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Physical Attractiveness in Social Interaction

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What impact does physical attractiveness have on social interaction? Although many studies demonstrate that beautiful people are more highly regarded, there are no reports about the effects of attractiveness on the course of people's actual everyday social lives. Using a journal-style record, we constructed numerous indices characterizing subjects' socializing and then related these variables to their independently rated physical attractiveness. The following major results were obtained: (a) Physical attractiveness was strongly related to the quantity of social interaction for males, positively with the opposite sex and negatively with the same sex; no significant pattern emerged for females. (b) For both sexes, particularly with opposite-sex interactions, satisfaction showed an increasing tendency over time to be positively correlated with attractiveness. (c) Females with more variable attractiveness ratings were more likely to be satisfied with their socializing. (d) Physically attractive males tended to have more mutually initiated, and fewer self- or other-initiated, interactions with the opposite sex. (e) Attractive males spent more of their interactions conversing and less in activities; attractive females also reported a lesser proportion of task interactions and more prevalent date/parties. Mediating mechanisms for these effects, notably including people's stereotypic beliefs about physical attractiveness, are also discussed.

This article reports research on the relationship between physical attractiveness and the everyday social interaction of first-year college students over an 8-month period. The data collection technique used was that developed by Wheeler and Nezlek (1977), which requires subjects to complete a short fixed-format record for every interaction of 10 minutes or longer that occurs during a specified interval. The major questions were: (a) Do normal levels of physical attractiveness affect quantitative and qualitative aspects of social participation? (b) Are the effects the same for females and males? (c) Do the effects change over time?

Adams (1977), outlining a "developmental social psychology of beauty," suggested four assumptions about the relationship between inner behavioral processes and outer appearance. The first is that people have different expectations about attractive and unattractive others and that these expectations are consistent across numerous social situations. This is the well-known physical attractiveness stereotype that "what is beautiful is good" (Dion, Berscheid, & Walster, 1972). The second assumption is that physically attractive people receive more favorable social exchanges. The third assumption is that these more favorable social exchanges create differential social images, self-expectations, and interpersonal styles. The final assumption (Adams, 1977) is that "attractive people will be more likely to manifest confident interpersonal

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behavior patterns than [will] less attractive individuals" (p. 218).

Although evidence is provided for each of these assumptions, an implication derived from all of them, namely that attractive individuals should be more socially successful across a wide variety of social situations, has not been tested. Our first prediction, then, was that physically attractive people should have more social encounters with the opposite sex and perhaps with the same sex and should find these encounters more rewarding.

We based this prediction on two assumptions. The first was that our culture teaches us that physical beauty is both important and desirable, particularly in opposite-sex interaction. If attractive people are in greater demand as dating partners (e.g., Brislin & Lewis, 1968; Tesser & Brodie, 1971; Walster, Aronson, Abrahams, & Rottmann, 1966), then they ought to participate in more, and more pleasing, social events. The second assumption was that the more attractive are more socially skilled and confident or that such behavior is elicited from them by others. There is some evidence for both of these possibilities. Goldman and Lewis (1977) used a blind, anonymous telephone call to ascertain that more attractive individuals of both sexes were in fact rated as more socially skillful and likable by their conversants, who could not have known their appearance. Snyder, Tanke, and Berscheid (1977) reversed the procedure and told male telephone callers that a female target person was either unattractive or attractive, when in fact all the targets were of equal attractiveness. Independent judges' ratings of just the target's half of the conversation revealed her to be more friendly, likable, and sociable when she was thought to be attractive than when she was believed to be unattractive. These studies suggest that stereotypes about physical beauty may have important consequences for people's social behavior and skills, necessitating further research on the relationship between attractiveness and actual everyday social interaction (as distinguished from studies assessing attractiveness stereotypes or first encounters in the lab).

Our second question was whether physical attractiveness is more important to the social behavior of males or females. Despite the pervasive cultural belief that it is more important for a female to be attractive than for a male, the evidence is mixed. Walster et al. (1966) found that a self-report popularity index correlated with attractiveness more highly for females (.46) than for males (.31), and Berscheid, Dion, Walster, and Walster (1971) found that attractiveness and estimated number of dates in the last year correlated more highly for females (.61) than for males (.25). On the other hand, Byrne, Ervin, and Lamberth (1970) found that a date's physical attractiveness correlated more highly with the attraction responses of female subjects than with those of male subjects, although the males *claimed* that a date's attractiveness was more important for them. Given these conflicting results, our second prediction was that physical attractiveness would affect the social participation of females and males equally. One qualification to this hypothesis is in order. Given Deaux's (1977) assertion that sex-stereotypic self-presentations are more likely in more "social" situations, we would expect attractive males to have more self-initiated interactions, whereas attractive females would participate in more other-initiated encounters.

Our third question concerned the lasting effects of physical attractiveness. Most of the physical attractiveness research has dealt with one-time interactions or with responses to photographs. In both cases the information is very limited, and we would expect attractiveness to have strong effects in the absence of other salient inputs. Many theorists, Berscheid and Walster (1974), for example, have speculated that as we receive more information about a person, the effect of attractiveness may diminish. The only evidence that we have been able to find is an experiment by Mathes (1975) in which attractiveness remained important over five separate encounters, even with competing additional information. Moreover, the theoretical position of Adams (1977) suggests that the attractiveness stereotype may be largely true, in which case attractiveness should remain socially important over time. This "kernel of truth" may of course be due to self-fulfilling prophecies (cf. Snyder et al., 1977). Our final prediction, then, was that

the effects of physical attractiveness on social participation would persist over the academic year of the study.

