, less with the upward target ($B = -.21, p < .05$). Secondly, simple slopes analyses for the interaction between direction and loneliness revealed that, not surprisingly, as participants were lonelier, they identified more with the downward target ($B = .34, p < .01$), and less with the upward target ($B = -.34, p = .001$), as can be seen in Figure 2.

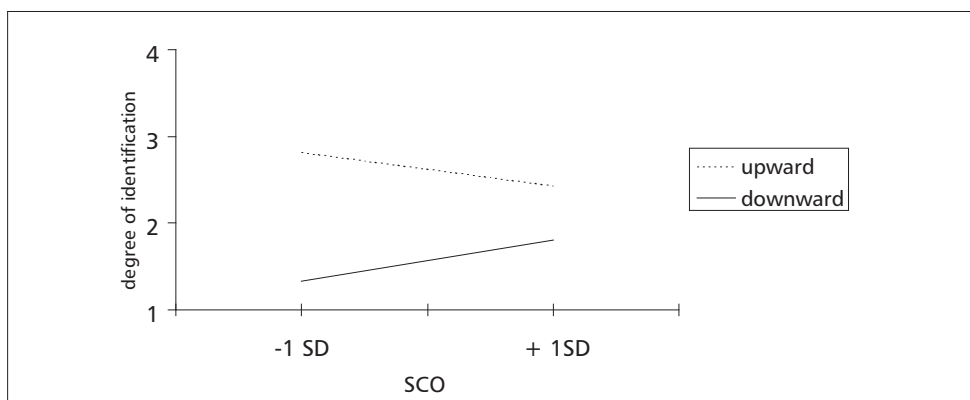


Figure 1. Degree of identification with the upward and downward targets as a function of social comparison orientation.

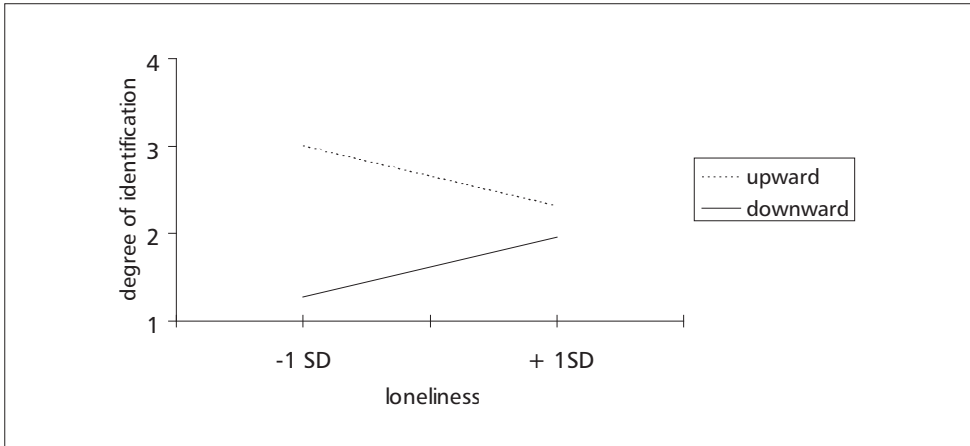


Figure 2. Degree of identification with the upward and downward targets as a function of feelings of loneliness.

Mood.

In the first step, a significant main effect of loneliness was found ($B = -.26, p = .001$), indicating that the lonelier participants were, the less positive moods they had after exposure to the upward or downward target. No other main effect was significant, nor was any two-way interaction. However, the three-way interaction was significant ($R^2\text{-change} = .062; F(1,102) = 7.86, p < .01$). Therefore, further analyses were performed in the downward and the upward conditions. In the downward condition, the main effect of loneliness was again significant ($B = -.31, p < .01$). In addition, despite the fact that the two-way interaction between direction and SCO was not significant, a significant main effect of SCO was found ($B = -.21, p < .05, 1\text{-tailed}$), indicating that, as predicted, participants were in a less positive mood after downward exposure as they were higher in SCO. In addition, an interaction effect between SCO and loneliness ($p < .05$) was found. Inspection of the simple slopes revealed that, as expected, in the downward condition, the higher the level of SCO, the less positive the moods relatively lonely participants experienced ($B = -.47, p < .01$). For those feeling relatively not lonely, SCO was not related to mood when exposed to a downward target ($B = .05, ns$). The simple slopes are depicted in Figure 3. In the upward condition, SCO and loneliness had no interaction effect on positive mood, but the main effect of loneliness was again found ($B = -.21, p = .059$). The simple slopes are depicted in Figure 4.

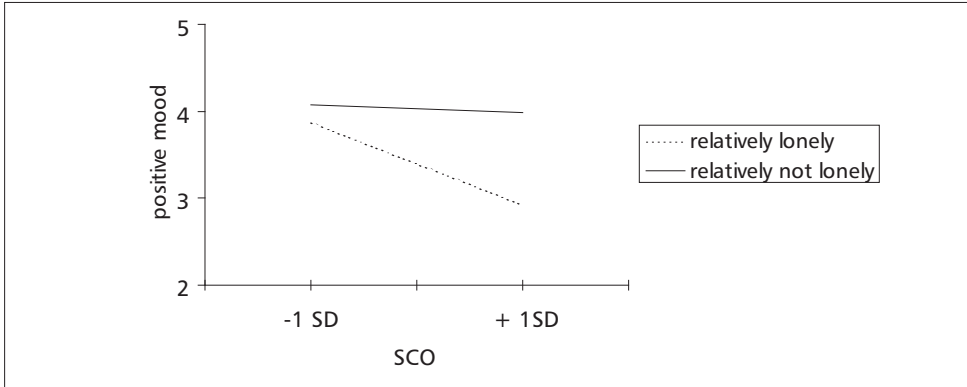


Figure 3. Positive mood after **downward exposure** for those feeling relatively lonely and for those feeling relatively not lonely as a function of social comparison orientation.

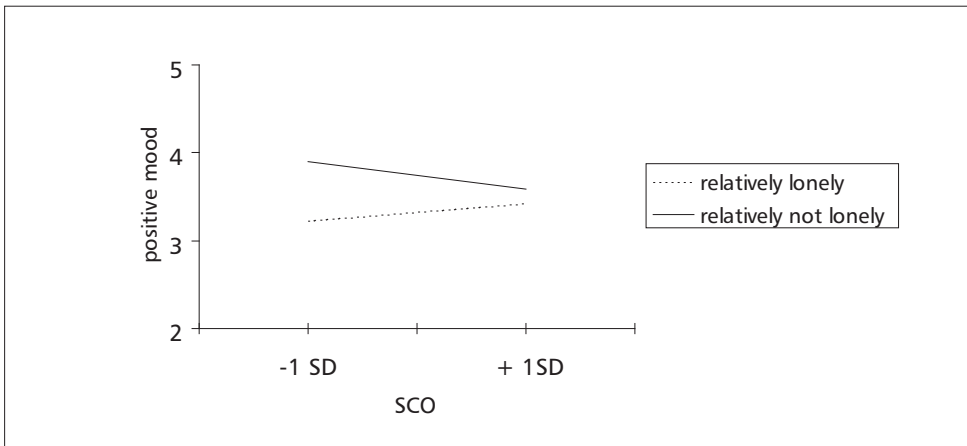


Figure 4. Positive mood after **upward exposure** for those feeling relatively lonely and those feeling relatively not lonely as a function of social comparison orientation.

Mediation Analyses

To further investigate whether identification with the target explains the mood effects of upward and downward exposure, mediation analyses were carried out. The preferable way would have been to conduct mediation analyses within each cell of a 2 (direction of exposure: upward, downward) X 2 (SCO: high, low) X 2 (loneliness: high, low) design. However, we did not have enough participants for this procedure (see Shrout & Bolger, 2002). Therefore, mediation analyses were performed separately in the upward and downward conditions for those

cases in which the above-reported regression analyses showed that SCO or loneliness was related to both positive mood and identification (see Baron & Kenny, 1986). Figure 5 shows the elements of the mediation analyses. Thus, mediation analyses were performed when c and a were significant. Identification mediates the effect of SCO or loneliness on mood when the product of a and b is different from zero (see Shrout & Bolger, 2002). However, as Shrout and Bolger explain, when sample sizes are small, the distribution of the estimate of $a \times b$ is skewed, which may reduce the power to detect mediation when it exists in the population. Therefore, we applied a bootstrap technique which allows the distribution of the estimates of $a \times b$ to be examined empirically and allows one to define the confidence interval by the cutpoints that exclude $(\alpha/2) \times 100\%$ of the values from each tail of the empirical distribution⁽³⁾.

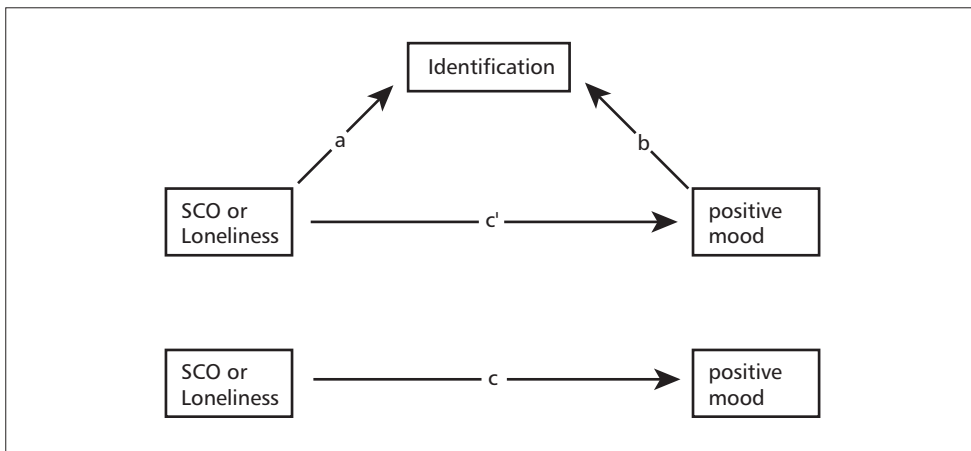


Figure 5.
Model for investigating whether identification with the target mediates the effects of SCO and loneliness on positive mood.

