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Mirrors and reflections

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RIJKSUNIVERSITEIT GRONINGEN

Mirrors and Reflections

**Social Comparison Orientation and Self-Perception of Physical
Attractiveness in Women**

Proefschrift

ter verkrijging van het doctoraat in de
Gedrag- en Maatschappijwetenschappen
aan de Rijksuniversiteit Groningen
op gezag van de
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CHAPTER I

General introduction

In daily life, comparisons are common. For example, when shopping, we compare prices of products and pieces of clothing or furniture. Such comparisons guide our decisions of what to buy and not to buy. However, in *social* comparisons, instead of two or more objects, the self and another individual are involved in the comparison. The purpose of social comparison is, among other things, to gather information that helps to define the self in relation to others and to better interpret one's personal situation or one's position on a specific dimension. For example, in order to assess whether I am chaotic or not, I have to know how chaotic others are. Only if most others are less chaotic than I am, I will consider myself to be chaotic. In other words, social comparisons are necessary to anchor self-perceptions and to develop an identity (e.g., Huguet et al., 2009; Krayer, Ingledew, & Iphofen, 2008).

Social comparisons may occur on many different dimensions. According to Festinger (1954), people have a fundamental need to evaluate their opinions and abilities in search for accurate appraisals of themselves. The drive to compare oneself with others is phylogenetically very old, biologically very powerful, and recognizable in many species (Gilbert, Giesler, & Morris, 1995). Although individuals may strive for objective and non-social standards to evaluate themselves, they will evaluate themselves by comparison with others especially when such objective information is unavailable, and even if such information is available.

Up and down

In some situations, individuals may deliberately choose with whom they will compare themselves: they may compare themselves with others who are similar (lateral comparisons), with others who are better off (upward comparisons), or with others who are worse off (downward comparisons). For self-evaluative motives, it is most informative to compare oneself with someone whose performance or standing is similar to one's own, as described in the "similarity-hypothesis" (Festinger, 1954;

Suls, & Wheeler, 2000), since it is difficult to accurately estimate one's abilities when others' abilities are too far removed from one's own. Therefore, to make accurate self-evaluations, the comparison other has to be similar, or, at least, to be perceived as similar. It must be noted, however, that social comparison targets are not always chosen from a wide array of available targets. Most of the time, individuals simply compare themselves to those who are coincidentally available. Likewise, in many studies on social comparison, participants are exposed to a specific comparison target that is manipulated or established by the researcher, rather than spontaneously chosen by participants themselves (e.g., Buunk, & Gibbons, 2006; Dijkstra, & Buunk, 1998).

Contrast and assimilation

Individuals may handle social comparison information in different ways: they may contrast themselves with a comparison target (i.e., focus on the differences between themselves and the target) or they may assimilate to (or identify with) a comparison target (i.e., focus on the similarities between themselves and the target (Buunk, Collins, Taylor, & VanYperen, 1990; Collins, 1996; Stapel, & Suls, 2004). Thus, individuals respond with assimilation if their response is congruent with the comparison direction, whereas they respond with contrast if their response is incongruent with the comparison direction. An assimilative response to someone better off is manifested in, for example, an increase in positive mood and a more positive self-evaluation. For instance, if I compare myself to someone who is a better tennis player than I am, I can be considered to give an assimilative response when I experience more positive emotions, an uplift in mood and a more positive perception of myself as a tennis player. I may not be as good as the target, but the target may inspire me to become better and gives me hope that, one day, I may be as good as him or her. A contrast in response to a better off target can be said to occur when individuals experience a decrease in positive mood and lowered self-evaluation. In that case, when seeing a superior tennis player, I will experience more negative emotions, a more negative mood and a less positive perception of myself as a tennis player.

For downward comparison, the exact opposite applies. An assimilative

response following downward comparison consists of less positive emotions, a decrease in mood and a more negative perception of myself as a tennis player. I may feel worried that, although I am not as bad as the target, I may become as bad in the future or that I will not be able to outperform even this bad player. In case of a contrastive response to someone who is worse-off, individuals will experience an increase in positive mood and increased self-evaluation. In that case, I may feel proud of myself, perceiving myself to be a much better tennis player than the target. As a result, four strategies of social comparison may be distinguished: upward identification, upward contrast, downward contrast, and downward identification (Buunk, Kuyper, & van der Zee, 2005; Lockwood, Jordan, & Kunda, 2002; Smith, 2000).

SOCIAL COMPARISON AND BODY IMAGE

An important dimension on which individuals, especially women, often compare themselves with others, is their physical appearance. In this context the term "body image" is often used. The term "body image" refers to the internal representation individuals have of their appearance (e.g., Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). One aspect of the body image are evaluations of one's own physical attractiveness: individuals may be more or less satisfied with their appearance and find themselves more or less attractive. Although mild levels of body dissatisfaction are normative (almost everybody perceives his or her body to be imperfect), more severe levels of body dissatisfaction are predictive of clinical problems, especially symptoms of eating disorders (e.g., Thompson et al., 1999). Body image is not a stable appraisal. There are several factors that may cause fluctuations in the perception of one's body satisfaction or dissatisfaction. Social comparisons are considered to be one of the most important factors that may lead individuals to re-appraise their body image. For instance, several studies have shown that, after viewing unattractive same-sex individuals, levels of body satisfaction tend to increase, whereas after viewing highly attractive same-sex, levels of body satisfaction tend to decrease. This contrast-effect has been found when individuals are confronted with media-portrayed beauty images (e.g., Heinberg, & Thompson, 1995; Stice, & Shaw, 1994), as well as when individuals meet same-sex individuals in vivo (Krones, Stice,

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Batres, & Orjada, 2005). Thus, in general, social comparisons are seen as the most important process linking the attractiveness of same-sex individuals to self-evaluations of attractiveness (e.g., Tiggemann, & Slater, 2004).

In general, being physically attractive is a more important attribute for women than for men (Buss, 1994). According to evolutionary psychologists, physical attractiveness is such an important attribute in women primarily because it signals their fertility. Numerous studies do indeed show that especially those characteristics that are perceived as physically attractive in women, such as a low waist-to-hip ratio, are positively related to fertility (e.g., Singh, & Luis, 1995). According to social-cultural theories, individuals are strongly influenced by our society that pictures the ideal woman as physically attractive. Although physical attractiveness is perceived to be an important attribute for men as well, other characteristics are usually seen as more important for men, such as being successful or having a high social status (e.g., Townsend, & Levy, 1990). In addition to being less important, in general, cultural norms for male beauty are more flexible and more realistic than those for female beauty (e.g., Hargreaves, & Tiggemann, 2004). For instance whereas during adolescence boys develop towards the ideal male body by becoming more muscular, girls develop away from the ideal female body because of the development of adipose tissue on the hips, stomach and thighs (Levine, & Smolak, 2001). As a consequence, comparisons with the beauty ideal may be overall less “upward” for men than for women, resulting in a smaller reduction in body satisfaction among men than among women (e.g., Strahan, Wilson, Cressman, & Buote, 2006). In general, it is usually found that women’s body image is more negatively affected by appearance-related comparisons than men’s body image. Although the responses to upward comparisons may be either contrastive or assimilative, studies show that, in daily life, social comparison processes more often have adverse than positive effects on individuals’ body satisfaction (for reviews see Cafri, Yamamiya, Brannick, & Thompson, 2005; Dijkstra, Gibbons, & Buunk, in press).

Only very scarce evidence suggests that, for some individuals, images of beauty may have assimilative responses, leading to feelings of hope, inspiration and an increased motivation to invest in becoming more attractive. Joshi, Herman and Polivy (2002), for instance, found that restrained eaters reported a more favorable self-image and a higher social self-esteem after exposure to advertisements depicting

attractive and thin women than after exposure to a control advertisement. In a similar vein, Mills and colleagues (Mills et al, 2002) found that restrained eaters rated their ideal and current body sizes as smaller and dis-inhibited their food intake more after exposure to idealized body images as compared to exposure to large body images or without any exposure. In a similar vein, studies that examined pro-anorexia websites suggest that some individuals may show assimilation towards ultra-thin models (for a review see Morris, Boydell, Pinhas, & Katzman, 2006). On these sites viewers may find "inspirational" photo galleries and quotes that aim to serve as motivators for weight loss. Although aimed at inspiring individuals in general, such photo galleries seem to appeal especially, or even only, to women who suffer from an eating disorder.

SOCIAL COMPARISON ORIENTATION

Although people in general seem to anchor their self-evaluations in part in social comparisons, some individuals are more inclined to compare themselves with other people than others. Gibbons and Buunk (1999) constructed an instrument to measure individual differences in the tendency to compare oneself with others, an individual difference variable they labeled Social Comparison Orientation (SCO). To measure SCO, Gibbons and Buunk developed the INCOM, an eleven item scale. As individuals are more inclined to social compare themselves, they score higher on this scale. Although the items of this scale could be divided in two subscales - six items reflecting abilities and five items reflecting opinions - Gibbons and Buunk advise to use the items as one scale. In their original research, Gibbons and Buunk (1999) found SCO to be negatively related to personality traits reflecting certainty about the self, self-esteem and emotional stability. Furthermore, Gibbons and Buunk found those high in SCO to show a strong interest in the feelings and thoughts of others and to have a highly activated self.

As noted before, social comparisons are viewed as the linking mechanism between images of beauty and self-evaluations of attractiveness. It is therefore highly likely that individual differences in SCO will affect or moderate self-evaluations of attractiveness in response to other people's appearance. Before the present

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research, no studies had experimentally examined this issue. Indeed, all studies on SCO and body image had been correlational in nature. More specifically, four correlational studies examined the relationship between SCO and body comparisons. Three of these four studies showed that SCO was positively related to weight and body concerns: as individuals were higher in SCO, they were more concerned about their weight and their body. In addition, Morrison et al. (2003) and Gilbert and Meyer (2003) found SCO to be positively related to bulimic tendencies, whereas Corning, Krumm and Smitham (2006) found SCO to be related to general eating disorder symptoms. The fourth study examined the potentially mediating role of SCO between media consumption and body perception (Miller, & Halberstadt, 2005), but found no evidence for such a role. In sum, these correlational studies show an important association between SCO and body image concerns, including pathology in the domain of eating disorders. Given the correlational nature of previous research, an important aim of the present research was to experimentally examine the moderating role of SCO with respect to the effect of social comparisons of attractiveness on self-evaluations of attractiveness.

A review of research on SCO in other areas

In the following section, I will provide a review of studies that have examined SCO in relationship to other variables than those related to body image. The goal is to develop a description of the typical high comparer, showing what characteristics characterize those high in SCO. By doing so, I hope to shed light on what can be expected to happen to those high in SCO when confronted with media images of beauty, and how they will respond to such images. For this purpose, I will first discuss studies that found evidence for an assimilative response to social comparison information among those high in SCO, followed by studies that found evidence for a contrastive response among those high in SCO. Next, I will discuss some discrepant findings, followed by studies on SCO and individual differences in preferences and responses to specific situations (Self, Health, Social orientation). Finally, I will summarize the research on SCO.

SCO and assimilative responses to social comparison information

A number of studies have shown that individuals high in SCO respond with relatively strong assimilation to social comparisons. These studies were conducted in different domains and with different methods. In order to examine whether SCO could predict comparison choice and mood, Van der Zee, Oldersma, Buunk, and Bos (1998) instructed cancer patients to read as many fictitious interview fragments as they liked. These fragments were presented as coming from fellow patients who were either doing worse or doing better than the typical cancer patient. After participants had read these interview fragments, positive and negative affect was measured. The results showed that selecting fragments of upward comparison targets evoked less negative affect, but only among individuals high in SCO. This finding suggests an assimilative response to upward comparisons among those high in SCO: cancer patient high in SCO felt better when they had read about cancer patients who were coping quite well.

An assimilative response was also found in two studies on the effects of social comparisons on depression. Bätzner et al. (2006) instructed participants, varying in levels of depression, to imagine a friend or acquaintance of the same age and gender “who attains nearly always what he/she wants in his/her job or his/her studies” (upward comparison target). Buunk and Brenninkmeyer (2001) exposed both depressed and non-depressed participants to information about someone overcoming a depression, either without or with effort. Bätzner and Kuiper (2006) found participants low in depression but high in SCO to feel less depressed after comparison with a successful other, whereas Buunk and Brenninkmeyer (2001) found these same individuals to respond with more positive affect when the target put high effort in the recovery from the depression. Although the manipulation in these studies differed, both studies found an assimilative response only in individuals high in SCO. Interesting to note is that in the study of Buunk and Brenninkmeyer (2001), non-depressed individuals who were high in SCO perceived depressed others overcoming a depression with high effort as a useful comparison other, whereas non-depressed individuals low in SCO perceived the situation of the depressed not relevant enough to compare themselves. Thus, even in the absence of depression, individuals high in SCO seem to view depressed others as useful comparison targets.

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It seems that individuals high in SCO do not only compare more often, but also to more diverse comparison targets, i.e. also to those who are unlike themselves. Finally, in a study among nurses, Buunk, Van der Zee en Van Yperen (2001) also found an assimilation effect. These authors found nurses high in SCO, independent of their level of neuroticism, to respond with more negative affect to a bogus interview with a nurse who was not functioning well (downward target).

An example of an assimilative responses among those high in SCO has also been found in research on intimate relationships. More specifically, Buunk (2006) exposed participants to a happily married couple that described their relationship as either effortless or effortful. Results showed that comparisons with the happily married couple that had an effortful relationship evoked more positive mood and higher levels of identification, but only among those high in SCO who were themselves happy in their relationship. This finding implies that individuals high in SCO appreciate the idea that effort leads to positive effects and that one is able to control one's situation or relationship. Again, it shows that individuals high in SCO do not only compare themselves more often with others, but also with more diverse comparison targets than those low in SCO. A possible explanation is that, in line with findings from Gibbons and Buunk (1999), those high in SCO in general show a relatively strong interest in the feelings and thoughts of others, and, as a consequence, identify more easily with others. This automatically broadens the range of comparison targets that are considered relevant enough for comparisons. Another explanation is based on findings by Michinov and Michinov (2001). According to these authors, individuals high in SCO are attracted to both similar and dissimilar others, because of uncertainty and confusion about their self-knowledge. As a consequence, they may be inclined to compare themselves both to others who are like themselves and to others who are unlike themselves.

SCO and contrastive responses to upward and downward comparison

In addition to assimilative responses to social comparison among those high in SCO, several studies have also found evidence for contrastive responses among those high in SCO . In the domain of intimate relationships, three studies have found such responses.. In one of these studies, the moderating role of SCO on the effect of

downward comparison information on relationship satisfaction was examined. In this study of Buunk, Oldersma and De Dreu, (2001) among individuals who were currently involved in a romantic relationship, the participants were instructed to write as many reasons as possible either why their relationship was better than that of most others (downward comparison condition) or why their relationship was good (no-comparison condition). This study showed that among those high in relational discontent engaging in downward comparison resulted in a higher relationship satisfaction, but only for those high in SCO. Apparently, reflecting about a positive aspect of the relationship compared to that of others, leads individuals high in SCO to feel better about their relationship.

In the two other studies in the domain of intimate relationships, differences in responses to rival characteristics among homo- and heterosexuals were studied for different levels of SCO. In these studies, participants read a scenario in which their partner was flirting with someone else (Dijkstra, & Buunk, 2002). In the first study, participants had to report how jealous they would feel in response to each of 56 rival characteristics; in the second study, a photograph and a personality description were added to the scenario after which participants had to rate how jealous they would feel if their partner would flirt with this person. In both studies, among heterosexuals individuals high in SCO felt more jealous in response to rival characteristics than individuals low in SCO. When viewing jealousy as a negative emotional experience, high levels of jealousy in response to rivals with superior qualities may be seen as a contrastive response. It must be noted, however, that in the homosexual sample, individuals high in SCO, responded with more jealousy than individuals low in SCO to a less attractive rival (downward comparison), showing an assimilative response.

Thus, research on intimate relationships suggests that individuals high in SCO who are unhappy with their relationship feel more satisfied with their relationship following downward comparison, and that heterosexuals high in SCO experience relatively high levels of jealousy in response to positive characteristics of a rival. Although these findings are rather complex, one may conclude that, at least in the domain of intimate relationships, individuals high in SCO are more affected by other people and circumstances than those low in SCO.

Other studies suggest that this conclusion may also apply to other domains. A study by Buunk and colleagues (Buunk, Zurriaga, Peiro, Nauta, & Gosalvez, 2005)

among general physicians, for instance, found that physicians high in SCO reported more positive mood following downward comparison (thinking of someone doing worse) and more negative mood following upward comparison (thinking of someone doing better) than those low in SCO. In a similar vein, Zhou and Soman (2003) found that individuals high in SCO were more affected by the number of people who were waiting behind them in a queue than individuals low in SCO. Participants in this study read one of three scenarios in which the number of waiting people behind them in a queue in a copy center (0, 5 or 10) was manipulated, after which positive and negative affect were assessed. Results showed that the more people were waiting behind, the more positive affect and the less negative affect participants high in SCO reported. The amount of waiting people behind seemed to constitute a downward comparison situation, that made those high in SCO feel better about their own situation – suggesting a contrastive response.

Discrepant findings

In most studies, downward and upward comparison conditions tend to evoke different patterns of responses in individuals low in SCO compared to individuals high in SCO, usually in terms of contrastive and assimilative responses. In general, the largest differences were found among those high in SCO. However, in one study, those low in SCO responded differently to upward than to downward comparison, whereas among those high in SCO no significant difference was found (Buunk, Ybema, Gibbons, & Ipenburg, 2001). Buunk and colleagues examined the effect of SCO and levels of burn-out on affect in response to a comparison target – either an upward or downward comparison target. They found that individuals low in SCO and high in burn-out responded more assimilatively, that is with more negative affect to the downward comparison target than to the upward comparison target, whereas those high in SCO did neither respond assimilatively nor contrastively.

Two other studies showed individuals high in SCO to respond more intensively to social comparisons than those low in SCO, regardless of the direction of comparison. Buunk, Peiro and Griffioen (2007) asked participants to read an interview with a new graduate who was either unsuccessful or successful in the job market. Individuals high in SCO reported more identification and more proactive

career behavior than individuals low in SCO did, regardless of the comparison target (successful or not). In individuals high in SCO, both comparison with the upward target and the downward target increased proactive career behavior and feelings of identification. Thus, in this study, the comparison direction did not guide the response of individuals high in SCO in terms of assimilation or contrast. It did, however, affect the degree of identification with the target.

In a similar vein, Ouellette and colleagues (Ouellette, Hessling, Gibbons, Reis-Bergan, & Gerrard, 2005) found individuals high in SCO to respond more strongly than those low in SCO. In this study, participants had to think of the prototypical non-exerciser or prototypical exerciser. Results showed that comparison with both the good and the bad exerciser evoked an increase in exercise intention and behavior, but only among those high in SCO. These studies suggest that, regardless of the exact nature of the circumstances, those high in SCO are simply more affected by other people and the situation in which these people find themselves.

SCO and individual differences: characteristics and preferences

In order to provide an image of the typical high comparer and what can be expected of this type of person with regard to social comparisons in the domain of body image, we now discuss a number of studies that have focused on the relationship between SCO and various individual difference variables. Some of the variables that have been found to be related to SCO, seem, at first sight, rather surprising. That is, one might not expect relations between these variables and SCO. Other variables have already been associated with SCO in the pioneering study of Gibbons and Buunk (1999) and the study of Buunk and Gibbons (2006).

The Self. An important cluster of individual variables that have been related to SCO is the cluster of characteristics that refer to feelings about the self. Gibbons and Buunk (1999) found positive correlations between SCO and public and private self-consciousness, neuroticism, depression, anxiety and low-self-esteem, suggesting that SCO is related to uncertainty about the self. Theoretically, a link between uncertainty about the self and SCO can be expected. Uncertainty can be regarded as a strong motive to compare oneself with others (Stapel, & Tesser, 2001). Butzer and Kuiper (2006) explicitly tested the unique contribution of four uncertainty related

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constructs to SCO (Self-Concept Clarity, Intolerance of Uncertainty, Anxiety and Depression). They found especially Intolerance of Uncertainty to be related positively and Self-Concept Clarity to be related negatively to SCO. That is, as individuals were more intolerant of uncertainty and had lower self-concept clarity, they reported higher levels of SCO. .

These studies on SCO and the self indicate that those high in SCO perceive higher levels of uncertainty about the self, suggesting that SCO is, at least partially, driven by feelings of uncertainty and a lack of self-clarity. A lack of self-clarity may motivate individuals high in SCO to compare themselves with others in order to answer questions such as: "who am I?" and: "what should I do?" in an attempt to strengthen their identity and feelings of self-esteem.

The relatively high uncertainty of individuals high in SCO seems to have several consequences. According to uncertainty management theory, because of their greater inner uncertainty, individuals high in SCO will be more sensitive to being treated unjust. Thau, Aquino and Wittek (2007) indeed found that perceptions of being treated unfairly in the work environment were more strongly related to anti-social behavior among those high in SCO than among other people.

