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Journal of Social and Personal Relationships 1990 7: 291

DOI: 10.1177/0265407590073001

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ACADEMIC PERFORMANCE AND SOCIAL BEHAVIOR

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This study investigated the relationship between the academic performance and social behavior of a sample of college students. In support of the primary hypothesis, for males, academic performance was negatively correlated with both the quality and quantity of their social interactions. For females, academic performance and social interaction were not correlated. This was true when both same and opposite sex social interactions were examined.

In the popular culture, the relationship between academic and social success has been represented by two stereotypes, each suggesting a different relationship between these two aspects of a student's life. One character is the bookworm who is usually found studying in one place or another while everyone else is at the football game, dance, etc. This stereotype portrays academic and social success as being mutually exclusive for the most part. In contrast to the bookworm is the Big Man On Campus (BMOC), someone who is simultaneously successful socially, athletically and academically. These stereotypes are pervasive, and have different implications for the relationships among success in different areas of behavior. Yet, there has been little research on the relationship between academic performance and social behavior, a deficiency the present study was intended to remedy.

There has been a considerable amount of research on predicting academic performance in both collegiate and non-collegiate populations. Much of this research has concerned the predictive power of such standardized measures as the SAT or the ACT, or has focused

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Journal of Social and Personal Relationships (SAGE, London, Newbury Park and New Delhi), Vol. 7 (1990), 291–309

upon the relationships among success in different academic areas. Other approaches have investigated the predictive power of socio-economic, demographic and historical variables. A popular psychological perspective used to understand academic performance has emphasized motivation, specifically achievement motivation. (See Sewell et al., 1976, for a broad discussion of the issues related to predicting academic achievement.) Other psychologically oriented research has used different personality measures, frequently the Edwards Personal Preference Scale. However, these studies have not examined academic achievement in the broader context of students' social lives. In Feldman & Newcomb's (1969) extensive review of research on the impact of college only 21 of 338 pages are indexed as containing a reference to grades.

The failure to consider academic achievement within the context of students' social lives is noteworthy. First, there is ample research suggesting that the social environments that exist in parallel with work environments can affect the amount and quality of work produced. Second, research has demonstrated that social norms and attitudes influence academic performance (see Feldman & Newcomb, 1969, for a summary of some of this work). Assuming that social norms and social behaviors are related, this suggests a relationship between social behavior and academic performance. Third, it would seem to be quite helpful within an applied context to understand the extent to which behaviors (and perhaps by implication, abilities or motivation) in different areas are related. Although theories about such relationships abound, more empirically based studies are needed.

There has been some research concerning the relationship between academic performance and social behavior, or its assumed correlates. These studies vary considerably in how they operationalize these constructs, in the relationships they find between them, and in the samples studied. Beelick (1973) found a positive relationship between students' grades and their level of general satisfaction, part of which was determined by satisfaction with personal relationships. Similarly, Bell (1967) found that high school dropouts were generally less active than those who completed school, where activity included a social component. Pulvino & Mickelson (1972) reported a negative correlation between reports of grades and social isolation for males, but no relationship between the two variables for females. In contrast, Grinder (1965) found negative relationships between grades and four different measures of interest in

social dating for males. For females, only two of these measures were negatively related to grades, while two were not correlated.

Some research suggests that academic performance and social behaviors are independent. Using various temperament variables, including measures of sociability and affiliation, Bayer (1968) was unable to distinguish college dropouts from those who graduated. Similarly, Coombs & Davies (1967) found no relationship between a self-report of sociability and collegiate scholastic success. Another null result was reported by Goldfriend & D'Zurilla (1973) in a study of college males. They found no relationship between scales of the Survey of Study Habits and Attitudes (Brown & Holtzman, 1966) and peer ratings of subjects' effectiveness in relationships. There was, however, a significant negative correlation (-0.38) between peer ratings of subjects' effectiveness of study habits and effectiveness in relationships with members of the opposite sex.

