

SUSCEPTIBILITY TO PHYSICAL ATTRACTIVENESS COMPARISON: ON THE ROLE OF ATTRIBUTIONS IN PROTECTING SELF-ESTEEM*

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Do the habitual comparisons of physical attractiveness conducted by people in daily life affect their self-esteem, and how do they account for the outcome of such comparisons? This study examined the effect of a single physical attractiveness comparison (PAC) on the change in group members' self-esteem, attractiveness ratings, and attributions following a manipulation of their attractiveness ranking. One hundred and twenty-two Japanese undergraduates ranked each other according to their attractiveness in newly formed groups, and later were provided with bogus feedback about their own rank. The results indicated a change in subjects' ratings of their own attractiveness, and various differences in their attribution style, but virtually no effect on their self-esteem. These outcomes are explained in terms of defense mechanisms employed to protect one's self-esteem from the fluctuations of incessant PACs, but they may also reflect certain aspects of the self common in collectivist societies.

Over the last twenty years there has been extensive psychological research on physical attractiveness, that demonstrated its pervasive effect on all spheres of human life. Findings of numerous studies indicate that the physically attractive are usually preferred to the unattractive and so enjoy preferential treatment in almost any social setting (for review see Bull & Rumsey, 1988; Feingold, 1992). While the majority of these studies have focused on identifying and showing the effect of physical attractiveness, only limited research has been conducted on the way people perceive, judge and compare their attractiveness in relation to others. The main obstacle has been the lack of a theoretical framework to account for judgmental processes of one's own and other's attractiveness. For this reason, recent attempts to link the concept of physical appearance and attractiveness to social comparison processes are of a special importance (Kenrick, Montello, Gutierrez, & Trost, 1993; Miyake & Zuckerman, 1993; Wheeler & Miyake, 1992).

The theory of social comparison was originally conceived to deal with the evaluation of opinions and performance, yet physical attractiveness seems to fit into its framework very well (for review of the social comparison theory, see Wheeler, 1991). As with other aspects that cannot be measured independently from their social context, physical attractiveness, as a feature under evaluation, is "...not feasible by

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testing directly in the environment" (Festinger, 1954, p. 217). Indeed, numerous studies have indicated that albeit the existence of general guidelines of beauty and ugliness in the perception of human attractiveness, the actual individual notion tends to somewhat fluctuate with age, gender, culture, and available information, but mainly with context (e.g., Lucker, 1976; Maret & Harling, 1985; Zuckerman, Miyake & Hodgins, 1991).

In most situations, the context people rely on when observing others and evaluating themselves is the immediate social context. That is, people who are usually in the vicinity of the observer and perceived as similar, serve as a temporary standard for one's schema of appearance evaluation. Several studies have shown that the presence of others in proximity to a target effect not only the evaluation of the target but also the evaluation of one's own attractiveness (e.g., Cash, Cash, & Buttress, 1983; Melamed & Moss, 1975). These studies have revealed a contrast effect of the attractiveness level of people around an unrelated target on the target's attractiveness evaluation, in addition to a contrast effect of the target's attractiveness on the self-evaluation of the subjects. Hence, the incongruity between the need for an accurate evaluation of oneself and others and the transitory character one's and other relative attractiveness necessitates repetitive comparisons in ever-changing social circumstances.

The resulting process, *physical attractiveness comparison* (henceforth PAC), is concerned mainly with people's cognition when assessing others' appearance and attractiveness in relation to their own. The importance of PAC is partly because physical attractiveness is "always salient," a feature that makes the comparison easy (Miller, 1982). As such, it should not be surprising that temporary and situational changes in people's perception of their attractiveness level also have behavioral implications. In a seminal study, Snyder, Berscheid, and Tanke (1977) demonstrated the profound effect of momentarily manipulated PAC not only on the male 'bidders' (who interacted through a telephone with a female 'target' while holding her bogus picture), but also on the 'target' who did not see her partner. Analysis of tape recordings of the targets who were thought to be physically attractive suggests that the outcomes of the bidders' PAC were rapidly conveyed to the targets, as they came to behave in more sociable manner in comparison with targets who were thought to be unattractive. The effect of a single PAC was also demonstrated in situations other than dating activity. In an earlier study, I (Kowner, 1995) asked students, following bogus feedback about their own attractiveness rank in a newly formed group, to choose a partner for ability tasks by indicating their preference for his or her rank. Findings indicated that at times when the only available information about others is their physical appearance, the choice of others for even appearance-irrelevant tasks relies on the situational interaction between one's notion of his or her own physical attractiveness and the others' perceived attractiveness.