Other consequences are reflected in the association between SCO and regret, that has been examined in two studies. According to Zeelenberg and Pieters (2006) regret implies a comparison between a current situation and the situation that would have been the result if one had behaved differently in the past, or if, some other way, things had turned out differently. These authors found individuals high in SCO to compare their current situation more often with hypothetical situations that might have been if things had turned out differently. In a similar vein, Van Dijk and Zeelenberg (2005) found individuals high in SCO tend to experience more regret. In this study, participants had to identify with someone who bought one of the two last scratch cards in a lottery with a guaranteed prize and who won € 15 in a book or liquor token. Then they found out that the prize of the other card was € 50 either in a book or liquor token and their level of regret was assessed. Results showed that participants felt less regret when the missed prize was in a different token, but this was only true for those low in SCO. In contrast, those high in SCO felt regret independent of the type of the token. These studies on regret and SCO seem to indicate that individuals high in SCO tend to doubt more about their past choices and

tend to think more often that they made the wrong choices. These findings can be easily understood from the perspective that individuals high in SCO engage more in self-doubt and think more negatively about themselves.

Health. In the health domain, three correlational studies have been conducted that examined SCO as related to the functioning of patients, their comparison choice, comparison frequency and comparison content. In a study among patients with traumatic brain injury, Arenth, Corrigan and Smidt (2006) compared levels of SCO of patients shortly after leaving acute care (within a month) with those of patients who had left acute care for over six months. The latter group reported higher levels of SCO and lower levels of mental health. These findings suggest that illness and the stress that may result from it may trigger people to compare themselves with others. However, when individuals with health problems have high self-management abilities, high levels of SCO are associated with higher life satisfaction. More specifically, Frieswijk et al. (2007) found that, for elderly with high levels of frailty and high levels of self-management ability, SCO was positively related to life satisfaction. A study with a focus on comparison content and comparison frequency and choice was performed by Buunk, Zurriaga, Gonzalez, Terol, and Roig (2006). Patients with chronic disease reported their content of comparison and their choice of comparison others. Individuals high in SCO compared their symptoms and their physical activities not only more frequently with others but also with more different other targets groups people with (no health problems, different or the same health problems) than individuals low in SCO, even when controlling for levels of neuroticism. With regard to health-promoting behaviors, Luszczynska, Gibbons, Piko and Tekozel (2005) examined whether the association between SCO and health-promoting behaviors (e.g., eating healthy, regular exercise) varied across countries (Hungary, Poland, Turkey, US). Their study showed that SCO predicted nutrition behavior and physical activity in all countries. Furthermore, individuals high in SCO showed a stronger intention to adopt a healthy life-style than individuals low in SCO.

Taken together, these studies seem to suggest that social comparisons in the domain of health may be related negatively to mental health, at least when individuals do not have high levels of self-management abilities. A possible explanation is that, when individuals perceive no possibilities to improve their health, social comparisons may increase rather than decrease stress. Furthermore, these studies suggest again

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that individuals high in SCO employ a broader range of comparison targets than other people. This may be due to the fact that those high in SCO show a relatively strong interest in the feelings and thoughts of others and tend to identify themselves with others with a wider variety of characteristics. Finally, although frequent health-related social comparisons may be negatively related to mental health, they do seem to stimulate healthy behaviors that may lead to improved physical health.

Social orientation. Four studies examined the relationship between SCO and individuals' attitudes with regard to relationships. The first study to focus on the relationship with others and SCO was the pioneering study by Gibbons and Buunk (1999). These authors found that individuals high in SCO had a stronger interpersonal orientation, i.e. were more interested in the feelings and thoughts of others. Results of an experiment by Michinov and Michinov (2001) point in the same direction. They found that, in general, most liking was reported for other individuals with similar attitudes. However, among those high in SCO, the level of attitude similarity did not affect the level of liking: individuals high in SCO liked others with dissimilar attitudes as much as they liked others with similar attitudes.

The role of SCO in moderating the effect of affiliation orientation, i.e., the preference for doing things together and in groups versus a preference for doing things alone, was studied by Buunk, Nauta and Molleman (2005). These authors found that the higher individuals were in affiliation orientation, the higher their level of group satisfaction was, but only for those low in SCO. For those high in SCO, group satisfaction was low, regardless of their affiliation orientation. Among those high in SCO, affiliation orientation was even negatively associated, although not very strongly, with group satisfaction. Buunk et al. (2005) conclude that the typical "group animal" is someone who has a strong preference for affiliation, combined with a low tendency to compare him- or herself with others. This study implies that frequent comparisons in work groups may decrease group satisfaction and that, due to these comparisons, individuals high in SCO will often experience lower group satisfaction. Finally, Buunk (2005) found gender differences in the preferences for autonomy versus commitment in intimate relationship to be related to SCO. Results showed that women high in SCO preferred high levels of commitment in their relationship rather than high levels of autonomy. For men high in SCO the opposite was true: they preferred high levels of autonomy.

Again, an important conclusion from these studies seems that individuals high in SCO are more oriented towards others, regardless of whether these others are similar or not.

Summary of findings of research on SCO

Although the studies in this review are very different in method and research domain, and the findings are often discrepant, it is possible to extract a number of characteristics of those high in SCO. Knowledge about the characteristics of high SCO is helpful in understanding how individuals high in SCO may respond to images of unattractive respectively attractive others, the main focus of the present thesis. Probably most typical for those high in SCO is their sensitivity to cues from outside, either being other people or circumstances, and their tendency to respond more vigilantly to these cues. Second, individuals high in SCO seem to focus relatively more on the possibilities of change and control. Those high in SCO appreciate effort, possibly because, for them, effort is associated with potentially positive outcomes. Their self-views seem to be flexible: their own effort or different circumstances may change their future resulting in changes in their self-views. Thirdly, individuals high in SCO seem to perceive similarity with others differently than those low in SCO do: they seem to feel similar with others that are objectively not similar, and tend more easily to identify themselves with others. Finally, individuals high in SCO seem, more than others, to suffer from low levels of self-esteem and high uncertainty. In sum, those high in SCO seem to be relatively sensitive to circumstances, to be more uncertain about the self, to have more flexible self-images, and to be more inclined to identify with others.

OVERVIEW OF THE PRESENT RESEARCH

A central aim of the present thesis is to experimentally examine the moderating role of SCO with respect to social comparisons of attractiveness. More specifically, the present research aimed to examine three topics, i.e.:

- the moderating role of social comparison orientation with respect to the effects of social comparisons on self-perceived attractiveness. That is, the

present research examined self-evaluations of attractiveness of individuals high and low in SCO following exposure to an upward (attractive) and downward (less attractive) comparison other.

- the relationship between SCO and the range of self-evaluations of attractiveness.
- the relationship between SCO and perceptions of similarity to others.

Effects of social comparison

Based on the literature review, I expected those high in SCO to respond more assimilatively when they are exposed to attractive as well as unattractive comparison others. The existing literature suggests that those high in SCO tend to respond with assimilation when they are exposed to comparison others. In general, those high in SCO seem to identify more easily with others, resulting in stronger tendency to show assimilative responses to social comparisons. It was therefore expected that exposure to a less attractive same sex target will decrease self-evaluations of attractiveness among those high in SCO, whereas it will increase self-evaluations of attractiveness among those low in SCO. In contrast, I expected exposure to an upward comparison target to increase self-evaluations of attractiveness among individuals high in SCO, whereas I expected this type of exposure to decrease self-evaluations of attractiveness among individuals low in SCO.

More specifically, in Chapter 2, in three studies the moderating role of SCO with respect to women's responses to attractiveness comparisons was examined. In addition, it was examined if women high in SCO tend to perceive more similarity between two objects. In Study 2.1 participants were presented with two drawings, after which similarity rating between the two drawing was made. In Study 2.2 and 2.3, the assimilative response of women high in SCO following upward and downward attractiveness comparison was examined. In Study 2.2, female participants were exposed to a bogus interview combined with a photograph of either an attractive or a less attractive female, after which self-evaluations of attractiveness were assessed. In Study 2.3, female participants were exposed to a set of five photographs of , either a very attractive of or a less attractive woman, after which self-evaluations of attractiveness were assessed. I hypothesized that women high in SCO will report

more similarity between two pictures than women low in SCO (Study 2.1). In addition, I expected women high in SCO to respond more assimilatively to the comparison with either the attractive or the less attractive targets. That is, women high in SCO will report higher self-evaluations of attractiveness following comparison with an attractive target than women low in SCO. Likewise, following comparison with a less attractive target, I expected women high in SCO to report lower self-evaluations of attractiveness than women low in SCO (Study 2.2 and Study 2.3).

Range of self-evaluation

The second aim of the present research was to relate SCO to the range of self-evaluations of attractiveness. In general, self-evaluations at time 1 may differ from self-evaluations at time 2, and may be more or less unstable (Melnyk, Cash, & Janda, 2004). I expected this to be true especially for those high in SCO. Illustrative are the higher expectations of future self-evaluations of attractiveness among those high in SCO that I discussed in the review above (Haddock, 2006). It is reasonable to assume that fluctuations in self-evaluations have boundaries, i.e. fluctuate between a certain range. More specifically, it is possible to determine individuals' most positive and most negative self-evaluations of attractiveness and thus, to calculate a personal range in which self-evaluations of attractiveness fluctuate. The studies in the present chapter's review suggest that individuals high in SCO have more flexible self-evaluations than those high in SCO and therefore have a wider range of possible self-evaluations.

In Chapter 3, in four studies differences in range in momentary self-evaluations were examined for women high and low in SCO. As discussed before, these fluctuations are assumed to take place between a personal lower and upper boundary. I therefore expected women high in SCO to have a wider range in momentary self-evaluations of attractiveness than women low in SCO. In Study 3.1, participants were asked to estimate their maximum and minimum attractiveness level without further instruction. In Study 3.2, ratings of the lowest and highest self-evaluations of attractiveness were related to a real life situation. Participants were asked to rate their highest and lowest attractiveness levels, imagining themselves in a shop window. In Study 3.3, participants were asked to estimate their lowest and

highest self-evaluations of attractiveness on an anchored scale that uses two photographs as anchors. In Study 3.4, lowest and highest self-evaluations were assessed separately and self-esteem was assessed to control for effects of self-esteem on the range in momentary self-evaluations.

Perceived similarity with comparison targets

The third aim of the present research was to examine perceptions of similarity between the self and the comparison target in individuals low and high in SCO. Generally, it is assumed that perceptions of similarity are important determinants of comparison choice (Alicke, LoSchiavo, Zerbst, & Zhang, 1997). For instance, individuals generally prefer to compare themselves with same-sex rather than with opposite sex targets, and with targets of approximately the same age (e.g., for a review see Dijkstra, Kuyper, Van der Werf, Buunk, & Van der Zee, 2008). As a result, perceptions of similarity or psychological closeness with the target are likely to affect responses to social comparisons (e.g., Brown, Novick, Lord, & Richards, 1992). Even small similarities, such as sharing the same date of birthday, may impact responses to social comparison information. One of my conclusions from the review of research on SCO was that individuals high in SCO seem to be more likely to identify with others. Illustrative is a study by Michinov and Michinov (2001) who found that individuals high in SCO did not perceive others with different attitudes as less likeable, as individuals low in SCO are inclined to do. A possible explanation is that individuals high in SCO are more empathic and are, more than others, able to imagine how others feel and live, and, consequently, may perceive others not as dissimilar as people low in SCO. This explanation is supported by the positive relation between SCO and interpersonal orientation reported by Gibbons and Buunk (1999). Although to date no research has explicitly examined differences in perceptions of similarity between the self and others as a function of SCO, it can be expected that individuals high in SCO will perceive others as more similar to the self than individuals low in SCO. In the present research I therefore expected individuals high in SCO to perceive themselves as more similar to both attractive and unattractive same-sex targets.

In Chapter 4 three studies are described that examine potential differences in the perception of similarity with the comparison target among women high and low in SCO. In this chapter, two types of similarity were distinguished: similarity in terms of one's standing in the domain of attractiveness (dimensional closeness) and psychological closeness. In Study 4.1, the extent to which individuals compared themselves with each of seven targets, varying in their levels of attractiveness, was assessed. I expected women high in SCO to compare themselves more often with these targets than women low in SCO. Furthermore, perceptions of similarity of attractiveness were assessed. Participants were presented with the same set of targets of varying levels of attractiveness after which perceptions of similarity in standing (dimensional closeness on the dimension under comparison, i.e. attractiveness) was assessed. Participants were asked to what extent they feel they look like the women in the seven photographs. In Study 4.2, I examined differences in perception of psychological closeness between women low and high in SCO. Finally, in Study 4.3, participants compared six pairs of targets, after which they rated the similarity between those sets of targets.

Based on present chapter's review (Buunk, & Gibbons., 2006; Gibbons, & Buunk, 1999; Stapel et al., 2001), I expected women high in SCO to compare themselves more often with all targets, i.e. regardless of their level of attractiveness, than women low in SCO. Furthermore, I expected women high in SCO to perceive themselves to be more similar in attractiveness to these seven targets than women low in SCO. Based on studies that have shown individuals high in SCO to have a relatively strong interpersonal orientation and self-activation, I also expected women high in SCO to respond differently to comparisons between the self and others and comparisons between two others. In comparisons in which the self is involved, individuals high in SCO will be more likely to actively search for similarity between themselves and others and, consequently, to perceive themselves as more similar to the other than individuals low in SCO. However, when they just compare others, and the self is not involved, I expected individuals high in SCO not to actively search for similarity and, consequently, not to differ from individuals low in SCO in their perception of similarity of these two other targets.

Finally, it must be noted that, for several reasons, the present research focused on women. As noted before, having a physically attractive appearance is

more important for women than for men, and, as a result, comparing one-self to others in the attractiveness domain is of more importance to women than to men. In addition, social comparisons in the attractiveness domain have been found to have a much larger, usually more negative, impact on women's self-evaluations of attractiveness than on men's (for a review see Dijkstra, Gibbons, & Buunk, in press).

Relevance of the present research

The present research focuses upon women, and aims to clarify the role of individual differences in SCO with regard to social comparisons of attractiveness. This is an important issue. First, from a theoretical point of view, to date no studies have yet experimentally examined the moderating role of SCO with respect to the effect of upward and downward comparisons on self-evaluations of attractiveness. Finding that individual differences in SCO matter, may support the assumption that social comparisons are indeed the linking mechanism between other people's appearance and self-evaluations of attractiveness. In addition, the present research may clarify documented effects of social comparison, especially with respect to discrepant findings in the domain of body image. Although most research on the responses to very attractive others has reported negative effects on mood and self-evaluation, more recently, positive effects on body satisfaction have been found (for reviews see Cafri, Yamamiya, Brannick, & Thompson, 2005; Dijkstra, Gibbons, & Buunk, in press; Joshi, Herman and Polivy, 2002; Mills et al, 2002; Morris, Boydell, Pinhas, & Katzman, 2006). Furthermore, the present research may offer insight in the processes that may underlie social comparison, including perceptions of similarity between oneself and others and the stability of self-views. Finally, the present research may clarify if specific effects of social comparison are limited to individuals high or low in SCO.

The present research is also relevant from a more practical point of view. Numerous studies have shown body dissatisfaction due to exposure to media images of beauty to be a risk factor in the development of clinical problems, such as eating disorders (e.g., Thompson et al., 1999). If indeed, as I expected, individuals high in SCO tend to respond more vigilantly to comparisons with other women, they may be more vulnerable to develop negative self-evaluations of attractiveness and body dissatisfaction. Knowledge about this issue may help identify individuals who are

vulnerable to the negative effects of media images of beauty and may help design programs aimed at maintaining a healthy body image and preventing body dissatisfaction and eating disorders.

CHAPTER 2

Assimilation or contrast?

Exposure to attractive or less attractive others and the role of Social Comparison Orientation¹

Most studies on the impact of social comparisons on self-evaluations of physical attractiveness have been conducted in female samples. Evolutionary theorists have argued that attractiveness is more important for women than for men, and that women compete more with other women in terms of physical attractiveness than men do (e.g., Fisher, 2004). Therefore, comparing with others in terms of physical attractiveness may affect the self-evaluations especially of women. In general, research suggests that when individuals compare themselves with others on evaluative dimensions, the psychological consequences may be positive or negative, depending on the direction of comparison (upward or downward) and on the interpretation of the comparison (assimilation or contrast). If the target individual is perceived as superior on the dimension (i.e., is more attractive than the perceiver), the outcome may be positive for self-evaluations if the perceiver assimilates with the target, but negative for self-evaluations if the perceiver contrasts with the target. On the other hand, if the target individual is perceived as inferior on the dimension (i.e., is less attractive than the perceiver), the outcome may be negative for self-evaluations if the perceiver assimilates with the target, but positive for self-evaluations if the perceiver contrasts with the target (Stapel, & Blanton, 2004; for a review see Mussweiler, 2003; Buunk, & Gibbons, 2006).

In the present research, we tested the hypothesis that social comparison orientation (SCO) moderates the effects of social comparison with respect to physical attractiveness. SCO refers to individual differences in the frequency of comparing oneself with others, the general tendency to engage in social comparisons,

¹ This chapter is based on Bosch, Buunk, Siero and Park (in press).

and the inclination to be affected by social comparisons (Gibbons, & Buunk, 1999). According to Buunk and Gibbons (2006) those high in SCO have strong activation of the self and tend to be particularly aware of their own thoughts and feelings when they are alone as well as when they are in the presence of others. Their tendency to compare themselves with others is also expressed in an interest in the feelings and needs of others. In addition, they tend to have somewhat higher levels of negative affectivity and uncertainty of the self (Buunk, & Gibbons., 2006). In general, when confronted with others, those high in SCO tend to relate the experiences and characteristics of others to the experiences and characteristics of themselves.

According to the Selective Accessibility Model (SAM) (Mussweiler, 2003), the default process in social comparisons is looking for similarities: testing for similarities between oneself and the target is a more common and natural process than testing for dissimilarities. Generally spoken, similarity testing will more likely result in an assimilative response rather than with a contrast response. Because searching for similarities is typical for social comparison, logically speaking, those who engage relatively often in social comparison should be characterized by a relatively stronger overall tendency to look for similarities. Mussweiler tested this tendency to search for general similarities by assessing the perceived similarity between two sketches. In the present research we tested with the same method if this tendency to search for general similarities differed for those high and low in SCO. When those high in SCO perceive the two sketches as more similar, it is plausible that those high in SCO will also look more for similarities with potential comparison targets and therefore respond more assimilative than those low in SCO.

This last prediction is not only in line with the SAM, but also with another recent model in the social comparison literature, the Interpretation Comparison Model (Stapel, & Koomen, 2000; Stapel, & Koomen, 2001; Stapel, & Blanton, 2004). In the SAM, no difference is formulated between responses to deliberate, explicit comparisons and to more implicit comparisons; according to the ICM, on the other hand, deliberate, explicit comparisons will activate a mindset of similarity testing between the characteristics of the target and the comparer resulting in assimilative responses (interpretation), whereas implicit comparison will not activate the similarity testing process resulting in contrast (comparison). Indeed, in one experiment, Stapel and Suls (2004) found assimilative responses when they asked the

participants to compare themselves with the target (explicit comparison), but contrastive responses when they instructed the participants to think about the target (implicit comparison). Social comparison orientation (SCO), in our view, refers to explicit comparisons, as the scale to assess this orientation asks for one's conscious awareness of making social comparisons. (Van der Zee, Oldersma, Buunk, & Bos, 1998). Although no research is done so far on how SCO affects the tendency to make implicit and explicit comparisons, we like to argue that the awareness of making comparisons in those high in SCO –with an highly activated self and strong interest in others– makes explicit comparisons more likely, whereas the lack of awareness of making comparisons in those low in SCO makes explicit comparisons less likely. Thus, also on the basis of the ICM, we hypothesized that those high in SCO will tend to assimilate more following social comparison than those low in SCO. As individuals low in SCO may be more susceptible to implicit comparisons, they may be more likely to contrast with targets as they focus on dissimilarities between themselves and the target.

Our predictions are not only in line with current theoretical models, but also with two lines of research. First, previous research on SCO suggests indeed that those high in SCO tend to show responses that seem to reflect assimilation, especially in downward comparisons (Gibbons, & Gerrard, 1995; Ouellette et al., 2005). For example, Buunk, Van der Zee and Van Yperen (2001) showed that most negative affect was found after downward comparison among nurses high in SCO, and Buunk, Ybema, Gibbons and Ipenburg (2001) found that individuals with high levels of burnout were most negatively affected by a downward comparison, but only when they were high in SCO. A second line of research relevant to the present predictions is the work by Brown, Novick, Lord and Richards (1992), who studied the effects of perceived similarity in a domain unrelated to attractiveness on the self-evaluation of attractiveness. Even trivial information highlighting similarity between self and target (e.g., sharing the same birthday) may affect perceived similarity and therefore evoke assimilative responses. In one set of studies Brown and colleagues found that women assimilate with attractive targets when they were told that they shared the birthday with the target.

Overview

To summarize, in the studies reported below, we tested the hypothesis that those high in SCO tend to focus relatively more on general similarities and will therefore respond more assimilative to social comparison than those low in SCO. To be more specific, Study 2.1 was designed to test differences between those high and low in SCO in a mindset towards seeing similarities. Studies 2.2 and 2.3 were designed to test the response to social comparison, and we expected that individuals high in SCO—due to the tendency to focus on similarities—are more likely to assimilate following social comparison. In these two studies, we presented participants with either attractive or less attractive comparison targets and assessed the impact on mood and self-evaluations. We also measured individual differences in SCO and tested the interactive effects of SCO and attractiveness of the target on mood and self-evaluations. In all three studies, the comparison domain was physical attractiveness. As physical attractiveness is a particularly relevant comparison dimension for women (Fisher, 2004) our studies were conducted with only female participants.