Downward exposure.

In the downward condition, SCO was related both to positive mood and to identification. As reported above, the higher participants were in SCO, the less positive the moods they experienced after downward exposure ($B = -.21, p < .05, 1$ -tailed), and the more they identified with the downward target ($B = .27, p <$

³ Following the instructions of Baron & Kenny (1986) for investigating mediation led to the same conclusions as did applying the bootstrap technique.

.05). Applying the bootstrap technique, we found that the 95% confidence interval for $a \times b$ was defined by $-.249$ and $.012$. This interval just includes zero, which would mean that identification does not mediate this effect. However, the 90% confidence interval was defined by $-.215$ and $-.002$, and did not include zero. Thus, indications were found that identification may partially mediate the effect of SCO, implying that individuals high in SCO experienced less positive mood after downward exposure, presumably because they identified themselves with the downward target. In addition, in the downward condition, we also found that the lonelier participants were, the less positive the moods they experienced ($B = -.31, p < .01$), and the more they identified with the downward target ($B = .34, p < .01$). Applying the bootstrap technique, we found that the 95% confidence interval for $a \times b$ was defined by $-.279$ and $.071$, which includes zero, and also the 90% confidence interval included zero ($-.240$ and $.051$). Thus, identification with the downward target could not explain why lonelier participants were in a less positive mood following downward exposure.

Upward exposure.

In the upward condition, only loneliness was related to both positive mood and identification, and not SCO. The above-reported regression analyses showed that the lonelier participants were, the less positive the moods they had after upward exposure ($B = -.21, p = .059$), and the less they identified with the upward target ($B = -.34, p = .001$). Using the bootstrap technique, the 95% confidence interval for $a \times b$ was defined by $-.147$ and $.087$, which includes zero, and the 90% confidence interval also included zero ($-.128$ and $.057$). Thus, identification with the upward target could not explain why lonelier participants were in a less positive mood following upward exposure. In sum, the degree to which participants identified themselves with the target seemed to only partially mediate the effect of SCO on positive mood in the downward condition, and did not mediate the effects of loneliness on positive mood in either the upward or downward conditions.

Discussion

In this study, it was investigated how individual differences in social comparison orientation determine people's moods after exposure to better- and worse-off others. It was predicted that people with a higher SCO would identify themselves

more with upward and downward others and would, therefore, respond more positively to upward exposure and more negatively to downward exposure, than those with a low SCO. Furthermore, loneliness was expected to moderate these effects: we predicted that individuals high in SCO would identify themselves more with a downward target, particularly when they were relatively lonely, and consequently respond more negatively to downward exposure. Likewise, it was predicted that individuals high in SCO would identify themselves more with an upward target than individuals low in SCO, particularly when they were not lonely, and consequently respond more positively to upward exposure. The results were largely in line with our predictions concerning downward exposure, but not concerning upward exposure.

Downward exposure.

Concerning exposure to a downward target the results showed, as expected, that relatively lonely participants with higher SCO were in a less positive mood after downward exposure. This finding is in line with the findings of other studies showing that people who are both high in SCO and low in well-being respond particularly negatively to social comparison (e.g., Buunk et al., 2001c). The finding may, however, appear to contradict the results of a study by Buunk et al. (2001a) on relationship satisfaction. They found that downward comparison was a successful rather than unsuccessful way to enhance satisfaction for those who were high in SCO and initially unsatisfied with their relationship. It must be noted, however, that downward comparison in their study was induced by asking participants to name features of their relationship in which they considered their relationship *to be better than that of most others*. This may have offered individuals high in SCO a helpful strategy that prevented them from identifying themselves with the downward target through focussing their attention on their superior position compared to worse-off others. Indeed, the present study offered partial support for the prediction that it is through identifying themselves with the downward target, that individuals high in SCO are in a less positive mood after downward exposure. This finding is in accordance with research showing that identification is associated with assimilative effects (e.g., Ybema et al., 1996). However, in contrast to our hypothesis, individuals high in SCO did not identify to a particularly high degree with the downward target when they were lonely, suggesting that individuals high in SCO identify themselves with worse-off others independently of the actual resemblance between themselves

and the other. Instead, loneliness was found to increase identification with the downward target independently of SCO. However, mediation analyses showed that identification with the downward target could not explain why lonely participants responded more negatively to downward exposure. Apparently, identifying with a worse-off other as a result of high SCO is psychologically different from downward identification as a result of an actual resemblance to someone else.

Upward exposure.

In contrast to our hypothesis, SCO was not related to mood after upward exposure. In addition, participants with higher SCO identified themselves less, rather than more, with the upward target. Combined with the finding that people high in SCO identified themselves more with the downward target, the latter finding suggests that people high in SCO display a rather unfavorable identification pattern, which may be related to their somewhat neurotic personality (Gibbons & Buunk, 1999). Mood after upward exposure was found to be related to loneliness; the lonelier participants were, the less positive their mood was after upward exposure. In addition, lonelier participants also identified less with the upward target. However, this lessened identification with the upward target could not explain why lonelier participants were in less positive moods after the exposure. In fact, identification with neither the upward nor the downward target appeared to mediate the effect of loneliness on mood. This main effect of loneliness on mood appears to reflect merely that lonely individuals are, in general, in a less positive mood than individuals who are not lonely, irrespective of possible comparisons with others. It is difficult to draw conclusions about the effects of SCO on responses to upward exposure, as the present findings are not consistent with our hypotheses or with other existing findings. We did not find mood effects of SCO after upward exposure, but Brenninkmeijer (2002) did. They found that individuals high in SCO responded less positively to upward exposure when they were also high in burnout. Furthermore, our study showed that people high in SCO identified less with the upward target, whereas Buunk et al. (2001c) found that identification with a better-off other was related to both SCO and burnout. As people were higher in burnout, they identified less with the upward target, but this was only true for those low in SCO. Those high in SCO identified with the upward target independently of their level of burnout. These findings may suggest a self-defensive reaction of those high in SCO, because among those high in burnout, upward identification appeared to be higher for individuals high in SCO

than for individuals low in SCO. In accordance with the present findings, Buunk et al. (2001c) found that SCO did not influence the affective responses to upward exposure. Taken together, these findings seem to suggest that, on the one hand, people with higher SCO respond less favorably to upward exposure, particularly when they are also low in well-being and, on the other hand, when they are low in well-being, they may sometimes employ a self-defensive reaction.

Implications and conclusions.

The present research, in combination with the existing research, suggests that people who are both high in SCO and low in subjective well-being respond particularly negatively to exposure to worse-off others. In addition, our results suggest that individuals high in SCO respond negatively to exposure to worse-off others, at least partially, because they identify themselves with the downward target. Furthermore, we found that individuals high in SCO employ a rather unfavorable identification pattern. However, more research is needed into how SCO influences people's reactions to exposure to better-off others, as the data are not consistent. Trying to overlook all the existing literature on SCO, an interesting direction for further research seems to be to investigate the hypothesis that individuals high in SCO, by disposition, react negatively to both upward and downward exposure, particularly when they are also low in well-being. Yet, that under certain circumstances, they may employ strategies to benefit from comparison with others, for example, strategies to prevent themselves from identifying with worse-off others (Buunk et al, 2001a) or to find ways to identify with better-off others when, in fact, they are rather dissimilar (Buunk et al.,2001c).



Chapter 5
How, when, and for whom
downward comparison
will be beneficial



Abstract - In two studies among 79 and 88 students, it was investigated how, when, and for whom exposure to a lively description of a downward target would be beneficial. Concerning the question of how, it was investigated whether a social comparison process or an identification process leads to beneficial effects. Concerning the question of when, it was examined whether it is particularly when people are low in subjective well-being (cf., Wills, 1981), or, more generally, when people find the comparison dimension personally important that downward comparison is beneficial. Concerning the question of who, we predicted that only people with a high score on the individual difference variable social comparison orientation would benefit from downward comparison. The results showed that, when people found the comparison dimension important, either because they were low in subjective well-being or because they found it important to excel on the comparison dimension, comparison, and not identification, with the downward target had beneficial effects, but only when they were high in social comparison orientation.

Do people feel better about themselves when they compare themselves with others who are worse off than they are? Why is that so? Is this true for everyone?

It has long been noted that people may compare themselves with others in order to feel better about themselves. Hakmiller (1966) suggested that this self-enhancement motive for social comparison is especially likely when individuals are suffering from some sort of threat such that social comparison may function as a way of "sustaining or reasserting the favorability of the individuals self-regard" (page 37). Wills (1981) proposed that especially comparison with worse-off others may be used for self-enhancement purposes. According to his theory of downward comparison, persons who experience negative affect can enhance their subjective well-being through comparison with a less fortunate other. Indeed, several research findings are in line with this hypothesis (e.g., Aspinwall & Taylor, 1993; Buunk, Oldersma, & De Dreu, 2001a; Wood, Michela, & Giordano, 2000). For example, Gibbons et al., (2002) found that individuals who performed poorly on a test or an exam lowered their preferred comparison levels, and were more interested in comparing themselves with persons who performed worse than they had than with persons who performed well. Furthermore, in a study by Gibbons (1986), depressed and non-depressed students were exposed to a lively description of a downward comparison target, after which their moods were assessed. In line with Wills' theory, it was found that the moods of the depressed students had improved after the downward comparison, but not the moods of the non-depressed students. However, exposure to a downward target does not always lead to beneficial effects, as some studies indicated that it can also affect

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people negatively (e.g., Ybema, Buunk & Heesink, 1996). In the present study, we aimed to discover how, when, and for whom exposure to a downward target will have beneficial effects. We firstly investigated what process underlies the beneficial effects of downward exposure, a social comparison process or an identification process. Secondly, we investigated whether downward exposure only works for people who are low in subjective well-being, or whether downward exposure can also be beneficial when people find the comparison dimension important. Finally, we examined whether all people can benefit from downward exposure, or whether individual differences in social comparison orientation determine who can and who cannot benefit from downward exposure.

Identification or social comparison?