Some studies have found relationships between academic performance and social behaviors, usually for males only, however. Granting the undocumented assumption that joining a fraternity or sorority is associated with the higher levels of social activity and/or competence, Bradshaw & Kahoe (1967) reported results somewhat in agreement with those of Goldfriend & D'Zurilla. Academically promising males who joined a fraternity had significantly lower grades after four years than did a control sample of non-members. In contrast, joining a sorority did not affect the grades of females. This finding agrees with the conclusion of Feldman & Newcomb (1969) that

... there are somewhat more studies showing fraternity men lower in academic achievement than studies showing no difference or studies showing fraternity men higher. On the other hand, ... sorority women are either higher or no different in grade point average from non-sorority women — they are rarely lower. (Feldman & Newcomb, 1969: 216)

Feldman & Newcomb go on to say that, in general, the effects of membership in a Greek organization are difficult to predict because of the wide variability among these groups in their academic and social orientations.

A sex difference in the relationship between academic and social behavior was also suggested by Robinson (1969). This study compared the ratings of the general collegiate environment made in freshman year by three different groups of students: dropped out, withdrew and graduated. The results suggested that males who dropped out or withdrew during their four years had a more positive

evaluation of their first year social environment than those who graduated. Wyer & Terrell (1965) in a study on the effects of different motives on academic performance found that for males high in desire to seek academic recognition, a desire to seek social recognition was associated with lower grades. For males low in academic desire, the relationship between social goals and grades was reversed. Social goals did not combine with academic goals in the prediction of females' grades.

It appears from these studies, particularly those of collegiate populations, that academic performance and social activity are negatively related for males and are either unrelated, or less strongly related for females. Such results are consistent with existing research on sex differences in social interaction. Perhaps one of the most persistent themes to emerge from this research is the tendency of women to be more interpersonally oriented in their interactions than men. In contrast, men have been found to be more goal-oriented in their interactions (see Deaux, 1977, for a review of this literature). These differences suggest two mechanisms underlying social behavior–academic performance relationships that served as the bases for the hypotheses of the present study.

The first mechanism is a resource allocation model that requires two assumptions. First, the sexes do not differ (on average) in their total psychic and motivational resources, such as time, energy, etc. Second, males have social skills that require them to expend more of these resources to maintain a certain level of social activity. This greater expenditure of energy leaves less energy for other activities. Such a model is consistent with previous research; males are less socially graceful and/or concerned than females because they are less skilled and have to spend more energy on such activities.

The second mechanism relies on the fact that males are more goal-oriented regarding social behavior. Males may view their college experience in one of two mutually exclusive ways. They may make decisions that going to college is primarily a way to meet people and have a good time. This makes an active social life (i.e. social interaction) a goal and is accompanied by a de-emphasis on academics. Alternatively, they may consider college more as an academic and/or career training opportunity, resulting in an emphasis on academics, not on friends and a good time. In this second instance, social interaction is also thought of as a goal, but not as a goal to be pursued.

Either of these mechanisms would lead to the conclusion that

social activity and academic performance are negatively related for males and unrelated for females. Within the resource allocation model, it costs more of their personal resources for males to be socially active than it does for females, producing a negative correlation between social activity and academic performance for males and no relationship for females. In considering goal orientation, males make a decision to be *either* socially active *or* academically oriented. Females do not make such mutually exclusive decisions, again resulting in a negative relationship between social activity and academic performance for males and no relationship for females. These models are not incompatible; they can exist simultaneously. Perhaps the exclusive decision of males results from their recognition that their social skills make social exchange unusually resource-consuming and, if they are to succeed, they need to orient themselves one way or the other.

Although there is some consistency among previous studies in terms of their conclusions, there is little consistency in terms of their methods. Academic performance has been operationalized in a variety of ways, ranging from interest in school to attaining a degree. Studies have used a wide variety of measures of social behavior such as attitudes about social life or social environments or have used variables from which only a weak inference about social behavior could be made (e.g. fraternity–sorority membership). These inconsistencies weaken the confidence in conclusions that can be drawn from this research. For example, is the relationship between academic performance and social activity so broad that it includes all types of social behavior and measures of academic progress, or is the relationship different for different behaviors, for example same- and opposite-sex interaction? When subjects respond to a question such as ‘How good is your social life?’, are their answers more likely to be influenced by the quantity or by the quality of their interactions? Moreover, all subjects may not be influenced by the same factors in answering such questions; for some it may be same-sex relations, for others, opposite-sex relations that count most. Finally, are the relationships between social behavior (however operationalized) and academic performance consistent across different measures of academic performance?