STUDY 2.1

Method

Participants and Procedure. Thirty-eight female undergraduate students from the University of Groningen participated voluntarily (mean age = 21.24, $SD = 3.11$).

Participants first completed an 11-item scale assessing individual differences in social comparison orientation (Gibbons, & Buunk, 1999). Examples of items are “I always like to know what others in a similar situation would do” and “If I want to find out how well I have done something, I compare what I have done with how others have done.” Participants provided responses on a 5-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Cronbach’s alpha was .79.

Following completion of the SCO scale, participants performed an ostensibly unrelated “similarity task” (taken from Markman, & Gentner, 1996). For this task,

participants were instructed to look carefully at two sketches. One sketch depicted a woman leaning over a table holding a cup of coffee or tea; a Christmas tree with a few presents below and a fireplace were also depicted. The other sketch depicted a man standing in front of a table reaching for a bowl on the table; a bottle and a few glasses were also depicted on the table. This task has previously been used in other research as an experimental manipulation task with half of the participants instructed to list similarities between the two sketches and the other half instructed to list dissimilarities (Mussweiler, 2001). In this study, this task was used as a dependent variable to measure the diverging informational foci, with identical instructions as in Mussweiler, Ruetter and Epstude (2004) and Stapel and Suls (2004). Participants were asked to rate how alike these two pictures were, on a scale from 1 (*not at all*) to 9 (*very much*). Words that may activate “similarity searching” or “dissimilarity searching” behavior were avoided in the instruction of this test. In Dutch, the answer to the instruction “how alike are the two pictures” can be given without any reference to similarities or dissimilarities. The anchors in this test were “not at all” and “very much”.

Results and Discussion

As hypothesized, scores on the SCO scale were positively correlated with the similarity ratings ($r = .34, p = .038$). Individuals with a greater tendency to compare themselves with others were more likely to notice or report similarities between the two pictures. This indicates that high comparers indeed focus on similarities more than do low comparers, even on a task that is completely unrelated to self–other comparisons. This finding provided a basis for the second hypothesis—that high SCO may be associated with a tendency to assimilate.

STUDY 2.2

Introduction

In Study 2.2, we tested the hypothesis that (as a consequence of their focus on similarities) high comparers will tend to respond with assimilation following social

comparison. Participants were randomly assigned to one of two conditions, i.e., being exposed to either an attractive target or a less attractive target, and their mood and self-evaluation were assessed. We tested the hypothesis that assimilative responses are positively related to SCO: (1) Following comparison with an attractive target, SCO positively predicts mood and self-evaluations, and (2) following comparison with a less attractive target, SCO negatively predicts mood and self-evaluations.

Method

Participants and Procedure. Seventy-two female undergraduate students from the University of Groningen participated in exchange for €4.50 (mean age = 20.21, $SD = 2.76$).

Participants completed the materials in separate rooms on computers. Participants first completed the SCO scale (Cronbach's $\alpha = .75$). Then, a filler task was introduced to separate the assessment of SCO from the experimental procedure. Participants were told that the goal of the experiment was to assess abilities and skills that are necessary for students. They were then instructed to read a previously published interview involving a female student from the Faculty of Medicine in which she talks about her life as a student. This interview was in fact fictitious and contained neutral information. The interview was accompanied by a photograph of the female interviewee in the two experimental conditions. In the control condition that was added to the design for manipulation check purposes, participants were not exposed to a photograph. Participants just read the interview and gave the self-evaluation of attractiveness. Because we did not have specific hypotheses on SCO as related to this control condition, this condition was not included in the analyses to test the hypotheses. In the experimental conditions, there were two versions of the photograph: For participants assigned to the "attractive" condition, the photograph depicted the face of an attractive woman; among participants assigned to the "less attractive" condition, the photograph depicted the face of a less attractive woman. The interview text consisted of twelve computer pages with the photograph on every page. The two photographs were pre-tested by 25 female students on a scale from 1 (*not at all attractive*) to 7 (*very attractive*).

After reading the interview, participants' mood was assessed by the question "How do you feel at this moment?" Responses were given on a scale from 1 (very negative) to 9 (very positive). In addition, self-evaluations of attractiveness were assessed by the question "How attractive do you feel at the moment?" Responses were given on a scale from 1 (not at all attractive) to 7 (very attractive). Finally, participants answered two questions that served as a manipulation check: "How attractive is this student in your opinion?" and "How attractive is this student to others?" Responses were given on a scale from 1 (very unattractive) to 7 (very attractive). Furthermore, seven additional variables were tested, for explorative reasons for further research. The questions are listed in a footnote².

Results and Discussion

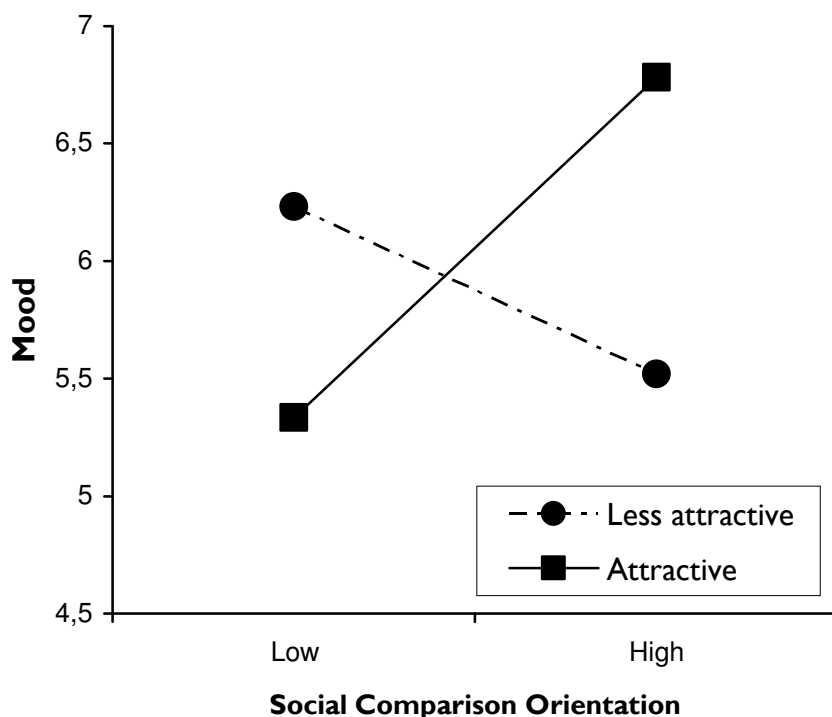
Manipulation check. Participants rated the photograph of the attractive female ($M = 5.70$, $SD = .77$) as more attractive than the photograph of the less attractive female ($M = 3.26$, $SD = .79$), $t(70) = 13.26$, $p < .001$. The average self-evaluation of attractiveness in the control condition ($M = 4.52$, $SD = 0.97$, $n = 41$) was significantly lower than the pretest rating of women in the "attractive" condition and higher than the pretest rating of the women in the "less attractive" condition (pre-test: $M = 5.76$, $SD = 0.70$, and $M = 3.75$, $SD = 0.85$, respectively). The manipulation check was also significant controlling for SCO, $F(1, 69) = 191.36$, $p < .000$ (main effect of SCO: $F < 1$, *ns*).

Effects of SCO and Attractiveness of the Target. To examine the effects of SCO and attractiveness of the target, two regression analyses were conducted in which mood and self-evaluations of attractiveness were dependent variables.

² "To what extent could you identify with the person in the interview?", "Did you get a clear picture about the kind of person the woman in the interview was?", "To what extent did you get actually information in this interview?", "To what extent did you get any information about what the person thinks and feels?", "How interesting did you think the interview was?", "How positive/negative was the interview in your opinion?" and "How appealing was the interview in your opinion?" Answers were given on a scale from 1 to 7, with anchors applicable to the question.

Mood. Figure 2.1 depicts the results of the analysis in which mood was the dependent variable. There was a marginal main effect of SCO. High comparers reported more negative mood than low comparers ($b = -0.36$, $t(68) = -1.68$, $p = .097$). The analysis revealed the hypothesized interaction effect of SCO and attractiveness of the target ($b = 1.08$, $t(68) = 2.71$, $p = .008$). Tests of simple main effects indicated that, among participants in the "attractive" condition, those high in SCO reported a relatively more positive mood ($b = 0.72$, $t(68) = 2.15$, $p = .035$). In contrast, among participants in the "less attractive" condition, those high in SCO reported a relatively more negative mood ($b = -1.44$, $t(68) = -2.65$, $p = .010$).

Figure 2.1. Regression lines depicting the interactive effect of SCO and attractiveness (Study 2.2)

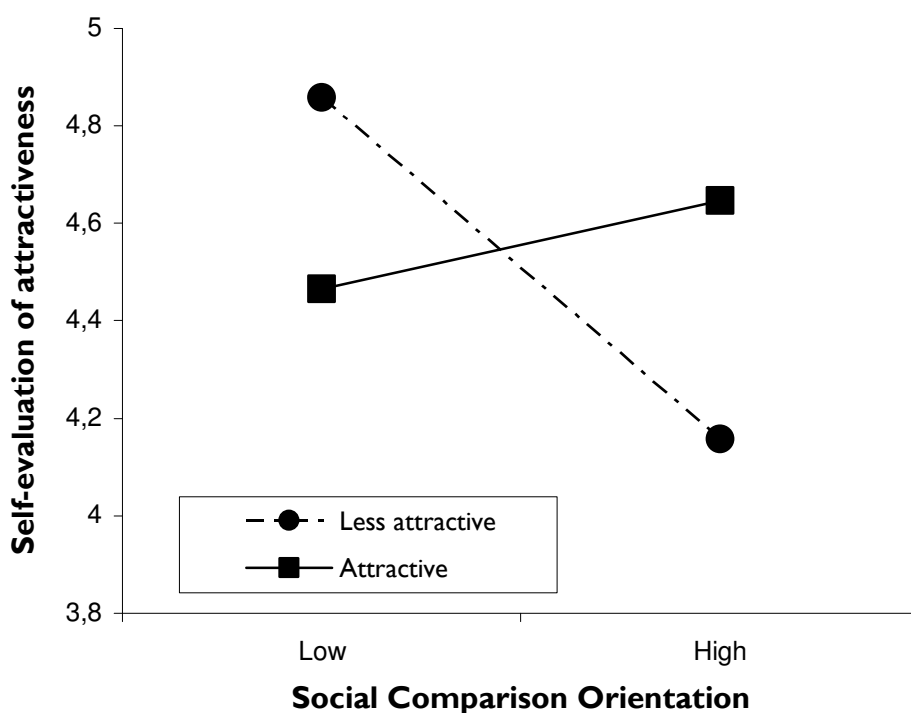


Tests of the remaining simple main effects showed that, among high comparers (+1 SD from mean), "attractive" comparison led to more positive mood than in the "less attractive" comparison ($b = 1.26$, $t(68) = 2.34$, $p = .022$); among low comparers (-1 SD from mean), the "less attractive" comparison tends to result in more positive mood than the "attractive" comparison ($b = -0.90$, $t(68) = -1.69$, $p = .096$). These results supported the key predictions: Following the "attractive" comparison, SCO

was positively associated with mood, and following the "less attractive" comparison, SCO was negatively associated with mood.

Self-evaluations of attractiveness. Figure 2.2 depicts the results of the analysis in which self-evaluations of attractiveness was the dependent variable. There was a main effect of SCO: High comparers reported lower self-evaluations ($b = -0.35$, $t(68) = -2.57$, $p = .012$). The results also revealed the hypothesized interaction effect of SCO and target attractiveness, although the effect was marginally significant ($b = 0.44$, $t(68) = 1.72$, $p = .090$).

Figure 2.2. Regression lines depicting the interactive effect of SCO and attractiveness (Study 2.2)



Tests of simple main effects showed that, among participants in the "less attractive" condition, SCO negatively predicted self-evaluations of attractiveness ($b = -0.35$, $t(68) = -2.57$, $p = .026$). All remaining simple main effects were not significant ($ps > .17$)³.

³ The remaining statistics were: In the "attractive" condition, no differences were found for low ($-1 SD$ from mean) and high ($+1 SD$ from mean) in SCO, $b = .09$, $t(68) = 0.42$, $p = 0.66$. Among those high in SCO ($+1 SD$ from mean) no difference was found in self-evaluations of attractiveness between attractiveness conditions, $b = .49$, $t(68) = 1.41$, $p = .17$. For those low in SCO ($-1 SD$ from mean), no difference was found in self-evaluations of attractiveness between the conditions, $b = -.39$, $t(68) = -1.15$, $p = .25$.

These results partially supported the predictions: Following the "less attractive" comparison, SCO was negatively associated with self-evaluations of attractiveness.

The statistics of the additional explorative analyses are added in a footnote.⁴

STUDY 2.3

Introduction

Although the pattern of results in Study 2.2 was consistent with the hypothesis that SCO moderates the tendency to assimilate or contrast oneself with others, the predicted effects on self-evaluations of attractiveness were not strong. In Study 2.3, we attempted to test the key predictions with respect to self-evaluations of attractiveness by introducing a stronger manipulation, consisting of five photographs with a cover-story to prevent suspicion among the participants. The cover-story for the experiment was that we wanted to check the lay-out of a brochure of a dating company. The choice for more than one photograph had two reasons. First, it was difficult to make a cover-story for presenting just one photograph without the interview, and a number of photographs were assumed to seem more acceptable. Second, there is evidence suggesting that in general using multiple photographs may

⁴ *Additional explorative analyses.* Seven additional variables were tested for explorative reasons after all experimental variables were completed. Five (marginally) main effect of SCO were found ("To what extent could you identify with the person in the interview?": $b = .34, t(68) = 1.72, p = .091$, "Did you get a clear picture about the kind of person the woman in the interview was?": $b = .46, t(68) = 2.57, p = .012$, "To what extent did you get actually information in this interview?": $b = .53, t(68) = 2.83, p = .006$, "How positive/negative was the interview in your opinion?": $b = .51, t(68) = 3.35, p = .001$, "How appealing was the interview in your opinion?": $b = .39, t(68) = 1.81, p = .075$). These main effects of SCO show that those high in SCO tend to identify more with the target, independent of the attractiveness of the target. Although the main effect was only marginally significant, the fact that those high in SCO tended to identify more than low SCO with both the attractive and the less attractive target, is theoretically consistent with the notion that those high in SCO engage more in assimilation. Furthermore, those high in SCO tended to perceive the interview as more informative than those low in SCO did.

In two of the seven variables an interaction between SCO and the experimental condition was found: "To what extent did you get actually information in this interview?": $b = -.85, t(68) = -2.44, p = .017$ and "How positive/negative was the interview in your opinion?": $b = -.65, t(68) = -2.26, p = .027$. Because we did not have specific hypotheses about the direction of this interaction, we did perform the additional analyses needed to interpret these findings.

In the two remaining questions no significant effects were found ("To what extent did you get any information about what the person thinks and feels?" and "How interesting did you think the interview was?").

be more effective than using a single photograph (Groesz, Levine, & Murnen, 2002), but that exposure to more than nine stimuli seems to decrease the effect. With the cover-story in mind, five photographs seemed to be a reasonable number of stimuli, i.e., not too many to create suspicion, but enough to evoke valid responses.

Method

Participants and Procedure. Fifty-three female undergraduate students from the University of Groningen participated voluntarily (mean age = 20.09, *SD* = 1.85).

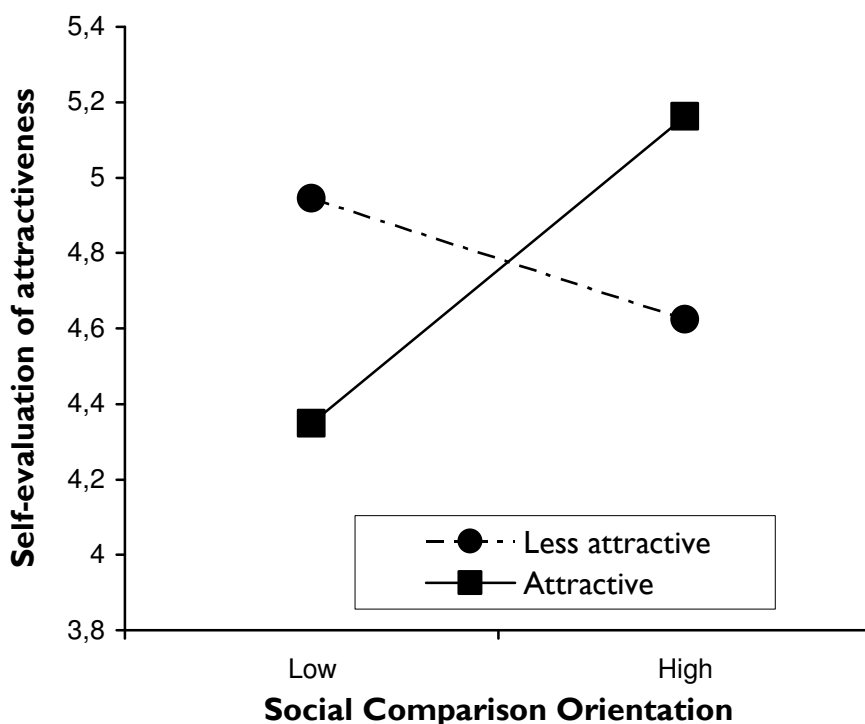
Participants completed the study sessions in groups. Students who assisted the experimenter gave each participant two booklets: one booklet with five photographs (of either attractive faces or less attractive faces) and a second booklet with questionnaires, with the following instruction: “We are students at the University of Groningen, and we were contacted by a dating company to do pre-testing for their brochures. Please give your opinion about the presentation and lay-out of this brochure. You will have to answer some questions about your personal characteristics as they can influence your judgment. We are interested in your personal opinion. Therefore, it is very important that you do not discuss these questions with others. Completing the questionnaire will take about twenty minutes.” Within the second booklet, participants completed—in the following order—a question assessing the self-evaluation of attractiveness, various questions about the photographs lay-out, a manipulation-check question. The SCO scale and a filler task were completed just prior to this experiment and were presented as an unrelated study. (Cronbach’s alpha = .78). To avoid suspicion about the purpose of the experiment, participants did not rate the attractiveness of every photograph separately. The manipulation check is based on one single question: “How attractive were the women on the photographs in your opinion?” Responses were given on a scale from 1 (*not at all attractive*) to 7 (*very attractive*). The women were chosen from a pre-tested sample. The women in the “attractive” condition scored above 7 on a scale from 1 to 10, whereas the women in the “less attractive” condition scored below 4.

Results and Discussion

Manipulation Check. Participants rated the photographs of the attractive females ($M = 4.16$, $SD = 1.14$) as more attractive than the photographs of the less attractive females ($M = 2.59$, $SD = 1.25$), $t(50) = 4.71$, $p < .001$. In this experiment, it was not possible to add a control condition -no photograph-, because the booklet consisted mainly of questions about the layout and photographs. In a control condition, the cover story would have been changed. Any change in the method would have created answers on the self-evaluation of attractiveness that are not comparable with the answers in the two experimental conditions.

Effects of SCO and Attractiveness of the Target. As in Study 2.2, we conducted a regression analysis to examine the effects of SCO and attractiveness of the target on self-evaluations of attractiveness. The main effect of SCO was non significant ($b = -0.16$, $t < 1$, $p = .41$), as was the main effect of condition ($b = -.029$, $t < 1$, $p = .91$). As depicted in Figure 2.3, the analysis revealed the hypothesized interaction effect ($b = 0.57$, $t(49) = 2.28$, $p = .027$).

Figure 2.3. Regression lines depicting the interactive effect of SCO and attractiveness (Study 2.3)



Tests of the simple main effects showed that, among participants in the “attractive” condition, SCO positively predicted self-evaluation of attractiveness ($b = 0.41$, $t(49) = 2.60$, $p = .013$). Among participants in the “less attractive” condition, SCO tended to predict self-evaluations of attractiveness negatively ($b = -0.73$, $t(49) = 1.75$, $p = .087$).

Tests of the remaining simple main effects showed that, among high comparers (+1 *SD* from mean), the “attractive” comparison tended to result into more positive self-evaluations than the “less attractive” comparison ($b = 0.54$, $t(49) = 1.55$, $p = .13$); among low comparers (-1 *SD* from mean), the “less attractive” comparison tended to result into more positive self-evaluations than the “attractive” comparison ($b = -0.59$, $t(49) = -1.72$, $p = .092$).

The pattern of results was generally consistent with the predictions. Following the “attractive” comparison, SCO was positively associated with self-evaluations of attractiveness, and following the “less attractive” comparison, SCO tended to be negatively associated with self-evaluations of attractiveness, although this latter effect did not reach statistical significance.

GENERAL DISCUSSION

Results from three studies provided support for the hypothesis that social comparison orientation—as a consequence of its relation to the tendency to focus on similarities—moderates the relationship between the effects of the comparison with an “attractive” and a “less attractive” other, with those higher in SCO showing more assimilative responses. It is worth noting that the results across these studies revealed a consistent pattern, although some of them were significant and others only marginally significant: The psychological consequences of exposure to an “attractive” or “less attractive” target were moderated by SCO in the hypothesized manner. The results of Study 1 showed that high comparers are more likely to focus on similarities compared with low comparers. This particular finding has important implications for social comparison research, as it suggests that a general tendency to compare is associated with a general tendency to assimilate. Studies 2 and 3 provided evidence consistent with these implications. Following exposure to attractive others, SCO was positively associated with mood and self-evaluations of attractiveness. Following exposure to less attractive others, SCO was negatively associated with

mood and self-evaluations of attractiveness. Much research has investigated factors that influence the tendency to assimilate versus contrast; these are the first empirical results to show that individual differences in SCO may be one of these factors.