How does exposure to a worse-off other make people feel better? What caused the depressed students in Gibbons' study (1986) to feel better after reading about an unfortunate fellow-student? There are two possible explanations. The first is that people may recognize themselves in the worse-off other which makes them realize that they are not the only ones in an unfortunate situation. Through identifying themselves with a downward target people low in subjective well-being may experience relief in a shared fate or a reduction in their sense of personal deviance (Gibbons & Gerrard, 1991). This notion is related to false consensus effects; people may overestimate the number of people who are in a similar, unfortunate, situation, in order to make themselves feel better (for an overview see Marks & Miller, 1987). Furthermore, finding relief in shared stress has also been suggested as a working mechanism for the beneficial effects of support groups (e.g., Gibbons, 1986). However, identifying oneself with a downward other may also contain a risk. Feeling similar to a person in an unfortunate situation may also emphasize one's own inferior position. Indeed, a study by Ybema, et al., (1996) among people who recently lost their jobs showed that the more participants identified themselves with a downward target, the more negative affect they experienced. In addition, a study by Lockwood (2002) showed that when students who were exposed to a downward target were able to imagine things "that could cause them to have a similar academic experience", which, in fact, is an identification process, they rated themselves more negatively afterwards. Also, Mussweiler (2003) suggested that when people expect to be similar to a downward other, they will render information accessible that they are in fact similar to the other, resulting in a decline in mood and self-evaluation (see also

Mussweiler & Strack, 2000). In sum, although identification with a downward other may offer the opportunity for finding relief in a shared fate, we predicted that, when people with low subjective well-being identify themselves with a downward target, they will feel worse rather than better about themselves afterwards.

The second possible explanation for the beneficial effects of exposure to worse-off others is that people compare themselves with the downward other and conclude that “things could be worse” (see also Taylor, Wood, & Lichtman, 1983) and that they were relatively well off. Often, the term social comparison is used to refer both to processes that may lead people to contrast themselves away from a target, and to processes that may lead people to assimilative themselves towards a target. However, we predict that when people literally compare themselves with others, they use the other as a reference point to evaluate the self against, which will typically result in contrastive responses (see also Mussweiler, 2003; Stapel & Koomen, 2000; Tesser, 1988). In line with this hypothesis are results of a study by Mussweiler (2001) in which participants were literally instructed to compare themselves with a target named Emily. It was found that when participants compared themselves with the low-assertive Emily, they subsequently evaluated themselves more assertive than when they compared themselves to the high-assertive Emily (see also Martin & Gentry, 1997; Cattarin, Thompson, Thomas, & Williams, 2000). Therefore, we predicted that when people with low subjective well-being literally compare themselves with a downward target, they would feel better about themselves as a consequence.

Low subjective well-being or importance?

Both Hakmiller (1966) and Wills (1981) proposed that self-enhancement would occur particularly for people who are in a negative mood or low in subjective well-being. We, however, would like to suggest that downward social comparison is beneficial not only for people who are in a negative mood or low in subjective well-being, but more generally, for people for whom the comparison dimension is personally relevant. One effect of low well-being is that the dimension on which one is under threat may become an important comparison dimension. For example, a person who was never much interested in how healthy he was would probably find health very important after having had a heart attack. We propose that it is primarily because of this importance, and not because of the threat, that people feel better about themselves after downward comparison. Thus, also

when a comparison dimension is personally important because a person strives for competence on a particular dimension or defines himself in terms of a certain dimension (see also Tesser, 1988), we expected to find beneficial effects of downward comparison.

Social comparison orientation.

A third aspect of the present studies concerns the role of individual differences in social comparison orientation (SCO: Gibbons, & Buunk, 1999). SCO indicates the degree to which people pay attention to how their situation is compared to that of others, and base their evaluation of their characteristics on how others are doing. Research shows that people who are high in SCO are indeed more interested in social comparison information (e.g., VanderZee, Oldersma, Buunk, & Bos, 1998b), and more affected by social comparison (e.g., Buunk, Zurriaga, Gonzalez-Roma, & Subirats, 2003; Buunk, Ybema, Gibbons, & Ipenburg, 2001c). Because we predicted that a social comparison process would be responsible for the beneficial effects of downward exposure, we predicted that only, people who are high in SCO would benefit from comparison with a worse-off other. A study by Buunk et al. (2001a) shows results that are particularly relevant to the present research. They investigated whether people who face problems in a close relationship may enhance their satisfaction with the relationship through downward comparison. The participants were instructed to either list features of their relationship that they considered good or features in which they considered their relationship to be better than that of most others (downward comparison condition). In line with Wills' theory (1981), the results showed that downward comparison increased relational satisfaction for those who were suffering from relational discontent, however, this effect was only found for those who were high in SCO. Therefore, we further investigated the role of SCO in this respect. We hypothesized that for people who are low in subjective well-being, only those with a high SCO may benefit from comparing themselves with a downward other, not only when they purely cognitively compare themselves with worse-off others, as in the study of Buunk et al. (2001a), but also when they are exposed to a downward target.

Overview of the studies.

In this article, two studies are described in which the participants were exposed to a lively description of a downward target. Study 1 is a reanalysis of data of Study

2 described in Chapter 1 including an additional independent variable (Groothof, Buunk, & Siero, 2003). The dependent variable that we used in that study may be criticized because of demand characteristic problems, as we directly asked the participants how reading about the target may have changed their self-evaluations. Nevertheless, we present the data here, because they are highly relevant to the present research questions, and because we think that a demand characteristic explanation cannot account for the complexity of the results. In Study 1, the downward target was a lonely first-year student, telling about his disappointing social experiences. In Study 2, the downward target was a third-year student who performed poorly academically. The first issue that we investigated was whether a social comparison process underlies the beneficial effects of exposure to a downward target and not an identification process, which we expected to lead to adverse effects. Therefore, in both studies, the participants were instructed to either compare or identify themselves with the downward target. The second issue we investigated was whether downward exposure would be beneficial not only to people who are feeling lonely (Study 1), but also to people who find it important to excel academically (Study 2). Finally, we predicted that only those high in SCO would benefit from downward comparison.

Study 1

Method

Participants and Design

The study was conducted among 79 first-year psychology students during an obligatory first-year psychology course. Two students were excluded from the data because they were 40 years or older at the time of the study. The average age of the 77 participants was 20 years ($SD = 1.86$). The participants received a paper-and-pencil questionnaire, which contained some demographic questions and personality measures in the first part. The second part of the questionnaire was an experimental section in which the participants were presented with the downward target preceded by an instruction to either compare or identify themselves with the target. Participants were randomly assigned to one of these two experimental conditions.

Measures and Stimulus Materials

Feelings of loneliness.

Individual differences in feelings of loneliness were measured using a new scale based on items of the revised and translated version of Russell, Peplau, and Cutrona's 1980 UCLA Loneliness Scale (Gerritsen, 1997). We revised this scale because it measures severe loneliness, while Dutch first-year students often experience milder forms of loneliness. Using a less extreme measure, we were better able to differentiate between participants. Five items from the UCLA, with the highest item-total correlation in a pre-study among first-year students, were reformulated. For example, item 14 'I feel isolated from others' was changed into 'Sometimes I have the feeling that I am becoming a bit isolated from others'. The other items were 'Every now and then I lack companionship around me', 'I sometimes feel a bit lonely', 'There aren't that many people I feel close to', and 'Sometimes I feel left out'. Answers were given on a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*; $M = 2.8$; $SD = .91$; Cronbach's alpha = .78).

Social comparison orientation.

Individual differences in SCO were measured using the Iowa-Netherlands Comparison Orientation Measure (Gibbons & Buunk, 1999). This scale consists of 11 items such as "I always pay a lot of attention to how I do things compared with how others do things" and "I never consider my situation in life relative to that of other people" (reversed). The items were measured using 5-point scales (1 = *strongly disagree*, 5 = *strongly agree*; $M = 3.5$; $SD = .59$; Cronbach's alpha = .82).

Downward target.

The participants were presented with a bogus newspaper article containing an interview with a first-year student about his or her social life (the sex of the target was not specified). The interview was based on actual in-depth interviews with first-year students and the article was made as realistic as possible by giving it a newspaper-article layout. In the interview, the student is rather negative about his or her social life. The student has no real friends and tells of standing alone during breaks at college, having hardly any contact with roommates, and being alone often, watching TV, or studying.

Instructions for social comparison and identification.

Before the participants read this interview, they were instructed to either compare or to identify themselves with the target. The social comparison instructions read as follows:

*When a person tells something about himself, for example, about how things are going with his studies or about an experience which he had, a common reaction of listeners is that they **compare** themselves with that person. Many people start thinking about their **own experiences** when a person tells them something that might also happen to them.*

*On the next page, you will find an interview with a first-year student that appeared in the media last year. The section in which this person tells about his or her social life will offer people who are also first-year students many opportunities for **comparison**.*

*When you read this interview in a minute, **compare** yourself as much as possible with this person.*

*With reference to this student's story, think about your own social life and try to assess how your social life is at this moment, **compared with** that of this student.*

Please take your time in reading the interview. Afterwards, you may continue with the rest of the questionnaire.

The identification instructions read as follows:

*When a person tells something about himself, for example, about how things are going with his studies or about an experience which he had, a common reaction of listeners is that they **recognize** themselves in that person. Many people realize that they **have a lot in common** with other people and that they **resemble others** in many ways.*

*On the next page, you will find an interview with a first-year student that appeared in the media last year. The section in which this person tells about his or her social life will sound very familiar to people who are also first-year students. When you read this interview in a minute, pay the most attention to things you **have in common** with this person. Assume that this person is **someone just like you**. If you don't recognize much of yourself in this person, imagine that in the*

future things might be the same for you as for this person.

Please take your time in reading the interview. Afterwards, you may continue with the rest of the questionnaire.

Self-evaluative reaction.