If PAC is such an habitual process, what are the repercussions for the observer's self (self-esteem and body esteem)? The experimental evidence is scarce. In one of

the few published studies on this topic, Morse and Gergen (1970) examined the effect a perceived competitor has on subjects' self-esteem during a job interview. Comparisons with 'Mr. Clean', who represented a good looking and generally superior competitor, resulted in a decrease in self-esteem, while a downward comparison with the inferior 'Mr. Dirty' resulted in an increase. Still, despite their astute demonstration, Morse and Gergen's study isolated neither the appearance factor nor its effect on esteem. Others studies focusing on the effect of attractiveness found only a limited contrast effect on the subjects' self- and body esteem, possibly due to the fact that all were conducted in artificial settings where subjects had to judge pictures rather than living people (Cash et al., 1983; Irving, 1990; Kowner & Ogawa, 1993). Thus, the source of the discrepancy between the contrast effect of others' attractiveness on self- and target attractiveness ratings on one hand and the lack of any attractiveness effect on the self on the other hand remains obscure.

Recently, Crocker, Cornwell, and Major (1993) examined the impact of both positive and negative feedback on overweight and normal weight college women. The feedback concerned a wish for a date based on the subjects' weight and height. It was presumably given by a male, whom the subjects did not meet during the experiment. Crocker et al. found no change in the subject's self-esteem, yet the attribution pattern differed from group to group. Relative to other groups, the overweight subjects who received negative feedback attributed the feedback more to their weight than to the evaluator, and consequently exhibited a greater negative mood.

The present study sought to investigate the impact PAC has on various aspects of the self in a setting where subjects can evaluate real targets, and the feedback they receive concerns solely with their appearance. The subjects' self-esteem level, and their perceptions of own-attractiveness as well as its self-relevance were examined before and after a manipulation of group feedback about their physical attractiveness. This feedback represents the presumed process one may experience in real-life comparisons. In addition, we sought to examine subjects' attribution style when accounting for the feedback received. Findings of previous studies lead to the prediction that subjects' esteem (global self-esteem and body esteem) would not fluctuate much as a result of PAC. Nevertheless, the evaluation of own attractiveness, as well as its relevance to the self were expected to vary according to the feedback. Subjects in positive condition (feedback of high attractiveness) were expected to show elevated self-ratings and to attach more relevance to their attractiveness, while subjects in the negative condition (feedback of low attractiveness) were expected to experience the opposite effect. Sex-difference, women's greater susceptibility to the feedback, was also predicted as their esteem seems to have greater dependency on perceived physical attractiveness (Kowner & Ogawa, 1993).

METHOD

Subjects:

The subjects were 122 undergraduates (65 males and 57 females; mean age = 20.1 ± SD = 2.2 years) enrolled in the University of Tsukuba. All were Japanese nationals, who took part in this study as a partial fulfillment of course requirements. The majority of them were freshmen, unfamiliar with each other.

Test materials:

The following variables were used as dependent measures.

1. Change in esteem—Two measures were used to determine subjects' esteem before and after the manipulation. The first measure was the State Self-Esteem (SSE) scale (Heatherton & Polivy, 1991), which examines short lived changes in self-esteem and consists of 20 items. The second measure was the Body-Esteem (BE) scale (Franzoi & Shields, 1984), which examines body satisfaction and consists of 35 body-related items.

