

Interpersonal Competition in Friendships

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Abstract Though ubiquitous in American life, competition has been neglected in studies of friendship. Conceiving of interpersonal competition as a dyadic process motivated by self-evaluation, the authors analyzed survey data from a random sample of 162 undergraduates at a US college who were asked about their closest friends of the same and opposite sex. Results indicated that male friendship dyads were most competitive followed by cross-sex and female dyads. Among same-sex friends, competition was negatively associated with academic class and positively associated with number of role relationships. Intimacy and companionship had positive effects and competition and conflict had negative effects on friendship satisfaction. Due to lower intimacy and greater competition in male friendships, men were less satisfied with same-sex friends than women.

Keywords Competition · Friendship · Close relationships · Gender differences

Introduction

Competition is pervasive in American society, influencing nearly every facet of daily life. Although there is an extensive social science literature on competition, much of it investigates the relative impact of cooperation and competition on achievement and performance (see Johnson and Johnson 1989). Some studies have examined the effect of competition within groups on interpersonal attraction

(see Johnson et al. 1983). Yet, despite the competitive nature of many social relationships, competition has received very little consideration in studies of friendship. To correct this oversight, in this paper we analyze competition within friendships.

One reason that competition has been neglected in studies of friendship may be the way in which it has been conceptualized. Traditionally, social psychologists have defined competition as a zero-sum game, a rivalry between parties in which the success of one requires the failure of the other (Johnson and Johnson 1989). Deutsch's (1949) influential theory emphasized competition as a type of social interdependence, a situation in which one person's goals are affected by the actions of others. In contrast to this structural conception, other researchers have construed competition as a personal disposition. Spence and Helmreich (1983) identified competitiveness, described as a "general personality trait," as one factor in their measurement of intrinsic achievement motivation. Ryckman et al. (1990, 1996) similarly viewed competition as an individual style of self-discovery and self-definition, which can be personally destructive ("hypercompetitiveness") or constructive ("personal development competitiveness"). Drawing on research in achievement contexts, especially sports, Vealey (1994) emphasized the evaluative aspect of competition, defining competition as "a social comparison process whereby individuals compare their performance with some standard in the presence of other individuals who can evaluate the comparison process" (p. 655).

We contend that none of these definitions adequately describes *interpersonal* competition. Competition between two people, such as between friends, is not limited to mutually exclusive goal attainment; it is not merely the sum or product of individuals' attitudes or personal qualities such as competitiveness; and it involves more than social

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comparison. Rather, interpersonal competition is a dynamic, ongoing process between two people that is initiated by social comparison and motivated by self-evaluation as the individuals vie to out-do one another on various tasks, abilities, and status dimensions.

According to Festinger's (1954) social comparison theory, people are motivated to evaluate their opinions and abilities; to the extent that nonsocial means of evaluation are unavailable, they seek out others as sources of evaluation. Further, the others are most informative and useful as standards of comparison when their opinions and abilities are fairly similar to the evaluator. Social comparison may or may not lead to competition; whether it does depends on whether the individual wants to or tries to outperform the other.

Tesser's self-evaluation maintenance (SEM) model (Campbell and Tesser 1985; Tesser 1988) provides the link between social comparison and competition. The SEM model assumes that people are motivated to maintain a positive self-evaluation. One's self-evaluation is most likely to be threatened when (1) the comparison other is psychologically close, (2) the dimension of evaluation is relevant or important to one's self-definition, and (3) the other's performance is not too dissimilar from one's own. When people feel threatened, one means of elevating their self-evaluation is to compete, that is, to try to perform at a higher level than the other person. Friends are likely to be psychologically close and to be similar to one another; therefore, all three conditions of threat are likely to be present, at least some of the time, when friends interact. When the conditions are met, they are likely to apply to both parties, making the competitive response truly interpersonal. Finally, how often the conditions are met will vary over time and across relationships and will determine the degree of interpersonal competition.