The participants' self-evaluative reactions to the downward target were measured using the 4 items. Because people may be reluctant to admit being affected by upward or downward exposure (see Wood, 1996), a short introduction was given in which it was explained that it is quite common for most, but not all, people to be affected by information about others. The items were "After reading this interview fragment, to what extent are you more or less satisfied with your own social life, or has nothing changed?", "After reading this interview fragment, to what extent are you more or less secure about your own social life, or has nothing changed?", "After reading this interview fragment, to what extent do you feel more or less lonely, or has nothing changed?", "After reading this interview fragment, to what extent do you worry more or less about your own social life, or has nothing changed?". Answers were given on a 9-point scale (e.g., 1 = *much more worried*, 5 = *no change*, 9 = *much less worried*). Two items were recoded so that higher scores indicated that the participants' evaluations of their own social lives were more positive ($M = 5.7$; $SD = 1.07$; Cronbach's alpha = .83). 11.7% of the participants indicated that their self-evaluations had not changed (i.e. answered 5 on every self-evaluation question).

Ratings of the target.

The participants were asked how they evaluated the target's social life in comparison with their own (1 = *much worse*, 5 = *about the same*, 9 = *much better*) in order to determine whether the downward target was really evaluated as being worse-off. In addition, the participants were asked to indicate on a 9-point scale how positive or negative they found the image that the person in the interview portrayed of his or her social life (1 = *very positive*, 9 = *very negative*).

Results

Ratings of the target.

The participants evaluated the downward target's social life as worse than their own ($M = 3.3$, $SD = 2.39$). A t-test revealed that this rating differed significantly

from 5, the point at which the target's social life is evaluated as equally good as one's own ($t(76) = -6.15, p < .001$). In addition, the participants found that the target portrayed a negative image of his or her social life ($M = 7.8, SD = 1.03$). A t -test revealed that this rating differed significantly from 5, the scale's neutral midpoint ($t(73) = 23.70, p < .001$). Thus, the participants did perceive the target as downward.

Self-evaluative reactions to the downward target.

To test our hypotheses, regression analyses were performed using instruction, loneliness, and SCO as predictors, and the self-evaluative reaction as the dependent variable. In the first step of the analyses, the main effects were entered. Next, three regression analyses were run in which each of the three two-way interactions was entered, in order to investigate whether each interaction significantly contributed to the prediction of the dependent variable. In the last step, when all two-way interactions were added, the three-way interaction was added. Following Aiken and West (1991), the continuous independent variables were standardised and the B -values are reported instead of the β -values. The first of the step analyses did not yield a significant main effect, and no significant two-way interaction was found in the second step (all R^2 -change's $< .021$; all F 's(1,71) < 1.59 , all p 's $> .21$). However, as expected, the three-way interaction was significant (R^2 -change = .050; $F(1,68) = 4.06, p = .048$). Further analyses revealed that only among those high in SCO was a significant interaction between instruction and loneliness found ($p = .007$), and not among those low in SCO. Inspection of the simple slopes revealed that, in line with our predictions, among those high in SCO, as they felt lonelier, comparison with the downward target led to more positive self-evaluative reactions ($B = .71, p = .011$), while identification with the downward target led to more negative self-evaluative reactions ($B = -.27, ns$), but this latter effect was not significant. The slopes are depicted in Figure 1. Among those with a low SCO, neither in the identification condition nor in the comparison condition was loneliness related to the self-evaluative response (see Figure 2).

Downward comparison

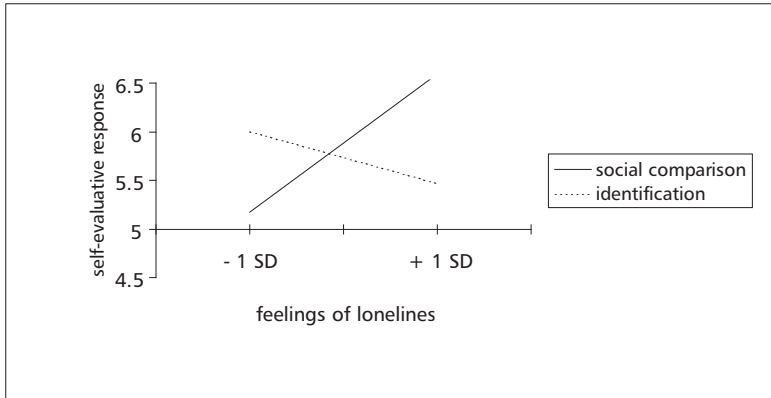


Figure 1. Self-evaluative response to downward exposure as a function of feelings of loneliness in the comparison and identification conditions for participants high in social comparison orientation.

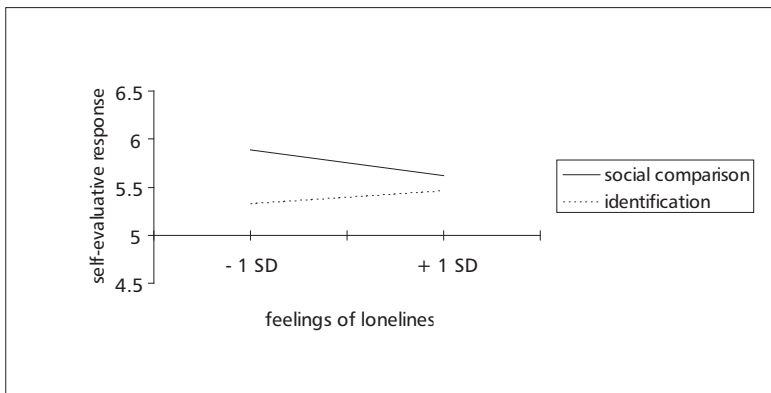


Figure 2. Self-evaluative response to downward exposure as a function of feelings of loneliness in the comparison and identification conditions for participants low in social comparison orientation.

Discussion and Introduction to Study 2

In line with Wills' downward comparison theory (1981), it was found that relatively lonely participants benefited from comparison with a worse-off other, and that those who were not lonely did not. In addition, the data suggested that it was specifically comparison with a downward target that caused them to feel better about themselves, and not identification with the downward target. Thus, it appeared that knowing that one is relatively well off is responsible for the

beneficial effect of downward exposure, and not a feeling of shared fate. Although we expected downward identification to lead to negative reactions, the data did not support that prediction. Finally, as predicted, the data suggested that only people who are dispositionally more inclined to base their self-evaluations on comparison with others, e.g., people who have a high SCO, benefit from downward comparison. In Study 2, these issues were further investigated, using academic performance as the comparison dimension. Unlike in Study 1, in which we found that downward comparison was beneficial for people with low subjective well-being, in Study 2 we hypothesized that the same beneficial effects of downward comparison may be found for people who find it important to excel. Two other changes were made. Firstly, the formulation of the dependent variable in Study 1 may have raised doubts because of demand characteristics concerns. The questions assessing the self-evaluative reactions referred directly to the target information, which, one may argue, might prompt participants to report effects that seem 'appropriate'. That is, because the purpose of the question may seem obvious to the participants, they might adjust their answers to suit the researchers' intent (see also Schwarz, 1999). However, we believe that a demand characteristic explanation cannot account for the complexity of the results, as it cannot explain why particularly lonely participants with a high SCO benefited from downward comparison. However, to exclude a demand characteristic explanation, in Study 2, we measured the dependent variables without referring to the interview fragment, which would make the researcher's intentions less obvious. Both the participants' moods and self-evaluations were assessed in this manner. Secondly, we included a control condition in which participants did not receive specific instructions on how to read the target information in order to investigate how people would react to downward information more spontaneously.

Study 2

Method

Participants and Design

Eighty-eight students (63 males and 25 females) participated in this paper-and-pencil experiment during several third-year courses in Business Management. The average age of the participants was 21.9 years ($SD = 1.15$). First, some demographic questions were asked, followed by some personality measures. Partici-

pants were randomly assigned to the no-instruction control condition, the social comparison condition, or the identification condition.

Measures and Stimulus Materials

Social comparison orientation.

SCO was again measured using the INCOM (Gibbons & Buunk, 1999). The internal consistency of the scale was good with Cronbach's alpha = .82 ($M = 3.5$, $SD = .53$).

Importance of excelling academically.

Two questions were asked to assess how important participants found it to excel academically: "How important is it for you to achieve excellent study results?" and "How important is it for you to be a top student?". Answers were given on a 7-point scale (1 = *totally unimportant*, 7 = *very important*). The correlation between both items was .66 ($p < .001$) and they were combined in one scale ($M = 3.8$, $SD = 1.23$).

Downward target.

The participants read a bogus newspaper article describing the experiences of a student in Business Management. The female participants read an article about a female student (named "Paula") and the male participants read about a male student (named "Paul"). Paul(a) is said to be behind schedule, with grades below average, and it is said that (s)he needs to retake exams. A teacher describes Paul(a) as a moderate student, who is not a real team worker and who has difficulty in applying theory practically. Furthermore, Paul(a) used to be a member of the management of a fraternity, but that was not a success. Paul(a) was liked by the others but did not make a contribution to organizing an important conference. We made the articles as realistic as possible by giving them a newspaper-article layout. Before reading the interview, participants either received no specific instruction or they were instructed to either compare or identify themselves with the target, using the same instructions as in Study 1.

Dependent variables.

Mood and self-evaluation were the main dependent variables and were assessed directly after the exposure. Mood was measured using two questions; "How positive is your mood at this moment" and "How negative is your mood at this

moment?". Answers were given on a 5-point scale (1 = *not at all or hardly*, 5 = *very strongly*). Because the correlation between the two items was $-.67$ ($p < .001$), the negative mood item was recoded and both items were combined in one scale ($M = 3.5$, $SD = .85$). Self-evaluations of the participants' own study performances were measured using 4 items ($\alpha = .65$). "How satisfied are you at this moment with your own academic performance?", "How certain are you at this moment about your own academic performance?", "How intelligent do you feel at this moment?", and "How concerned are you at this moment about your own academic performance?" (reversed). Answers were given on a 5-point scale (1 = *not at all or hardly*, 5 = *very strongly*; $M = 3.6$, $SD = .59$). To determine whether the target was indeed perceived as downward, two questions were asked, analogous to those in Study 1. First, the participants were asked to indicate on a 9-point scale how positively or negatively they found that Paul(a)'s academic performance was described (1 = *very negatively*, 5 = *not negatively, not positively*, 9 = *very positively*). Second, the participants were asked how they perceived the target's academic performance in comparison with their own (1 = *much worse*, 5 = *about the same*, 9 = *much better*) in order to determine whether the downward target was evaluated as downward.