These findings are in line with previous research. The findings are also consistent with previous research suggesting that high comparers (high in SCO) tend to show patterns consistent with assimilation (Buunk, & Brenninkmeijer., 2001; Buunk, Van der Zee, & Van Yperen, 2001; Gibbons et al., 1995; Ouellette et al., 2005). Furthermore, the findings are relevant for the two recent models in social comparison research, the SAM and the ICM. First, the findings that those high in SCO—frequent comparers by definition—reported more general similarity between two sketches and responded assimilative to the attractiveness comparison, are consistent with the idea of SAM that the basic strategy in social comparison is similarity testing and the default outcome is assimilation. Second, our findings complement evidence showing that experimentally induced tendencies to compare oneself implicitly or explicitly with others may influence the tendency to assimilate or contrast (Stapel, & Suls, 2004). Although we do not have direct evidence for this, our findings suggest that the mindset in those high in SCO seems to resemble the mindset that is manipulated in explicit comparison. Those high in SCO tend to focus more similarities, compared to those low in SCO and therefore, those high in SCO respond more assimilative to social comparison than those low in SCO.

More broadly, the present findings contribute to the literature on the factors that may influence people's tendencies to assimilate with various target individuals. In the self-evaluation maintenance model (Tesser, Millar, & Moore, 1988), the focus was on the perception of the comparison dimension. In the study by Tesser et al., assimilation was only found when the comparison dimension was perceived as relatively unimportant. In our experiments, we focused on a characteristic of the comparer (SCO). Further research is needed to examine in what way the importance of the comparison dimension interacts with the effects of SCO.

The notion that individuals high in SCO—who tend to have low self-esteem—may profit from upward comparison might seem counterintuitive, but it is in fact consistent with previous research showing that low-esteem individuals enhance their self-worth by indirect self-enhancement techniques, such as assimilation with a superior target (Brown, Collins, & Schmidt, 1988). Recently, Buunk (2006) showed

that individuals high in SCO felt more positive after reading a bogus-interview with happily married couples that put high effort in their relationship, than individuals low in SCO. The core content of the assimilative affective response in that study seemed to be inspiration.

Although the present findings are important, there are a number of limitations. First, the findings are confined to attractiveness comparisons, which may differ from other kinds of comparisons. Attractiveness is readily observable, and so attractiveness comparisons can be made after brief exposures to others. Furthermore, attractiveness comparisons may not entail as much direct competition as comparisons in performance domains. Another limitation of this line of research is that body image was not included in the questions or in the stimuli. It is possible that the outcome is restricted to comparison of attractiveness of faces and that body comparisons are driven by other processes.

Nevertheless, given the importance of social comparison—in social psychology as well as in everyday life—the present research makes an important contribution by highlighting the relevance of individual differences in SCO for current models on social comparison. Not only do individual differences in social comparison influences the way people react to actual social comparison situations, but as demonstrated by Jonas and Huguet (2008), these differences also regulate basic psychological phenomena (such as in time perception) in relation with expected social comparison events. We showed not only that some people are dispositionally more prone to assimilate following social comparison, whereas others are more prone to contrast themselves, but that such differences between individuals are captured by differences in SCO, suggesting that it is in general important to include SCO when testing hypotheses on the effects of social comparison.

CHAPTER 3

How attractive am I today?

Effects of Social Comparison Orientation on the range in momentary self-evaluations of attractiveness

While many studies have shown that self-evaluations of women's attractiveness may not always be stable (Altabe, & Thompson, 1990; Henriques, Calhoun, & Cann, 1996; Haimovitz, Lansky, & O'Reilly, 1993; Heinberg, & Thompson, 1992; Pliner, & Chaiken, 1990; Taylor, & Cooper, 1992), individual differences that may affect the flexibility in self-evaluations of attractiveness have not received much attention. It seems likely that this flexibility is limited; in other words, while individuals may fluctuate in their momentary self-evaluations of attractiveness, these fluctuations may have boundaries. We assume that in general, woman will have an upper boundary above which their self-evaluation never rises, and a lower boundary below which their self-evaluation never sinks. These boundaries mark a personal range in momentary self-evaluations, in other words, all momentary self-evaluations will fall between the upper and lower boundary. This personal range will differ between individuals, i.e., some women will have more extreme ups and downs in their momentary self-evaluations, and, therefore have a wider range in momentary self-evaluations than women who have less extreme ups and downs.

The goal of the present research was to examine the relationship between social comparison orientation (SCO) and the personal range in self-evaluations of attractiveness among women. Social Comparison Orientation (SCO) refers to individual differences in the tendency to compare oneself with others, which is assessed by a scale developed by Gibbons and Buunk (1999). Buunk and Gibbons (2006) characterized the typical comparer by the following features: a strong activation of the self, a strong interest in the feelings of others, and a tendency to have a low self-esteem and to be high in neuroticism. There is some evidence from

outside the attractiveness domain that individuals high in SCO respond more strongly, and often more negatively, to a wider range of social comparison targets (Van der Zee et al., 1998; Buunk et al., 2006). In particular, it seems that even rather distant targets may evoke social comparisons responses among individuals high in SCO. For example, non-depressed individuals have been found to be affected in their mood by information about a depressed other when they were high in SCO, and not when they were low in SCO (Buunk, & Brenninkmeijer, 2001). This suggests that typical comparers tend to relate what happens to others to themselves, even when the situation of the other is quite different from their own. Following Festinger's (1954) reasoning, who stated that comparisons are only useful when the standing on the comparison dimension is perceived as relatively similar, it seems plausible that those high in SCO will be more inclined than those low in SCO to perceive objectively distant others as rather similar in standing. Thus, those high in SCO will, more than those low in SCO, compare themselves with very unattractive as well as very attractive targets. As social comparisons imply perceiving others as similar, we hypothesize that this wider range of comparison targets are in part due to the fact that women high in SCO have a wider range in the momentary self-evaluations of their attractiveness than those low in SCO. This wider range in self-evaluations will also lead to a wider range of relevant comparison targets among those high in SCO.

It may be argued that it is not a high SCO, but rather a low self-esteem that will affect the range of self-evaluations of attractiveness, given the fact that SCO has been found to be moderately, and negatively related to self-esteem (Gibbons et al., 1999). However, it seems logical to assume that self-esteem will only be accompanied with both a relatively less high upper and a relatively low boundary of one's self-evaluations, but that the range in these self-evaluations may be more or less stable, even for those with low self-esteem. Therefore, we expect that relationships between of SCO and the range of momentary self-evaluation of attractiveness will remain even when controlling for self-esteem.

Overview

In the present research we tested the hypothesis that those high in SCO will have a relatively wider personal range in momentary self-evaluations of attractiveness (Study

3.1, Study 3.2 and Study 3.3). In study 3.4, the same hypothesis was tested, controlling for self-esteem.

First, in Study 3.1, the hypothesis that individuals high in SCO have a wider range in self-evaluations was tested by asking the participants to judge how attractive they felt on their most attractive moment (highest self-evaluations of attractiveness, upper boundary) and on their least attractive moment (lowest self-evaluations of attractiveness, lower boundary), without any further instructions. In the second study, lowest and highest self-evaluations of attractiveness were related to a real life situation, i.e. catching a glimpse in a shop window, but without any reference to a social environment. In the third study, the lowest and highest self-evaluations of attractiveness were generated within a social comparison context. Participants had to estimate their lowest and highest self-evaluation of attractiveness on a scale with two photographs as anchors. Finally, in Study 3.4, the most positive and the most negative momentary self-evaluations of attractiveness were assessed independently, and the effect of SCO was examined controlling for self-esteem.

STUDY 3.1

Method

Participants and Procedure. Seventy-nine female undergraduates at the University of Groningen participated in this study in exchange for € 5 (mean age = 19.5, $SD = 1.70$).

Participants completed the questionnaire and tasks in separate rooms, and all questionnaires and other questions were completed on computers. Participants first completed the SCO scale (Gibbons, & Buunk, 1999) ($M = 3.80$, $SD = 0.48$, Cronbach's $\alpha = .76$). The scores of the questions were summed and divided by the amount of questions and then standardized. This scale consisted in eleven questions. Examples of items are: "I always like to know what others in a similar situation would do", "If I want to find out how well I have done something, I compare what I have done with how others have done", "I always pay a lot of attention to how I do things compared with how others do things". Participants could indicate how much they agree with

each statement by using a 5-point scale ranged from 1 (*I strongly disagree*) to 5 (*I strongly agree*).

Next, a filler task was introduced to separate the assessment of SCO from the assessment of the attractiveness range. The attractiveness range was assessed with two questions, after the following instruction: “Most people fluctuate in their judgments about their own attractiveness.” Next, participants were asked “What is the most positive judgment you have had about your attractiveness?” and “What is the most negative judgment you have had about your own attractiveness?” Answers were given by means of a slider. The participants could move, by means of the mouse, a button on a vertical line to a position they chose. The anchors of the line were positioned on the top (*very attractive*) and the bottom (*not at all attractive*) of the line. When the knob was in the right position, participants had to press the enter button. The scores were transformed to a scale from 0 and 100. When the participants answered the second question, they could still see their answer on the first question.

Results

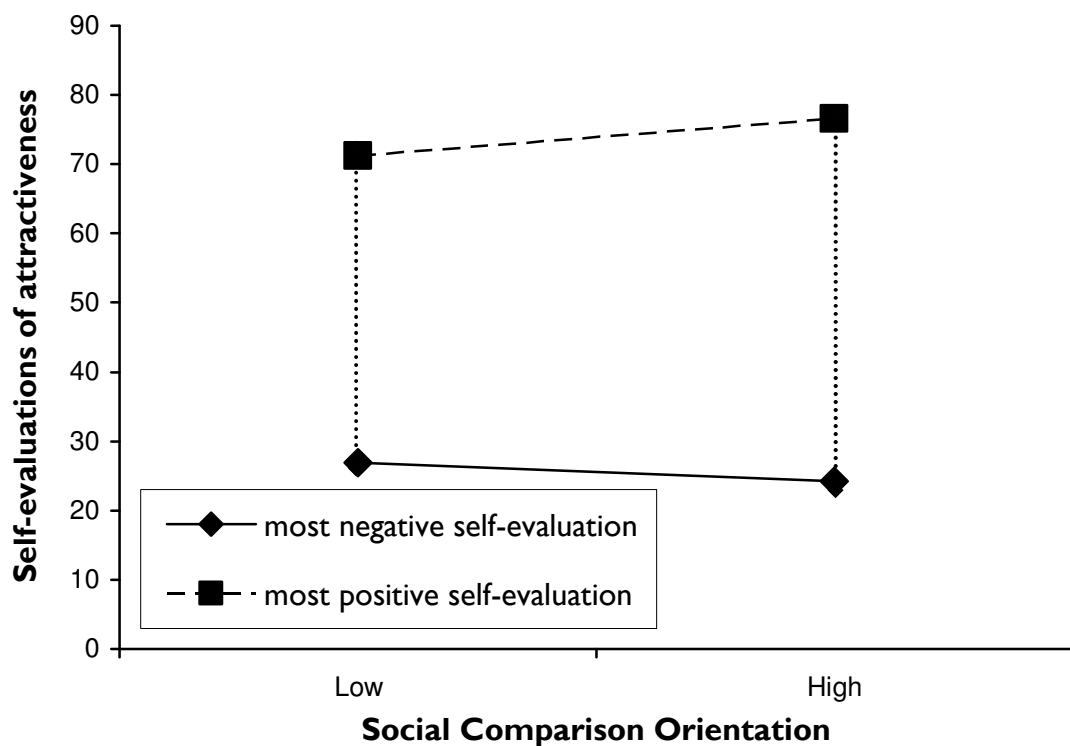
The scores on the SCO scale were standardized for use in the statistical analysis. The mean of the best self-evaluations of attractiveness was 73.92 ($SD = 9.46$) and for the worst self-evaluation of attractiveness 25.58 ($SD = 5.25$).

To test the hypothesis that women high and low in SCO differed in their range of self-evaluation of attractiveness, the range was calculated by subtracting the worst self-evaluation of attractiveness from the best self-evaluation of attractiveness (Mean difference score ($M = 48.33$, $SD = 11.09$)). A regression analysis with the standardized SCO-scores predicting the difference scores, revealed that the effect of SCO was significant, indicating that the attractiveness range differed between participants low and high in SCO, $B = 4.028$, $t = 3.420$, $p = .001$. Thus, as predicted, the higher the SCO, the wider was the personal range of self-evaluations of attractiveness.

Using difference scores leaves us with the question whether differences between high and low SCO are in fact driven by differences on both components or just on one of the components from which the range is calculated. Therefore, we also did separate regression analyses for the lowest and highest self-evaluation of

attractiveness With increasing levels of SCO, the upper boundary increased ($b = 2.67, t = 2.56, p = .012$), and the lower boundary decreased ($b = -1.36, t = -2.34, p = .022$). Thus, the difference in range between those low and high in SCO was due to a higher upper boundary as well as a lower lower boundary among those high in SCO as compared to those low in SCO. The statistics of the separate regression analyses were used to draw the simple slopes based on the original scores for different levels of SCO, with two vertical lines to indicate the personal range for individuals low (-1 SD) and high ($+1$ SD) in SCO. (Figure 3.1). This figure shows that the range of the two self-evaluations of attractiveness is wider for those high in SCO than for those low in SCO.

Figure 3.1. Range in self-evaluations of attractiveness for low and high in SCO (Study 3.1)



STUDY 3.2

Introduction

The results of Study 3.1 showed that individuals high in SCO have a wider personal range of attractiveness evaluations than individuals low in SCO. A potential limitation of Study 3.1 was that participants were simply asked to mark attractiveness scores for the best and the worst moments on a single line. Although the line was anchored with 0 (*not at all attractive*) and 100 (*very attractive*), the interpretation of the exact position of the marks remained implicit. Implied was that the participants remembered a specific worst and best moments, but no explicit instructions were given to guide the thoughts of the participants about these moments. They were free to choose their own best and worst moment. Therefore, their memories about these moments may have been subject to various biases. To provide for a more valid assessment of the self-ratings, in Study 3.2, a situation was specified, i.e., seeing oneself in a shop mirror.

Method

Participants and Procedure. Sixty-nine female undergraduates at the University of Groningen were recruited in the University Library to participate for free (mean age = 20.62, $SD = 2.26$).

In Study 3.2, a paper and pencil method was used for practical reasons. The order of materials was identical to that in Study 3.1. The mean score of SCO in this sample was 3.84 ($SD = 0.59$) and Cronbach's alpha was .75. The instruction differed slightly from those in Study 3.1: "Sometimes, you catch a glimpse of yourself in a shop window. Your appearance can exceed your expectations or fall short of your expectations." Then two questions were posed: "How attractive were you on the least attractive moment in a shop window? Mark your answer on the line." and "How attractive were you on the most attractive moment in a shop window? Mark your answer on the same line." Both answers were given on the same vertical line of approximately 12.5 cm and the anchors of the line were positioned on the top (*very attractive*) and the bottom (*not at all attractive*) of the line. To compare the results of

Study 3.2 with the results of Study 3.1, the scores in centimeters were transformed into scores on a scale from 0 to 100.

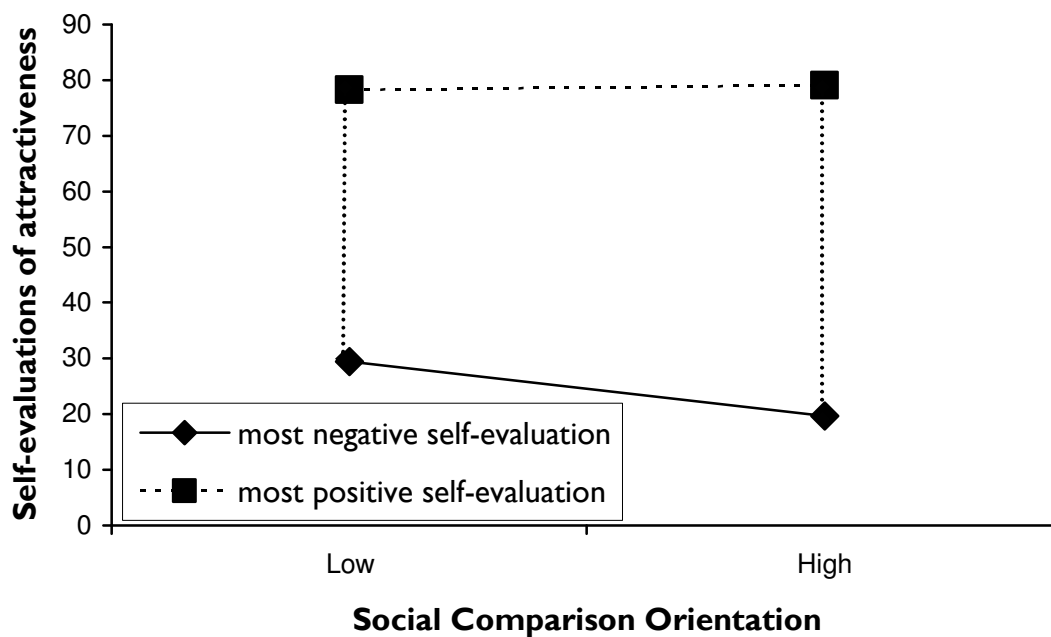
Results

The mean of the worst self-evaluation of attractiveness was 24.81 ($SD = 15.88$) and the mean of the best self-evaluation of attractiveness was 78.65 ($SD = 8.82$). The range was calculated by subtracting the worst self-evaluation of attractiveness from the best self-evaluation of attractiveness. The mean of the range was 53.96 ($SD = 17.11$).

As in Study 3.1, a regression analysis with the standardized SCO-scores predicting the difference scores, revealed that the effect of SCO was significant, indicating that also with this method the attractiveness range differed between participants low and high in SCO, $B = 5.34$, $t = 2.73$, $p = .008$. Thus, again, as predicted, the higher the SCO, the wider was the personal range of self-evaluations of attractiveness.

Again, we also did separate regression analyses for the lowest and highest self-evaluation of attractiveness. Unlike Study 3.1, with increasing levels of SCO, the upper boundary did not change ($b = .42$, $t = .39$, $p = .70$), however, in line with Study 3.1, the lower boundary decreased ($b = -4.92$, $t = 2.65$, $p = .01$). Thus, in this study the difference in range between those low and high in SCO was solely due to a lower lower boundary among those high in SCO as compared to those low in SCO. The statistics of the separate regression analyses were used to draw the simple slopes based on the original scores for different levels of SCO, with two vertical lines to indicate the personal range for individuals low ($-1 SD$) and high ($+1 SD$) in SCO. (Figure 3.2). This figure shows that the range of the two self-evaluations of attractiveness is wider for those high in SCO than for those low in SCO, and that this is mainly due to differences in the lower boundary.

Figure 3.2. Range in self-evaluations of attractiveness for low and high in SCO (Study 3.2)



STUDY 3.3

Introduction

The results of Study 3.1 and Study 3.2 showed that individuals high in SCO have a wider personal range of self-evaluations of attractiveness than individuals low in SCO. Although when specifying the situation in Study 3.2 the same results were obtained as in Study 3.1, there are still some questions left about the validity of the attractiveness dimension itself. It is possible that the interpretation of the attractiveness dimension differed between individuals high and low in SCO. In other words, the interpretation of “very attractive, 100” and “not at all attractive, 0” could have been interpreted differently. Study 3.3 was conducted to anchor the attractiveness dimension itself by using objective standards. Both at the top and the bottom of the line, photographs – pre-tested on attractiveness levels - were added to anchor the attractiveness dimension.

Method

Participants and Procedure. Fifty-three female undergraduates were recruited in the lobby of different university buildings to participate. (age $M = 20.70$, $SD = 2.13$). The materials were identical to those in Study 3.1, but this study used for practical reasons a printed questionnaire. The mean score of the SCO was 3.52 ($SD = 0.51$, Cronbach's alpha = .75). The instruction and the attractiveness questions were also identical to those in Study 3.1, with one difference. In this study, two photographs were added to the *very attractive* and *not at all attractive* anchors on the vertical line. The top of the photograph on the “very attractive” anchor was at exactly the same height as the top of the line, whereas the bottom of the photograph of the “not at all attractive” anchor was at exactly the same height as the bottom of the line.