According to this theoretical formulation, the desire to maximize self-evaluation drives competition. However, competition is not the only way to raise or restore a self-evaluation when one is threatened. As Campbell and Tesser (1985) point out, an individual who learns that a close other performs better on a self-relevant task may choose to "reduce the relevance of the task" or "decrease closeness with the other" or perceptually distort the performance differential (p. 111). For a competitive response to occur, the individual must believe that it is possible to improve his or her performance relative to another. Furthermore, competition should be normative within the relationship. As Felmlee (1999) has shown, normative expectations for same-sex friendships can differ from those for cross-sex friendships. We suspect, for example, that there are more restrictive norms regarding competition between two women or between a man and a woman than competition between two men.

Although competition in friendships seldom has been investigated, related research does suggest two major predictions. First, we expect more interpersonal competition between male friends than between female friends. Correlational and observational studies almost uniformly have shown that males are more competitive than females (Lever 1978; Spence and Helmreich 1983). This difference seems to be the product of gender-role expectations and socialization. In studies of gender-role stereotypes, for example, "competitive" is among the traits identified as typical of adult males but not of adult females (Rosenkrantz et al. 1968); it also is a masculine indicator in a widely used measure of gender-role identity, the Bem Sex Role Inventory (Bem 1974). In a survey of over 2,400 students about competition with other students, Ahlgren and Johnson (1979) discovered, at every grade from 2 to 12, that boys expressed more positive attitudes toward competition than girls. A similar but broader measure of competitive achievement motivation produced the same gender difference—males being more competitive—in samples of middle-school and high school students, college students, and middle-class parents (Spence and Helmreich 1983).

The gender difference in competition is sure to be manifested in same-sex friendships. And, indeed, in-depth interview studies (Rubin 1985; Werking 1997) have noted a competitive element in male in contrast to female friendships. Rubin (1985), for example, reported that women seldom acknowledged competition with their friends, but that competition was a "theme" that ran through men's relationships with one another. The literature is largely mute, however, on competition in cross-sex friendships. Based on interviews, Werking (1997) concluded that cross-sex friendships offer relief to both men and women from the competition between same-sex friends, which implies less competition between cross-sex than between same-sex friends.

Second, we expect interpersonal competition to have a negative impact on the quality of friendships. This prediction follows from several lines of inquiry, beginning with Deutsch's (1949) hypothesis that competition produces a "negative cathexis" (reduced liking) because it interferes with the satisfaction of individual needs. Deutsch contrasted the negative effects of competition with the positive effects of cooperation, and numerous studies since have shown that cooperation promotes greater interpersonal attraction within groups than interpersonal competition (see Johnson et al. 1983).

With respect to friendship relations specifically, Rubin (1985) sees competition as undermining the emotional support that friendship requires. Lewis (1978) also cited various essays that attribute male inhibitions about intimacy and self-disclosure to competition in male relationships; and intimacy is a strong predictor of friendship satisfaction

(Jones 1991). Further, when Sapadin (1988) asked professionals what they disliked about their friendships, “competition” was the most frequent response of both men and women with respect to their same-sex friends. Again, however, the prediction is less clear for cross-sex friendships. In response to Sapadin’s question about what was disliked about their friendships, neither men nor women mentioned competition with respect to cross-sex friendships.

Similar predictions may be derived from a conception of interpersonal competition based on the SEM model. A key variable in the SEM model is psychological closeness, which Campbell and Tesser (1985) conceptualize as the “‘quantity’ of relatedness between two individuals” (p. 113). Factors that create a sense of relatedness include “proximity in space; similarity of various characteristics such as age, race, national origin, gender, religion, family background and reputation; and common role or group memberships (e.g., friend, siblings, classmates)” (Campbell and Tesser 1985, p. 112). Psychological closeness tends to be greater among same-sex friends than among cross-sex friends, as same-sex friends not only are the same gender but also are more likely than cross-sex friends to be roommates and to share various group memberships. In addition, a same-sex friend will be more likely than a cross-sex friend to perform at a comparable level on dimensions of importance to a particular individual. Hence, competition should be greater among same-sex friends than among cross-sex friends.

It also follows from the SEM model that interpersonal competition will have a negative impact on relationships, irrespective of gender. Whenever friends compete with one another, one person will perform better than the other, which will have a negative effect on the self-evaluation of the individual who performs worse (Tesser 1988). Although the person in the friendship who performs worse almost certainly will fluctuate, the *relationship* is likely to suffer if either individual’s self-evaluation is diminished. Therefore, the more often friends compete, the more ill feelings and tension they will experience and the less satisfied they will be with the relationship.