The purpose of the present study is to investigate the nature and breadth of physical attractiveness effects in people's ongoing social lives. Despite the apparent relevance of appearance to social interaction, as discussed by Adams (1977) and Berscheid and Walster (1974), there has been little research relating attractiveness to aspects of social interaction, and we are aware of none that examines and distinguishes the various parameters of socializing as they relate to attractiveness.

The technique developed by Wheeler and Nezlek (1977) for studying social participation makes investigation of this aspect of attractiveness possible. Their procedure requires subjects to complete a short fixed-format record for every interaction of 10 minutes or longer that occurs during a specified interval. From their entries, indices of duration, satisfaction, intimacy, initiation, activity, location, and sex composition are assessed, both overall and after they have been broken down into various categories (same-, opposite-, and mixed-sex interactions, for example). These variables were selected in their research because they represented many of the essential features characterizing people's social encounters. For this reason, as well as for their success in Wheeler and Nezlek's study, they will be utilized here also. Using this approach, we assessed the interaction pattern of a group of first-year college students and then examined the relationship of these numerous indices with physical attractiveness in order to explore the three general predictions stated above.

Method

Subjects and General Overview

Subjects were 35 males and 36 females enrolled in a moderately sized, academically oriented northeastern university. All were in their first year of college and lived in dormitory rooms shared with one roommate. They completed the interaction records for four 10-day periods chosen to minimize overlap with exam periods and holidays: September 27 to October 6, December 1 to 10, January 24 to February 2, and April 5 to 14. Some subjects did not complete the records during all four intervals for various reasons (e.g., illness, trips home, etc.), yielding the following subsamples: Time 1—36 males, 35 females; Time 2—33 males, 34 females; Time 3—35 males, 35 females; Time 4—34 males, 34 females. Pictures were taken at the conclusion of the fourth time period and were rated at a nearby university.

Procedure

Subjects were recruited during summer orientation sessions for a "research project on social interaction." During a brief meeting, the importance of understanding interaction patterns was explained and the students' role as collaborators in this naturalistic research was stressed. Although subjects were told that if grant support was obtained they would receive $10 for each record-keeping period, they were asked to volunteer only if the opportunity to participate in some interesting research was sufficiently rewarding. To emphasize this goal, it was noted that the probability of funding was small. Our subjects' intrinsic motivation is evident in the fact that not one complained about the lack of payment when informed that funding had not been secured. No other academic or extrinsic incentives were involved.

Shortly after their arrival on campus in September, another meeting was held with subjects who had expressed an interest in participating. At that time, the interaction record was explained more fully. The record, a sample of which is shown in Figure 1, was to be completed for every interaction that lasted 10 minutes or longer. An interaction was defined as any encounter with another person(s) in which the participants attended to one another and adjusted their behavior in response to one another. Examples were provided (e.g., sitting next to someone in a lecture was not appropriate, whereas talking during the lecture for 10 minutes was), and the various categories were discussed until everyone felt comfortable with the forms. A more detailed description may be found in Wheeler and Nezlek (1977). It was suggested to subjects that they fill out the records at a uniform time, such as before going to sleep. To encourage daily recording, subjects were asked to return their completed forms and pick up blank ones every few days. Throughout the study, a collaborative, nondeceptive atmosphere was maintained, which we believe aided the gathering of valid data. Confidentiality of the records was emphasized and closely guarded throughout. At the conclusion of each 10-day record period, a brief

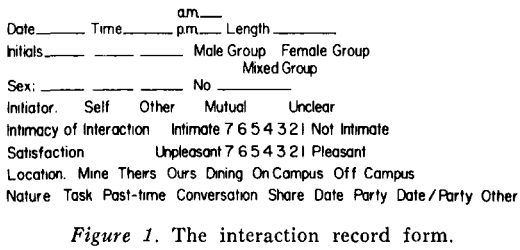

Figure 1. The interaction record form.

interview with one of our research assistants was held. During that session, the interviewer probed for difficulties, ambiguities, and potential sources of inaccurate data. In particular, subjects were urged to inform us of anything that might have impeded their accuracy.

At the conclusion of the final interview, subjects were informed that we wished to photograph them in order to investigate the effects of physical attractiveness. They were told the slides would be evaluated at another university and would never be shown on this campus nor used for any other purposes. Further, they were allowed to reclaim their slides at any point. One subject declined to be photographed.

Uniform mid-thigh to over-the-head photographs were taken, with a beige background curtain. All subjects were asked to smile, and the most favorable of a minimum of 2 slides (as judged by the investigators) was used. Subjects had not been forewarned that they would be photographed; we sought photographs that would reflect their "everyday appearance." The 71 final slides were then grouped by sex and were randomly arranged within sex. They were judged by an introductory psychology class of 47 males and 49 females at another university 75 miles away. This university is essentially similar in its orientation and in the type of students it attracts. Although a group rating session was used, the need for independent ratings was highlighted, and the students remained silent throughout. They were instructed to use their own, personal standards of physical attractiveness. Each slide was judged on the same 1–15 scale, with the high end indicating greater attractiveness. To provide a general orientation, the entire set of slides was shown once. They were then rated on a second viewing, 25 sec per slide. All of the female slides were shown first, followed by the males.

Construction and Nomenclature of Interaction Variables

From the raw interaction records, composite indices were created in the following manner: *satisfaction*—mean reported satisfaction over all interactions; *intimacy*—mean reported intimacy over all interactions; *length*—mean reported length of all interactions; *per day*—mean reported number of interactions per day; *time per day*—mean reported length summed across all interactions per day; *list*—number of different individuals interacted with during the entire record-keeping period; *percentage*—percentage of all interactions falling into that category; *initiation*—proportion of all interactions that were self-, other, mutually or unclearly initiated (must sum to 1.00 for each subject); *nature*—proportion of all interactions that were tasks, passing time, conversations, sharing thoughts and feelings, dates/parties, or other activities (must sum to 1.00 for each subject).