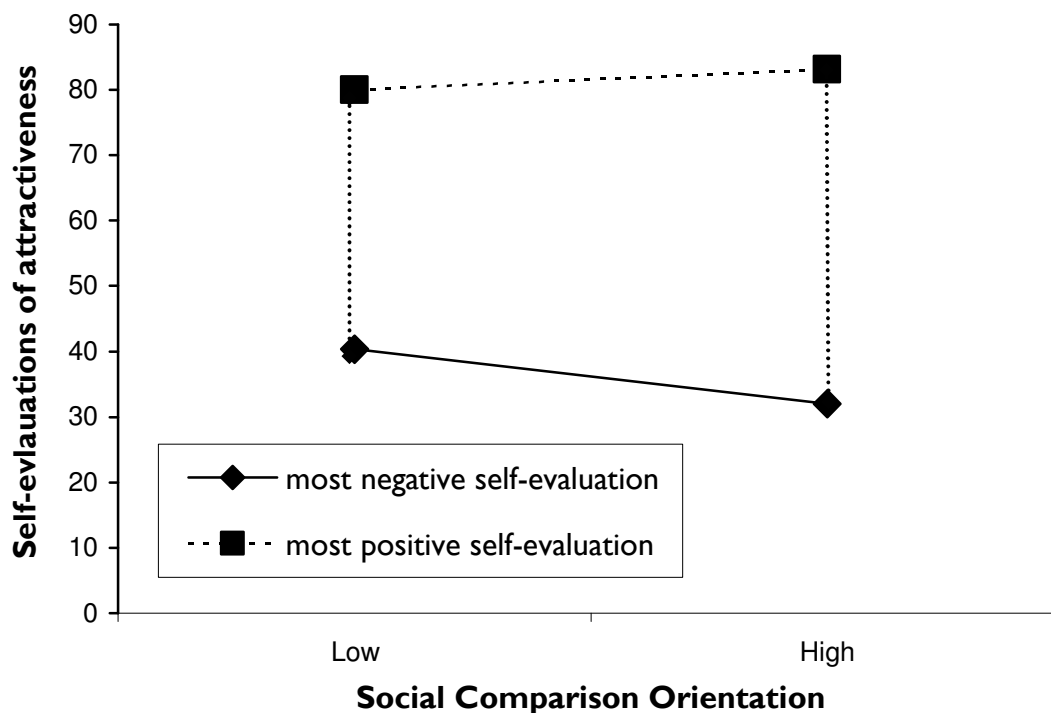
Results

To test the hypothesis of the wider attractiveness range for individuals high in SCO, the range was calculated by subtracting the answer on the question about the lowest self-evaluation of attractiveness from the answer on the question about the highest self-evaluation of attractiveness ($M = 45.34$, $SD = 18.91$). The mean for the lowest self-evaluation of attractiveness was scores was 36.18 ($SD = 18.03$) and for the highest self-evaluation of attractiveness was 81.58 ($SD = 9.12$)

As in Study 3.1 and 3.2, a regression analysis with the standardized SCO-scores predicting the difference scores, revealed that the effect of SCO was significant, indicating that also with this method the attractiveness range differed between participants low and high in SCO, $B = 5.34$, $t = 2.73$, $p = .008$. Thus, again, as predicted, the higher the SCO, the wider was the personal range of self-evaluations of attractiveness.

Again, we also did separate regression analyses for the lowest and highest self-evaluation of attractiveness. As in Study 3.2., with increasing levels of SCO, the upper boundary did not change ($b = 1.56$, $t = 1.24$, $p = .22$), but the lower boundary decreased ($b = -4.12$, $t = -1.71$, $p = .094$), although the effect was only marginally significant.

Figure 3.3. Range in self-evaluations of attractiveness for low and high in SCO (Study 3.3)



Thus, also in this study the difference in range between those low and high in SCO was solely due to a lower lower boundary among those high in SCO as compared to those low in SCO. The statistics of the separate regression analyses were used to draw the simple slopes based on the original scores for different levels of SCO, with two vertical lines to indicate the personal range for individuals low (-1 *SD*) and high ($+1$ *SD*) in SCO. (Figure 3.3). This figure shows that as in Study 3.1. and Study 3.2., the range of the two self-evaluations of attractiveness is wider for those high in SCO than for those low in SCO, and that this is, as in Study 3.2., mainly due to differences in the lower boundary.

STUDY 3.4

Introduction

The goal of Study 3.4 was two-fold: to provide again more robust evidence for the hypothesis that the range of momentary self-evaluations differs between those high

and low in SCO, and to examine whether the effects of SCO on the range in self-evaluations of attractiveness remained controlling for self-esteem.

Unlike the previous studies, the upper boundary was assessed two weeks before the lower boundary. This was done to exclude an alternative explanation for the findings in Study 3.1, 3.2 and 3.3. These findings could have been affected by the measurement that was used. Marking two points on the same line could have led to an overestimation of the difference between the two self-evaluations, and this overestimation could have been more pronounced in low of in high in SCO. Thus, by conducting Study 3.4, we had the opportunity to exclude this alternative explanation.

The second aim of Study 3.4 was to filter the possible confounding effects of self-esteem. Although the finding that those high in SCO have a wider range of momentary self-evaluations of attractiveness seems to be robust across various methods, it is possible that the effect of SCO mainly represents an effect of self-esteem. The fact that the separate regression analyses showed only consistent effects for the most negative self-evaluation of attractiveness suggests that the difference in range between those high and low in SCO may primarily reflect an effect of self-esteem. Therefore, in Study 3.4, a measure for self-esteem was added to the design, to check if the effects of SCO remained controlling for self-esteem.

Method

Participants and Procedure. Thirty-three female undergraduate students of the University of Groningen participated (mean age = 20.00, *SD* = 3.31) for course credit.

This study consisted of three on-line parts. In the first part, participants completed the SCO scale. Cronbach's alpha was .82. An e-mail was sent to invite the participants to participate in the second and third part. In the second part, the most positive self-evaluation of attractiveness was assessed, and Rosenberg's Self-Esteem Scale was completed. In the third part, the most negative self-evaluation of attractiveness was assessed.

Most positive self-evaluation of attractiveness. This was assessed with the following question: Most people fluctuate in their judgments of their own attractiveness. "What is the most positive judgment you have had about your attractiveness?" Answers were given on a 10-points scale (0 (*not at all attractive*) – 100 (*very attractive*)).

Rosenberg's Self-Esteem Scale. Rosenberg's Self-esteem Scale (RSE) consisted in ten items (Rosenberg, 1965). Responses were given on a scale from 1 (*I strongly disagree*) to 4 (*I strongly agree*).

Most negative self-evaluation of attractiveness. This was assessed with the following question: "What is the most negative judgment you have had about your attractiveness?", on a 10-points scale.

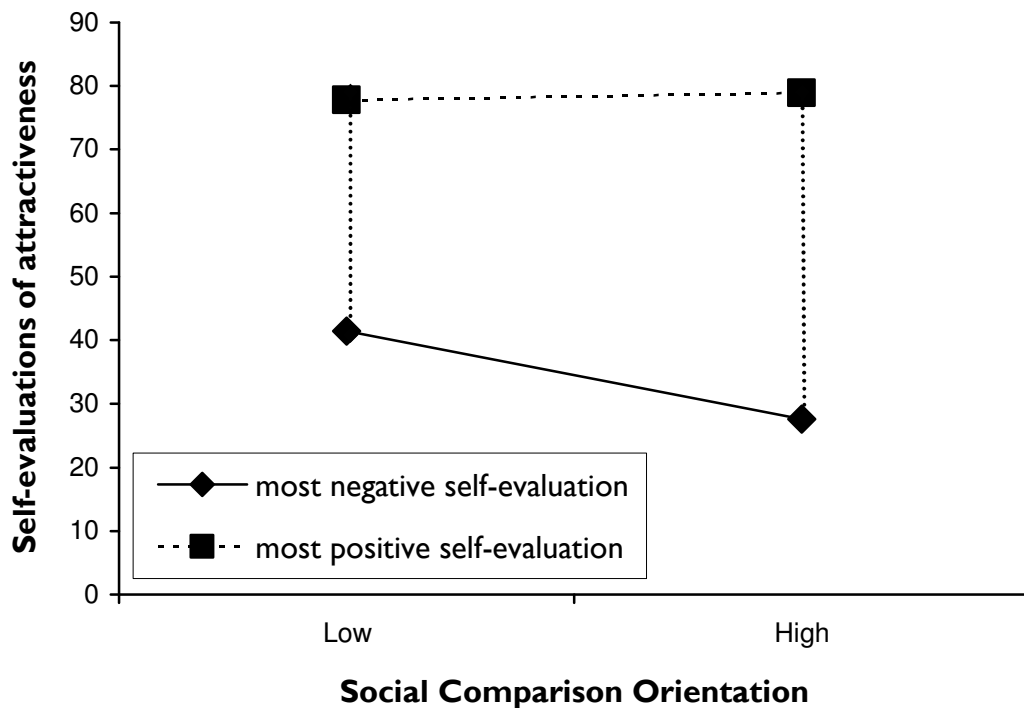
Results and Discussion

Correlation between SCO and RSE. The correlation between SCO and RSE (Rosenberg's Self Esteem Scale) was -0.11 , $p = .33$; this indicates that, although in most studies, higher SCO is associated with lower RSE, in this study RSE and SCO were unrelated. They seem to tap different constructs.

Range. The range was calculated by subtracting the answer on the question about the most negative self-evaluation of attractiveness from the answer on the question about the most positive self-evaluation of attractiveness ($M = 44.34$, $SD = 26.51$). The mean for the most positive self-evaluation of attractiveness was ($M = 34.22$ ($SD = 24.40$) and for the most negative self-evaluation of attractiveness was ($M = 78.73$ ($SD = 12.08$)). The correlation between range and RSE was $r = -0.02$, (*ns*) and between range and SCO $.27$, $p = .014$.

A regression analysis was conducted, with range as dependent variable and SCO and RSE entered in the first step and the interaction (SCO X RSE) in the second step. As predicted, the range differed for different levels of SCO, $b = 7.43$, $t = 2.43$, $p = .017$, whereas the main effect of RSE on the range was not significant ($p > .85$). Thus, the finding that those high in SCO had a wider range in momentary self-evaluations of attractiveness could not be explained by differences in RSE. Figure 3.4 shows the predicted range for those high and low in SCO. Although both the most negative and the most positive self-evaluation were lower for those high in SCO than for those low in SCO, the range between the two attractiveness self-evaluations was wider for those high in SCO than for those low in SCO.

Figure 3.4. Range in self-evaluations of attractiveness for low and high in SCO (Study 3.4)



Separate multiple regressions were conducted for the most positive and the most negative self-evaluation of attractiveness with RSE and SCO and the interaction between RSE and SCO as predictors. As expected, increasing levels of RSE, resulted in positive self-evaluations of attractiveness, for the most positive self-evaluation, $b = 6.22$, $t = 5.06$, $p < .001$, and for most negative self-evaluation, $b = -6.04$, $t = 2.39$, $p = .019$). The main effect of SCO for the most negative self-evaluation in the separate analysis was, $b = -6.90$, $t = -2.59$, $p = .011$, but the main effect of SCO for the most positive self-evaluation was not significant, $b = 0.53$, $t = 0.41$, $p = .69$. Thus, when controlling for self-esteem, no effect of SCO on the upper boundary of self-evaluation of attractiveness was found, which suggests that the findings obtained in Study 3.2 and Study 3.3 are not due to effects of self-esteem.

GENERAL DISCUSSION

We hypothesized that one the characteristics of individuals high in SCO would be that they would perceive a relatively high degree of perceived similarity with a wide range of others, which would facilitate comparison processes. The results of four

different studies showed that women high in SCO have indeed a wider personal range in their momentary self-evaluations of attractiveness than those low in SCO. This wider range in self-evaluations of attractiveness may enable women high in SCO to compare themselves with distant –upward as well as downward– targets. Although many studies have shown the effects of SCO as a powerful moderator, until now, little was known about the processes that may underlie the comparison process typical for individuals high in SCO. The present research thus can be taken as a starting point in exploring these processes.

Besides offering insight in the differences in comparison processes between those high and low SCO, these findings contribute to the research on fluctuations in body image. Recently, Melnyk, Cash and Janda (2004) examined that *variability* of momentary self-evaluations and tried to predict this variability with different moderators, for example psychological investment, disturbed eating attitudes and appearance-fixing coping strategies. Their focus was on the variability of momentary self-evaluations and what factors could cause changes in self-evaluations, whereas our focus was on the boundaries of this variability, the *personal range* in momentary self-evaluations of attractiveness.

The findings that those high in SCO have a wider range in self-evaluation of attractiveness is in line with the findings of Haddock (2006). Among those high in SCO, he found a difference between their future and current appraisals of attractiveness, whereas no such difference was found for those low in SCO. This finding suggests that self-appraisals are more flexible for those high in SCO.

Although a consistent finding in all four studies was that those high SCO had a wider range in self-evaluations than those low in SCO, this seems mainly due to differences in the lowest self-evaluation as suggested by Study 3.2 and 3.3 and 3.4. In these studies, the most positive self-evaluation did not differ between those high and low in SCO. However, in Study 3.1, the most positive self-evaluations of attractiveness differed between those low and high in SCO; the most positive self-evaluations were higher for those high in SCO than for those low in SCO. To provide a possible explanation for this finding, it is worthwhile to mention the measure and method differences across the four studies. That is, Study 3.1 differed from Study 3.2 and 3.3 in instruction and from Study 3.4 in method. In Study 3.1, the participants reported the upper and lower self-evaluations at the same time, whereas

in Study 3.4 there was a time interval between the two self-evaluations. The fact that these differences in instruction or lay-out and time interval did not affect the self-evaluation of the lower bond, suggests that especially the lower boundary of attractiveness differs between those high in SCO and low in SCO.

Although it is not directly obvious why those high in SCO have particularly a lower boundary in the evaluation of their attractiveness, this finding could explain why those low in SCO are more affected by downward comparisons, as has been found in several studies. For example, Buunk, Ybema, Gibbons and Ipenburg (2001) asked socio-therapists to read a bogus interview with someone involved in the same profession who was either very successful (upward comparison) or very unsuccessful (downward comparison). SCO did not affect the feelings evoked by the upward comparison.. However, the higher the level of burnout, the more negative affect was evoked by the description of the downward comparison target, but only among individuals high in SCO. In a similar study by Buunk, Van der Zee and Van Yperen (2001), a sample of nurses was exposed to either a downward or an upward target. The higher individuals were in SCO, the more negative affect they reported following exposure to the downward comparison target. Interestingly, this effect stayed the same when controlling for neuroticism. In a study by Buunk and Dijkstra (2001) among lesbian women, evidence was also found that those high in SCO tend to respond particularly negatively to downward comparisons. Participants were presented with a scenario in which they were asked to imagine that their partner was flirting with another woman. These women reported more jealousy when they were exposed to a physically attractive rival as compared to one that was unattractive. However, although SCO did not affect jealousy in response to an attractive rival, high SCO women responded with more jealousy to the unattractive rival.

To conclude, the results of the current studies demonstrate that those high in SCO have a wider range in momentary self-evaluations of attractiveness, than those low in SCO, which may facilitate comparison processes with a variety of others. This may shed new light on a number of previous research on SCO, and may stimulate further research on the way in which SCO affects the processes and outcomes of social comparisons.

CHAPTER 4

Feeling similar to others:

Effects of SCO on the perception of dimensional and psychological closeness

Although it is assumed that social comparison is a general human mechanism, some individuals have a stronger need for social comparison, or, in other words, individuals differ in the tendency to compare themselves with others. Gibbons and Buunk (1999) constructed a scale to detect these individual differences in what they labeled as *social comparison orientation* (SCO). This scale has been used in over seventy studies in the past decades (Buunk, & Gibbons, 2006). On the basis of correlations between SCO and various personality characteristics, Buunk and Gibbons (2006) characterized the typical individual high in SCO by three features: a strong activation of the self (public and private self-consciousness), a strong interest in the feelings of others (interpersonal orientation), and a tendency to have low self-esteem and to be high in neuroticism. There is considerable evidence that individuals high in SCO respond more strongly to social comparisons. For example, Van der Zee, Oldersma, Buunk and Bos (1998) conducted an experiment in which cancer patients could select as many (bogus) interviews with upward and downward comparison information as they wanted. Those high in SCO selected more interviews, spent more time reading these interviews, and were more positively and negatively affected by the interviews than those low in SCO.

The result of this study seems to suggest that those high in SCO are not only more interested in the stories of other cancer patients, but that they also perceive the information of the patients as more comparable to themselves than those low in SCO did. Furthermore, those high in SCO seem to compare themselves more often with others and are more affected by comparison information as those low in SCO do. The fact that comparison information in general affects those high in SCO more

than those low in SCO suggests that those high in SCO do not only respond more strongly to social comparison with peers and friends, but that those high in SCO (versus low in SCO) do compare themselves with a wider *range* of comparison others. Given the fact that some perception of similarity is a necessary condition in social comparison (Festinger, 1954), comparisons with a wider range of comparison others imply the perception of similarity with a wide range of targets. To be more specific, the central hypothesis examined here is that those high in SCO, when confronted with a series of women varying in attractiveness, will perceive themselves as relatively more similar to these targets, than those low in SCO will.

Similarity has been a core construct in social comparison theory since Festinger's (1954) pioneering work. According to Festinger, a basic condition for social comparison of one's abilities is being similar to another in abilities. We refer to this type of similarity as *dimensional* closeness, i.e., similarity on the dimension of comparison. When I am trying to find out how well I am doing in playing tennis, it is most informative to compare myself to other players that are not far from my level. When I judge their skills and I know that I am doing better or worse, I have concrete information about my standing. Another type of similarity that has been suggested as fostering social comparisons, is *psychological* closeness (i.e. Tesser et al., 1988; Tesser, & Campbell, 1982). In this study, we focused on dimensional and psychological closeness as two important types of similarity:

Dimensional closeness

Festinger (1954) argued that comparer and comparison target need to be dimensionally similar, that is, not too distant in their standing on the comparison dimension. Without *dimensional closeness*, according to Festinger, the comparison information is useless. If you want to compare yourself with someone else to estimate your intelligence level, the information that you (Ph.D.-student, highest educational level) are more intelligent than a hairdresser (lowest educational level) is useless. As indicated by differences in education, a higher intelligence level for the Ph.D.-student could be expected. Comparing your intelligence level to other Ph.D. students will provide more useful information.

There is considerable evidence that individuals compare themselves more with targets similar in standing. In a pioneering study, Wheeler (1966) examined the comparison choices of participants with the rank order paradigm. Participants were given their own scores and a rank order of the scores of the other 6 participants. Each participants was told that he or she was the middle score (Rank 4 out of 7). They were told that the middle 3 participants (Rank 3, 4, 5) had quite similar scores. The anchors for Rank 1 and Rank 7 were given. Then, the participants had to choose which score of the other six participants they wanted to see. Wheeler found among others that the majority of the participants chose to see the score of the participants with a score most similar to their own (Rank 3 and 5). Subsequent studies have confirmed these findings (e.g., Wheeler, 1969; Wheeler, & Koestner, 1984). Specifically relevant to the present research is the finding that dimensional closeness in attractiveness tends to foster social comparison processes on other dimensions (Miller, 1982). Participants chose to compare themselves on their performance or personality with others who were similar to them in physical attractiveness, though attractiveness seems irrelevant to dimensions such as performance or personality.

Psychological closeness

The construct of psychological closeness is frequently used in the field of social comparison research. According to the Self-Evaluation Maintenance Model (Tesser et al., 1982), psychological closeness is a strong moderator in the social comparison process. Anything that links individuals to another may increase feelings of closeness, and thus the tendency to compare oneself with others, for example physical proximity, similarity in age, background, group membership or status (Heider, 1958). Kernis and Wheeler (1981) showed that people are more likely to perceive psychological closeness with others when they were made to believe that these others are friends rather than strangers. Even trivial similarities may evoke feelings of psychological closeness that result in a stronger tendency to compare oneself with others. For example, Brown, Novick, Lord and Richards (1992) found that sharing attitudes with the upward comparison target (Study 2) and sharing the same birthday with an attractive comparison other (Study 3 and 4) resulted in increased social

comparison effects, to be precise, in higher self-evaluations of attractiveness after upward comparisons.

For both types of similarity –dimensional closeness and psychological closeness - , we hypothesize that individuals high in SCO will consider others to be more similar to themselves than those low in SCO will do. There is indeed some indirect evidence that those high in SCO perceive more dimensional closeness with a wider range of others. For example, Michinov and Michinov (2001) found that those high in SCO felt attracted to both those with objectively similar and those with objectively dissimilar attitudes, whereas those low in SCO felt attracted only to others with similar attitudes. Given the fact that the perception of similarity is very important for the onset of feelings of liking, the liking of another individual with objectively dissimilar attitudes in those high in SCO may imply that those high in SCO tend to perceive some type of similarity even with others with dissimilar attitudes.

Indirect evidence that those high in SCO will perceive higher levels of psychological closeness with others, than those low in SCO do is suggested in high correlation between SCO and interpersonal orientation (Swap, & Rubin, 1983) and communal orientation (Clark, Oullette, Powell, & Milberg, 1987) indicating that those high in SCO have a strong interest in others and may perceive others in general as psychologically closer than those low in SCO do. In addition, in a study among socio-therapists, Buunk, Ybema, Gibbons and Ipenburg (2001) found that burned out individuals high in SCO identified themselves to a greater degree with a better performing comparison target than burned out individuals low in SCO. In a similar vein, Buunk (2005) found that those high in SCO showed a higher level of identification with a happily married couple than those low in SCO.

Our main hypothesis that those high in SCO will perceive more easily similarity with comparison others may suggest that those high in SCO have a general activated similarity testing mind set. When a similarity testing mindset is active, the focus is on similarities, resulting more easily in the perception of similarity between the two targets (see Mussweiler, 2003; Stapel, & Suls, 2004). According to Mussweiler (2003), every comparison starts with a general holistic similarity testing process that is an unconscious cognitive process. Indeed, when comparing two objects - as shown in chapter 2 - those high in SCO tend to report more similarities than those low in SCO. One would therefore expect that those high in SCO would

also view more similarities when comparing two other individuals. However, the nature of SCO seems to imply that individuals high in SCO will perceive especially similarities with others when they compare themselves with these others, more so than when they just compare these others with each other. To obtain useful information in social comparisons –which seems the function of the comparison tendency characteristic of those high in SCO– it is necessary that the comparison targets are perceived as similar to oneself, and this motivational effect will not apply so much when those high in SCO just compare two other individuals with each other.