In the present study, we analyze data from a survey of friendships among college students. Friendships are vital to college students, especially when they live on campus, as nearly all their activities—eating, attending class, participating in sports and other campus events, partying, and so forth—take place in the presence of peers. Because of this and because friendship has been linked to well-being (Myers 1992), it is important to examine factors that may determine the quality of students’ friendships. Competition is one such factor. That it has been all but ignored by friendship researchers is surprising, for competition has been called an inescapable feature of human relationships (Ruben 1980), and competitive outcomes often affect how people feel about themselves.

Our theoretical conception of competition as well as the extant literature suggests several hypotheses: (1) men’s same-sex friendships will be more competitive than women’s same-sex friendships, (2) same-sex friendships will be more competitive than cross-sex friendships, (3) the greater the number of role relationships between friends (i.e., psychological closeness), the greater the interpersonal competition, and (4) competition will be negatively associated with friendship satisfaction, irrespective of gender. We examine the third and fourth hypotheses by conducting multivariate analyses that control for relevant extraneous variables. With interpersonal competition as the dependent variable, we consider the effects of respondent’s gender, academic class, athletic status and other role relationships with *same-sex friend*. In predicting friendship quality or satisfaction, we analyze the effect of competition relative to other variables in *both same-sex and cross-sex friendships*. Research on same-sex dyads has shown that women tend to be more satisfied than men with their same-sex friends (Wheeler and Nezlek 1977) and to rate same-sex friendships higher in overall quality than men (Sapadin 1988). Therefore, it is possible that competition mediates this relationship. In addition, competition often creates conflict, which undermines interpersonal attraction, whereas intimacy and companionship are two important contributors to relationship satisfaction (Jones 1991). By including all three of these variables in the analysis, we examine the mediating influence of conflict as well as the net effect of competition on friendship satisfaction.

Method

Participants and Procedure

Data for this study were drawn from a survey of students at a northeastern liberal arts college. Structured, face-to-face interviews were conducted with a simple random sample of the student body between March 15 and April 19, 2005. From an initial sample of 180, 162 interviews were completed, yielding a response rate of 90%.

After an open-ended question on the meaning of friendship, respondents were asked specific questions about their friendships with two people. First, they were asked to “choose the one person” at the college “with whom you have the closest relationship.” Then, after answering several questions about this person, they were asked to choose either their closest friend of the opposite sex or the same sex, depending, respectively on whether the first friend they chose was the same or opposite sex of the respondent. In this way, parallel questions and measures were obtained for on-campus closest friends of the same and opposite sex. The vast majority of the respondents, 86.4%, chose a same-

sex friend first—that is, as the person with whom they had the closest relationship. Fourteen respondents reported that they had no close friend of the opposite sex at the college; therefore, we have data for 162 same-sex friends and 148 cross-sex friends.

Of the 162 respondents, all were between 18 and 23 years old, 50.6% were female, and 87.7% were white. Ninety-five percent of the respondents lived on campus. By academic class, 27.8% were first-year students, 28.4% second-year, 21.6% third-year, and 22.2% fourth-year.

Measure

Companionship

We defined companionship as participating with friends in activities undertaken for their mutual enjoyment (Rook 1987). The measure of companionship consisted of the sum of the frequency with which respondents reported that they and their friends had engaged in six gender-neutral activities in the past month: going to lunch or dinner together, working out or exercising together, going to a party together, watching TV together, attending a sports event together, and listening to music together. Response categories were coded from 0=not at all to 4=every day or almost every day. The index thus had a possible range of 0 to 24; $\alpha=.58$ for same-sex friend and .64 for cross-sex friend.

Intimacy

The most important indicator of intimacy in both same-sex and cross-sex relationships is self-disclosure (Fehr 2004; Monsour 1992). Although we did not ask respondents directly about self-disclosure, we did ask how often (from 0=not at all to 4=every day or almost every day) they discussed topics with their friends that were likely to be personally revealing. These included: a personal matter, family, your own or your friend's shortcomings, your relationship with one another, relationships with others, and the opposite sex. Adding responses to these six items created an index of conversational intimacy with a possible range of 0 to 24. Cronbach's $\alpha=.77$ for same-sex friend and .79 for cross-sex friend.