The goal of the present study was to investigate the relationships between academic performance and social behavior in a fashion that overcame some of the deficiencies in the available research. The study involved a sample of college students who were studied

during their senior year. To have a clear operationalization of academic performance, academic performance was assessed through grades calculated from transcripts provided by a university registrar. Social behavior was measured using the Rochester Interaction Record (RIR), originally developed by Wheeler & Nezlek (1977). The RIR is a self-report, diary style technique that has been found to produce accurate and detailed summaries of the social behaviors of those who maintain it. These behavioral summaries have been useful in studying differences between the sexes in social behavior (Wheeler & Nezlek, 1977), relationships between physical attractiveness and social interaction (Reis et al., 1980) and a variety of other topics. (See Nezlek et al., 1983, for a summary of some of the work using the RIR.)

Maintaining the record is relatively simple. During a specified period subjects describe all social interactions they have lasting 10 minutes or longer. They use a short fixed-format record requesting quantitative and qualitative information about each event. Behavioral summary variables are calculated from the records. Quantitative summaries include variables such as number of different partners, frequency and length of contact, etc. Qualitative variables include more subjective indices such as perceived intimacy, quality and influence in interactions. Furthermore, the RIR permits the calculation of separate variables to summarize interactions with members of the same and opposite sex, or interactions with those who are close friends or only acquaintances. Previous research investigating academic performance–social behavior relationship has not permitted these distinctions. See Nezlek & Wheeler (1984) for a description of the strategy used to analyze data produced by the RIR.

Using behavioral summaries provided by the RIR, and indices of academic performance derived from the transcripts, the following hypothesis was formulated: academic performance would be negatively related to both the quantity and the quality of social interaction for males, but would be unrelated for females. In addition, patterns of social behavior will be examined to demonstrate the comparability of the present sample to others and to provide a broader context in which grade–behavior relationships can be considered.

Method

Subjects were 44 males and 55 females enrolled in a moderately sized, academically oriented, private Northeastern university. All subjects were seniors who lived on

campus at the time of the study. They maintained a record of their social behaviors for periods ranging from 7 to 18 days in November, during a time chosen to minimize conflict with holidays and examinations. The mean number of days subjects maintained the diary was 14.5, with a standard deviation of 1.9. All other data mentioned in this study were gathered during an interview following these diary-keeping periods, during separate testing sessions scheduled soon after these periods, or were obtained from the appropriate sources following the completion of consent forms by subjects, i.e. transcripts of grades from the university registrar's office.

Procedure

Subjects were recruited from a student directory for a 'research project on social interaction'. The only requirement was that they had to be seniors living on campus. During a brief meeting, the importance of understanding interaction patterns was explained and the students' role as collaborators in this naturalistic research was stressed. They were also told that they would be paid for their participation. No other incentives were provided.

Subjects were instructed to record every social interaction they had 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. simply sitting next to someone in a lecture was not an interaction, whereas talking with someone during a lecture was. As part of this orientation, the various response categories were discussed until everyone felt comfortable with the forms and the procedure. Instructions to the subjects indicated that intimacy did not have to include a sexual component. A verbatim description of this procedure may be found in Nezlek & Wheeler (1984).

To facilitate accurate recording, subjects were provided a scratch sheet and it was suggested that they complete the records at least once a day 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 forms every few days. A collaborative, non-deceptive atmosphere was maintained throughout the study, which we believe aided the gathering of valid data. Confidentiality of the records was emphasized and closely guarded throughout.

At the conclusion of the record-keeping period, a brief interview with one of the researchers was held. During this interview, subjects were questioned about the difficulties, ambiguities and potential sources of inaccuracy in their data. Based on these responses, the data of five participants were discarded. Following the interviews, subjects returned twice to provide additional data. During the second of these two sessions, subjects were paid, and were informed more fully as to the hypotheses of the study.