Overview

The main hypothesis of this research is that those high in SCO will report more similarity with targets varying in attractiveness than those low in SCO do. Two related constructs of similarity were tested: dimensional closeness and psychological closeness. In Study 4.1, before testing out main hypothesis, we explored with which others those high in SCO compared themselves more than those low in SCO. In Study 4.1 the results of this exploration are reported. Furthermore, in this study, the effect of SCO on dimensional closeness with targets varying in attractiveness was examined. In Study 4.2, we tested the effect of SCO on dimensional closeness as well as psychological closeness with targets varying in attractiveness. In Study 4.3, we explored if the those high in SCO also perceive other individuals as similar when they compare these individuals with each other. In addition to our main question, we explicitly examined if those high in SCO do consider themselves more similar to comparison targets of a specific standing than those low in SCO, and will, consequently compare themselves more with specific others. It may be argued that those high in SCO will consider themselves especially more similar than those low in SCO to attractive others. Indeed, as noted above, those high in SCO tend to identify themselves more than those low in SCO with better-off targets, and in Chapter 2 we found that those high in SCO showed more positive responses after exposure to an attractive target than those low in SCO. Thus, it seems likely that with increasing levels of SCO, individuals will not only consider themselves more similar to others,

but will do specifically with respect to attractive others. In a similar vein, the level of comparison with more attractive others may increase with increasing levels of SCO.

STUDY 4.1

Introduction

In most of the previous studies on SCO, participants were exposed to just one comparison target. The aim of this study was to examine the tendency to compare with seven comparison targets of varying attractiveness levels. We expected those high in SCO to compare themselves overall more with all targets than those low in SCO, and might do so especially with more attractive targets. All participants were exposed to seven photographs of females from a different attractiveness level in a random order.

Method

Participants. Hundred and twenty-six female students volunteered to participate in this study. They were recruited in the cafeteria's of several departments of the University of Groningen and the Hanzeschool for Higher Education. The mean age was 20.6 year ($SD = 2.12$).

Procedure and materials. The recruited participants were guided to a silent corner, where they complete the paper and pencil experiment. The cover story for this experiment was that the experiment consisted in two parts. The first part was about effects of self-views on word formation. The filler task was a word formation task. The second part was presented as a separate study on impression formation.

First, the SCO-scale was completed to detect individual differences in social comparison orientation (Gibbons, & Buunk, 1999). Examples of items are: "I always like to know what others in a similar situation would do", "If I want to find out how well I have done something, I compare what I have done with how others have done". Participants could answer on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*). A word scrambling task was completed as filler task between the SCO-scale and the part with the photographs.

Next, without any further instruction, photographs were presented of the faces of seven very different young females aged between eighteen and twenty-five years. In a pilot-study with 20 photographs, the attractiveness of each of the depicted women was assessed on a scale from 1 (*not at all attractive*) to 7 (*very attractive*). The mean of the twenty attractiveness ratings varied from 2.2 to 5.8. Seven photographs were chosen that represented all levels of the attractiveness dimension with about the same distance between every photograph. Each photograph was presented on a different page, with two questions on the next page, i.e., “Did you compare yourself with the woman on the photograph?” scored on a 7-points scale from 1 (*not at all*) to 7 (*very much*) and “To what extent do you think you look like the person on the photograph?” (dimensional closeness). The order of the two questions varied randomly: half of the participants started with the question about comparison and half of the participants with the question about the dimensional closeness.

Results

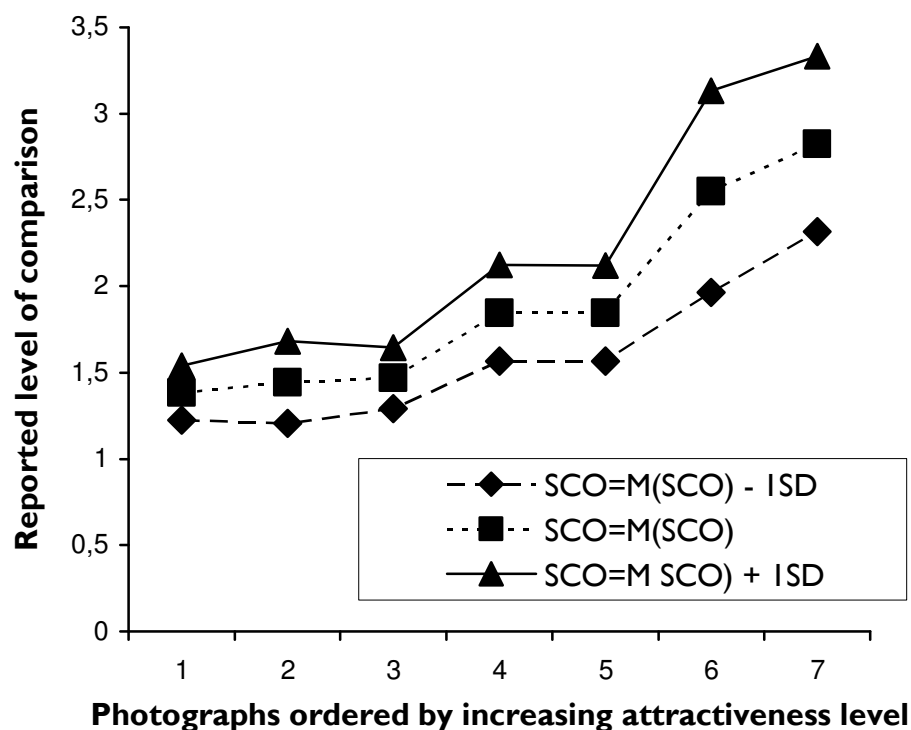
To test the hypothesis that those high in SCO will compare themselves more than those low in SCO with targets of different attractiveness level, and to examine a possible interaction between SCO and target attractiveness, a repeated measures analysis was used. Seven photographs represented the whole attractiveness dimension with about the same distance between every photograph. The level of attractiveness was used as a within subject factor, whereas the SCO-scale was used as an independent continuous variable. The eleven items of the SCO were summed and divided by the number of questions. The final SCO score was standardized ($\alpha = .86$, $M = 3.35$, $SD = .60$).

Social comparison. A main effect of SCO was found, $F(1, 124) = 18.12$, $p < .001$, $\eta^2 = .13$. Overall, those high in SCO compared themselves more with the seven targets than those low in SCO, regardless of the attractiveness of the target. Figure 4.1⁵ shows the reported level of comparison for those low ($M_{SCO-1SD}$) and high ($M_{SCO+1SD}$) in SCO. For all seven photographs representing seven different standings on the attractiveness dimension, the level of comparison of those high in SCO exceeded the

⁵ All figures are based on the parameter estimates for high SCO ($M_{SCO+1SD}$) and low SCO ($M_{SCO-1SD}$) in the repeated measures analysis.

level of those low in SCO. In addition, the analysis revealed a main effect of attractiveness, $F(6, 119) = 48.71, p < .001, \eta^2 = .28$. The level of comparison increased with the level of attractiveness of the target. The more attractive the target, the more participants were inclined to compare themselves with the target. The level of comparison increased with the level of attractiveness of the target. The more attractive the target, the more participants compared themselves with the target. The within-subjects contrasts showed a significant linear trend, $F(1, 124) = 101.03, p < .001, \eta^2 = .45$. There was also a significant quadratic trend, $F(1, 124) = 24.08, p < .001, \eta^2 = .16$, indicating that the linear trend was reversed for the lowest attractiveness levels, and that individuals compared themselves relatively more to the less attractive than to the moderately attractive targets. Furthermore, the interaction between attractiveness and SCO was also significant, $F(6, 119) = 2.35, p = .035, \eta^2 = .11$. The within-subjects contrasts showed a significant linear trend, $F(1, 124) = 6.82, p < .01, \eta^2 = .05$.

Figure 4.1. Level of comparison with the seven photographs (Study 4.1)

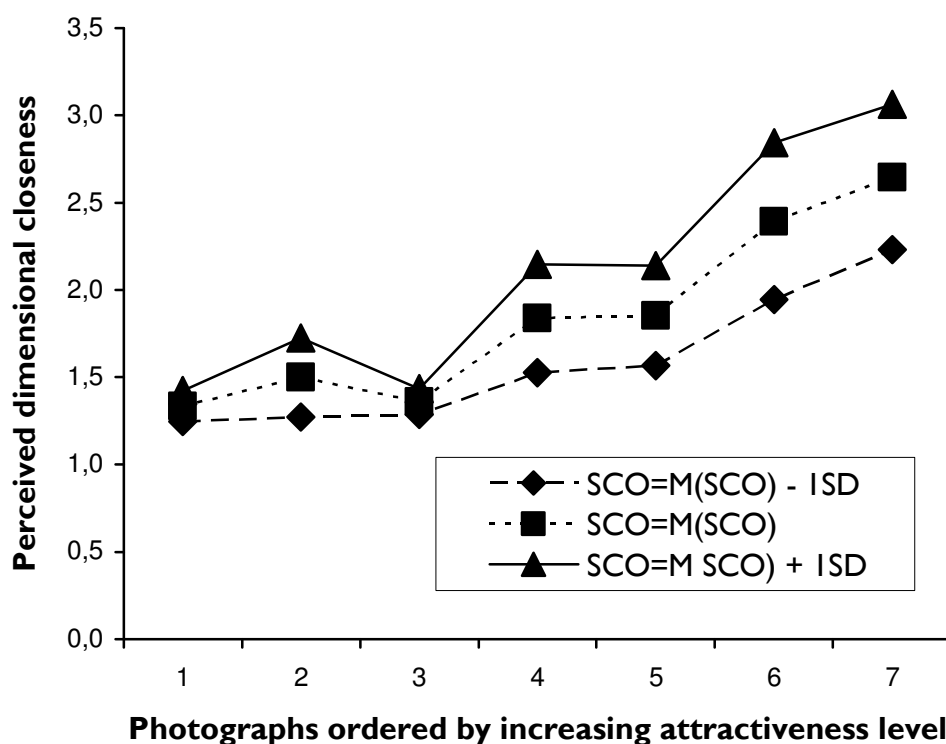


Although those low and high in SCO showed both an increase in comparison level with increasing attractiveness of the targets, the line for those high in SCO was

steeper than for those low in SCO. That is, more so than those low in SCO, those high in SCO compared themselves more with the target as the attractiveness of the target increased.

Dimensional closeness. A main effect of SCO was found, $F(1, 124) = 14.32, p < .001, \eta^2 = .10$. Overall, those high in SCO felt more dimensionally close to the seven targets than those low in SCO, regardless of the attractiveness of the target. Figure 4.2 shows the reported level of dimensional closeness for those low ($M_{SCO} - 1SD$) and high ($M_{SCO} + 1SD$) in SCO. For all seven photographs representing seven different standings on the attractiveness dimension, the perceived dimensional closeness among those high in SCO exceeded the level of those low in SCO. In addition, the analysis revealed a main effect of attractiveness, $F(6, 119) = 20.16, p < .001, \eta^2 = .50$.

Figure 4.2. Perceived dimensional closeness to the photographs (Study 4.1)



The perceived dimensional closeness increased with the level of attractiveness of the target. The more attractive the target, the more dimensionally close participants felt to the target. The within-subjects contrasts showed a significant linear trend, $F(1, 124) = 100.39, p < .001, \eta^2 = .45$. There was also a significant quadratic trend, F

(1,124) = 18.16, $p < .001$, $\eta^2 = .13$, indicating that the linear trend was reversed for the lowest attractiveness levels, and that individuals felt relatively more similar to the less attractive than to the moderately attractive targets. Furthermore, the interaction between attractiveness and SCO was also significant, $F(6, 119) = 2.90$, $p = .017$, $\eta^2 = .12$. The within-subjects contrasts showed a significant linear trend. $F(1,124) = 11.64$, $p = .01$, $\eta^2 = .05$. Although those low and high in SCO showed both an increase in dimensional closeness with increasing attractiveness of the targets, the line for those high in SCO was steeper than for those low in SCO. That is, more so than those low in SCO, those high in SCO perceived more dimensional closeness with the target as the attractiveness of the target increased.

STUDY 4.2

Introduction

In Study 4.1 was found that those high in SCO compared themselves more with the different targets and felt more dimensionally close to them than those low in SCO. Interestingly, the higher dimensional closeness with the targets experienced by those high in SCO was especially pronounced with respect to the more attractive targets. In Study 4.2, we wanted to replicate this finding, and, in addition, to assess if those high and low in SCO differed with respect of the perceived *psychological* closeness with the targets.

Method

Participants. Ninety-four female undergraduate students at the University of Groningen and the Hanzeschool for Higher Education volunteered to participate in this study (mean age = 20.32, $SD = 2.43$). They received € 7 for their participation.

Procedure and materials. On entrance, the recruited participants were guided to separate computer cubicles. This experiment was the first of three unrelated experiments. The other two experiments were from different researchers. The materials were identical as those in Study 4.1, and 4.2. First, the SCO-scale was completed (Cronbach's alpha = .84). The SCO scale and a word scrambling filler task

were presented separate studies. Next, the same seven photographs were presented as in Study 4.1. Each photograph was presented on a different screen. The dimensional closeness was measured by the same question as in Study 4.1: “To what extent do you think you look like the person on the photograph?” (dimensional closeness). To assess the psychological closeness, participants had to indicate the distance between themselves and the persons depicted on the photographs by means of the IOS scale with seven options to choose (seven pairs of circles with varying overlap (Aron, Aron, & Smollan, 1992). The IOS scale was constructed to assess feelings of personal bonding in between self and other. The instruction of the IOS in this study was: “Please mark the circles below that best describes your relationship between you and the woman depicted on the photograph”. The order of the two questions varied randomly: half of the participants started with question about dimensional closeness and half of the participants with the IOS scale.

Results

Dimensional closeness. A main effect of SCO was found, $F(1, 90) = 5.45, p = .017, \eta^2 = .06$. Overall, those high in SCO felt more dimensionally close to the seven targets than those low in SCO, regardless of the attractiveness of the target.

Figure 4.3. Perceived dimensional closeness to the photographs (Study 4.2)

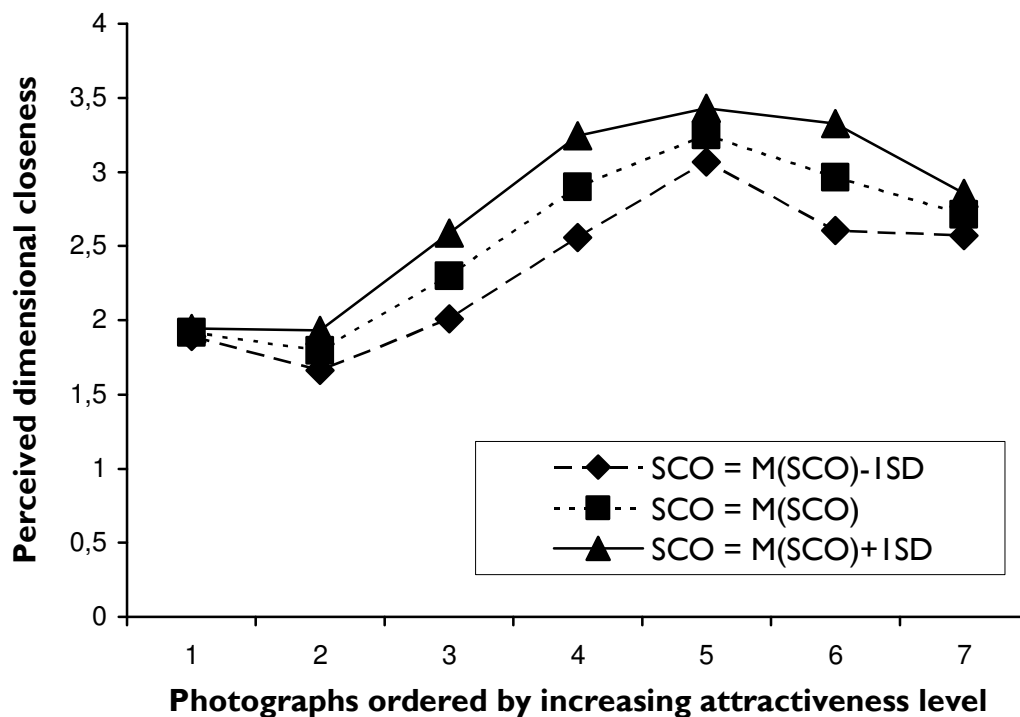
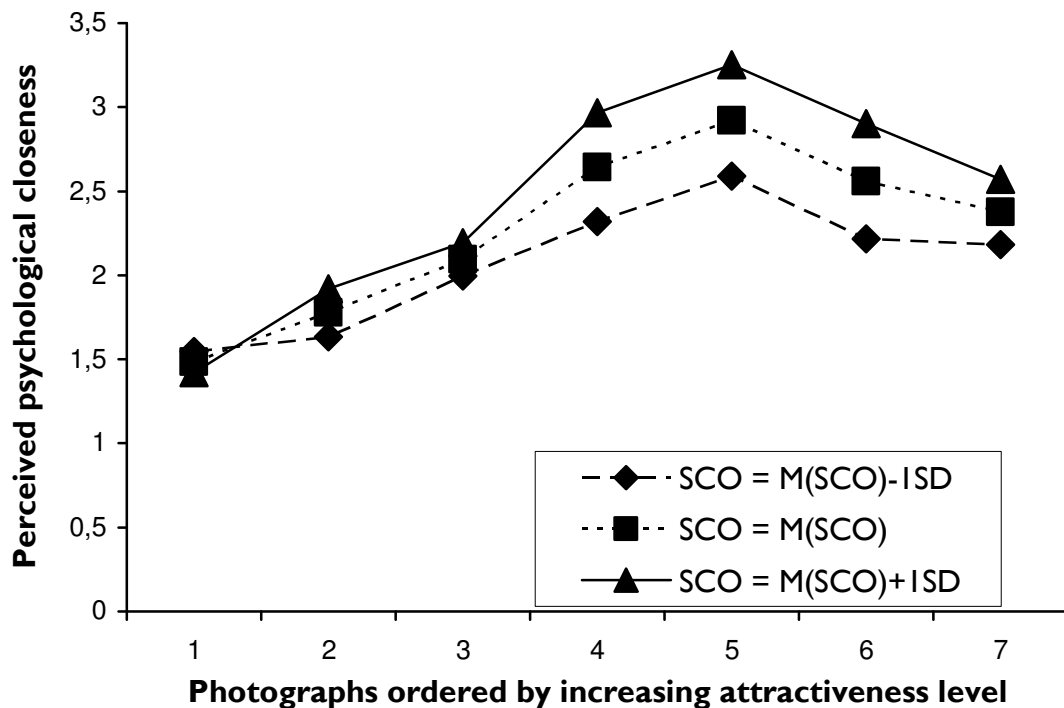


Figure 4.3 shows the reported level of dimensional closeness for those low ($M_{SCO} - ISD$) and high ($M_{SCO} + ISD$) in SCO. For all seven photographs representing seven different standings on the attractiveness dimension, the perceived dimensional closeness among those high in SCO exceeded the level of those low in SCO. In addition, the analysis revealed a main effect of attractiveness, $F(6,85) = 19.23$, $p < .001$, $\eta^2 = .58$. The perceived dimensional closeness increased with the level of attractiveness of the target. The more attractive the target, the more dimensionally close participants felt to the target.

The within-subjects contrasts showed a significant linear trend, $F(1,90) = 45.11$, $p < .001$, $\eta^2 = .33$. There was also a significant quadratic trend, $F(1,90) = 19.41$, $p < .001$, $\eta^2 = .18$, indicating that the linear trend was reversed for the highest attractiveness levels, and that individuals felt less similar to the very than to the moderately attractive targets. Furthermore, the interaction between attractiveness and SCO was not significant, $F(6, 85) = 0.58$, $p = .74$.

Figure 4.4 Perceived psychological closeness to the photographs (Study 4.2)



Psychological closeness. A main effect of SCO was found, $F(1, 90) = 10.66, p = .002, \eta^2 = .11$. Overall, those high in SCO felt more dimensionally close to the seven targets than those low in SCO, regardless of the attractiveness of the target. Figure 4.4 shows the reported level of psychological closeness for those low ($M_{SCO-ISD}$) and high ($M_{SCO+ISD}$) in SCO. For all seven photographs representing seven different standings on the attractiveness dimension, the perceived psychological closeness among those high in SCO exceeded the level of those low in SCO. In addition, the analysis revealed a main effect of attractiveness, $F(6, 85) = 25.82, p < .001, \eta^2 = .65$. The perceived psychological closeness increased with the level of attractiveness of the target. The more attractive the target, the more psychologically close participants felt to the target.

The within-subjects contrasts showed a significant linear trend, $F(1, 90) = 56.40, p < .001, \eta^2 = .56$. There was also a significant quadratic trend, $F(1, 90) = 35.91, p < .001, \eta^2 = .29$, indicating that the linear trend was reversed for the highest attractiveness levels, and that individuals felt less similar to the very than to the moderately attractive targets.