Each of these categories was then subdivided in accordance with the sex composition of the encounter: *same sex*—interactions including up to three members of the same sex; *opposite sex*—interactions including up to three members of the opposite sex; *mixed sex*—interactions including three others, at least one of each sex; and *group*—interactions including more than three other people. *Overall* measures incorporate all interactions. The same- and opposite-sex categories were then further divided to distinguish the processes inherent in close and less close relationships. Interaction partners were first rank-ordered within each time period by their frequency of occurrence. Where duplicate sets of initials appeared, subjects were asked to provide distinguishing middle initials. Each of the interaction measures was then computed for subjects' three best friends (i.e., satisfaction, intimacy, etc., for those interactions in which the three most frequently reported partners participated) and other friends (i.e., those interactions including friends ranked fourth through last). The appropriateness of frequency to define closeness has been discussed earlier (Wheeler & Nezlek, 1977). In their sample, 93% of respondents named one of the three most frequent interactants as their best friend. It should be noted that some of the categories listed above contained no observations for some subjects. These entries were treated as missing data in the analyses.

Results

Accuracy of the Interaction Records

All subjects were interviewed individually after each data collection period. The record was examined for any peculiarities, subjective impressions were elicited, and a standardized interview was given.

The following questions were analyzed with a 2 (Sex) × 4 (Time) unweighted analysis of variance. No sex differences were found, but some variables exhibited significant linear time trends that are reported below, along with their means. (a) Degree of difficulty recording interactions (1 = no difficulty, 7 = very much difficulty): Time 1 = 2.90, Time 2 = 2.84, Time 3 = 2.73, Time 4 = 2.52; $F(1, 60) = 7.74$, $p < .01$. (b) How accurate did the student perceive his/her records to be? (1 = very accurate, 7 = very inaccurate): Time 1 = 2.44, Time 2 = 2.42, Time 3 = 2.85, Time 4 = 2.76; $F(1, 60) = 27.72$, $p < .01$. (c) What is the student's guess of the percentage of interactions not recorded? Time 1 = 10.94, Time 2 = 10.01, Time 3 = 8.90, Time 4 = 9.11; $F(1, 60) < 1.00$, *ns*. (d) How does the student rate the extent to which keeping the record interfered with his/her interactions? (1 =

Table 1
Mean Rating and Mean Variability of Stimulus Persons' Attractiveness

Stimulus persons	Male raters	Female raters
Mean attractiveness[a]		
Males		
M	5.51	5.15
SD	1.24	1.52
Females		
M	6.31	6.64
SD	1.78	1.88
Mean standard deviations of attractiveness across raters		
Males	5.05	6.46
Females	5.83	6.81

[a] There are 36 female and 35 male stimulus persons and 49 female and 47 male raters.

a great deal of interference): Time 1 = 1.55, Time 2 = 1.37, Time 3 = 1.21, Time 4 = 1.29; $F(1, 60) = 6.88$, $p < .01$. (e) Did such interference increase or decrease during the record keeping period? (1 = decreased, 2 = no change, 3 = increased): Time 1 = 1.87, Time 2 = 1.94, Time 3 = 2.02, Time 4 = 1.98; $F(1, 60) = 4.69$, $p < .05$. (f) Did the student consider his accuracy to have increased or decreased during the record-keeping period? (1 = decreased, 2 = no change, 3 = increased): Time 1 = 2.31, Time 2 = 2.27, Time 3 = 2.06, Time 4 = 2.05; $F(1, 60) = 8.15$, $p < .01$.

Although these self-reports cannot be construed as objective measures of accuracy, taken together they indicate that subjects felt the diaries were representative of their social lives. The linear time trend suggests that the record-keeping became easier over time, although the lack of effect on the percentage of interactions not recorded indicates that this was not due to differential reporting of interactions. Furthermore, mean differences were small when compared to the scale endpoints. When combined with the lack of sex differences, these data imply that our results are not likely to have been due to differential recording. It is useful to note further that these values are nearly identical to those reported by Wheeler and Nezlek (1977). Although the present study did not include sufficient pairs of interactants acquainted with each other to compute reliabilities, theirs did. Intraclass correlations for their subjects, sorted by sex and time, ranged from .67 to .84. As the present measures and procedures are highly similar, their data may be taken as evidence of adequate reliability.

Ratings of Physical Attractiveness

Before discussing the relationship of attractiveness and interaction, it will be useful to examine the nature of the ratings themselves. Male and female raters tended to agree on relative attractiveness ratings. Their mean ratings correlated .96 for male stimuli and .95 for female stimuli. This is consistent with reports of other studies (cf. Berscheid & Walster, 1974). However, mean differences appeared such that pictures of females were seen as more attractive than pictures of males, $F(1, 92) = 8.94$, $p < .01$. This difference was also greater for female raters than it was for males; the Sex of Picture × Sex of Rater interaction is also highly significant, $F(1, 92) = 30.46$, $p < .001$; the respective means are shown in Table 1 and are similar to those found in previous research (e.g., Morse, Reis, Gruzen, & Wolff, 1974). The extremely high correlations indicate that the sexes agreed in their relative rankings. The variances of stimulus persons' level of attractiveness did not differ by sex of subject or rater, $F_{max}(4, 35) = 2.29$, *ns*.