Measures of social behavior

Subjects' interaction diaries were analyzed using the RIRAP series of programs (Nezlek & Wheeler, 1984), a set of programs written specifically to analyze data generated by the RIR. The data generated by the RIR permit the calculation of a wide variety of summary variables. For purposes of the present study, two sets of these variables were used. One set of variables, *overall*, represented all the social interactions in a subject's record. A second set of variables classified interactions on the basis of the gender of the participants: *same sex*, all other persons represented on the record were of the same sex as the subject; *opposite sex*, all others opposite sex;

and *mixed sex*, others not of one sex. A discussion of this analytic framework can be found in Wheeler & Nezlek (1977) and Nezlek & Wheeler (1984).

Each set of variables contained similar qualitative and quantitative measures. Qualitative measures were the averages for each of the seven scales, *intimacy*, *self-disclosure*, *other disclosure*, *pleasantness*, *satisfaction*, *initiation* and *influence*, across all the interactions that fell into a particular category (e.g. same-sex interactions). Quantitative measures included: *per day* — mean number of interactions reported for each day of the study; *percent* — percentage of all interactions falling in a certain category; *length* — average length of interactions in a certain category; *time per day* — total time spent each day in interaction in a certain category; and *number of others* — number of different individuals represented during the entire record-keeping period. In addition, the general nature of the interaction *work*, *task*, *pastime*, *conversation* or *date-party*, was also represented by a percentage breakdown within each category of interaction. Variables were calculated separately for each subject, and when appropriate, corrected for the number of days subjects kept the RIR. In this way all subjects contributed equally to the final analyses.

Measures of academic performance

Transcripts provided by the registrar were used to calculate measures of academic performance. The university used a +/- system and the following scoring procedure was used: A = 4 points, B = 3 points, C = 2 points, D = 1 point, F = 0 point, with pluses and minuses representing +0.3 and -0.3 points respectively. Since different courses were taken for different numbers of hours of credit, grade point averages were weighted averages, with course credit hours serving as weights. Three different grade point averages were calculated: overall, average in major subject, and average for the semester in which the diary was kept.

Results

At the end of the record-keeping period, all subjects were interviewed individually, in part to assess their reactions to keeping the interaction diary. Subjects were questioned closely regarding how well they maintained their diaries and what inaccuracies they felt their diaries might possess. Subjects' responses strongly suggested that they kept their diaries accurately and that maintaining the diaries did not interfere with their social lives. The questions and subjects' average responses are presented below. (A) Degree of difficulty recording interactions (1 = no difficulty, 7 = very much difficulty), $M = 3.00$. (B) Perceived accuracy (1 = very accurate, 7 = very inaccurate), $M = 2.47$. (C) Estimate of the percent of interactions not recorded, $M = 6.53$. (D) Estimate of number of interactions which were less than 10 minutes, but were recorded, $M = 0.99$. (E) Extent to which keeping the RIR interfered with social life (1 = no interference, 7 = a great deal of interference), $M = 1.64$. (F) Perceived accuracy of other students in the study (1 = very

accurate, 7 = very inaccurate), $M = 3.10$. When males' and females' responses to these questions were compared, no significant differences were found (all p 's > 0.25).

Further confirmation of the accuracy of the records came from an analysis of how frequently pairs of roommates mentioned each other in their diaries. Seventeen pairs of roommates participated in the study and could be identified in each other's records. The number of times each roommate's initials appeared in the other's records was computed for days both roommates kept the diary. The intra-class correlation between these reports was 0.81, indicating a high degree of mutual recording.