2. Change in attractiveness self-ratings—Two measures were used to determine subjects' perceptions of their own attractiveness before and after the manipulation. The first measure was 'Relative Attractiveness', which examines subjects' evaluation of their own attractiveness relative to relevant others. It contains one item concerning appearance and four distractor items concerning several scopes of daily life, all to be rated on a 5-point Likert scale. The second measure was 'Appearance Priority', which examines changes in subjects' ranking of the importance they attach to physical attractiveness. It contains one item concerning appearance and 11 distractor items concerning one's daily life. Subjects are asked to rank these items according to their importance ('self-relevance') from the highest (1) to the lowest (12).

3. Feedback attribution—Effects of PAC on subjects' attribution were determined by two measures. The first one was 'Feedback Attributions questionnaire', which examines subjects' attributions regarding the source of the feedback received. It contains nine statements offering various explanations regarding the causes of feedback. Subjects are requested to rate each of them on a 6-point scale from total disagreement (1) to total agreement (6). The second measure was 'Interest scale', which investigates the subjects' interest in the feedback received. It contains three items (importance, relevance, and interest), to be rated on a 6-point scale each.

Independent Measures—The following scales were employed to measure presumed moderating factors in the changes after manipulation:

- Body Consciousness (BC) scale (Miller, Murphy & Buss, 1981)—Measures people's awareness of their body, and contains 15 items.

- Social Evaluative Anxiety (SEA) scale (Watson & Friend, 1969)—Measures level of anxiety in social situations and in evaluative situations (such as PAC). This measure consists of two scales: a Fear of Negative Evaluation scale and a Social Avoidance and Distress scale (30 items and 28 items of false or true answers, respectively).

- Attractiveness level scale—Subjects' attractiveness level was determined by two measures. The first one ('Objective attractiveness') was based on judgements made by group members using a sociometric test. According to the test, members of each group were classified into one of the following three attractiveness levels: *low* (the lowest 25% of each group), *high* (the highest 25%), and *medium* (the rest). The second measure was based on self-evaluation ('Subjective attractiveness'), comprised of a 10-point Likert scale ranging from very low (1) to very high attractiveness (10).

Procedure:

The study was conducted in two phases. In the first phase, introduced as "a study on the self-concept," the subjects filled in a battery of questionnaires which included the BE scale, SSE scale, BC scale, SEA scale, Relative Attractiveness scale, and the Appearance Priority scale.

In the second phase, 6–8 weeks later, subjects were scheduled for group experimental session lasting close to 1 hr. They were randomly assigned into six groups of 12–25 members each, with roughly equal numbers of females and males (a quarter of the subjects did not participate in the first phase). On arrival, the subjects were met by an experimenter who was unaware of the hypothesis of the study but not of the experimental condition. Each group was seated in a semicircle facing each other and the experimenter. Subjects wore a letter badge for identification purpose, and the session was presented as a study on "the relation between group dynamics and the impression made by others." To make the subjects less apprehensive about attractiveness evaluation, they were initially asked to rate the attractiveness and friendliness of several pictures of average appearance stimuli persons in a ruse questionnaire.

Subsequently they rated their own physical attractiveness and friendliness/kindness (the latter trait served as a distractor), and then were asked to rate the three most attractive and the three most friendly members of their group.

Following a short break used ostensibly for "checking the results of the previous test" by other experiments outside the class and to explain to the subjects the purpose of sociometric test, the subjects were administered a random written false feedback about the results of the sociometric test, which concerned only the attractiveness dimension. Half of the subjects were told they were almost in the top of their group (positive feedback), whereas the remaining half were told that were almost in the bottom (negative feedback). Then, the subjects were requested to fill in another set of the questionnaires ostensibly "for the next session." This set included the SSE and the BE scales, as well as the Relative Attractiveness and Appearance-priority scales. Finally, the subjects filled in the Interest scale and the Feedback Attributions questionnaire. Upon completion, the subjects were debriefed about the false feedback and the goals of the study.