The bottom part of Table 1 presents the average standard deviation of the 96 judges' ratings of each stimulus person, that is, the extent to which judges agreed or varied as to each person's attractiveness. Analysis of these ratings indicated that female raters tended to vary more than male raters, $F(1, 69) = 36.31$, $p < .001$. No other effects approached significance. Therefore it appears that the sex differences to be reported below cannot be attributed to heterogeneity of variance in females' and males' attractiveness. As the difference between male and female raters' overall mean judgments is small (1.14 units on a 15-point scale), it also seems unlikely that this accounts for sex differences, since both genders were rated in the mid-regions of

attractiveness. For all analyses, mean physical attractiveness scores were obtained by averaging across all raters. Systematic sex-of-rater differences did not affect any of our results.[1]

Attractiveness and Social Interaction

Because of the large number of variables and computations, our analytic strategy warrants delineation. Unlike Wheeler and Nezlek (1977), who used analyses of variance to identify sex differences in interaction, the present research concerned the relationship of physical attractiveness to interaction. A correlational approach is therefore more appropriate. Since the major hypothesis posited a simple linear relation, the first step was to compute Pearson product-moment correlations between mean physical attractiveness on the one hand and the interaction indices on the other, separately for all four time periods. The various social interaction parameters were broken down for overall, same, opposite, mixed, and group composition; their correlations with attractiveness are presented in Tables 2 through 4 and 6 through 8. Correlations for the three best and other friends breakdown are discussed only for those instances in which they deviated from the combined results and therefore shed additional light on the phenomena. Results for the primary dependent variables, interaction quantity and quality, will be presented first, followed by the secondary measures of initiation and nature of the interaction.

A brief note on the quantity of computations is in order. Of course, computation of such a massive set of correlations necessarily produces a substantial number of chance-generated significant correlations (using the .05 criterion, 1/20). The only possible control for spurious conclusion drawing will be internal consistency across time periods and variables. Consistent, repeated, and strong data patterns will be treated as meaningful results; isolated significant correlations will be noted but considered cautiously.

Interaction Quantity

Table 2 presents the correlations between interaction quantity and attractiveness for males. These results are strong and striking. Physically attractive males socialized with more females, more frequently, longer per interaction and per day, and as a greater proportion of their total social participation. They also engaged in mixed-sex encounters more often and with a greater duration. By contrast, attractive males reported interacting

Table 2
Correlations of Interaction Quantity and Physical Attractiveness for Males

Composition/ variable	Time 1	Time 2	Time 3	Time 4
Same list	−.03	−.18	−.33	−.39
Opposite list	.59	.32	.52	.57
Same percent	−.62	−.49	−.68	−.69
Opposite percent	.57	.40	.63	.65
Mixed percent	.32	.29	.54	.49
Group percent	.16	.08	−.07	−.01
Overall per day	.23	.14	.22	.13
Same	−.25	−.20	−.46	−.60
Opposite	.60	.35	.65	.56
Mixed	.44	.29	.59	.49
Group	.22	.12	−.03	−.00
Overall length	.21	.35	.44	.31
Same	−.03	.07	−.09	.21
Opposite	.17	.26	.64	.70
Mixed	−.04	.47	.33	.00
Group	.14	.20	.35	.13
Overall time	.38	.35	.44	.30
Same	−.15	−.14	−.40	−.41
Opposite	.61	.40	.67	.60
Mixed	.49	.51	.65	.51
Group	.22	.26	.18	.12

Note. *ns* vary from 33 to 36. Two-tailed critical values of r for 31 df are as follows: $r = .29$ ($p < .10$); $r = .34$ ($p < .05$); $r = .44$ ($p < .01$). Length *ns* vary from 24 to 35 because some subjects had no interactions in either the group or opposite-sex categories.

[1] To control for the possibility that the sex-of-rater differences might have affected these measures, mean attractiveness was also computed from standard scores, thereby equalizing the sex-of-rater means and standard deviations. None of these correlations differed from those presented by more than .01. Further, correlations calculated separately for subjects' ratings by male judges and by female judges revealed results virtually identical to those presented. Thus the sex-of-rater differences that emerged seem not to be related to social interaction. Copies of these analyses are available from the senior author on request.

Table 3
Correlations of Interaction Quantity and Physical Attractiveness for Females

Composition/ variable	Time 1	Time 2	Time 3	Time 4
Same list	.12	−.05	−.02	−.26
Opposite list	−.10	.26	.13	.00
Same percent	−.01	−.01	.05	−.16
Opposite percent	−.15	−.03	−.02	.10
Mixed percent	.24	.05	−.05	.09
Group percent	.22	.10	.09	.39
Overall per day	.11	.13	−.04	−.20
Same	.11	.09	.01	−.23
Opposite	−.16	.04	−.01	−.03
Mixed	.24	.14	−.07	−.08
Group	.22	.16	.06	.18
Overall length	−.02	−.12	−.11	.21
Same	−.04	−.05	−.04	−.21
Opposite	−.05	−.10	−.18	.32
Mixed	.21	−.15	−.21	.27
Group	.11	−.17	−.06	−.11
Overall time	.17	.00	−.14	−.04
Same	.04	.07	−.06	−.28
Opposite	−.09	−.05	−.00	.11
Mixed	.35	−.03	−.15	.11
Group	.19	.02	−.01	.25

Note. *ns* vary from 34 to 35. Two-tailed critical values of r for 32 df are as follows: $r = .29$ ($p < .10$); $r = .34$ ($p < .05$); $r = .43$ ($p < .01$). Length *ns* vary from 31 to 35 because some subjects had no interactions in the group category.

with fewer other males, less often, and as a smaller proportion of their daily socializing, although the length of these encounters was unaffected. Interestingly, these decrements in same-sex involvement grew stronger over time, perhaps suggesting that as their first year of college progressed and academic/extracurricular pressures increased, social interaction necessarily became more selective. Early in the year, interaction with females was essentially irrelevant to time spent with other males; later it precluded it. Group interactions showed no significant relationships with appearance for males.