Overview of academic performance and social behavior

Before presenting the data describing the relationships between academic performance and social behavior, a description of the sample in these two areas will be presented. These descriptions will provide a context within which grade-behavior relationships can be understood more fully. The university at which the study was conducted is highly selective. Average SAT scores for entering classes meet or exceed 1200. The campus atmosphere is academically oriented, many students aspire to, and eventually attend, graduate or professional school. There are few marginal students, particularly in comparison to larger, public universities with less stringent admission criteria. The students in the study were comparable to their classmates in terms of their academic performance. For subjects, the average cumulative Grade Point Average (GPA) for females was 3.06 ($SD = 0.40$), and for males it was 2.94 ($SD = 0.23$). Average GPAs in declared majors were 3.07 for females and 2.94 for males. None of these differences between the sexes was significant. All students graduated in the spring following the study.

Social interaction was described with two sets of measures. One described *overall* behavior, and the other described *same-sex*, *opposite-sex* and *mixed-sex* interactions separately. Differences between the sexes in *overall* behaviors were analyzed using one-way ANOVAs with subject sex as the between factor. Differences among the three different types of interactions were analyzed using two (subject sex) by three (interaction composition) mixed-model ANOVAs. The two disclosure measures were not analyzed because they were highly correlated with the intimacy measures (0.85 and above for both sexes for both self- and other disclosure).

The analyses of *overall* behavior revealed significant differences

between the sexes on many of the measures. The means describing males and females are displayed in Table 1. Compared to men, women reported more intimacy in their interactions, ($F(1,97) = 16.2, p < 0.01$); they found their interactions to be more pleasant, ($F(1,97) = 4.92, p < 0.05$); and more satisfying ($F(1,97) = 10.9, p < 0.01$). Males reported more self initiation of interactions ($F(1,97) = 8.79, p < 0.01$), although the sexes did not differ in terms of their influence once interactions had begun, $F < 1$. Females had more interactions per day than males ($F(1,97) = 4.53, p < 0.05$), although the sexes did not differ in terms of the average length of interactions or in time spent per day in interaction, both $ps = 0.3$.

An important feature of the RIR is its ability to describe social interaction using different classification systems. Classifying subjects' social interactions as a function of the sexual composition of the interaction provided a valuable perspective on their patterns of behavior. First, for all of the measures presented in Table 1 there were significant main effects for composition in the sex by composition ANOVAs. Moreover, there were numerous sex by composition interactions that qualified both the composition and sex main effects. The composition main effects that were *not* qualified by such interactions were the main effects involving quantity of interaction. There were composition main effects in the analyses of average length of interactions, ($F(2,194) = 21.6, p < 0.01$); of number of interactions per day, ($F(2,194) = 65.8, p < 0.01$); and of time per day spent in interaction, ($F(2,194) = 23.8, p < 0.01$). The relevant means are presented in Table 2.

These data indicate that same-sex interaction was the most common and that interactions involving opposite-sex others tended to be longer.

The analyses of the qualitative variables produced significant sex by composition interactions for all measures except satisfaction: intimacy, ($F(2,194) = 16.4, p < 0.01$); pleasantness, ($F(2,194) = 3.37, p < 0.05$); initiation, ($F(2,194) = 3.37, p < 0.05$); and influence, ($F(2,194) = 12.5, p < 0.01$). The relevant means are presented in Table 3.

Inspection of these means suggests that females perceived same- and opposite-sex contact to be virtually identical in terms of quality and intimacy. Males, however, reacted differently to these two types of interactions, finding opposite-sex interaction to be more pleasing and more intimate than same-sex contact. Analyses of initiation of, and influence over, interaction produced a different

TABLE 1
Overall behavior

Variable	Males	Females
Intimacy*	3.5 (0.95)	4.2 (0.72)
Quality*	4.9 (0.38)	5.1 (0.46)
Initiation*	4.1 (0.38)	3.9 (0.38)
Satisfaction*	4.3 (0.26)	4.5 (0.37)
Influence	4.0 (0.30)	4.1 (0.30)
Length	54.7 (17.9)	51.1 (16.2)
Per-day*	6.3 (2.18)	7.4 (2.72)
Time/day	376 (116.4)	350 (113.7)
No. same sex	1.58 (0.68)	1.51 (0.75)
No. opposite sex	9.94 (0.57)	1.34 (0.57)

Notes.

Standard deviations are in parentheses.

Significant sex differences are noted with *.

For initiation and influence higher numbers indicate more often initiation and influence.