RESULTS

Effect on esteem

A mixed-design analysis of variance (ANOVA) with the attractiveness feedback (positive and negative feedback) and sex and with repeated measures of the scores before and after the manipulation was performed using the SSE and the BE scores. As expected, the analysis revealed an effect, except for sex difference in the BE scores ($F(1,83)=5.4, p<.03$). Females' BE score was significantly lower than the males'. In a similar set of analyses, we examined the effect of the manipulation on subjects' esteem using 2 (feedback) \times 2 (sex) ANOVAs on the SSE and BE scores after the manipulation. Again, these analyses did not yield any significant effect or interaction, except for a sex difference in the BE scores, ($F(1,106)=9.0, p<.004$ see Table 1).

In addition, we examined the effect of several presumed moderating factors (BC, SEA) on the subjects' esteem before and after the manipulation. The following correlation matrix was used to assess the appropriateness and significance of the numerous univariate tests described below (see Table 2).

Subsequently, scores on these measures were split to low and high groups according to their median. We used 2 (feedback) \times 2 (sex) \times 2 (each moderating

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Table 2. Correlation Coefficients Between Various Measures Used Before (1) and After (2) the Manipulation

	BE1	SSE1	BE2	SSE2	BC1	SEA1	Att1	Att2	SP1	SP2	ATB2	
BE1												
SSE1	.36 [†]		.68 [†]	.35 [†]	.22*	-.45 [†]	.40 [†]	.12	-.11	-.07	-.14	
BE2		.46 [†]		.60 [†]	.07	-.55 [†]	.20*	.10	.05	.00	-.16	
SSE2			.44 [†]		.33**	-.45 [†]	.42 [†]	.38 [†]	.03	.09	.03	
BC1				.16		-.58 [†]	.21*	.31 [†]	.05	.15	-.23*	
SEA1							-.05	.19*	.32**	-.16	.22	
Att1								-.23*	-.14	-.03	-.01	
Att2									.50 [†]	-.09	-.25*	
SP1										-.05	-.18	
SP2											.33**	
ATB2												-.39 [†]

* $<.05$ ** $<.01$ † $<.001$ ‡ $<.001$

Note: BE-Body Esteem, SSE-State Self-Esteem, BC-Body Consciousness, SEA-Social Evaluative Anxiety, Att-rating of own attractiveness relative to others, SP-Self-priority (of attractiveness), ATB-Attributions of the feedback.

factor) repeated measure ANOVAs on the SSE and BE scores before and after the manipulation. The analysis of the SSE scores revealed main effect (but no interactions) of the following factors: subjective attractiveness ($F(1,90)=15.1, p<.0001$), SEA ($F(1,45)=26.4, p<.0001$) and a tendency for BC ($F(1,77)=3.2, p<.08$). Subjects who rated themselves as attractive, had low social anxiety, and high body consciousness, exhibited higher SSE. The analysis of the BE scores revealed main effects of the following factors: subjective attractiveness, ($F(1,86)=28.3, p<.0001$), objective attractiveness ($F(1,89)=3.4, p<.04$), SEA ($F(1,45)=13.6, p<.0003$), and BC ($F(1,77)=15.4, p<.0001$). Subjects who were rated or rated themselves as attractive, had low social anxiety and high body consciousness exhibited higher BE.

Effect on self-ratings of attractiveness

A mixed-design analysis of variance (ANOVA) with the attractiveness feedback (positive and negative feedback) and sex and with repeated measures of the scores before and after the manipulation was performed using the Relative Attractiveness and the Appearance-Priority scores. The analyses revealed main effect of feedback on the Relative Attractiveness scores ($F(1,88)=6.3, p<.02$), while in the analysis of the Appearance-Priority scores, we revealed main effects of the manipulation, sex, and the feedback in the second scale ($F(1,78)=7.9, p<.015$; $F(1,78)=3.6, p<.07$; $F(1,78)=3.3, p<.08$), respectively. Subjects who received high feedback rated themselves as more attractive and placed attractiveness in higher priority than subjects who received low feedback. Similarly, female subjects tended to place physical appearance in higher priority than males. A planned comparison within

Table 1. Subjects' Self-Esteem Before and After the Feedback (Mean Score of SSE & BE Scales)