The corresponding correlations for females are shown in Table 3. Immediately apparent is the lack of significant relationships between interaction quantity and physical appearance. Only one correlation, that with the proportion of group interactions during the fourth time period, was significant at the $p < .05$ level. Since this general paucity of significant correlations was surprising, the data were further scrutinized for nonlinear relationships. No significant quadratic (i.e., either inverted or upright U-shaped bivariate frequency distributions) relationships were found. Another set of exploratory analyses investigated hypotheses positing a heteroscedastic relationship. Attractiveness did not have more of an effect at higher levels of beauty (as suggested by Miller, 1970) or at lower ones. That is, there were no scatterplots resembling a funnel placed on its side. This was confirmed by splitting the subjects into three equal groups of high, medium, and low attractiveness. These three groups did not significantly differ in variance on any consistent set of interaction variables. Finally, there was no evidence to support the contention that appearance most restricts the options of the least attractive, these restrictions diminishing as attractiveness increases (i.e., what might be visualized as the lower right-hand triangle of a diagonally divided cube). Thus, the results for interaction quantity may be summarized succinctly: For males, beauty related positively to interaction with women and negatively with men; for females, there were no discernible correlates.

Interaction Quality

Table 4 presents the Pearson correlations between attractiveness and self-reported intimacy and satisfaction for both sexes. Looking at females and males simultaneously, perceived intimacy did not relate to appearance. Satisfaction revealed the more intriguing pattern of an increasingly positive correlation with attractiveness over time, most apparently so in interactions including members of the opposite sex. All 10 satisfaction correlations increased in positivity from the first time period to the third and fourth, and although only 2 of the Time 4 correlations were significant at $p < .05$ (opposite-sex satisfaction for females and males), the remainder were in the appropriate direction approaching significance (for 7, $p < .15$). Examination of the satisfaction–attractiveness correlations for best and other friends separately revealed that this increment occurred primarily for other friend

relationships. For females, attractiveness maintained a steady correlation with three best opposite-sex friends satisfaction (.23, .07, .19, .12), whereas it increased steadily for other opposite-sex friends (−.15, .18, .23, .39). For males, attractiveness showed similarly small changes with the three best opposite-sex friends (−.08, .18, .30, .17) and large gains with other opposite sex friends (−.28, .07, .25, .58). Comparable results were found for females' same-sex relationships (three best: .07, .08, .20, .19; others: .01, .12, .41, .33), although not for males. Thus, the increasingly positive relationship between attractiveness and satisfaction over time seems to derive primarily from changes in more peripheral opposite-sex interactions.

Table 4
Correlations of Interaction Quality and Physical Attractiveness

Composition/ variable	Time 1	Time 2	Time 3	Time 4
	Males			
Overall intimacy	.20	.17	.16	.23
Same	.19	.16	.08	.21
Opposite	.03	.16	.32	.25
Mixed	.27	.21	.10	.09
Group	.12	.16	−.02	.12
Overall satisfaction	.06	.10	.17	.28
Same	−.03	−.04	.03	.17
Opposite	−.17	.04	.36	.41
Mixed	−.00	.06	.14	.15
Group	.04	.08	.01	.19
	Females			
Overall intimacy	.21	−.05	.25	.15
Same	.24	.00	.27	.27
Opposite	.23	−.20	.37	.31
Mixed	.04	−.01	.24	.09
Group	.07	−.05	.34	.22
Overall satisfaction	.03	.01	.21	.25
Same	.04	.07	.29	.22
Opposite	.24	.08	.21	.41
Mixed	−.04	.01	.21	.26
Group	−.11	−.10	.16	.30

Note. *ns* vary from 33 to 36. Two-tailed critical values of r for 31 df are as follows: $r = .29$ ($p < .10$); $r = .34$ ($p < .05$); $r = .44$ ($p < .01$). Group *ns* and male opposite sex *ns* vary from 24 to 35 because some subjects had no interactions in those categories.

Table 5
Correlations of Attractiveness Variance With Satisfaction

Composition/ variable	Time 1	Time 2	Time 3	Time 4
	Males			
Overall satisfaction	−.02	−.04	.07	.16
Same	−.10	−.16	−.04	.08
Opposite	−.22	.10	.38	.35
Mixed	−.05	−.09	.02	.13
Group	.04	−.04	−.03	.13
	Females			
Overall satisfaction	.17	.33	.42	.35
Same	.23	.37	.47	.29
Opposite	.16	.27	.43	.40
Mixed	.01	.34	.37	.37
Group	.05	.48	.41	.39

Note. *ns* vary from 33 to 36. Two-tailed critical values of r for 31 df are as follows: $r = .29$ ($p < .10$); $r = .34$ ($p < .05$); $r = .44$ ($p < .01$). Group *ns*, and male opposite sex *ns* vary from 24 to 35 because some subjects had no interactions in those categories.

An unexpected finding emerged at this point. In trying to account for the failure to support our original hypothesis regarding females' socializing, a number of potential alternatives centered on variability. For some subjects, judges readily agreed on the level of attractiveness; for others, there was greater disagreement. Accordingly, the variance of each subject's attractiveness was computed (i.e., the extent to which judges differed on the subject's attractiveness). As documented in Table 5, variance turned out to be a stronger predictor of female satisfaction across all composition interactions and during the final three time periods. For males, these same correlations tended to be nonsignificant. The potential meaning of this result will be commented upon in the Discussion section. However, none of the other interaction variables showed a consistent pattern of relationship with attractiveness variance.