Results and Discussion

Ratings of the target.

The participants found that a negative description was given of the downward target's academic performance ($M = 2.9$, $SD = 1.10$). A t-test revealed that this rating differed significantly from 5, the scale's neutral midpoint ($t(38) = -11.66$, $p < .001$)². In addition, the participants evaluated the downward target as performing worse than they performed ($M = 3.8$, $SD = 1.81$). A t-test revealed that this rating differed significantly from 5, the point at which the target's academic performance is evaluated as equally good as one's own ($t(83) = -6.20$, $p < .001$). Thus, the target was indeed perceived as downward.

Main Analyses

To test our hypotheses, we performed hierarchical regression analyses following the recommendations of Aiken and West (1991) for investigating interactions between categorical variables with three levels and continuous variables. We coded the three experimental conditions using two dummy variables, the first contrast-

² Only 39 participants were included in this analysis, because in some questionnaires, one scale anchor was not correctly described.

ing the comparison condition with the identification condition, and the second contrasting the comparison condition with the control condition. Both importance and SCO were standardized, and the B-values are reported instead of the β -values. In the first step of the regression analyses, the four main effects were entered. In the second step, the two-way interactions between each dummy and importance, each dummy and SCO, and the interaction between importance and SCO were added. In the third step, the three-way interactions between each dummy, importance, and SCO were added.

Mood.

In the first step, a significant main effect of the contrast between the comparison and the control condition was found ($B = -.43, p = .056$), indicating that the participants in the comparison condition were in a more positive mood than the participants in the control condition. In the second step, no significant two-way interaction was found, however, adding both three-way interactions resulted in a significant increase in explained variance ($R^2\text{-change} = .135, F(2,74) = 6.34, p = .003$). This effect was fully attributable to a significant interaction between the contrast between the comparison condition and the identification condition, importance, and SCO ($p = .001$). As can be seen in Figure 3, inspection of the simple slopes revealed that among those high in SCO, in the social comparison condition participants were in a more positive mood the more important they found it to excel ($B = .46, p = .043$), while in the identification condition, participants who found it more important to excel were in a less positive mood ($B = -.36, p = .084$). The interaction between the contrast between the comparison condition and the control condition, importance, and SCO was not significant. Among those high in SCO, in both the comparison condition ($B = .46, p = .043$) and the control condition ($B = .53, p = .10$), participants were in a more positive mood the more important they found it to excel academically. Among participants low in SCO, in none of the conditions was a significant relation between importance to excel and mood found, as can be seen in Figure 4.

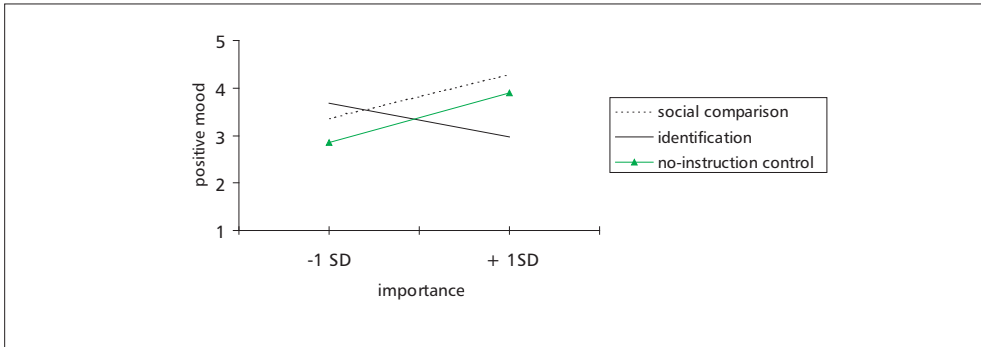


Figure 3. Positive mood after downward exposure as a function of importance of excelling academically in the comparison, identification, and no-instruction control conditions for those high in social comparison orientation.

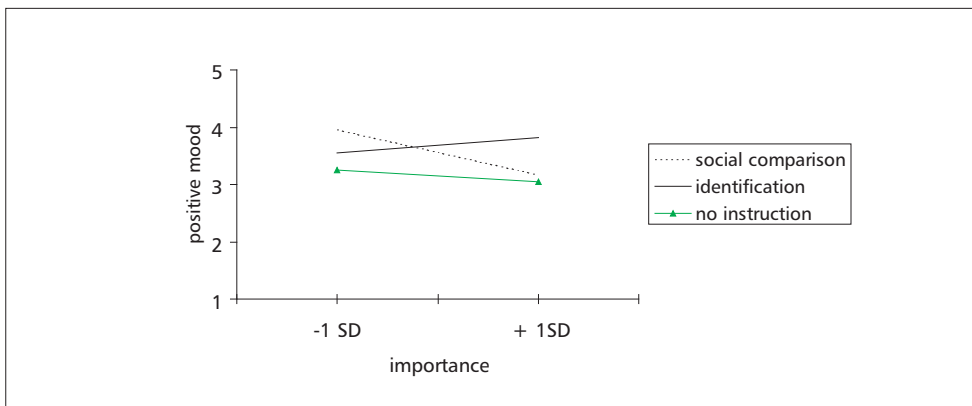


Figure 4. Positive mood after downward exposure as a function of importance to excel academically in the comparison and in the identification condition for those low in social comparison orientation.

Self-evaluation.

Unexpectedly, no significant effects were found concerning participants' self-evaluation after exposure to the downward target. Because of the relatively low reliability of the self-evaluation measure, we also performed analyses on the individual items or combinations of two or three items. However, these analyses also yielded no significant results.

In conclusion, in the second study, in which the importance of the comparison dimension was due to a motivation to excel rather than to low subjective well-being, the same pattern of results was found as in Study 1. For those who were high in SCO, the more important they found it to excel, the more positive their moods were after comparing, and not after identifying, themselves with the downward target. In the control condition, in which participants did not receive particular instructions on how to read the information about the target, almost the same results were found as in the comparison condition. Apparently, without receiving specific instructions, participants spontaneously compared themselves with the downward target, and did not spontaneously identify themselves with the downward target. The instruction to compare seems only to have increased the spontaneous comparison reaction. Unexpectedly, participants' self-evaluations were not affected by exposure to the downward target.

General Discussion

In two studies, we investigated the conditions under which exposure to a worse-off other has beneficial effects. We predicted that people would feel better after exposure to a downward target because they compared themselves with the target and not because they identified themselves with the target; thus, that a sense of being better off rather than a feeling of shared fate underlies the beneficial effect of downward exposure. In addition, we expected that exposure to a downward target would be beneficial not only when people are suffering from a decrease in subjective well-being, or under threat (cf. Wills, 1981), but more generally, when people find the comparison dimension personally important. Therefore, in Study 1, it was investigated whether people who were low in well-being, that is feeling lonely, would benefit from downward comparison, and in Study 2, it was investigated whether the same effects would be found among people who find it important to excel. Finally, we predicted that only people who have a higher social comparison orientation would benefit from downward comparison. The results were generally in line with these predictions. Both studies showed the same pattern of results: either because participants were low in well-being or because they found it important to excel, comparison with the downward target, and not identification with the downward target, led to beneficial effects, confirming the first and the second hypothesis. That is, in both cases, a feeling of being better off rather than a sense of shared fate underlay the beneficial effects of

downward exposure. Furthermore, these findings suggest that we should apply Will's downward comparison theory at a more general level; it is not only when people are low in well-being, but more generally, when people find a comparison dimension important, that comparison with a worse-off other has beneficial effects. According to Wills, being low in well-being leads to a motivation to feel better about oneself, and downward comparison is a way of fulfilling that need. However, when people find it important to excel on a particular dimension, they may also have a need to feel better, which can also be satisfied by downward comparison. Our third hypothesis also received support both in Study 1 and in Study 2; only participants with a higher SCO benefited from downward comparison, and not those low in SCO. This finding is in line with the results obtained by Buunk et al. (2001a). They, however, used a more cognitive way of installing downward comparison than we did, strengthening the generalizability of the present finding. Furthermore, the present finding is in line with other studies showing that people high in SCO are more affected by social comparisons (e.g., Buunk et al., 2001c; Buunk et al., 2003).

Some predictions were, however, not supported by the data. Firstly, in Study 1, participants' self-evaluations were affected by downward comparison whereas, in Study 2, participants' self-evaluations were not affected, and only effects on mood were found. We suppose that the use of two different comparison dimensions, social life in Study 1 and academic performance in Study 2, may have caused these divergent findings. It is possible that, because academic performance is more easily objectively quantified through grades and course credits than one's social life, people may have a better perception of their relative standing concerning academic performance than concerning their social lives. Therefore, it may be that self-evaluations concerning social life are more easily influenced by comparison with others than self-evaluations concerning academic performance, for which only effects on mood were found. It should be noted that, in Study 2, the effects on mood and self-evaluation diverged although we expected parallel effects on both variables. Apparently, cognitive and affective measures are not similar, a conclusion that other researchers have also drawn (e.g., Swann, Griffin, Predmore, & Gaines, 1987). Indeed, dual process theories (e.g., Epstein & Pacini, 1999) suggest that cognitive and affective processes are governed by two different systems that operate by different rules. Thus, it appears that one should be more specific about what kinds of effects, cognitive or affective, one expects. Secondly, identification with the downward target was not found to lead to significant aversive reactions

in either study, only a trend in that direction was found. One explanation may be that identification with the downward targets was not threatening because the target and the participants were at a similar stage of development; both were either first-year students in Study 1 or third-year students in Study 2. The participants may already have gained enough experience to feel certain that they were unlikely to fall prey to the unfortunate situation of the downward target (see also Lockwood, 2002). Indeed, Lockwood showed that instructing first-year students to think about what could cause them to have a similar academic experience as the downward target, which, in fact, is an identification instruction, only led to negative effects when the target was a recent graduate and not when the target was also a first-year student.

In conclusion, in the present research, we attempted to discover how, when, and for whom exposure to a downward target has beneficial effects. Concerning the question of how, the results suggest that comparison with the downward target, and thus a feeling of being better off, underlies the beneficial effect of exposure to a worse-off other and not an identification process. Concerning the question of when, it appears that it is not only when people are low in subjective well-being (cf. Wills, 1981), but, more generally, when people find the comparison dimension personally important that downward comparison can be beneficial. Finally, the results showed that not everyone can benefit from downward comparison, as it only seemed to work for people high in social comparison orientation.