Social Conflict

Four items were taken from the National Survey of Midlife Development in the US (Brim et al. 2003) to measure social conflict. Respondents were asked to indicate how often in the last 2 weeks (none of the time, once, a few times, or several times), their friend has (1) "criticized you," (2) "irritated you or gotten on your nerves," (3) "made too many demands on you," and (4) "let you down when you were counting on him/

her." Responses were coded from 0 (none of the time) to 3 (several times) and summed over the four items to create a social conflict index. Cronbach's $\alpha=.63$ for same-sex friend and .67 for cross-sex friend.

Friendship Satisfaction

Four items, three drawn from Jones (1991), measured friendship satisfaction. On seven-point scales, with 1=not satisfied and 7=very satisfied, respondents indicated how satisfied they were with (1) "the assistance you get from (friend) in solving daily problems such as helping with tasks, giving you information, and so forth," (2) "the emotional support you receive from (friend) such as feeling cared about and discussing personal problems," (3) "the socializing you do with (friend)," and (4) the friendship in general. Scores on these items were summed to create a satisfaction index; Cronbach's $\alpha=.75$ for same-sex friend and .86 for cross-sex friend.

Interpersonal Competition

We constructed a seven-item index to measure interpersonal competition. Because the referent of the construct "interpersonal competition" is the relationship and not the individual respondent, some items were stated from the perspective of the respondent and others from the perspective of his or her friend. In addition, the items capture our theoretical definition of interpersonal competition as a process of comparison motivated by the desire to out-do the other; thus, the index does not measure the frequency of competition but rather its *intensity*. The seven items consisted of statements about competition within various domains in which friends may compete with one another ("I don't like my friend to get better grades than I do"; "When my friend and I play games, he/she tends to get upset when I win"; "I do not mind losing arguments with my friend" [reverse coded]; "My friend doesn't like it when I get better grades than he/she does") as well as general statements about competition ("There is a feeling of competition between me and my friend"; "I like to compete with my friend"; "It seems to bother my friend when I do something better than he/she does"). For each statement, participants responded on a five-point Likert scale from 1=strongly disagree to 5=strongly agree. With seven items, the index had a possible range of 7 to 35. Cronbach's $\alpha=.78$ for same-sex friend and .77 for cross-sex friend.

In addition to the above questions, which were asked of both same-sex and cross-sex friend, a small set of questions were asked of the first friend chosen—the person with whom the respondent had the closest relationship. With 140 of the 162 respondents identifying someone of the same sex, separate analyses were made of the effect of these measures on interpersonal competition between same-sex

friends. The additional measures included length of relationship, time spent with friend, and role relationships. Length of relationship was operationalized by calculating the difference in months between the date of the survey and the date when respondents reported that they first met their friend. Time spent with friend was calculated by summing the responses to three items, asking respondents to estimate how much time they spent with their friend in the morning, afternoon, and evening on weekdays during the past week. To measure relationships other than being friends, respondents were asked to indicate whether their friend was a roommate or suite mate, a teammate, a fellow member of a campus group, or a classmate (i.e., presently taking a class together).

Results

Validation of Interpersonal Competition Index

Supporting the validity of the interpersonal competition index, index scores were positively correlated with respondents' estimates of *how often* they competed with their friend. Earlier in the interview, respondents were asked to indicate how often in the past month they and their friend "competed with one another." Correlations between this question and the competition index were .53 for same-sex friend and .48 for cross-sex friend. In addition, scores on the competition index were positively correlated with social conflict ($r=.43$ for same-sex friend and .36 for cross-sex friend).