Initiation of Interactions

Although Hypothesis 2 predicted equivalent relationships between attractiveness and interaction for both sexes, correlations for attrac-

Table 6
Attractiveness as Correlated With Initiation of Opposite-Sex Interactions

Variable	Time 1	Time 2	Time 3	Time 4
	Males			
Self-initiation	−.19	.08	−.11	−.49
Other initiation	−.34	−.23	.16	.05
Mutual initiation	.50	.25	.26	.29
Unclear initiation	.07	−.14	−.29	.30
	Females			
Self-initiation	−.12	−.25	.05	−.05
Other initiation	.04	−.01	−.22	−.10
Mutual initiation	.31	.11	.06	.09
Unclear initiation	−.35	.24	.26	.11

Note. *n*s vary from 33 to 36. Two-tailed critical values of *r* for 31 *df* are as follows: $r = .29$ ($p < .10$); $r = .34$ ($p < .05$); $r = .44$ ($p < .01$). Group *n*s, and male opposite sex *n*s vary from 24 to 35 because some subjects had no interactions in those categories.

tiveness and initiation were expected to differ by gender. Results did not support this prediction; however, they were consistent with the data pattern that has emerged so far. That is, for males, initiation did relate to attractiveness, chiefly in opposite-sex encounters. For females, no meaningful tendencies appeared. Table 6 lists the correlation between male- and female-rated attractiveness and the proportions of opposite-sex interactions falling into each of the initiation categories. As can be seen, beautiful males had a greater preponderance of interactions that they perceived as mutually initiated, and a lesser proportion of self- and other-initiated encounters.[2] Although the overall, same, mixed, and group initiation data did not reveal any set of results beyond chance expectation, it should be noted that a number of individual correlations were consistent with this trend, and none contradicted it. The following significant correlations with attractiveness were found for males: Time 1, overall other initiation: $r(33) = -.36$; Time 4, overall unclear initiation: $r(32) = .33$.

Nature of Interactions

The final set of interaction variables sorted all social events into six distinct categories:

Table 7
Males' Attractiveness as Correlated With the Nature of Their Interactions

Composition/ variable	Time 1	Time 2	Time 3	Time 4
Tasks:				
Overall	.10	.02	−.11	−.17
Same	−.01	−.05	.03	.03
Opposite	.21	.24	−.46	−.07
Mixed	.17	−.09	−.28	−.00
Group	.12	−.11	.22	.13
Pastime:				
Overall	−.27	−.38	−.49	−.43
Same	−.15	−.44	−.30	−.44
Opposite	.19	.09	−.08	−.39
Mixed	−.46	−.20	−.15	.16
Group	−.36	−.23	−.07	−.30
Converse:				
Overall	−.03	−.00	.30	.39
Same	−.02	.22	.22	.39
Opposite	.03	−.19	.41	.25
Mixed	.23	−.13	.14	.16
Group	.15	.00	−.16	.06
Share:				
Overall	.12	.19	.18	.20
Same	.11	.10	.15	.08
Opposite	−.15	.02	.22	.34
Mixed	−.03	.42	−.13	.11
Group	−.09	.08	−.11	−.04
Party/Date:				
Overall	.16	.27	.23	−.06
Same	.11	.05	−.15	−.19
Opposite	−.17	−.05	.07	.05
Mixed	.25	.39	.29	−.23
Group	.18	.21	.31	.06
Other:				
Overall	.03	.08	.12	.03
Same	.02	.06	.29	.10
Opposite	.03	.05	−.01	−.17
Mixed	.01	−.28	−.04	−.25
Group	−.21	−.24	−.00	.14

Note. *n*s and significance criteria are the same as in Table 2.

tasks, pastimes, conversations, sharing feelings, dates/parties, and others. This was done to examine qualitative differences in the manner in which attractive and less attractive individuals spend their social time. To control for

[2] Because of skew in the distributions, Spearman rank-order correlations were computed to ensure that these findings were not attributable to a few anomalous cases. All significant correlations remained significant in this analysis.

quantity differences, each score represented the proportion of all interactions of that sex composition spent in that domain. Among other things, these variables will allow us to test in our data the one finding most often reported in the literature: that attractive individuals date more frequently.

Table 7 presents these correlations for males. More attractive men appear to be spending a larger proportion of their interactions in conversations and a smaller proportion in pastimes and, to a lesser extent, in tasks, the two activity-centered dimensions. This pattern was spread across all of the sex composition categories and time periods, although the results were most consistent for overall and same-sex interactions, as well as for the latter two time periods. There was also a less consistent tendency for attractive males to date/party relatively more frequently in mixed-sex settings. Comparison of the three best friend and other friend correlations did not reveal any distinguishing trends.

The corresponding correlations for females are listed in Table 8. As with their male counterparts, attractive females tended to occupy a lesser proportion of their interactions with tasks. They also reported proportionally fewer "other" activities and sharing feelings. In contrast, they experienced more prevalent date/party interactions, notably including more than one other person, as most party interactions might. In the literature, attractiveness typically reveals a positive correlation with the *number* of dates, and it does in our data as well. The number of mixed-sex – date/party interactions correlated .30, .10, .32, and .36 with attractiveness over the four time periods (all but the second figure are significant at $p < .08$). These dates/parties tended to involve peripheral rather than their three best male friends: the attractiveness – opposite-sex others – date/party correlations approached significance at $p < .11$ for Time 3 and Time 4, both $rs(33) = .26$. Thus, support for the hypothesis that attractive women date more often is contained in our data.