Chapter 6
General discussion



Being confronted with a person who is in a similar situation but who is either better or worse off may evoke strong reactions in a person. People may respond to such a confrontation both affectively, and by changing their evaluation of themselves and their own situation. In the present dissertation, these responses to forced social comparisons were examined using a dual-process framework (Epstein & Pacini, 1999; Epstein, 2003). A social comparison process was distinguished that was assumed to operate according to the rules of a cognitive system, and an identification process was distinguished that was assumed to operate according to the rules of an experiential system. We predicted that the social comparison process, in which both similarities and differences between the self and the other were assumed to be systematically assessed, would lead to contrastive self-evaluative responses. That is, we expected that, after comparison with an upward other, people would evaluate themselves less positively and after comparison with a downward other, people would evaluate themselves more positively. Furthermore, we predicted that the identification process, in which, as we assumed, one perceives the other holistically and feels a bond with the other person, would lead to an assimilative affective response. That is, we expected that, identification with an upward other would evoke primarily positive affect and identification with a downward other would evoke primarily negative affect. Social comparison and identification were thus considered to be two fundamentally different kinds of processes that may occur simultaneously when people are exposed to others, leading to fundamentally different kinds of responses. In addition, the influence of two individual differences variables on how people may respond to upward and downward exposure were investigated. Firstly, people may differ in their inclination to compare themselves with others, that is in social comparison orientation (SCO). We predicted that people high in SCO would respond more strongly to upward and downward exposure, and that they would specifically identify themselves more with others than would people low in SCO. Secondly, the influence of individual differences in subjective well-being was examined. We investigated how people low in subjective well-being may benefit from exposure to worse-off others. In this chapter, the main findings of the research presented in the previous chapters is first summarized, and then integrated and discussed. In addition, the implications for the theory of and the research into social comparison are discussed.

Summary of findings

Chapter 2.

In two studies, student participants were exposed to an interview with a fellow-student who either had a very good social life (upward target) or was feeling lonely (downward target). In both a correlational study and an experimental study, the affective and self-evaluative responses to these exposures were related to comparison and identification with the targets. In Experiment 1, it was found that social comparison was related particularly to a contrastive response to self-evaluation: the more people compared themselves with the upward target, the more negative their self-evaluations were, and the more they compared themselves with the downward target, the more positive their self-evaluations were. In addition, identification was related to an assimilative response to affect after upward exposure: the more people identified themselves with the upward target, the more positive affect the exposure evoked. However, this effect was found only for those who were high in social comparison orientation. In line with these results, Experiment 2 showed that a comparison instruction increased the contrastive response to self-evaluation whereas an identification instruction increased the assimilative response to affect. Thus, as expected, the social comparison and identification processes appeared to influence different kinds of responses in opposite directions. Concerning the influence of individual differences in social comparison orientation, the two studies showed that people with a high social comparison orientation both compared and identified themselves more with better and worse-off others than did those with a low social comparison orientation. Study 1 also showed that only people with a high social comparison orientation derived more positive affect from spontaneous identification with the upward target.

Chapter 3.

The interplay between the affective and the self-evaluative reactions to exposure to others who are either better off or worse off was investigated. It was assumed that the affective reactions are primary and that the self-evaluative reactions are secondary. Therefore, we predicted that the strongest effects on both affect and self-evaluation would be found when affect was assessed first and self-evaluation next. In line with this prediction, affective effects were found only when they were measured first, and not when they were measured after

self-evaluation. However, the effects on self-evaluation were the same whether they were measured first or last. Furthermore, individual differences in social comparison orientation were found to enhance the self-evaluative reactions, but not the affective reactions.

Chapter 4.

We investigated the influence of individual differences in social comparison orientation (SCO) on the affective responses to exposure to better- and worse-off others. We tested the hypothesis that people with higher SCO identify themselves more with downward and upward others, and will, therefore, be in a more negative mood after downward exposure and in a more positive mood after upward exposure. In addition, we expected that people's low levels of well-being, loneliness in this research, would moderate these effects. The results concerning upward exposure were not in accordance with our hypotheses, or other existing evidence, and we suggested that future research should investigate under what conditions people high in SCO do respond either positively or negatively to upward exposure. In contrast, the results concerning exposure to a downward target were largely in line with our predictions as we found that people who were high in both SCO and loneliness were in the least positive mood after downward exposure. In addition, we found indications that the less positive reactions of individuals high in SCO to downward exposure may be partially attributed to their heightened identification with downward others.

Chapter 5.

In two studies, we investigated how, when, and for whom exposure to a downward target would be beneficial. Concerning the question of how, it was investigated whether a social comparison process or an identification process leads to beneficial effects. Concerning the question of when, it was examined whether it is particularly when people are under threat (cf. Wills, 1981), or, more generally, when people find the comparison dimension personally important that downward comparison is beneficial. Concerning the question of who, we predicted that only people with a high social comparison orientation would benefit from downward comparison. The results showed that, when people found the comparison dimension important, either because they were under threat or because they found it important to excel on the comparison dimension, comparison, and not identification, with the downward target had beneficial effects, but only when they were high in social comparison orientation.

Taken together, the present findings may further the understanding of people's responses to others who are doing better or worse. Most importantly, the present dissertation contributes to the social comparison literature by demonstrating 1) the difference between affective and self-evaluative responses to upward and downward exposure, 2) the role of two processes underlying these responses, social comparison and identification, and 3) the role of individual differences in social comparison orientation and in subjective well-being.

Difference between affective and self-evaluative responses.

A noteworthy conclusion of the present research concerns the distinction that was made between people's affective and self-evaluative responses to exposure to others. Whereas in previous research, typically either one of these types of responses was investigated, the present findings suggest that the conclusions that are drawn about how people respond to better-off and worse-off others depend heavily on whether affective or self-evaluative responses are considered. In all of the present studies, the affective and the self-evaluative responses differed from each other. This was most clearly the case in both studies reported in Chapter 2, in which the affective and self-evaluative responses were even in opposite directions. Upward exposure was found to evoke positive feelings, but, did not influence people's self-evaluation. Downward exposure was found to evoke negative feelings and, simultaneously, to lead to a more positive self-evaluative response. In other words, an assimilative response to affect and a contrastive response to self-evaluation were found. Using a different type of measurement, the subsequent studies unambiguously showed that the affective and the self-evaluative responses can not be considered interchangeably. It was found that, whereas self-evaluative responses are unaffected by whether they are measured first or last, the affective responses were found only when they were measured directly after the exposure, implying that affective responses may occur prior to self-evaluative responses (Chapter 3). Also, people's affective and self-evaluative responses to exposure to a downward target were found to be influenced differently by individual differences in social comparison orientation (Chapters 3, 4, and 5). In conclusion, the present findings suggest that affective and cognitive responses may stem from two independent mental systems, as proposed by dual process theories (Chaiken & Trope, 1999; see also Swann, Griffin, Predmore, & Gaines, 1987). By considering both kinds of responses, we were able to obtain a more refined understanding of how people are influenced by seeing others who are doing better or worse.

The present findings suggested also that particularly the assessment of the affective responses may be sensitive to the type of measurement that is used. When people were asked to indicate the feelings that exposure to an upward or a downward target evokes, that is, when the question referred explicitly to the target, their answers appeared to be congruent with the affective state of the target. Upward exposure evoked predominantly positive feelings and downward exposure evoked predominantly negative feelings. Furthermore, the affective response was related to the degree to which people could identify themselves with the target and, thus, indicated something about the relation between the participant and the target (Chapter 2). In contrast, when people indicated their affective state when no reference to the target was made, their answer appeared to be more related to themselves (Chapter 3 and further). The affective reaction may then perhaps best be considered as the emotional forerunner of what the exposure implies for one's self-evaluation.

In line with the findings of the present thesis, other researchers also found that people's affective and self-evaluative responses to upward and downward exposure may differ. Buunk and Ybema (2003) recently found that, in a sample of married women in rural areas who compared their marriages with that of an upward or downward target, the affective and self-evaluative responses diverged. Similar to the findings in Chapter 2, they found that upward exposure evoked more positive affect than did downward exposure, but that people's self-evaluations were more positive after exposure to the downward target than after exposure to an upward target (see also Bui & Pelham, 1999; Stapel & Koomen, 2000). Thus, although the present research was limited to investigating the responses to upward and downward exposure on two comparison dimensions, social integration and academic performance in student populations, there is good reason to assume that the present findings may be generalised to other comparison dimensions and populations.

A possible limitation of the studies presented in this dissertation is that a control condition in which participants were not exposed to a target was not included. This would have helped in making a more unequivocal interpretation of the findings concerning the affective and self-evaluative responses to exposure to upward and downward others. For example, it was found that people's self-evaluations were more positive after exposure to the downward target than after exposure to the upward target. Yet, it remained unclear whether people's self-evaluations had become more positive after exposure to the downward target

or whether self-evaluations had become more negative after upward exposure, or both. Although this would have been interesting to investigate, the present studies aimed to answer different questions. For instance, examining whether the order in which affective and self-evaluative responses are measured is important does not require a control condition. Likewise, investigating the influence of individual differences in SCO on the responses to upward and downward exposure, and the conditions under which exposure to a downward target results in positive outcomes, did not call for a control condition. Finally, in the studies described in Chapter 2, we used dependent variables that made a control condition superfluous. The questions assessing these variables measured directly how upward and downward exposure was perceived by the participants, for example, by asking the participants whether they were more or less satisfied with their own situation after reading about the target. Thus, although including a control condition in our studies would, in some cases, have strengthened the interpretation of the results, most research questions we addressed did not require a control condition.

Two underlying processes: Social comparison and identification.