Furthermore, the interaction between attractiveness and SCO was also significant, $F(6, 85) = 2.41, p = .034, \eta^2 = .15$. The within-subjects contrasts showed a

marginally significant linear trend, $F(1,90) = 2.82, p < .096, \eta^2 = .03$. Although those low and high in SCO showed both an increase in psychological closeness with increasing attractiveness of the targets, the line for those high in SCO was somewhat steeper than for those low in SCO. That is, more so than those low in SCO, those high in SCO perceived more psychological closeness with the target as the attractiveness of the target increased.

STUDY 4.3

Introduction

As suggested in the introduction, one might argue that those high in SCO apply a general similarity testing strategy in all sort of comparisons and that the results in the previous studies are the effect of such a general similarity testing strategy among those high in SCO. In Study 4.3, we explored if individuals high in SCO perceived the targets employed in the previous studies as more similar to each other than individuals low in SCO.. The participants compared all the target with the mean attractiveness levels with all other targets.

Method

Participants. Thirty female undergraduate students at the University of Groningen and the Hanzeschool for Higher Education volunteered to participate in this study (mean age = 18.3, $SD = 4.01$).

Procedure and materials. On entrance, participants were guided to separate computer cubicles. This experiment was the first of two unrelated experiments. The other experiment was from a different researcher. They received € 6 for participation in the four separate experiments.

As in the previous studies, the SCO-scale was first completed to detect individual differences in social comparison orientation (Gibbons, & Buunk, 1999). The SCO-scale and a word scrambling filler task were presented as a separate study.

Next, the same seven photographs as used in the previous studies were used, but in this experiment, the participants had to indicate the similarity between the

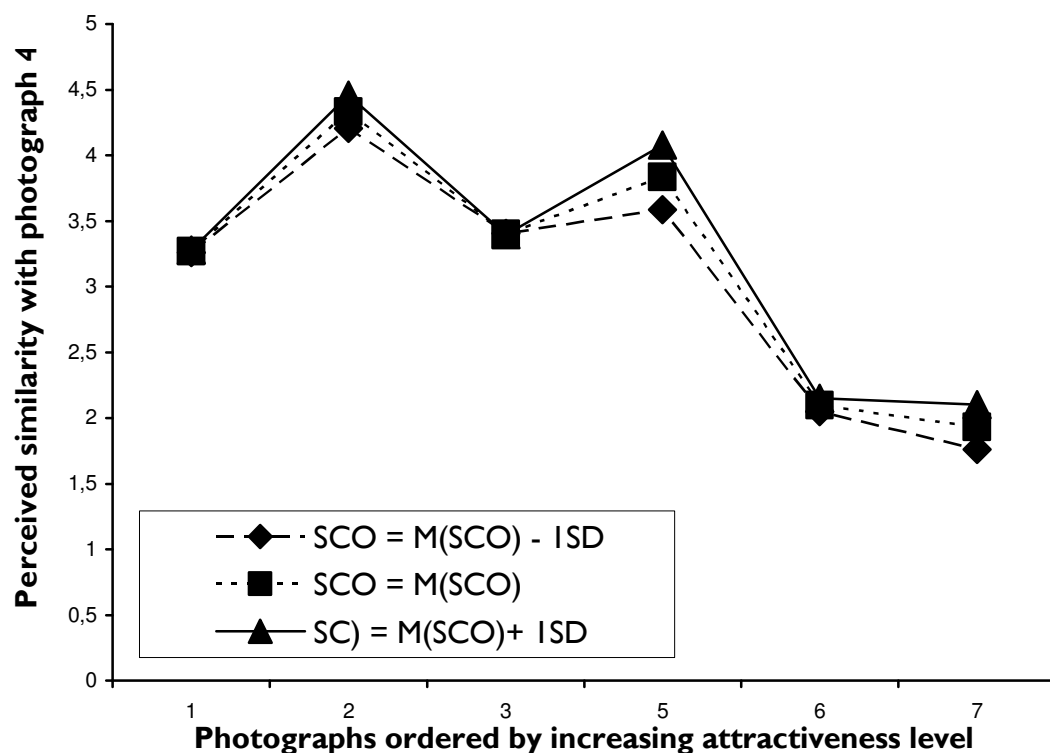
photograph that was at the mean of the attractiveness dimension in the previous studies (rank 4) and the remaining six photographs (rank 1, 2, 3, 5, 6 and 7), making six pairs. Every pair (4-1, 4-2, 4-3, 4-5, 4-6, 4-7) was presented on a different screen, randomly ordered. Participants had to answer the question: “How similar are these two persons?”, scored on a 7-points scale from 1 (*not at all similar*) to 7 (*very similar*).

Results

As expected in our hypothesis in this study, the main effect of SCO on level of similarity was not significant, $F(1,28) = 0.40, p = .534, ns$. Those high in SCO and those low in SCO reported the same similarity level for all six pairs. The lines in Figure 4.5 show no differences for the different levels of SCO.

Furthermore, the main effect of level of attractiveness was significant, $F(5, 140) = 20.46, p < .001, \eta^2 = .42$, indicating that, not surprisingly, the level of attractiveness of the comparison targets influenced the perceived similarity to the reference target.

Figure 4.5. Perceived similarity with the average photograph (Study 4.3)



Inspection of Figure 4.5 shows that participants perceived the less attractive targets (1, 2 and 3) as more similar to the reference target than the more attractive targets (5, 6 and 7).

DISCUSSION

The present research suggests those high in SCO do consider themselves more similar to comparison targets of a specific standing than those low in SCO, and will, consequently compare themselves more with specific others. Indeed, the results of Study 4.1 indicate that those high in SCO compared themselves more with others varying in attractiveness than those low in SCO did. In addition, the results from the first three studies provided clear support for the hypothesis that those high in SCO perceived more similarity with targets varying in attractiveness than those low in SCO do. Those high in SCO perceived more dimensional closeness as well as psychological closeness with targets varying in attractiveness, than those low in SCO did. However, those high SCO did not report higher levels of similarity than those low in SCO when they compared sets of two photographs of women with each other. These findings suggest that SCO has a specific self-related meaning in that it induces a tendency to see oneself as similar to others, but not a tendency to see others as similar to each other. Indeed, in the first two studies of this chapter, we showed that those high in SCO reported more similarity between themselves and others than those low in SCO (self-other comparison), but in the last study of this chapter, we did not that women high in SCO perceived more similarities between two other women (other-other comparison). To my knowledge, the difference in comparisons of the type self-other and other-other has not been studied in the social comparison literature. These are the first empirical results that showed differences in response patterns between the two types of comparisons. Remarkably, other-other comparisons seem to be different from comparisons of objects, as in Chapter 2 it was found that in such comparisons those high in SCO tend to perceive relatively more similarities.

Interestingly, those high in SCO did consider themselves especially more similar than those low in SCO to attractive others. This is in line with research by Bätzner and Kuiper (2006) and Van der Zee and colleagues (1998) showing that those

high in SCO seem inclined to identify themselves more than those low in SCO with better-off targets, and with the finding in Chapter 2 that those high in SCO show more positive responses after exposure to an attractive target than those low in SCO. Thus, our results suggest individuals high in SCO, do not only consider themselves in general more similar to others, but do specifically with respect to others of a high standing. This is an important finding that may explain discrepant findings in the social comparison literature, and that is in line with research by Miller (1982) showing that feelings of dimensional closeness in attractiveness foster social comparison processes

The present findings are important, but the studies had limitations that demand additional research. Although different forms of similarity seem to be easily separated in the literature, it was difficult to separate the constructs in this research. In all studies, the perception of different types of similarity to a set of seven photographs was measured. In all studies, the participants were exposed to photographs. It is possible that there was an underlying construct or variable that is related to all the types of similarity that affected the different perceived similarity measures. Looking at a photograph may unintentionally have evoked feelings or thoughts, that was not measured afterwards, but may have probably influenced the type of similarity that was measured. For example, simply feelings of liking (resemblances of a real life friend) may increase feelings of dimensional closeness. Although all types of similarity were tested separately in this research, interdependency of different types of similarity can not be ruled out. However, the finding that those high in SCO perceived more similarity with the photographs –tested with different methods and definitions of the similarity–, suggests that those high in SCO generally perceive more similarity in a comparison between self and others than those low in SCO, and especially when it concerns attractive others.

The core variable in this research was similarity. In all studies, the assessment of the different types of similarity had the format of: “How much do you resemble X in ...”, except the measurement of psychological closeness: in the IOS scale, the frame of comparison stayed rather implicit. There is research showing that individuals are more inclined to perceive similarity between themselves and others when the assessment has the format “How much does X resemble you”, than when the format is “How much do you resemble X” (Tversky, 1977). In our experiments, we did not

vary the format of the question, because the format was not part of the research question. However, some personality characteristics have been found to affect the responses to the two different formats of comparison, such as self-monitoring and private self-consciousness (Holyoak, & Gordon, 1983; Srull, & Gaelick, 1983), both related to SCO (Gibbons, & Buunk, 1999). Further research is needed to examine if SCO moderates the responses of the two different types of framing. It is not possible without further research to rule out that some of the results we found are due to the format of the similarity testing in this chapter.

The findings in studies 4.1, 4.2 and 4.3 on SCO are quite robust. In all figures, the line for those high in SCO exceeds the line for those low in SCO. However, inspection of the figures shows that in some cases the effect of the attractiveness of the targets deviates from the general trend, which may be due to the fact that other characteristics of the depicted women such as hair color have in some way affected the responses of the variable that was measured. Furthermore, the perception of the two most attractive women differed between Study 4.1 and 4.2. In Study 4.1, the more attractive the women were, the higher the reported similarity, but in Study 4.2 this line drops down for the two most attractive women. The method in both studies was identical, which makes it difficult to explain this difference. This difference between Study 4.1 and 4.2 suggests that other factors may influence response patterns when participants are exposed to photographs of other women. Among other factors, a possible resemblance of themselves to the others may have guided the responses. The stimuli that were selected in these studies included women who differed in hair color, eye color, skin color and BMI. As no data on the hair color, eye color, skin color nor BMI of the participants is available, it is hard to interpret any of the differences between the responses to the different photographs.

A limitation of this research is that dimensional closeness was assessed by one subjective measure. Our intention was to measure *feelings* of dimensional closeness. However, it could have been informative to have an objective measure of dimensional closeness as well. An objective measure of dimensional closeness could have been calculated using attractiveness evaluations of the persons on the photographs and self-evaluations of attractiveness. In this research, we did not ask participants to give attractiveness evaluations of the depicted women to avoid

inducing undesired effects, like attractiveness comparisons and activation of the attractiveness dimension, with uncontrollable responses.

The findings of this research are the first that suggest that those high in SCO are more prone to perceive similarity with others than those low in SCO, and only when the self is involved in the comparison. There is one study that may clarify in what way self-involvement affects the perception of similarity. Van Dijk and Zeelenberg (2005) examined the moderating role of SCO in the feelings of regret after a missed prize. They told the participants that all participants received a prize, but that one half of the participants won a better prize, than they did. Feelings of regret were the dependent variable. The better prize was either comparable (from the same category) or non-comparable (from a different category). Participants felt less regret when a missed prize was not comparable (from another category), but this was only true for those low in SCO. For the missed prize from a different category, those low in SCO felt less regret than those high in SCO. Those low in SCO perceived both prizes as dissimilar and therefore as non-comparable, whereas those high in SCO perceived both prizes as similar and therefore as comparable. Those high in SCO seem not to focus on the dissimilarity in the category of the prize as those low in SCO seem to do, but seem to focus on the similarity with the other that simply received a better prize than they did. Probably as a result of the perception of similarity with the other person, those high in SCO perceive the prizes as more similar. This is in line with our findings, in which those high in SCO perceived the targets as more *similar to themselves* than those low in SCO did, but in which those high in SCO did not perceive the pairs of targets as *more similar to each other* than those low in SCO did.

To conclude, the results of the current studies demonstrate that those high in SCO perceive more similarity with the comparison others than those low in SCO, and especially with more attractive targets. The perception of similarity in those high in SCO may influence the comparison outcomes. Therefore, it would seem important to take the perception of similarity and the moderating role of SCO into account in future social comparison research.

CHAPTER 5

General discussion

The association between social comparisons and evaluations of attractiveness is often quite manifest in our language. For example, it is often said: "Her natural beauty toned down the appearances of her friends" to indicate that even the presence of a single attractive individual may make look others less attractive. And women who are dieting may look worried at thicker women and say: "I hope I'll never get her size!". The present thesis focused upon these types of social comparisons, i.e. social comparisons in the domain of physical attractiveness. In so doing, the present thesis limited itself to social comparisons among women. As noted in the introduction section, being physically attractive is especially important for women. Moreover, physical attractiveness is one of the most important domains, perhaps even the most important domain, in which women compare themselves with other women. Numerous studies have indeed shown that especially women compare their body and appearance to those of same-sex individuals, and often feel jealous or inadequate as a consequence (e.g., Buss, 1994; Joseph, 1985; Wade, & Abetz, 1997).

Although social comparisons are a universal mechanism, individuals differ in the degree to which they engage in social comparisons in their lives. In other words, individuals differ in what has been labeled as Social Comparison Orientation or SCO (Gibbons, & Buunk., 1999). Until the present thesis, no experimental research had been conducted on the association between SCO and self-evaluations of attractiveness in women. In the present thesis, three different processes in which SCO may play an important role, were examined, i.e. (1) responses to social comparisons of attractiveness, (2) the range of momentary self-evaluations of attractiveness, and (3). perceptions of similarity in attractiveness.

SUMMARY OF THE MAIN FINDINGS OF THE EMPIRICAL CHAPTERS

SCO and responses to comparisons with attractive and less attractive women.

In Chapter 2, the basic question we aimed to answer was whether a high SCO is associated with a focus on similarity, and how this focus may influence responses to comparisons with other women varying in their degree of attractiveness. Three different experiments were conducted to answer these questions. In the first experiment, the assumption was tested that those high in SCO are, in general, more focused on perceiving similarity between stimuli. To test this assumption, participants were asked to rate the extent to which they thought two different sketches were similar to each other. This task assessed to what degree participants focused on similarities. As expected, it was found that those high in SCO perceived a higher level of similarity between the two sketches than those low in SCO. Thus, support was found for the assumption that a high SCO is associated with a general similarity focus in comparisons, i.e. with a tendency to perceive two unrelated stimuli as more similar to each other, even when the two stimuli are not social in nature.

In the other two experiments, the implications of this similarity focus among those high in SCO were tested. It was argued that high levels of similarity testing should result in an assimilative response to social comparisons. Thus, confronted with upward comparisons, I expected those high in SCO, i.e. those focusing on similarities in attractiveness comparisons, to respond with a relatively positive mood and to show relatively positive self-evaluations of attractiveness. On the other hand, confronted with downward comparisons, I expected them to respond with a decrease in mood and lowered self-evaluations. In the second experiment, participants were presented with an interview, either accompanied with a photograph of an attractive woman or a less attractive woman. Results of second experiment showed that women high in SCO responded assimilatively, but only in mood. The self-evaluations of attractiveness did not change significantly. In the third experiment, the attractiveness manipulation consisted of exposure to five photographs of either attractive women or less attractive women. Presented with

this manipulation, in the attractive condition, compared to those low in SCO, those high in SCO responded relatively more assimilatively, reporting more positive self-evaluations of attractiveness. That is, women high in SCO showed more positive self-evaluations of attractiveness after exposure to attractive targets than after exposure to less attractive targets. Women low in SCO tended to show contrastive responses, reporting more positive self-evaluations in the less attractive condition compared to the attractive condition.

The results of these studies suggest that those high in SCO are more focused on similarity and tend to respond more assimilatively to upward (attractive condition) and downward comparisons (less attractive condition) than those low in SCO.

SCO and the range in momentary self-evaluations of attractiveness.

In research on social comparisons of attractiveness, studies on the flexibility of self-evaluations of attractiveness are scarce. However, it seems likely that there are boundaries to momentary self-evaluations that mark an individual's range of self-evaluations in a specific domain. In Chapter 3, I examined the association between SCO and the range of momentary self-evaluations of attractiveness. I was interested in this range, because a broader range of self-evaluations of attractiveness may be indicative of a stronger inclination to compare one's own attractiveness with those of others and vice versa.

In Chapter 3, the association between SCO and the range of momentary self-evaluations was examined in four experiments. In all of the four experiments, participants rated their most attractive self-evaluation and their least attractive self-evaluation, by marking two points on a vertical line (representing the attractiveness dimension). Chapter 3's experiments differed slightly in their instructions for the participants. Nonetheless, the results remained comparable. The results of all four experiments showed that those high in SCO had a wider range of momentary self-evaluations of attractiveness. In addition, the fourth experiment showed that this wider range could not be attributed to differences in self-esteem. These findings indeed suggest that those high in SCO have lower levels of self-clarity and have less well-defined self-views (Campbell et al., 1996).

SCO and the perception of similarity

Chapter 4 examined a process that may underlie Chapter 2's finding that those high in SCO perceive more similarity between two sketches and show more assimilative responses to social comparisons than those low in SCO. That is, I examined if those high in SCO perceive others that are very different from the self in attractiveness to be more close and similar to themselves than those low in SCO.

I argued that similarity testing (Mussweiler, 2003) has restrictions because a strong similarity mind set may also impose costs, such as the loss of information. Although viewing others as similar to the self may facilitate finding relevant comparison targets, it may decrease the amount of relevant information per target. As a result, I expected women high in SCO not to differ from women low in SCO when they compare two possible comparison targets.

In this chapter, two different types of similarity were examined, i.e., perceptions of similarity of attractiveness, and perceptions of psychological distance to others. In the experiments described in Chapter 4, participants were all presented with the same set of seven photographs of young women representing all levels of the attractiveness dimension with about the same distance between each pair of photographs. The aim of the first experiment was to examine whether women differed in the tendency to compare themselves with all seven stimuli. Those high in SCO indeed reported that they had compared themselves more with all seven targets than those low in SCO, indicating that those high in SCO are less selective in their comparison choice than those low in SCO. The second purpose of the first experiment was to test whether women high in SCO perceived the seven stimuli to be closer to their own level of attractiveness than women low in SCO, regardless of the attractiveness level of the stimulus. Indeed, higher levels of perceived similarity in attractiveness was found among those high in SCO than among those low in SCO.

In the second experiment, participants had to indicate which distance between two circles best reflected their psychological closeness to the same set of comparison targets. Again, those high in SCO perceived less distance to all seven targets than those low in SCO did. Thus, those high in SCO tend to perceive more psychological closeness with targets of various attractiveness level than those low in SCO.

In Chapter 4's last experiment, participants rated the similarity between the photograph of the target of medium attractiveness, i.e. in the middle of the attractiveness scale, and each of the remaining six photographs. No difference was found between similarity ratings for different levels of SCO. This indicates that, although those high in SCO have a strong similarity mindset, this similarity mind set is not active when they compare two photographs of women with each other. It seems to become active only when women compare themselves with a target.

In addition, it must be noted that the attractiveness of the target played a role as well in all experiments: both women low and high in SCO felt more psychologically close to attractive than to unattractive targets.

Chapter 4's results show that those high in SCO perceive more similarity between themselves and others than those low in SCO. It also shows that their relatively strong similarity mind set is not a *general* mindset, but one that is activated when women high in SCO compare themselves with other women. These findings are interesting, although it is not clear what the causal relationship is. Do women high in SCO compare themselves more often with different targets, because they feel similar to them, which would imply that those high in SCO have different views of their own standing? Or does the fact that they compare themselves with different targets make them feel more similar, without having many implications per se for their self-views? I would like to argue that the first is the case: as previous studies have suggested, the self-view of those high in SCO is not clearly defined. As a result, they may more easily identify and feel similar to others with whom they are confronted.

Links between the three empirical chapters

It is highly likely that the findings of the three empirical chapters are related to each other. The broader range in momentary self-evaluations of attractiveness in those high in SCO found in Chapter 3 may facilitate perceptions of similarity between oneself and targets of varying levels of attractiveness levels. This heightened perception of similarity may result in a more assimilative response after exposure to an upward or downward comparison target. Further research is needed to examine the effect of a broader range in momentary self-evaluations in attractiveness and the

perception of similarity on the response following upward and downward comparisons.

To conclude, those high in SCO are relatively more focused on similarity when they compare themselves with others and therefore, respond more assimilatively to those comparisons than those low in SCO. Furthermore, those high in SCO perceive more similarity to others, showing more similarity with other women, compared to those low in SCO. This high perceived similarity could possibly be explained by a lack of self-clarity. The finding that women high in SCO show a wider range of self-evaluations of attractiveness supports this interpretation.

It is interesting to compare the findings of the three empirical chapter with each other, although the method and design in the chapter is very different. In Chapter 2, those high in SCO responded similar to both upward and downward comparisons. However, in Chapter 3, those high in SCO seem to respond more strongly to the upper part of the comparison dimension. The findings in Chapter 4 seem to suggest the opposite: the effect of the difference in range between those low and high in SCO seem to be based on differences in the lower boundary. Further research is needed to explore why the different methods and designs throughout this thesis resulted in apparently opposite responses.