Table 8
Females' Attractiveness as Correlated With the Nature of Their Interactions

Composition/ variable	Time 1	Time 2	Time 3	Time 4
Tasks:				
Overall	−.12	−.11	−.17	−.12
Same	−.19	−.16	−.10	−.09
Opposite	−.28	−.10	−.25	.06
Mixed	−.08	−.04	−.43	−.21
Group	.13	−.11	−.08	−.33
Pastime:				
Overall	.04	.05	.16	.16
Same	.14	.01	.24	.08
Opposite	.02	.16	−.00	−.06
Mixed	.10	.01	.09	.09
Group	−.05	−.08	−.03	.13
Converse:				
Overall	−.13	.13	−.16	−.21
Same	−.19	.23	−.15	−.11
Opposite	.18	.25	.12	−.02
Mixed	−.10	−.00	.04	−.17
Group	−.09	.15	−.03	.04
Share:				
Overall	.05	−.33	.10	.11
Same	.15	−.35	.05	.19
Opposite	−.01	−.34	.01	−.02
Mixed	.11	−.13	.27	.17
Group	−.15	−.13	.25	.21
Party/Date:				
Overall	.29	.13	.29	.46
Same	.16	.26	.16	.10
Opposite	.05	−.09	.14	.12
Mixed	.06	.22	.28	.48
Group	.23	.20	.14	.30
Other:				
Overall	.17	.13	−.05	−.15
Same	.06	.18	−.25	−.38
Opposite	.22	.10	.20	.10
Mixed	.01	.06	−.19	−.20
Group	−.08	−.15	−.30	−.48

Note. *n*s and significance criteria are the same as in Table 3.

Discussion

We will begin discussing and interpreting our results by summarizing the predominant trends that bear on our three initial hypotheses. (a) Physical attractiveness was strongly related to the quantity of social interaction for males, positively with the opposite sex and negatively with the same sex; no significant pattern emerged for females. (b) For both sexes, satisfaction, particularly with op-

posite-sex interactions, showed an increasing tendency over time to be positively correlated with attractiveness. (c) Females with more variable attractiveness ratings were more likely to be satisfied with their socializing. (d) Physically attractive males tended to have more mutually initiated and fewer self or other initiated interactions with the opposite sex. (e) Attractive males spent more of their interactions conversing and less in activities; attractive females also reported a lesser proportion of task interactions and more prevalent date/parties.

Thus, Hypothesis 1 was clearly supported, but only for males. Of course, this means that Hypothesis 2 was not supported, but the findings are interesting in that they challenge folk wisdom: Attractiveness was a more important concomitant of social interaction for males than for females. Finally, Hypothesis 3 was supported in that most correlations with attractiveness endured over time. Correlations that changed, such as those for satisfaction, grew stronger as the academic year progressed.

That male attractiveness was broadly and quite strongly related to the quantity of interaction is consistent with other results reported by Berscheid et al. (1971), Krebs and Adinolfi (1975), and Walster et al. (1966). Prettier males had more and longer interactions for more time per day with more different females, both alone and in mixed-sex company. In contrast, they had fewer interactions with fewer other males. In addition, interactions involving females occupied a greater proportion of their social lives. Apparently, these males expanded their opposite-sex contacts at the expense of, rather than as a supplement to, their same-sex socializing. Perhaps their beauty makes them more acceptable to female partners and therefore less likely or less able to seek companionship elsewhere. Attractive males may also have experienced more positive feedback in opposite-sex encounters in the past, producing greater confidence, enjoyment, and attraction to relationships with women. This explanation is favored by the finding that these interactions were more likely to be conversations than tasks or pastimes and that they tended to be mutually initiated. A conversation focuses attention on the people involved. Anxiety or general unease would lead one to seek "something to do" in order to avoid awkward unfilled moments or self-focusing (objective self-awareness). Similarly, greater reliance on mutual initiation implies less of a seeking or being-sought orientation and more of a natural progression of chance contacts into interactions lasting at least as long as our criterion of 10 minutes. Along with Goldman and Lewis's (1977) finding that attractive males were more socially skillful in anonymous telephone conversations, it appears that beautiful males' greater heterosexual contact reflects greater self-assurance and skill. Doubtless, social anxiety stems from prior experiences. However, critical self-assessments may lead unattractive males to withdraw from heterosexual contact, thereby "proving" their own hypothesis in the manner of a self-fulfilling prophecy. Skills and confidence require practice, and one simply comes to prefer interactions with other males. By avoiding contact with women, rejection, particularly without externalizing justifications that maintain self-esteem, is not possible (Jones & Berglas, 1978).

It is perplexing that our data revealed no similar relationships for females. Prior research and popular wisdom suggest more prevalent effects for females, with the exception of Byrne et al. (1970), who found that attraction correlated more strongly with their dates' physical beauty for female subjects than males. Supporting a "no relationship" conclusion over experimental artifact is our replication of the basic datum reported in prior research: Attractive females reported more date/party interactions. However, this did not extend to other quantitative indices of their social lives.