TABLE 2
Interaction composition and quantity

Variable	Same sex	Opposite sex	Mixed sex
Length	46.7	52.9	61.8
Per-day	3.46	1.90	1.47
Time/day	150	103	85

Note. For all variables there was a significant composition main effect.

TABLE 3
Interaction composition, sex and affective reactions

Variable	Same sex		Opposite sex		Mixed sex	
	M	F	M	F	M	F
Intimacy	3.4	4.3	4.2	4.3	3.1	3.6
Quality	4.8	5.1	5.1	5.1	4.8	5.0
Initiation	3.9	4.0	3.8	4.3	4.1	4.2
Influence	4.0	4.0	3.9	4.2	4.2	4.2

Note. For all variables there were significant main effects for composition and significant sex \times composition interactions.

pattern. The sexes were relatively similar in initiating and influencing same- and mixed-sex interactions, but males reported relatively more self-initiation and influence in opposite-sex interaction than females.

Relationships between academic performance and social behavior

Relationships between academic performance and social behavior were assessed using correlations between measures of interaction quantity and quality produced by the RIR and measures of academic performance derived from transcripts. Correlations between social behaviors and the three GPAs (cumulative, major and semester) were calculated. These three sets of correlations were similar due to the high intercorrelations, 0.8 and above, among the three grade point measures. For simplicity's sake, only those correlations between cumulative GPA and social behavior will be presented.

The primary hypothesis of the study was that academic performance would be negatively related to the quality and quantity of social interaction for men, but unrelated to the social behavior of women. The correlations between measures of interaction quality and quantity and cumulative GPA presented in Table 4 supports

TABLE 4
Interaction quality, quantity and academic performance

Variable	Males	Females
<i>Overall</i>		
Quality	-0.38**	-0.12
Time per day	-0.42**	0.01
Length	-0.44**	-0.05
<i>Same sex</i>		
Quality	-0.30*	-0.12
Time per day	-0.28	-0.07
Length	-0.36*	0.00
<i>Opposite sex</i>		
Quality	-0.24	-0.13
Time per day	-0.30*	-0.07
Length	-0.41**	-0.08

* $p < 0.05$, ** $p < 0.01$.

this hypothesis. For men, there were significant negative correlations between their GPAs and their reports of the pleasantness they experienced in their interactions, between GPA and average length of interaction, and between GPA and time spent per day in interac-

tion. For women, there were no significant correlations between GPA and these measures of social behavior. In addition, there were no significant relationships between GPA and the intimacy and two disclosure measures, for either men or women (all r s were between -0.1 and $+0.1$). The same pattern characterized grade-behavior relationships for both same- and opposite-sex interactions.

One of the proposed explanations for the hypothesized results was that men were more likely than women to consider social and academic activities as mutually exclusive. For women, social interaction was assumed not to occur at the expense of other activities. Some additional results supported this explanation. The analysis of opposite-sex behaviors produced significant correlations between GPA and the nature of the activities that subjects engaged in, relationships not found in the overall and same sex analyses. For men, there was a positive correlation between GPA and the percent of opposite-sex *task* interactions, ($r(42) = 0.44, p < 0.05$); and a negative correlation between GPA and percent of opposite sex *pastime* interactions ($r(42) = -0.34, p < 0.05$). For women, percent of opposite-sex *pastime* interactions was positively correlated with GPA ($r(53) = 0.25, p < 0.06$). When academically successful men were with women, the focus of their interactions was less interpersonal than it was work-oriented, in comparison to their less academically successful counterparts. The data did not suggest such an exclusive focus for women.

Additional analyses

The university at which the study was conducted offered a wide variety of academic majors. Given this, the role that academic interest per se had in creating the present results had to be determined. Subjects were divided into two categories, the first including those majoring in the arts, humanities or social sciences, and the second including those majoring in the physical, natural or engineering/applied sciences. Women were more likely to be arts majors (78 percent), than men, more of whom were science majors (52 percent). This confounding of gender and academic major allowed for the possibility that the obtained sex differences were actually differences between two groups with different academic orientations. However, separate correlations calculated for each group of majors, for each sex, revealed that sex differences in grade-behavior correlations were not due to a confound of academic major and gender. Correlations for male arts and science

majors were similar to each other and to those presented in this paper, and the same held true for females with different academic orientations.