EMBEDDING IN AND CONTRIBUTION TO THE LITERATURE

Our finding that individual differences, in this case individual differences in SCO, affect responses to upward and downward comparison is in line with other research. Previous studies have shown several individual difference variables to be related to responses to upward and downward comparison, such as neuroticism and the tendency to respond defensively when confronted with self-esteem threats (e.g., Nussbaum, & Dweck, 2008). More specifically, research on social comparisons of attractiveness has focused relatively strongly on the potentially negative consequences of upward attractiveness comparisons. Studies in this research line have shown that comparisons with attractive others often have a negative effect on self-evaluations of attractiveness, mood and body satisfaction (Cash, Cash, & Butters,

1983). Socially comparing one's own body is even assumed to be a risk factor for the development of clinical problems, such as depression and eating disorders (e.g., Dijkstra, Gibbons, & Buunk, in press).

More recently, a more fine tuned picture is emerging from this field of study. That is, in line with the larger field of social comparison research, more recent studies show that responses to upward comparison targets are, for a large part, driven by individual differences and not by the exposure to attractive targets per se. Research shows that a contrastive response to highly attractive targets is especially found in women with high levels of internalized body dissatisfaction. Compared to other women, these women respond with contrast, i.e. with decreased mood and increased levels of body dissatisfaction, to upward comparisons of attractiveness (Posavac, Posavac, & Posavac, 1998; Trampe, Stapel, & Siero, 2007). In a similar vein, there are individual differences that seem to predict assimilative responses to upward comparisons of attractiveness, such as restrained eating and perceptions of similarity. For instance, when restrained eaters are exposed to attractive and thin targets, their mood improves and their food intake increases (e.g., Joshi, Herman, & Polivy, 2004).

The present thesis shows that SCO can be added to the list of individual difference variables that moderate the effect of social comparisons of attractiveness on mood and self-evaluations of attractiveness. More specifically, the present thesis showed that, as women are higher in SCO, their self-evaluations are more easily affected by social comparisons of attractiveness. This may have both positive and negative consequences, depending on the direction of the comparison. More specifically, compared to other women, the present thesis showed that, in response to highly attractive comparison targets, women high in SCO reported higher self-evaluations of attractiveness and more positive affect. Compared to other women, in response to relatively unattractive comparison targets, these women tended to report lowered self-evaluations of attractiveness and more negative affect.

However, more than just being another individual difference variable that moderates the effects of social comparison information on self-evaluations of attractiveness, the present study confronts us with an intriguing disagreement in findings. Previous studies have shown that especially women suffering from low self-esteem tend to interpret comparisons with highly attractive women in a self-destructive and negative manner (e.g., Posavac, Posavac, & Weigel, 2001; Schemer,

2007). Although SCO has been found to be negatively related to self-esteem (e.g., Gibbons, & Buunk, 1999), showing that women high in SCO often suffer from low self-esteem, the present research suggests that, when confronted with a highly attractive comparison target, a high SCO seems to constitute a strength rather than a vulnerability. A possible explanation is that, under these conditions, social comparisons are not guided by feelings of low self-esteem, but by levels of low self-clarity. In the introduction section I have already discussed the fact that, in addition to self-esteem, SCO is also related negatively to levels of self-clarity (Butzer, & Kuiper, 2006): as individuals have higher SCO, they have lower self-clarity. Self-clarity and self-esteem are, however, two very different concepts. Whereas low self-esteem refers to *negative* perceptions of the self, low self-clarity refers to an *unclear* view of the self. Therefore, it is very well possible that, regardless of their relatively low levels of self-esteem, women high in SCO may show an improvement in mood and self-evaluations when confronted with a highly attractive comparison target. Our finding that women high in SCO have a broader range of self-evaluations of attractiveness supports this explanation. The present thesis showed that, compared to other women, women high in SCO see themselves as both relatively more unattractive and more attractive: in response to social comparison information, they more easily shift their self-view from more to less attractive or vice versa than other women. It seems highly likely that this broader range of self-evaluations (or lack of self-clarity) guides the social comparisons, and thus self-evaluations, of women high in SCO, and not their relatively low self-esteem.

An alternative, related explanation is that the negative consequences of having a low self-esteem are outweighed by the positive consequences of increased levels of psychological closeness and similarity that women high in SCO experience when confronted with an attractive comparison target. In line with Brown et al. (1992), the present thesis showed that, more than other women, women high in SCO experience higher levels of psychological closeness with other people, regardless of the level of attractiveness of the specific comparison target. In other words, they have a relatively strong similarity mind set. Having such a mind set may help women high in SCO to create a more well-defined self because it encourages them to seek information that may be used to define the self. In contrast, women low in SCO, who already have a well-defined self-view, and, as a result, a more limited range of self-

evaluations of attractiveness, may feel less of a need for information to define themselves, and as a consequence, may be more selective in their choice of self-relevant information.

The present thesis found that, although, when confronted with relatively attractive comparison targets, a high SCO may be a strength, when confronted with relatively unattractive comparison targets, a high SCO seems to be a vulnerability. More specifically, the present thesis found women high in SCO to respond with assimilation to downward comparisons of attractiveness. That is, when confronted with an unattractive target, women high in SCO tended to evaluate their attractiveness more negatively than other women and experienced more negative affect. A possible explanation may again be found in the relatively low levels of self-clarity and relatively high perceptions of similarity of women high in SCO. Whereas other women may feel downward comparison targets are not relevant to their self-definition, because of their strong similarity mind set, women high in SCO may not be able to devalue this type of social comparison information as irrelevant and suffer as a consequence. According to Tesser, Millar and Moore (1988) being close to others may bring “pain and pleasure”, a statement our findings seem to confirm.

More in general, the present thesis’ findings underline the importance of individual difference variables when researching the effect of social comparisons of attractiveness on self-evaluations of attractiveness. It is important to know that not everyone responds the same to ideal images of beauty. Having a high or low SCO can make women vulnerable to the potentially negative consequences of social comparisons of attractiveness. This conclusion may have several practical implications, a topic I will discuss in the next section.

Practical implications

In the introduction section of this thesis, I pointed to the possibility that women high in SCO may respond more vigilantly to comparisons with beauty ideals, and develop more negative self-evaluations of attractiveness and body dissatisfaction as a consequence. Fortunately, the present thesis showed this scenario to be unfounded. Moreover, the opposite is true: women high in SCO seem to respond more positively than other women to society’s images of beauty. They may feel they look

good too or feel inspired to become as attractive as the comparison target. In itself this is good news. Media images of beauty are omnipresent and our society is drenched with the idea that being physically attractive is important for women. The present thesis shows that women high in SCO appear not to suffer negative consequences of the societal ideal of beauty, even though this ideal is highly unrealistic and unattainable.

Nonetheless, our present thesis suggests that SCO is an important individual difference variable in the study and treatment of the negative consequences of media images of beauty. Although women high in SCO may feel better about themselves when confronted with highly attractive comparison targets, they suffer when they are confronted with unattractive same-sex targets. They may feel even more unattractive than they actually are and become distressed about their appearance. In addition, the broad range of self-evaluations of women high in SCO (in other words, their lack of self-clarity) may catch these women in a never ending cycle of cognitive activity that may be tiring and not very constructive. That is, the more these women try to define and evaluate themselves, the more they compare themselves with others, the more different momentary self-evaluations they will have, and the broader their range of self-evaluations will be. To close the circle, this broad range of self-evaluations, and thus the lack of self-definition, may be a strong motivator for even more social comparisons. Although, as explained above, social comparisons of attractiveness may not necessarily be a negative phenomenon, too much thinking about the self and one's attractive and unattractive qualities or body parts, may lead to body objectification, rumination, and symptoms of anxiety and depression (Grabe, Hyde, & Lindberg, 2007).

Our study suggests that, in order for women high in SCO to feel better about themselves, they should be helped to develop a more defined self-view. A more well-defined view of themselves may limit the range of women's momentary self-evaluations and, as a result, the comparison targets women find relevant to compare themselves with. Although women will then show less of a tendency to assimilate with unattractive targets, a possible drawback of this strategy is that women will also be less inclined to assimilate to highly attractive targets, and as a result, may respond more negatively to society's images of beauty. It is very well possible, however, that this drawback is outweighed by the advantages of having a well-defined self-view and

by breaking the never ending circle of thoughts about the self and one's appearance. Feeling less of a need to compare the self to everyone one meets or sees, may create more inner peace and happiness in general.

The ultimate challenge, however, would be to help women high in SCO to preserve their ability to assimilate with upward targets and feel inspired by them, while helping them to contrast themselves with downward comparison targets. This goal may be reached by helping women, in addition to creating a well-defined self, to gain a *positive view* of the self as an attractive woman. A positive, well-defined self-image may cause women to identify with upward targets, because they will see these targets as relevant to the self. They may then automatically contrast themselves with unattractive targets, because those are no longer seen as relevant or similar to the self.

Limitations

As any research, the present thesis suffered from limitations. First, the samples in the present research consisted of female undergraduates only. Conclusions are therefore limited to young, intelligent and psychologically healthy women. It is possible that SCO has a very different effect on self-evaluations of attractiveness in older or clinical populations, for instance, among women who suffer from an eating disorder. It seems highly relevant to study the role of SCO in self-evaluations of attractiveness in these samples. Especially for people suffering from negative self-evaluations of attractiveness or extreme body dissatisfaction, research on the effect of SCO on self-evaluations of attractiveness may create additional avenues for the development of interventions aimed at improving body image.

By studying females only, we know nothing about the role SCO may play in the self-evaluations of attractiveness among men. However, previous studies have already shown men to be less competitive with regard to their physical appearance than women (e.g., Joseph, 1985; Wade, & Abetz, 1997). As a result, men can be expected to view their attractiveness as a less important aspect of the self and to compare themselves less often with regard to their attractiveness. In contrast, several studies suggest that status and success are more important determinants of men's self-views and, as a result, more important dimension on which to compete and compare the

self (e.g., Dijkstra, & Buunk 1998; Townsend, & Levy, 1991). Nonetheless, it seems wise for future studies to examine the role of SCO in the self-evaluations of attractiveness of men. In that case, it seems wise to include sexual orientation as a moderator, since several studies have shown physical attractiveness to be more important for homosexual than heterosexual men (e.g., Buunk, & Dijkstra, 2001).

Finally, the present research restricted itself to social comparisons in the domain of attractiveness. It remains unknown whether SCO plays the same moderating role in other domains of social comparison. I hope the present research inspires others to examine the potentially moderating role of SCO in other interesting and potentially important domains of social comparison, such as the domain of success and status I described above.

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SUMMARY IN DUTCH - SAMENVATTING

De laatste jaren is er op de televisie veel zendtijd ingeruimd voor programma's waarin de aantrekkelijkheid van vrouwen centraal staat. Vaak wordt aangenomen dat het schadelijk is voor het zelfbeeld van jonge vrouwen om blootgesteld te worden aan dergelijke zeer aantrekkelijke modellen. Echter, het onderzoek naar de effecten van blootstelling aan aantrekkelijke modellen is niet eenduidig. Er is onderzoek dat negatieve effecten voor het zelfbeeld vindt na blootstelling aan zeer aantrekkelijke modellen, maar ook onderzoek waaruit geen negatief effect of juist een positief effect voor het zelfbeeld blijkt. Door het onduidelijke beeld dat naar voren komt uit onderzoek lijkt het heel aannemelijk dat er andere factoren beslissend zijn voor de invloed van blootstelling aan zeer aantrekkelijke modellen op het zelfbeeld van jonge vrouwen.

Een van de factoren die van belang lijkt voor het effect van vergelijking van uiterlijk bij vrouwen, is het individuele verschil in de neiging tot vergelijken, ofwel SCO (Gibbons, & Buunk, 1999). De ene mens vergelijkt zich nu eenmaal vaker met anderen dan de andere. Een sterke neiging tot vergelijken met anderen gaat vaak samen met onzekerheid over waar je staat wat betreft een bepaalde eigenschap ten opzichte van anderen.

Binnen de sociale vergelijkingstheorie (Festinger, 1954) wordt ervan uitgegaan dat het alleen zin heeft je te vergelijken met personen die van relatief "vergelijkbare" waarde zijn, dus met personen die wat positie betreft niet ver bij je vandaan zitten. Nu is uit onderzoek met de SCO is gebleken dat personen met een hoge score op SCO zich gemakkelijker met anderen vergelijken, dan die met een lage score, ook al lijkt de ander -objectief gezien- in een andere positie te verkeren. Zo vergeleken niet-depressieve hoogscoorders op SCO zich met depressieve personen (Buunk, & Brenninkmeijer, 2001). Het lijkt erop dat deze hoogscoorders veel anderen om zich heen als gelijk genoeg ervaren om zich mee te vergelijken. Door deze gelijkheidsfocus wordt hun zelfbeoordeling naar de positie van de ander toegetrokken (assimilatie).

Een ander aspect waarin personen met een hoge score op SCO verschillen van die met een lage score is in het toekomstig zelfbeeld. Personen met een hoge score op SCO verwachten een positievere zelf-evaluatie voor de toekomst. Blijkbaar

Samenvatting

beseffen personen met een hoge score op SCO dat zelf-evaluatie aan verandering onderhevig is, zij het begrensd. Er valt een bereik te definiëren waarbinnen alle mogelijke zelf-evaluaties van een bepaalde persoon te plaatsen zijn: het bereik tussen de hoogst en laagst mogelijke zelf-evaluatie. Omdat personen met een hoge score op SCO zich meer gelijk voelen aan anderen dan personen met een lage score, mag verwacht worden dat personen met een hoge score op SCO een groter bereik hebben in mogelijke zelf-evaluaties.

In drie empirische hoofdstukken wordt beschreven hoe de relatie is tussen SCO en de reactie op vergelijking met zeer aantrekkelijke en minder aantrekkelijke vrouwen, tussen SCO en het ervaren van gelijkheid en tussen SCO en het bereik van mogelijke zelf-evaluaties van aantrekkelijkheid.

SCO en de reactie op vergelijkingen met aantrekkelijk en minder aantrekkelijke vrouwen

De belangrijkste onderzoeksvraag die in Hoofdstuk 2 aan de orde kwam is, of vrouwen met een sterke vergelijkingsneiging (hoog SCO) meer gelijkheid waarnemen en welke invloed dat kan hebben op het effect van vergelijking van aantrekkelijkheid. In drie experimenten werd deze tweeledige onderzoeksvraag beantwoord.

Geredeneerd vanuit het ervaren van gelijkheid met veel andere vrouwen kan de reactie van hoge SCO op blootstelling aan anderen gekleurd zijn. Het gevolg zal dan zijn dat vrouwen met een hoge score op SCO zich assimileren (hun zelf-evaluatie aanpassen in de richting van de ander) aan de vrouwen met wie zij zich vergelijken, terwijl vrouwen met een lage score op SCO zich contrasteren met deze vrouwen (hun zelf-evaluatie afzetten tegen de ander). Kortom, vrouwen met een hoge score op SCO zullen zich aantrekkelijker voelen als ze zich vergeleken hebben met een zeer aantrekkelijke andere vrouw, terwijl vrouwen met een lage score zich juist minder aantrekkelijk voelen na een dergelijke vergelijking. Het omgekeerde is ook waar, na vergelijking met een minder aantrekkelijke vrouw, zal een vrouw met een hoge score op SCO zichzelf juist als minder aantrekkelijk zien, terwijl een vrouw met een lage score op SCO zichzelf dan juist aantrekkelijker voelt.

In het eerste experiment van Hoofdstuk 2 werd de gelijkheidsfocus van personen met een hoge score op SCO getest. De proefpersonen beoordeelden de

gelijkheid tussen twee tekeningen. Inderdaad, personen met een hoge score op SCO beoordeelden de twee tekeningen als meer gelijk, dan personen met een lage score op SCO. De resultaten van het tweede en derde experiment van Hoofdstuk 2 laten zien dat vrouwen met een hoge score op SCO zich positiever voelden en een hogere inschatting van hun eigen aantrekkelijkheid hadden na het zien van een zeer aantrekkelijke vrouw, dan vrouwen met een lage score op SCO. Na vergelijking met een minder aantrekkelijke vrouw gebeurde het omgekeerde: vrouwen met een hoge score op SCO voelden zich minder positief en hadden een negatiever beeld van hun uiterlijk dan vrouwen met een lage score op SCO. De resultaten van dit hoofdstuk bevestigen de hypothese dat personen met een hoge score op SCO meer gericht zijn op het zien van gelijkheid. Het ervaren van gelijkheid met anderen leidt ertoe dat de reactie na een vergelijking assimilatief is (aantrekkelijker voelen na het zien van aantrekkelijke ander en andersom), vergeleken met vrouwen met een lage score op SCO.

SCO en het bereik van zelf-evaluaties van aantrekkelijkheid

Ook al herkennen veel vrouwen schommelingen in de beleving van hun aantrekkelijkheid, onderzoek naar de variabiliteit in perceptie van de eigen aantrekkelijkheid is schaars. In Hoofdstuk 3 onderzocht ik in vier experimenten de relatie tussen SCO en het persoonlijke bereik van momentane zelf-evaluaties van aantrekkelijkheid. Hoe breder dit bereik, hoe meer personen in aanmerking komen om je mee te vergelijken. Voor personen met een hoge SCO-score werd een breed bereik verwacht. Proefpersonen schatten in alle vier experimenten van Hoofdstuk 3 hun meest positieve en hun meest negatieve zelf-evaluatie van aantrekkelijkheid door kruisjes te zetten op een verticale lijn.

In alle vier experimenten van Hoofdstuk 3 hadden vrouwen met een hoge score op SCO een breder bereik in aantrekkelijkheid. Voorts bleek uit het vierde experiment dat het bereik van aantrekkelijkheid niet verklaard kon worden door verschil in zelfwaardering. De breedte van het bereik in aantrekkelijkheid voor hoogscorders op SCO suggereert dat vrouwen met een hoge score op SCO geen scherp zicht hebben op hun niveau van aantrekkelijkheid en minder uitgesproken zijn in hun zelfbeeld.

SCO en het waarnemen van nabijheid en gelijkheid

In Hoofdstuk 4 werd onderzocht of personen met een hoge score op SCO zich meer gelijk in aantrekkelijkheid en meer nabij voelen met zeven andere vrouwen van verschillend aantrekkelijkheidsniveau, dan personen met een lage score op SCO. Eerder onderzoek met SCO toonde aan dat blootstelling aan informatie over anderen meer impact heeft op personen met een hoge score op SCO dan op personen met een lage score op SCO (Van der Zee et al., 1998; Thau et al., 2007). Het lijkt erop dat personen met een hoge score op SCO meer gelijkheid en nabijheid met anderen ervaren, dan personen met een lage score.

Uit het eerste experiment bleek dat degenen met een hoge score in SCO zich meer vergeleken met de zeven getoonde vrouwen dan degenen met een lage score en dat ze zich ook gelijkter voelden met de zeven vrouwen. In het volgende experiment werd weer gevonden dat vrouwen met een hoge score op SCO elk van de zeven vrouwen als meer gelijk in aantrekkelijkheid en ook dat ze deze als psychologisch meer nabij waarnamen dan vrouwen met een lage score op SCO.

Vrouwen met een hoge score op SCO nemen meer gelijkheid tussen zichzelf en anderen waar. Dat wil niet zeggen dat deze vrouwen standaard meer gelijkheid tussen twee mensen in het algemeen waarnemen. Als er weinig verschil tussen personen in de omgeving zou worden waargenomen zou dat een enorm verlies opleveren bij sociale vergelijking. Uit de resultaten van het laatste experiment bleek dat vrouwen met een hoge score op SCO niet meer gelijkheid zagen tussen zes paren van vrouwen dan personen met een lage score.

Deze resultaten spreken tot de verbeelding, al is het niet duidelijk hoe het causale verband is. Vergelijken mensen met een hoge score op zich meer met verschillende anderen omdat ze zich gelijk voelen? Dat zou betekenen dat personen met een hoge score op SCO werkelijk wisselend zijn in zelf-evaluaties. Of zorgt het onbedwingbare vergelijken met anderen ervoor dat ze zich meer gelijk voelen met anderen, zodat hun zelfbeeld op zich er weinig mee te maken heeft? Mijn veronderstelling is op basis van andere resultaten met SCO dat personen met een hoge SCO-score geen duidelijk gedefinieerd zelfbeeld hebben. Als gevolg van deze onzekerheid kunnen ze zich gemakkelijk identificeren en gelijk voelen aan anderen.

Samengevat, personen met een hoge score op SCO hebben een sterkere gelijkheidsfocus in de vergelijking tussen zelf en anderen en hebben een breder bereik van momentane zelf-evaluaties. Het effect van vergelijking blijkt assimilatief te zijn: vrouwen met een hoge score op SCO voelen zich aantrekkelijker na het zien van een zeer aantrekkelijke andere vrouw dan een vrouw met een lage score. Voor vergelijking met minder aantrekkelijke vrouwen gaat het tegengestelde op.

Conclusie

Het is waarschijnlijk dat de resultaten van de drie verschillende hoofdstukken onderling samenhangen, of –anders gezegd– dat dezelfde processen de resultaten voor een deel kunnen verklaren. Meer onderzoek is nodig om de processen te ontrafelen en te onderzoeken hoe de in dit proefschrift onderzochte mechanismen elkaar beïnvloeden. De resultaten van de drie empirische hoofdstukken maken duidelijk dat het effect van vergelijking met aantrekkelijke en minder aantrekkelijke anderen niet te voorspellen valt zonder rekening te houden met individuele verschillen in de neiging tot vergelijken. In de strijd tegen anorexia en het negatieve lichaamsbeeld bij jonge vrouwen zal dan ook rekening gehouden moeten worden met deze individuele verschillen.