One potential explanation centers on male–female differences in orientation to social interaction, differences that Deaux (1977) has characterized in terms of self-presentational style. Males, according to Deaux, are likely to choose a *status-asserting* manner, seeking to establish a more dominant position for themselves. In contrast, females prefer an affiliative, or *status-neutralizing,* style that minimizes status differentials and instead builds egalitarian bonds. If one thinks of beauty as a social asset, then more attractive males

would perceive their chances of acceptance as higher (Huston, 1973) and would consequently seek interaction with females to enhance their social status. Less attractive males would assess their lot less favorably and shun interaction with females, since there was little stature to be gained. (Interestingly, Morse et al., 1974, found that males who rated females' attractiveness more highly dated less.) A related alternative states that many males fear rejection by attractive women. For females, self-perceptions of beauty would be less important, since the choice of an interaction partner would not be based on developing status differentials, but instead on eliminating them. The interaction and relationship itself is the focus, rather than any gains in social standing. The absence of a particular type of interaction or partner then leads simply to choosing a substitute, since there is greater latitude in the scope of acceptable activities and partners. Attractiveness may therefore not be so relevant to whether, and in what manner, a female socializes.

As for our qualitative indices, two general trends were identified. That satisfaction showed a tendency to be increasingly positively correlated with attractiveness over time is revealing, since it has often been presumed that the importance of appearance diminishes temporally. However, the first year of college involves social exploration and experimentation before stable, enjoyable socializing styles are found and established. At first, the choice of interaction partners may be of a "hit-or-miss" variety, satisfaction being somewhat randomly determined. Presumably, attractive persons have more options in the selection of partners, which would allow them greater choice in this process. It seems obvious that greater social assets would permit one to select more desirable relationships. In addition, the heightened sense of personal control would make for greater satisfaction as well. Herold (1979) also found that college students' social satisfaction correlated with their attractiveness. Interestingly, he found this relationship to be somewhat stronger for males than for females.

An explanation of the fact that more variably attractive women were generally more satisfied must be more speculative, since this result was not anticipated. Our best hunch resides in the nature of attractiveness, sex role stereotypes, and the attribution process. In answering the question "Why is (isn't) this person interested in me?" it would seem that one's attractiveness or the lack of it is a sufficiently potent external cause to preclude more dispositional attributions about character, intelligence, personability, wit, charm, or mystery. In Jones and Davis's (1965) terms, a socially desirable external factor prevails. Everyone is aware of the stereotype stipulating that males are interested in females only for their looks, although most women (and men) would probably prefer to be liked for their dispositional qualities. The stereotyped view of males' attraction is presumably most compelling for women who receive rather uniform evaluations from others and whose assessments of their own beauty are somewhat accurate. In other words, consistency, consensus, and distinctiveness are high for the low-variability individual ("this man and all other men are always interested in attractive women like me but not other less attractive women"; note that we are positing attractiveness as an entity factor). On the other hand, if one's attractiveness is variable, for example, by possessing features which are "in the eye of the beholder," then the pattern favoring an external explanation is not present. Attraction is less likely to be perceived as covarying with beauty, since one has not received uniform feedback from others in the past. Attributions to other presumably more internal factors are more likely ("this man and only this man likes something about me"). The argument is that a woman will be more satisfied with being liked for her character than for her looks. A related point is that being liked by only some people may make one feel individuated in that relationship, a personally gratifying idea as well.

The use of naturalistic journal records to provide a comprehensive examination of ongoing social participation is of course fraught with many of the deficiencies that nonlaboratory data often entail. Of specific relevance here are three methodological issues: bias in the self-reports, uncontrolled and nonrandom "third variables" influencing and masking our effects, and the probability of Type I errors

attendant in the large number of statistics computed. Regarding biased reporting, the highly concrete format of the interaction record eliminated many of the errors that stem from variable memory and interpretation. Instructions were quite specific, and most subjects completed their entries daily. Because this procedure involves reporting more than judgment and therefore seems more amenable to accurate recall than general questions (e.g., "how many dates have you had in the last month?"), we believe that the journal records are less affected by self-serving and self-denigrating biases than are other techniques using less concrete procedures. This feeling is substantiated by the interview data presented earlier.

As for uncontrolled third variables, they are obviously present. We have traded the tight controls of the laboratory for the ecological validity of a more naturalistic approach. This seems appropriate, as our goal was not to establish causal linkages but rather to study attractiveness as it relates to people's natural social context. Laboratory research has yielded a well-defined set of guiding principles. Many factors may intervene in real life, however, modifying the general tendencies observed under stricter controls. Minimally, these might include self-selection of partners, longer durations of relationships, and the availability of alternative partners. The usual admonition that causal statements are not possible seems overly conservative, however. Causality may be inferred by extrapolation from the ready base of experimental literature. Social psychology may well be arriving at the luxurious threshold of articulately combining naturalistic and laboratory research into the coordinated study of social phenomena. More naturalistic research is clearly needed in this area. One important consideration would be replication of this study in a noncollege sample in which the subjects are older and are not residing in a self-contained social community.

Finally, a note on the large number of correlations computed is in order. Using a .05 cutoff, we may of course expect 1 of every 20 correlations to be significant, yielding the possibility of substantial chance findings. Consistency has been our guide to counteract this potential. The proportion of significant correlations in these data is well above 1/20. Additionally, we have avoided any inferences whatsoever about "significant" correlations that were well dispersed in the data and were not repeated across categories and time periods. For the primary findings, we believe chance causes may be ruled out.

From these data, nothing should be more apparent than the fact that physical attractiveness plays an important role in social participation, the nature of this effect being decidedly more complex than was initially suspected. The "what is beautiful is good" stereotype may well be the origin of meaningful variations in one's style, extent, and feelings about socializing. These would include social skills, social confidence, the manner of activities and relationships one chooses, and cognitons about those relationships and oneself. What first figures as a superficial, minimally consequential trait is thereby imbued with substantial importance. Considerably more research is therefore appropriate, paying attention not only to what people's implicit theories about physical attractiveness are but to the real-life ramifications of these beliefs as well. Such research entails the naturalistic study of people in a broad context as they go about their lives.

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