A second aspect of the research presented in this dissertation concerns the role of two processes that were expected to underlie the affective and self-evaluative responses to upward and downward exposure: social comparison and identification. When people were asked to list their spontaneous reactions while reading an interview with an upward or a downward target, those reactions revealed both social comparison and identification with the targets. Furthermore, the present thesis shows that the degree to which people compare and identify themselves with upward and downward others influences their affective and self-evaluative responses. In several studies in this dissertation, participants were instructed to either compare or identify themselves with an upward or a downward target, while, in others, participants' affective and self-evaluative responses were correlated with the degree to which they had compared and identified themselves with the targets. In general, these studies showed that social comparison typically leads to contrastive responses whereas identification with the targets typically leads to assimilative responses. The studies described in Chapter 2 showed that, in line with our hypotheses, social comparison specifically underlay the contrastive responses to self-evaluation whereas identification specifically underlay the assimilative responses to affect. Note that, whereas the term social comparison

is often used to refer to both contrastive and assimilative responses to seeing others doing better or worse, the present dissertation showed that, when people really compare themselves with others, contrastive responses are typically found, and not assimilative responses (for similar findings, see Cattarin et al., 2000; Martin & Gentry, 1997).

The finding that social comparison underlay the cognitive responses and identification the affective responses can be taken as an indication that, as was assumed, the comparison process operates according to the rules of a cognitive system and identification operates according to the rules of an experiential system. However, the precise nature of the social comparison and identification processes was not investigated directly in this dissertation. Future research may be aimed at this; for example, with some additional reaction time and priming studies, it may be tested whether identification is more automatic than social comparison, or whether social comparison is an automatic process, as suggested by Gilbert, Giesler, & Morris (1995). In addition, since it appeared that the comparison and identification processes may occur simultaneously, it would be interesting to investigate how both processes may interact. For example, how may a first strong feeling of identification with a person influence subsequent comparison between the self and the other?

Another issue that was briefly addressed in the present research, but that deserves more attention in future research, is that people's responses to upward and downward others may be self-serving. That is, people may adjust the degree to which they compare and identify themselves with upward and downward others in such a way that they promote positive responses and prevent the occurrence of negative responses. In general, people compared themselves more with the downward target than with the upward target, whereas they identified themselves more with the upward target than with the downward target. As was shown, downward comparison and upward identification led to positive outcomes whereas upward comparison and downward identification led to negative outcomes. This self-serving tendency is in line with the identification-contrast model of Buunk and Ybema (1997; see also Buunk & Ybema, 2003). Their model states that people strive for a sense of relative superiority through identifying themselves with upward others and through contrasting themselves with downward others. However, the finding that people compared themselves more with downward others than with upward others is in contrast with the hypothesis of Festinger (1954), which states that people have a unidirectional drive to compare

upward. Stapel and Koomen (2001) also report a study in which they showed that people may use social comparison information in a self-serving way, particularly when the comparison dimension has high personal importance. In sum, social comparison and identification appeared to be important processes that distinctly influence people's responses to upward and downward others. Identification typically steered the responses in an assimilative direction, whereas social comparison typically steered the responses in a contrastive direction.

Individual differences in social comparison orientation and in subjective well-being. A third contribution of the present dissertation was the clarification of the role of individual differences in social comparison orientation and subjective well-being in responses to exposure to upward and downward others. Firstly, it appeared that people with a high SCO employ an unfavourable identification pattern. Whereas they tended to identify themselves more with others doing worse and others doing equally well, they tended to identify themselves less with others doing better (Chapters 2 and 4). Although, in the studies discussed in Chapter 2, it appeared that people with a high SCO also identified themselves more with upward others, it must be noted that the upward target in those studies was not evaluated as being better off but as being equally well off. This unfavourable identification tendency of people with a high SCO may be related to their somewhat neurotic personalities (Gibbons & Buunk, 1999). Furthermore, the different identification tendencies of people with a low or a high SCO influenced the responses of people who were low in subjective well-being to exposure to worse-off others. Whereas Wills' theory of downward comparison (1981) states that people who are low in subjective well-being may benefit from downward comparison, the present thesis offers some important qualifications and extensions of this theory. The present dissertation showed that people who are feeling lonely, and who are, in addition, high in SCO, tend to respond negatively to exposure to downward others. This finding is in line with a study among sociotherapists by Buunk, Ybema, Gibbons, & Ipenburg (2001c), which showed that downward exposure evoked negative affect among those who were high in burnout and high in SCO. These findings suggest that, in general, when people are low in subjective well-being and high in SCO, they do not benefit from exposure to a downward target, but, in contrast, tend to become more distressed by downward exposure. The present dissertation further suggests that this negative response of people low in subjective well-being and high in SCO may be partly due to their increased iden-

tification with worse-off others. The studies in Chapter 5 confirmed this, but also showed a remedy for the negative responses to downward exposure for people low in subjective well-being and high in SCO. That is, when they were instructed to compare, rather than to identify, themselves with a person doing worse, they did not respond negatively, but very positively, to downward exposure. This implies that, through comparing themselves with worse-off others these people can obtain a sense of being better-off than some others are. This result was in line with the findings of a study by Buunk, Olderman, & DeDreu (2001a) of relationship satisfaction. They found that people high in SCO who were, in addition, dissatisfied with their intimate relationship could enhance their satisfaction with their relationship by considering aspects of their relationship in which they were better than others. It thus seems that people with a low subjective well-being and a high SCO can benefit from exposure to a downward target only when their attention is directed at how they are better off than downward others, for example, by simply instructing them to compare themselves with the downward others. A possible extension of Wills' theory that can be derived from the present dissertation is that downward comparison may be beneficial not only for people who are low in subjective well-being, but, more generally, for people for whom the comparison dimension has high personal importance. Chapter 5 showed that, similar to people who are low in subjective well-being, people who find it important to excel on the comparison dimension can benefit from comparing themselves with a worse-off other. Since being low in subjective well-being and finding it important to excel on a particular dimension can both make a dimension personally important, Wills' theory may be extended to all dimensions that have high personal importance.

Concerning the responses to upward others, the present thesis showed that those low and high in SCO do not differ much. However, other researchers have found that, depending on their level of well-being, those high and low in SCO differ in the degree to which they identify themselves with an upward target (Buunk, Ybema, Gibbons, & Ipenburg, 2001c). With lower levels of well-being, only those low in SCO identified themselves less with an upward other, whereas those high in SCO continued to identify themselves with an upward other, irrespective of their level of well-being. This finding seems to suggest that, among those low in subjective well-being, particularly those who are high in SCO may use upward comparison information in a profitable way. Nevertheless, more research is needed into how people high and low in SCO differ in their responses


to upward others.

Conclusions

Despite the limitations and unresolved issues mentioned above, the present dissertation offers an interesting pattern of results concerning affective and self-evaluative responses to exposure to others who are doing better or worse. Particularly by showing that affective and self-evaluative responses differ, or may even be opposite, the present dissertation is relevant to theory of and research into social comparison issues. Furthermore, insight was obtained into the processes that underlie these responses. The degree to which people either compare or identify themselves with others appeared to steer their responses in opposite directions. The present thesis also showed how people with varying levels of social comparison orientation differ in their responses. Finally, the present dissertation offers indications of how people for whom a particular domain is very important, either because they are low in subjective well-being in that domain or because they find it important to excel, may handle comparison with worse-off others and use it to their benefit. In conclusion, when people see others in their surroundings who are doing either better or worse than they are, it appears that it is sometimes more pleasant to listen to the heart, and others times more pleasant to listen to the head.





Samenvatting
Summary in Dutch 



Wanneer mensen anderen zien die in een gelijke situatie of wel beter af zijn of wel slechter af zijn, kan dat sterke reacties oproepen. Mensen kunnen als reactie sterke gevoelens ervaren als ook zichzelf en hun eigen situatie anders gaan beoordelen. Binnen de sociale psychologie zijn vele studies gedaan die deze reacties op confrontatie met opwaartse anderen (mensen die beter af zijn) en neerwaartse anderen (mensen die slechter af zijn) hebben bestudeerd. Over het algemeen laten deze studies zien dat er geen eenvoudig antwoord kan worden gegeven op de vraag hoe mensen geneigd zijn te reageren. Het blijkt dat opwaartse en neerwaartse confrontatie beide zowel positieve als negatieve reacties kunnen oproepen (e.g., Buunk, Collins, Taylor, Van Yperen & Dakof, 1990, zie ook Brickman & Bulman, 1977; voor overzichten zie Blanton, 2001; en Suls & Wheeler, 2000). Zo biedt confrontatie met een opwaartse ander bijvoorbeeld niet alleen de gelegenheid om te leren hoe je jezelf zou kunnen verbeteren, maar benadrukt ook je eigen ondergeschikte positie. Evenzo laat confrontatie met een neerwaartse ander zowel zien hoe het met je zou kunnen aflopen, maar het geeft ook aan dat je zelf beter af bent. Om meer inzicht te verkrijgen in de reacties op opwaartse en neerwaartse confrontatie richtten we ons in het huidige onderzoek op de processen die ten grondslag liggen aan deze reacties. We maakten hierbij gebruik van een duaal-proces benadering (Chaiken & Trope, 1999). In navolging van Epstein (zie Epstein & Pacini, 1999; Epstein 2003) onderscheidden we een cognitief en een affectief informatieverwerkingssysteem. We veronderstelden dat binnen het cognitieve systeem mensen zich op systematische en analytisch wijze kunnen vergelijken met een ander, resulterend in een zelfbeoordelingsreactie. Daarbij verwachtten we dat vergelijking met een opwaartse ander leidt tot een negatievere zelfbeoordeling en vergelijking met een neerwaartse ander tot een positievere zelfbeoordeling (contrasteffect). Daarnaast veronderstelden we dat binnen het affectieve systeem mensen zich op associatieve en holistische wijze kunnen identificeren met anderen, resulterend in een affectieve reactie. Daarbij verwachtten we dat identificatie met een opwaartse ander leidt tot een positieve affectieve reactie, en identificatie met een neerwaartse ander tot een negatieve affectieve reactie (assimilatie-effect). Door het gelijktijdig optreden van een vergelijkings- en een identificatieproces kunnen de affectieve en zelfbeoordelingsreacties na opwaartse en neerwaartse confrontatie dus tegengesteld zijn. Verder werd de invloed van individuele verschillen in de neiging om zich te vergelijken met anderen, aangeduid met het begrip sociale vergelijkingsoriëntatie onderzocht (SVO; Gibbons & Buunk, 1999). Op basis van eerder onderzoek, verwachtten we

dat mensen met een hoge SVO sterker worden beïnvloed door confrontatie met opwaartse en neerwaartse anderen (zie bijvoorbeeld Gibbons & Buunk, 1999; Van der Zee, Oldersma, Buunk & Bos, 1998b). In het huidige onderzoek werd nagegaan of dit komt doordat mensen met een hoge SVO zich meer vergelijken en/ of identificeren met anderen of doordat ze sterker worden beïnvloed door vergelijking en/ of identificatie met anderen dan mensen met een lage SVO. Tot slot onderzochten we de reikwijdte van Wills neerwaartse vergelijkingstheorie (1981) die stelt dat mensen met een verlaagd subjectief welbevinden zich beter kunnen gaan voelen door zich te vergelijken met neerwaartse anderen.