Another possible confounding variable was the academic load that subjects had during the semester when they maintained the diary. Although all subjects were full-time students and there were no sex differences in academic loads, there were individual differences in the number of semester hours that subjects carried during the study. Therefore, analyses were done to determine the role, if any, of these individual differences in determining grade-behavior relationships. There were no significant correlations between number of semester hours and measures of social behavior, nor did partialling academic load out of the grade-behavior correlations change them.

Discussion

The results of the present study supported the primary hypothesis that academic performance and the quality and quantity of social interaction would be negatively related for males and would be unrelated for females. Moreover, these relationships occurred with a sample that exhibited patterns of social behavior similar to those obtained in other research.

Before discussing grade-behavior relationships, we will consider the patterns of social behavior per se found in the study. These patterns of behavior are very similar to those found in previous interaction research. The level of activity, the distribution of different types of social events, and the mean responses on the different rating scales are quite similar to the data from other studies using the RIR. More specifically, same-sex behavior was the predominant form of social contact and there were considerable differences between the sexes in terms of their perceptions of and affective responses to interaction.

Differences between the sexes found in the present study agree with previous interaction research and with the broader literature on sex differences in social behavior. In terms of perceived quality and intimacy, women responded relatively similarly to same- and opposite-sex contact, whereas men reacted quite differently. Women found same-sex contact to be much more rewarding, both more pleasing and more intimate, than men did. In terms of control

of social events, the sexes did not differ in their perceptions of same-sex contact, whereas their perceptions of opposite-sex contact were different. Men felt that they were more likely to initiate opposite-sex contact and control its progress once begun than women did. In contrast, initiation and control of same-sex interaction were perceived similarly by the sexes. (For a more detailed discussion of these issues and of the comparability of results of different studies using the RIR, see Nezlek et al., 1983.)

The correlations between interaction measures and measures of academic performance clearly supported the primary hypothesis of the study. For men, there were strong negative correlations between their interaction quality and quantity and their grades, while for women there were no relationships. This pattern occurred regardless of type of interaction considered, overall, same-sex only, and opposite-sex only interaction. These quality and quantity measures were examined because they provided the most direct test of the hypothesis of the study. Of considerable interest however, is the fact that there were no similar relationships between grades and other measures of affective reactions to interaction, specifically, intimacy.

Correlations between interaction intimacy and quality were moderate (0.2 to 0.4 depending upon the specific type of interaction considered) and therefore, from a purely statistical perspective, there was no reason to expect that grade-quality and grade-intimacy correlations had to be similar. Nonetheless, the two variables are psychologically related, and they exhibited similar patterns in the analyses comparing the sexes, patterns that agreed with previous research and theorizing. The similarity in the analyses comparing mean reactions of the sexes, combined with the divergence in the correlational analyses, raises questions about the comparability of the mechanisms behind each phenomenon. That is, the mechanisms that account for sex differences in reactions to same-sex interaction may not be the same as those mechanisms responsible for the differences in grade-behavior correlations found in the study. More specifically, the mediators of intimacy and quality in interaction may be similar in some, but not all, respects.

To explore these issues further, analyses were done to take sex-role orientation into account. A considerable body of research suggests that sex differences in behavior are related to individuals' sex-role orientations. As part of a related study, subjects were given the Personal Attributes Questionnaire (Spence et al., 1975), a

measure of sex-role orientation. This questionnaire produces three scores: masculinity, femininity and masculinity–femininity. No significant relationship between any of these measures and GPA was found, for either males or females. Although this instrument has been successful in predicting social behavior in conjunction with other variables (see Wheeler et al., 1983) it did not provide any insight into the present results.