	N	Negative Feedback				Positive Feedback			
		Before		After		Before		After	
		M	SD	M	SD	M	SD	M	SD
SSE score									
Total	91	58.9	9.3	59.5	9.4	60.1	9.2	59.7	8.7
Males	44	59.4	9.7	60.9	8.2	61.3	9.9	60.1	8.6
Females	47	58.5	9.2	58.5	10.1	58.4	8.2	59.5	9.2
BE score									
Total	87	100.7	13.7	101.7	11.4	104.3	13.8	103.9	14.6
Males	41	104.6	15.6	105.4	12.2	107.3	11.0	106.0	11.1
Females	46	97.9	11.8	99.0	10.2	100.8	16.0	101.5	17.8

Table 3. Subjects' Attractiveness-Self Ratings Before and After the Feedback
(Mean Scores of Appearance Priority and Relative Attractiveness Scales)

Attractiveness Priority (1-12)	N	Negative Feedback				Positive Feedback			
		Before		After		Before		After	
		M	SD	M	SD	M	SD	M	SD
Total	82	9.8	1.9	9.2	2.3	9.4	2.7	8.2	2.7
Males	41	9.8	2.2	9.7	2.1	10.3	2.0	8.4	2.4
Females	41	9.8	1.9	8.9	2.4	8.3	3.0	8.0	3.0
Relative attractiveness (1-5)									
Total	92	2.60	0.71	2.60	0.68	2.89	0.66	2.98	0.66
Males	44	2.58	0.69	2.58	0.77	3.04	0.61	3.00	0.65
Females	48	2.62	0.73	2.62	0.62	2.68	0.67	2.95	0.71

each sex revealed a main effect of the manipulation, as well as an interaction between the manipulation and the feedback within the males ($F(1,36)=5.9, p<.025$; $F(1,36)=4.6, p<.04$), respectively. Males who received high feedback put their attractiveness in higher priority while males who received low feedback did not show a change (see Table 3).

Effect on attributions

The effects of PAC on subjects' attributions were examined by 2 (feedback) \times 2 (sex) ANOVAs on scores of the Interest scale and the Feedback Attributions questionnaire. Analysis of the Interest scale scores indicated a main effect of feedback ($F(1,108)=4.0, p<.05$). Subjects who received high feedback had greater interest in the results.

Prior to the analysis of the manipulation effect on the subjects scores of the Feedback Attributions questionnaire, we conducted a factor analysis on the ratings with a varimax rotation. The analysis revealed four factors with 6 items loaded greater than +.50. The factors comprised of self-related ("it's all a matter of effort"), others-related ("other members don't know me well"), luck-related ("it's just luck," "it's (not) my day"), and disbelief-related explanations ("the results are wrong," "the

Table 4. Subjects' Attributions Following the Feedback
(Means Scores of Feedback Attributions & Interest Scales)

Attribution domains	N	Negative Feedback			Positive Feedback		
		All	Males	Females	All	Males	Females
Self	112	1.8	1.6	2.0	2.0	2.0	1.9
Others	112	3.8	3.5	4.0	4.4	4.2	4.6
Luck	112	1.5	1.4	1.55	2.05	2.05	2.05
Disbelief	112	1.4	1.35	1.45	1.65	1.5	1.8
Interest in the feedback	112	8.3	7.8	8.7	9.8	9.7	10.0

experimenter fabricated the results"). The score of each factor was analyzed using a 2 (feedback) \times 2 (sex) ANOVA. Analysis of the first factor, Self-related causes, did not reveal main effect or interaction, while analysis of the second factor, Others-related causes, revealed main effect of feedback ($F(1,108)=5.9, p<.02$). Subjects who received high feedback attributed the outcomes more to others. Analysis of the third factor, Luck-related causes, revealed main effect of feedback ($F(1,108)=26.5, p<.0001$). Subjects who received high feedback made more attributions to luck. Likewise, analysis of the fourth factor, Mistake-related bias, revealed main effect of feedback ($F(1,108)=4.6, p<.04$), subjects who received high feedback showed more disbelief in the results than low feedback subjects (see Table 4).