Om deze onderzoeksvragen te toetsen lieten we proefpersonen (studenten) een interview lezen met een medestudent die ofwel erg succesvol was of juist niet, waarna hun affectieve en zelfbeoordelingsreacties werden gemeten. In een aantal studies werd daarnaast de mate waarin ze zich vergeleken en identificeerden met de student gemeten, terwijl in andere studies proefpersonen expliciet de opdracht te geven zich of wel te vergelijken of wel te identificeren met de student in het interview. In de meeste studies was de vergelijkingsdimensie sociale integratie in het eerste studiejaar. In één studie beschreven in Hoofdstuk 5 was de vergelijkingsdimensie studieprestaties. Vooraf werden de individuele-verschillen afgenomen.

In hoofdstuk 2 worden twee onderzoeken beschreven. Het eerste onderzoek toonde aan dat de zelfbeoordelingsreactie positiever was na confrontatie met de neerwaartse ander dan na confrontatie met de opwaartse ander en, in overeenstemming met de hypothesen, vooral wanneer mensen zich hadden vergeleken met de ander. Verder werd gevonden dat de affectieve reactie positiever was na opwaartse confrontatie dan na neerwaartse confrontatie en, zoals voorspeld, vooral wanneer mensen zich identificeerden met de ander. In het tweede onderzoek werd de mate van vergelijking en identificatie experimenteel gemanipuleerd. De resultaten van deze studie bevestigden de resultaten van de eerste studie. In de vergelijkingsconditie was de zelfbeoordelingsreactie sterker terwijl in de identificatieconditie de affectieve reactie sterker was. Daarnaast bleek dat mensen met een hoge SVO zich zowel meer vergeleken als meer identificeerden met de ander ten opzichte van mensen met een lage SVO. Bovendien versterkte SVO de affectieve reactie na identificatie met de opwaartse ander: alleen bij mensen met een hoge SVO leidde een sterkere identificatie met de opwaartse ander tot een positievere affectieve reactie.

In het derde hoofdstuk wordt een onderzoek beschreven naar de wisselwerking

tussen de affectieve en zelfbeoordelingsreacties na confrontatie met opwaartse en neerwaartse anderen. Aangenomen werd dat affectieve reacties, ontstaan binnen het affectieve systeem, eerder zouden optreden dan de zelfbeoordelingsreacties, ontstaan binnen het tragere cognitieve systeem (zie ook Zajonc, 1980). We verwachtten daarom de sterkste effecten op affect en zelfbeoordeling wanneer de affectieve reacties eerst werden gemeten en de zelfbeoordelingsreacties daarna, omdat dit de 'natuurlijke gang van zaken' volgt. In overeenstemming met deze hypothese werden de sterkste effecten op affect gevonden wanneer ze voor zelfbeoordeling werden gemeten en verdween het effect op affect zelfs als affect na zelfbeoordeling werd gemeten. Echter, de effecten op zelfbeoordeling waren hetzelfde wanneer ze voor of na affect werden gemeten. Verder bleken individuele verschillen in SVO de zelfbeoordelingsreactie te versterken, maar niet de affectieve reactie.

In hoofdstuk 4 werd onderzocht hoe individuele verschillen in SVO de affectieve reacties na opwaartse en neerwaartse confrontatie beïnvloeden. De verwachting was dat mensen met een hoge SVO zich sterker zouden identificeren met de opwaartse en neerwaartse ander, aangezien het maken van een vergelijking veronderstelt dat men een zekere mate van gelijkheid met zichzelf en de ander waarneemt (cf. Festinger, 1954). Voorts verwachtten we dat als gevolg van deze sterkere identificatie mensen met een hoge SVO meer positief affect zouden ervaren na opwaartse confrontatie en meer negatief affect na neerwaartse confrontatie dan mensen met een lage SVO. Bovendien werd onderzocht hoe het niveau van welbevinden, eenzaamheid in deze studie, deze effecten zou modereren. Ten aanzien van opwaartse confrontatie waren de resultaten niet in overeenstemming met de hypothese. Mensen met een hoge SVO identificeerden zich juist minder met een opwaartse target dan mensen met een lage SVO en bovendien beïnvloedde SVO de affectieve reactie na opwaartse confrontatie niet. Ten aanzien van neerwaartse confrontatie werden de hypothesen grotendeels wel bevestigd. Mensen met een hoge SVO identificeerden zich meer met de neerwaartse ander dan mensen met een lage SVO. Bovendien ervoeren ze daarna veel negatief affect, vooral als ze zelf ook relatief eenzaam waren. We concludeerden dat mensen met een hoge SVO een ongunstig identificatiepatroon hanteren en als gevolg daarvan negatief reageren op neerwaartse confrontatie, vooral als ze zelf ook een laag subjectief welbevinden ervaren.

In hoofdstuk 5 tenslotte worden twee studies gepresenteerd waarin werd onderzocht op welke manier, onder welke omstandigheden, en voor wie confrontatie

met neerwaartse anderen gunstige effecten geeft (zie ook Wills, 1980). Beide studies toonden aan dat neerwaartse confrontatie alleen positieve effecten oplevert wanneer mensen zich vergelijken met de neerwaartse ander, en niet wanneer ze zich identificeren. Bovendien vonden we dat niet alleen mensen met een verlaagd subjectief welbevinden kunnen profiteren van neerwaartse vergelijking, maar ook mensen die willen excelleren op de vergelijkingsdimensie. Ten slotte bleken alleen mensen met een hoge SVO te kunnen profiteren van neerwaartse vergelijking en niet mensen met een lage SVO.

Al met al kunnen de volgende conclusies getrokken worden op basis van de resultaten van de studies beschreven in dit proefschrift. Ten eerste blijkt het belangrijk te zijn om een onderscheid te maken tussen affectieve en zelfbeoordelingsreacties na confrontatie met opwaartse en neerwaartse anderen. In alle onderzoeken verschilden de affectieve en zelfbeoordelingsreacties van elkaar en soms waren ze zelfs tegengesteld. Deze conclusie lijkt algemener te gelden dan in de situaties die in het huidige proefschrift werden onderzocht. Een onderzoek van Buunk en Ybema (2003) laat bijvoorbeeld zien dat ook in een steekproef van getrouwde plattelandsvrouwen die hun huwelijk vergeleken met opwaartse en neerwaartse anderen de affectieve en zelfbeoordelingsreacties tegengesteld waren, vergelijkbaar met de resultaten beschreven in Hoofdstuk 2. Verder toonde het huidige onderzoek aan dat affect een meer primaire reactie lijkt te zijn dan de zelfbeoordelingsreactie (zie Hoofdstuk 3). Dergelijke bevindingen suggereren dat affectieve en zelfbeoordelingsreacties mogelijk voortkomen uit twee onafhankelijke mentale systemen, zoals voorgesteld door duaal-proces theorieën (Chaiken & Trope, 1999, zie ook Swann, Griffin, Predmore, & Gaines, 1987). Door beide soorten reacties in ogenschouw te nemen waren we in staat een beter begrip te krijgen van hoe mensen reageren op confrontatie met opwaartse en neerwaartse anderen. Ten tweede toont dit onderzoek aan dat gelijktijdig een vergelijkingsproces en een identificatieproces kan optreden die de affectieve en zelfbeoordelingsreacties van mensen in tegengestelde richtingen sturen. Vergelijking leidt tot contrastreacties terwijl identificatie tot assimilatiereacties leidt. Door het geven van een eenvoudige instructie tot of wel vergelijking of wel identificatie, konden we de reacties van mensen in tegengestelde richting sturen.

Een derde conclusie is dat, zoals verwacht, mensen met een hoge SVO sterker worden beïnvloed door confrontatie met betere en slechtere anderen dan mensen met een lage SVO. Enerzijds blijkt dit effect te moeten worden toegeschreven aan een sterkere beïnvloeding door identificatie met anderen, en anderzijds aan een

sterkere vergelijking én identificatie met anderen. Echter, aangezien mensen met een hoge SVO zich alleen sterker identificeren met neerwaartse anderen en juist minder met opwaartse anderen, geven zij blijk van een tamelijk ongunstig identificatiepatroon. Daarnaast vonden we dat mensen met een hoge SVO, wanneer zij bovendien een laag subjectief welbevinden hebben, bijzonder negatief reageren op confrontatie met neerwaartse anderen. Dit kon deels worden verklaard door het feit dat mensen met een hoge SVO zich sterker identificeren met neerwaartse anderen. Echter wanneer mensen met een hoge SVO de opdracht krijgen zich te vergelijken, in plaats van zich te identificeren met een neerwaartse ander, konden juist zij profiteren van de neerwaartse confrontatie. Daarnaast biedt de huidige dissertatie aanwijzingen voor hoe mensen voor wie een vergelijkingsdimensie erg belangrijk is, of wel omdat ze een laag welbevinden in dat gebied ervaren, of wel omdat ze het belangrijk vinden om te excelleren in dat gebied, vergelijking met neerwaartse anderen kunnen gebruiken om zich beter te voelen. Tot besluit, wanneer mensen anderen zien die het beter dan wel slechter doen dan zichzelf, blijkt het soms aangenamer om het hart te laten spreken en in andere gevallen om het verstand aan te wenden.

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