Gender Differences

Table 1 breaks down the interpersonal competition index by gender. Consistent with our first hypothesis, and further validating the interpersonal competition index, in same-sex friendships men scored significantly higher on the index than women, $t(160)=5.27$, $p<.001$. Contrary to our second hypothesis, same-sex friendships were not uniformly more

competitive than cross-sex friendships. Both men and women experienced a similar level of competition with their cross-sex friends [$t(146)=.339$, *ns*]; however, same-sex friendships were more competitive than cross-sex friendships among male respondents [$t(70)=4.19$, $p<.001$], but less competitive than cross-sex friendships among female respondents [$t(76)=2.06$, $p<.05$]. Irrespective of gender and type of friendship, scores on the competition index were below the natural mid-point of the index (21, or an average of 3 on the 5-point Likert scale), indicating a tendency to disagree with items affirming interpersonal competition. Thus, overall, respondents tended to perceive a relatively low level of competition in their close friendships.

Predictors of Interpersonal Competition

Our third hypothesis is that interpersonal competition depends on the number of role relationships between friends. To test this hypothesis, we examined the effects of role relationships both separately and together. Table 2 presents the zero-order correlations and regression coefficients for various role relationships and other predictors of interpersonal competition with *same-sex friend*. The zero-order correlations indicate that interpersonal competition was negatively associated with academic class and positively associated with male status and having one's closest friend as a teammate. (Significance tests of all correlations are two-tailed.) The only other variable that approached significance ($p<.10$) was whether the respondent was an intercollegiate athlete: athletes were more likely to compete with their friends than non-athletes.

The last three data columns in Table 2 show the results of the regression analysis. Preliminary analysis indicated a correlation of .84 between length of relationship (or longevity) and academic class, creating a possible problem of collinearity. Because academic class was significantly correlated with interpersonal competition ($r=-.17$, $p<.05$), but longevity was not ($r=-.06$, *ns*), and because the R^2 value was greater with academic class in the equation (.27 vs .24), we excluded longevity. Also, when we initially included interaction terms for gender with all other variables in Table 2, the analysis showed no interaction effects; therefore, all interactions were omitted.

The regression analysis indicated that with gender in the equation, the effect of athlete status disappeared and the effect of having a friend as a teammate was diminished, which is due to the fact that men ($M=.38$) were more likely than women ($M=.15$) to be intercollegiate athletes [$t(160)=3.41$, $p<.001$] and to identify a teammate as their closest friend [$M_{\text{men}}=.41$, $M_{\text{women}}=.06$, $t(160)=5.72$, $p<.001$]. Still, interpersonal competition appeared to increase not only when one's closest friend was a teammate but also when the friend was enrolled in the same class. According

Table 1 Mean interpersonal competition scores by gender in same-sex and cross-sex friendships.

	Same-Sex Friends			Cross-Sex Friends		
	<i>n</i>	<i>Mean</i>	<i>SD</i>	<i>n</i>	<i>Mean</i>	<i>SD</i>
Males	80	18.81 ^a	5.16	71	15.83 ^c	5.21
Females	82	14.38 ^b	5.54	77	16.14 ^c	5.92
Total	162	16.57	5.78	148	15.99	5.58

Competition scores had a possible range of 7 (low) to 35 (high). Means not sharing a superscript are significantly different from each other based on independent sample *t* tests with $p<.05$, two-tailed.

Table 2 Means, standard deviations, zero-order correlations, and standardized and unstandardized regression coefficients for predictors of interpersonal competition with same-sex friend ($N=140$).

Variable	Mean	S.D.	r	β	B	$SE B$
Male ^a	.49	.50	.43***	.37***	4.19***	1.00
Intercollegiate Athlete ^a	.28	.45	.15**	-.05	-.64	1.33
Academic Class	2.38	1.10	-.18*	-.20*	-1.03*	.43
Minutes Per Day with Friend	364.17	166.43	.06	-.08	-.00	.00
Friend is Roommate ^a	.51	.50	-.01	.09	1.08	1.04
Friend is Teammate ^a	.27	.45	.31***	.20**	2.55**	1.43
Friend is in Same Campus Group ^a	.25	.44	-.02	.01	.14	1.06
Friend is Taking Same Class ^a	.39	.49	.11	.15**	1.78**	.98
R^2				.26		

^aDummy variable with 1=characteristic present

* $p < .05$; ** $p < .10$; *** $p < .001$.