In addition, we examined the effect of several presumed moderating factors measured prior to the manipulation (BC, SEA, self and others' ratings of attractiveness, SSE, and BE) on subjects' attributions after the manipulation. We used 2 (feedback) \times 2 (sex) \times 2 (each moderating factor split to low and high groups) ANOVAs on the scores of the two scales. Analyses indicated that SSE and BE interacted with the feedback in attributing the self ($F(1,77)=5.1, p<.03$; $F(1,77)=6.0, p<.02$), respectively. Subjects high on SSE and BE attributed the self as a cause of their rank more than low subjects when the feedback was high, and less than low subjects when the feedback was low. High anxious subjects expressed more interest in the feedback ($F(1,45)=12.2, p<.002$), and SEA interacted with sex ($F(1,45)=7.7, p<.008$). Females high in social anxiety expressed the greatest interest, while females low on social anxiety the least.

DISCUSSION AND CONCLUSIONS

The findings indicate that although the feedback (representing a single PAC) did not affect subjects' esteem (as determined by the SSE and the BE scales), it affected their perceptions of their physical attractiveness. Feedback implying a high rank led to higher self-ratings while feedback of a low rank led to lower ratings. As such, this study confirmed the predicted status of physical attractiveness as a relative feature that needs to be evaluated in the social context. Likewise, analysis of the three attribution questionnaires (feedback attributions, interest, and priority) confirmed the proposition that the subjects employed various defense mechanisms to mitigate the impact of information about themselves they regarded as negative or too positive. Subjects who received high feedback consistently placed their physical attractiveness higher in their priority list, and showed more interest in the test than subjects who received low feedback.

Effect of PAC on esteem

Our results suggest that in the laboratory and possibly in reality as well, self-esteem hardly changes following a single PAC, especially when conducted with unfamiliar (and arguably irrelevant) others. It is contended that people cannot afford substantial changes in their self-esteem after every PAC they conduct, for such an

habitual practice would turn self-esteem into a perpetual pendulum. As a result, the repercussions of a single feedback are rather limited, and often too fleeting to detect. The outcome of a cock-fight, may serve as a metaphor for esteem-change. The anthropologist Geertz (1973), who investigated this 'sport' in Bali, was baffled by two contradictory observations: The fight involved esteem and status of the cock owners, and yet "...no one's status is actually altered by the outcome of the cockfight; it is only, and that momentarily, affirmed or insulted" (Ibid, p. 433).

Hence, if a single PAC does not effect one's esteem, what is its role? Barkow (1989), who questioned the accumulated effect of the 'reaffirmation of status' in the Balinese cock-fight, argued that it may have long-term implications for the owner's social standing if his cocks are always to lose or to win. We believe that this interpretation may hold a clue for understanding human PAC as well. Indeed, several studies have suggested that numerous and consistent reactions to one's appearance may have some lingering effects. Pruzinsky & Edgerton (1990), for example, showed that appearance transformation, real or imagined (such as the one occurred following plastic surgery), leads to changes in one's body image and the self. Likewise, studies concerning the impact of one's physical attractiveness across the life span indicate that people's level of physical attractiveness, transmitted through numerous PACs, has an accumulated impact on various aspects of life (Alley, 1993; Burns & Farina, 1992).

The role of attributions

In protecting their self-esteem from frequent fluctuations due to PAC, people may employ various defense mechanisms, such as attributions and relevance-change. The priority change can be accounted for by Tesser's SEM model which emphasizes the variety of choices of comparison directions and similarity of the comparison others in the process of evaluation (Tesser, 1991; Tesser, Millar, & Moore, 1988). Tesser argues that the evaluation process, stemming from a consideration of positive self-evaluation maintenance, is an interaction of three variables. These variables include: the relevance of the compared attribute to self-definition, the evaluated attribute (performance), and the closeness of the comparison other (a term analogous to similarity, though wider in scope). People's attribution style primarily mitigates the relevance of the compared attribute, and thus the findings that subjects who received high feedback attributed the outcome more to others, luck, or mistake are of particular interest.