Two mechanisms formed the bases for the present hypothesis. One relied upon a resource allocation model in which it was assumed that women are more socially skilled than men, allowing them to be socially active without an accompanying cost in terms of their academic performance. The results of the study are consistent with such a model. Men with more active and more satisfying social lives were less successful academically than their less active and satisfied peers. These negative relationships included measures of both same-sex and opposite-sex interactions. For women, social behavior and academic performance were unrelated. Additional support for this model comes from data gathered for a related study, data that suggested that men were less comfortable in social situations than women. Men indicated more anxiety and avoidance of social situations on the Social Avoidance and Distress Scale (Watson & Friend, 1969) than women ($M_s. = 4.8, 3.2; F(1,83) = 4.20, p < 0.05$). If one assumes that greater anxiety and more avoidance are associated with fewer skills, then these results support the contention that men are less socially skilled than women and that maintaining social interaction is more resource-consuming for men than for women.

A second mechanism relied on the fact that males are more goal-oriented in their social behaviors. It was assumed that men were more likely than women to make decisions that considered academics and social relationships as two mutually exclusive sets of goals. In contrast, it was assumed that women were less likely than men to consider social interaction as a goal per se and therefore were also less likely to view interaction and other activities as mutually exclusive. For women, social interaction does not occur at the expense of another activity. Rather, their orientation is such that social interaction usually occurs *with* other activities. Within this framework, women did not see socializing and work as mutually exclusive activities, while men did.

Some of the results supported such a model. For males, there were positive correlations between GPA and the percent of

opposite-sex task interactions, and negative correlations between GPA and percent of opposite-sex pastime interactions. Men with higher grades may have used opposite-sex contact more as a means to an end (e.g. study-dates) than as an end in itself. In contrast, men with lower grades viewed opposite-sex contact more as a source of relaxation than as an opportunity for extra study time. This pattern did not hold for same-sex contact. Perhaps the social skills required to maintain same-sex contact do not lead men to consider task and interpersonal domains as exclusively as they do when considering opposite-sex activity. For women the GPA-nature correlations were reversed. Academically successful women had more opposite-sex pastime interactions than their less successful peers. Academic success may have created less of a need for study-dates (or been the result of more studying and fewer study-dates) and allowed more opportunities for relaxation with men.

The above mechanisms are not incompatible; both may influence behavior. They could both stem from differential socialization practices experienced by the sexes. As boys, men may be encouraged to develop one set of skills or the other, but not both. Such an emphasis would produce a negative correlation between academic *skills* and social *skills*. Socially active men may have spent just as much time studying as their less active counterparts; it just did not do them as much good. On the other hand, women may be socialized so that social skills are not acquired at the expense of academic skills. Women may have the interpersonal nature of social contact made salient to them throughout their socialization (as a matter of course), but for men, such an emphasis is accompanied by a de-emphasis on other aspects of life (i.e. academics). Within this framework, men and women may have similar levels of social skills, but for men this acquisition was at the expense of academic skills, while for women it was not. A parallel argument can be made regarding motivation toward academic and social behaviors. Men may be socialized in a fashion that leads to a conflict between these two motives whereas women may not.

The present study has not fully explained the relationship between academic and social behaviors, but it has provided some insights. Methodologically speaking, the value of gathering the type of data provided by the RIR was demonstrated. Detailed summaries of individuals' social lives confirmed an hypothesis suggested but not proved by previous research. Of particular interest was that two weeks of social behavior postdicted four years of academic activity.

Moreover, the convergence of the present results with previous work on sex differences in affective reactions to interaction, combined with differences in the patterns of correlations between intimacy and quality of interaction and a non-social variable, suggest that intimacy and quality in social interaction may be moderated by different factors. There may be some similarity in these factors and their influence across certain situations (same- versus opposite-sex interaction), but there may be important differences in other instances, i.e. in the specific relationship between the two and non-social behaviors.

With specific reference to the two stereotypes mentioned in the introduction, it would seem that the news, at least for men, is not all that cheerful. The bookworm is probably a better description of the academically successful student than is the BMOC. For women however, academic success seems to have no social cost, the bookworm and BWOC are equally likely descriptors of academically successful females. Why this is so, and how generalizable the present findings are to other environments, are questions that remain to be answered.

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