to our interpretation of the SEM model (hypothesis 3), psychological closeness increases competition, and the more social connections friends have with one another, the greater the psychological closeness. Therefore, we should expect more competition when friends are *both* teammates *and* taking the same class than if they are either one or the other. To test this formulation, we created a composite index of role relationships by summing the four roles (roommate, teammate, same campus group, same class), and replaced the four separate roles with the composite index in a multiple regression. Supporting our third hypothesis, number of role relationships was a significant predictor ($\beta = .22$, $p < .01$) of interpersonal competition, R^2 was the same (.26) as and beta estimates for male (.41), athlete status (.01), academic class (-.17), and time with friend (-.05) were very similar to those in Table 2.

Finally, the estimate for academic class also was significant. Academic class is highly correlated with age at this institution ($r = .87$) and therefore may be treated as a proxy for age. Thus, the decline in interpersonal competition during the college years appears to be an extension of Ahlgren and Johnson's (1979) finding of a general drift downward in competitive orientation of students in grades 2 to 12—that is, an overall trend during the formative years toward less competitive relationships.

Interpersonal Competition and Friendship Satisfaction

Our fourth hypothesis is that interpersonal competition is negatively associated with relationship satisfaction independently of other variables known to affect the quality of relationships. To test this hypothesis, we conducted a series of multiple regressions to assess the net effect of competition and to examine various mediating processes. Table 3 presents the results of this analysis. The zero-order correlations reveal, first, that all variables except gender were

significantly associated with satisfaction in both types of friendship. Consistent with prior research, gender was significantly related to satisfaction in same-sex friendships; however, it was not associated with satisfaction in cross-sex friendships.

Intercorrelations among the predictors also revealed one other set of findings that supports earlier research on same-sex friendships. Gender was positively correlated with companionship ($r = .18$, $p < .05$) and negatively correlated with intimacy ($r = -.40$, $p < .001$). That is, men were more likely than women to do things together and women were more likely than men to have intimate conversations (Caldwell and Peplau 1982; Parker and de Vries 1993). Although we expected social conflict and competition to be related similarly to companionship and intimacy, an interesting pattern emerged. Competition was not significantly correlated with either measure in either type of friendship ($r_s = .12$ and $.04$ for companionship, $r_s = -.04$ and $.00$ for intimacy, $ps > .05$, with same- and opposite-sex friends, respectively). But conflict was *positively* associated with both companionship ($r = .19$, $p < .05$ for same-sex and $r = .15$, $p < .10$ for cross-sex friends) and intimacy ($r = .24$, $p < .01$ for same-sex and $r = .28$, $p < .001$ for cross-sex friends).

Models 1 to 3 show the regression estimates when friendship satisfaction is regressed on the five predictors. None of the interactions with gender was significant in any of the regressions; therefore, these have been eliminated. Overall, the models show similar effects for both types of friendships. In every case, the data support hypothesis 4: Competition had a negative effect on satisfaction. In addition, the R^2 -change values for Models 2 and 3 were significant for both friendship types (same-sex Model 2, $F(2,157) = 21.81$, $p < .001$; same-sex Model 3, $F(1,156) = 10.05$, $p < .01$; opposite-sex Model 2, $F(2,143) = 16.86$, $p < .001$; opposite-sex Model 3, $F(1,142) = 11.53$, $p < .001$). Thus, adding variables to each successive model contributed significantly to the prediction of satisfaction. Model 2 substantiates

Table 3 Means, standard deviations, and standardized estimates for satisfaction with same-sex friendship ($N=162$) and satisfaction with cross-sex friendship ($N=148$).