In other situations where attributions had been studied, such as task performances or intelligence tests, subjects tended to take credit for success (attribute it to themselves) and to deny responsibility for failure (attribute it to external causes). This tendency is known as a self-serving bias in attribution of causality for failure and success (Zuckerman, 1977). In PAC however, attributing 'success' to oneself seems to be associated with vanity, and consequently may lead to negative reaction from others (Adams, 1981; Dermer & Thiel, 1975; Salovey & Rodin, 1991). In other words, current social norms, and subsequently the wish to avoid negative impressions

and jealousy from others exerts on people not to publicly brag about their physical attractiveness. In fact, due to the saliency of this feature there is a little need to do so. Our findings also support earlier findings that people with high SSE or BE tend to attribute positive outcomes (feedback on attractiveness) to themselves more than others, and negative outcomes less than others (Gurman & Balban, 1990).

Several cross-cultural studies of attribution processes offer another interpretation by hinting that cultural aspects may be involved in the attribution pattern revealed in the present study (for review, see Markus & Kitayama, 1991). Japanese subjects, for instance, were found to attribute success in terms of external sources, even in situations where Western subjects would definitely attribute it to themselves (Shikanai, 1988; Isozaki, 1984). Furthermore, Kashima and Triandis (1986) argue that Japanese, as members of a collectivist society, may not have a self-serving bias at all. They contend that rather than having a lesser need to protect self-esteem, Japanese make less use of an individual coping strategy than American (students). Although Kashima and Triandis' study focused on different attributes than ours, their conclusions are certainly worth attention and cross-cultural validation also in the field of PAC.

Susceptibility to PAC

The present study revealed the very limited effect of several specific moderating factors in the process of PAC. Nevertheless, studies of social comparison processes suggest that PACs have a stronger impact on people when interacting with unfamiliar others and when additional comparison dimensions are (still) scarce (Daly, Hog, Sacks, Smith, & Zimring, 1983). In general, comparisons with familiar people are expected to cause greater tension, yet PACs with familiar people are confounded by comparisons on additional dimensions. People tend to mitigate the outcomes of multiple PACs they frequently conduct with additional information about those involved in the interaction, through a careful choice of people with whom PACs are to be conducted. Ultimately, they employ various defense mechanisms that limit the negative impact of upward comparisons (Brickman & Bulman, 1977; Mann, 1976). In the same vein, it seems that the less information one has about others, the more conspicuous the attractiveness element becomes. In this situation attractiveness may have a crucial role in the decision whether to continue a relationship into the next stage of dyadic relations, offering a job to another person, etc. (Bull & Rumsey, 1988).

The present study did not reveal significant gender differences in the susceptibility to esteem change following PAC. These findings are conspicuous in the light of previous indications that women are more susceptible than men to the contrast effect of physical attractiveness, and that their choice of partner tends to be influenced by PAC (Kowner, 1995; Kowner & Ogawa, 1993). Several studies have previously demonstrated that women's attractiveness level is more crucial to their life outcomes (e.g., Pliner, Chaiken, & Flett, 1991), which implies that women should be more dependent on PAC as a means for self-evaluation. Nonetheless, women are more likely than men to be exposed to constant implicit or explicit feedbacks about their

appearance, which makes their judgment about their own appearance more accurate (Gurman & Balban, 1991). It is possible that greater exposure balances the harmful effects of a PAC for women, whereas men may be less dependent on physical attractiveness in daily life but show greater defensiveness to the negative outcomes of PAC. In another departure from real life, in this experiment we did not indicate to each subject how the sex of the observers affected their ranking. In reality, however, people know the gender of the person they interact with, and seem to react differently to PACs that take place with the same or opposite gender. This suggestion follows Kenrick et al.'s (1993) demonstration that people exposed to opposite-sex pictures of attractive people had a higher mood than when viewing average looking people, whereas people exposed to pictures of attractive people of the same sex showed the opposite effect.

Overall, the present study suggests that a single PAC does not affect a person's self-esteem, probably due to the mitigating function of various attributional processes. Nevertheless, people's perceptions of their own physical attractiveness do fluctuate moderately following a single PAC, suggesting that in the long run these fluctuations may affect self-esteem as well.

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