	Mean	S. D.	r	Model 1	Model 2	Model 3
				β	β	β
Same-Sex Friends						
Male ^a	.49	.50	-.20*	-.11	.00	-.01
Interpersonal Competition	16.57	5.78	-.28***	-.24***	-.29***	-.18*
Companionship ^b	12.88	4.18	.29***		.24***	.26***
Intimacy ^b	13.70	4.35	.41***		.33***	.38***
Social Conflict ^c	2.77	2.28	-.18*			-.24**
R^2				.09	.29	.33
ΔR^2				.09***	.20***	.04**
Cross-Sex Friends						
Male ^a	.48	.50	.01	.01	-.04	-.04
Interpersonal Competition	15.99	5.58	-.21**	-.21**	-.23**	-.13**
Companionship ^b	8.52	3.68	.37***		.29***	.29***
Intimacy ^b	12.03	5.01	.34***		.21*	.29***
Social Conflict ^c	3.34	2.53	-.19*			-.27***
R^2				.04	.23	.28
ΔR^2				.04*	.18***	.06***

^a Dummy variable with 1=male gender

^b Scores had a possible range from 0 (low) to 24 (high)

^c Scores had a possible range of 0 (low) to 12 (high)

* $p < .05$; ** $p < .10$; *** $p < .001$.

Jones's (1991) finding that companionship and intimacy are among the most important determinants of friendship satisfaction; Model 3 shows the additive effect of conflict.

The three models assume a causal ordering among the variables with possible mediating factors. One possibility is that competition mediates the relationship between gender and satisfaction with same-sex friendships. Baron and Kenny (1986) describe four steps that are required to establish such mediation: (1) gender must be correlated with friendship satisfaction ($r = -.20$, as shown in Table 3); (2) gender must be correlated with competition ($r = .38$, $p < .001$); (3) competition must affect satisfaction ($\beta = -.24$ in Model 1); and (4) the association between gender and satisfaction should be reduced when competition is controlled ($\beta = -.11$, *n.s.*, in Model 1). In addition, the Sobel test confirmed that this reduction was statistically significant ($Z = 2.53$, $p = .011$) (Sobel 1982).

Because the beta coefficient in step 4 was not zero, there may be additional mediators; indeed, Model 2 suggests that competition in combination with intimacy and/or companionship may mediate the gender-satisfaction relationship. Meeting the Baron and Kenny requirements, gender was correlated with both intimacy and companionship, as noted above (Step 2); competition, intimacy, and companionship were significant predictors in Model 2 (Step 3); and also in Model 2 the association between gender and satisfaction was reduced to zero (Step 4). Finally, according to the Sobel test, the reductions due to competition ($Z = 3.15$, $p = .002$) and

intimacy ($Z = 3.35$, $p = .001$) were statistically significant, but companionship was not ($Z = 1.91$, $p = .056$). Thus, greater interpersonal competition and lower intimacy explain why men found same-sex friendships less satisfying than women.

Mediation analysis also showed that conflict mediates the relationship between competition and friendship satisfaction. Competition was correlated with conflict among both same-sex ($r = .43$, $p < .001$) and opposite-sex friends ($r = .36$, $p < .001$); the association between conflict and satisfaction was significant for same- and opposite-sex friends (see Model 3 coefficients); and the effect of competition on satisfaction was reduced in Model 3. The Sobel test further showed that this reduction was statistically significant for same-sex ($Z = 2.81$, $p = .005$) and opposite-sex friends ($Z = 4.63$, $p < .001$). In short, the negative impact of competition on satisfaction may be accounted for, in part, by the fact that interpersonal competition engenders conflict.

Discussion

With empirical evidence strongly supporting the conventional wisdom that men are more competitive than women, it seems to be taken for granted that friendships between men are more competitive than friendships between women. Yet, prior to the present study, this relationship had not been tested systematically. Examining close friendships among

undergraduates, we found more competition between male friends than between female friends. We also found that the level of competition between cross-sex friends was less than that between male friends but greater than that between female friends. What accounts for these patterns?

The gender difference in same-sex friendships is consistent with gender-role expectations; men's friendships are more competitive than women's friendships because friendships are based on cultural norms of masculinity and femininity and being competitive is a masculine norm. This also might explain the intermediate-level of competition in cross-sex friendships insofar as men's competitiveness is moderated by women's inhibitions about competition. An alternative complementary interpretation is that men's friendships provide more opportunities to compete than women's. Research consistently has shown that men are more likely than women to engage in shared activities with their same-sex friends (Caldwell and Peplau 1982), and many of these activities, such as playing games, involve direct competition. This interpretation is consistent with a SEM-based concept of competition insofar as out-performing a close other in various activities is more important to men's than to women's self-definitions.

On the other hand, the prediction from the SEM model of more competition between women than between cross-sex friends was not supported. One possible explanation is that the interpersonal competition index underestimated competition within women's friendships. Davidson and Duberman (1982) found in same-sex friendships that women exhibited more covert competition for power than men. Similarly, Rubin (1985) concluded that it is not that women do not compete with another, but rather that women have more difficulty than men in acknowledging competitive feelings. They "have learned to abjure competition" and "have been taught to believe it to be a destructive force in human relationships," especially between women (Rubin 1985, p. 86). Further, Walker (1994) noted the same difficulty in the ability of both men and women to admit to behavior that violates gendered norms about friendship. She contended that there is "more variation in same-sex friendships than the stereotypes or the social scientific literature lead one to expect" (p. 246). Her in-depth interviews of adults revealed that when men and women discussed friendship, they emphasized behavior that conforms to prevailing gendered norms, but their specific friendship experiences often contradicted this cultural ideology.

A related possibility is that sources of competition vary by gender, and that the measure we used did not adequately tap the competitive domains of women. When Werking (1997) "inquired about the sources of competition between female friends, women mentioned 'men,' 'clothes,' 'monetary things,' 'looks,' 'lifestyles,' 'weight,' and 'credit cards'"

(p. 55). A challenge for future research is to identify gender differences in the sources of competition and to develop measures of competition that adequately take these into account.

A source of interpersonal competition suggested by this study is friends' role relationships beyond friendship. Being teammates and classmates increased the likelihood of competition; and the more social connections that friends had, the more competitive they were. Neither amount of time spent with friends nor length of relationship was correlated with interpersonal competition between same-sex friends; however, competition between same-sex friends did decline with academic class. It is possible that this decline is based on selection: competitive relationships are less likely to survive, and so upper-class students are less likely than lower-class students to identify a close friend with whom they have a competitive relationship. But when considered as part of a general decline in competition throughout childhood and adolescence, this finding also is explicable in terms of developmental processes. One explanation is that as individuals mature, they become more adept at identifying and avoiding sources of strain such as competition in their relationships with others. Alternatively, research indicates that, beyond the pubescence stage, adolescents experience growing self-acceptance (Demo 1992). As this occurs, they may develop a more stable sense of self-worth that is more resistant to change and the influence of peers (McCarthy and Hoge 1982). Hence, they become less susceptible to threats to their self-evaluations, which, according to the SEM model of competition, would make them less inclined to compete.

Like gender differences in competition between friends, the negative impact of interpersonal competition on the quality of friendships seems to be taken for granted. Occasionally, in-depth interview studies have cited instances in which interviewees claim that competition has detracted from the quality or intimacy of their friendships. For example, a woman professional in Walker's (1994) study attributed her lack of intimate friendships partly to the competitiveness of her colleagues: "they are very competitive and they are not very friendly" (p. 259). A married man interviewed by Reid and Fine (1992) stated, "[A] lot of that information I would not disclose to my best male friend because I feel in competition with him and therefore would not be willing to tell my weaknesses to him" (p. 138). We found no empirical studies, however, that systematically examined the relationships among competition, intimacy, and friendship satisfaction.

The present study showed that interpersonal competition was negatively associated with satisfaction with close friends among both men and women and in same-sex as well as cross-sex relationships. As in prior research, women were more satisfied with their same-sex close friends than

men; however, a mediational analysis of our data indicated that this effect was due partly to competition. The effect of competition on satisfaction was both direct and indirect, through conflict. But its influence on satisfaction was not mediated by having a negative impact on intimacy, as some scholars have speculated; in fact, competition was not associated with intimacy.

The effects of conflict were complex. Conflict lowered friendship satisfaction, but it was positively associated with both companionship and intimacy, which enhanced friendship satisfaction. While this pattern may seem paradoxical, it corresponds closely to Hays's (1985) finding that both friendship benefits and costs increased as relationships between same-sex college students developed and became more intense. Becoming more companionate and intimate (construed as benefits by Hays) are part of the process of getting to know one another and building a friendship. And as Hays (1985) noted, this process "opens up the potential for increased disagreement" (i.e., conflict) (p. 922). So, conflict is two-edged; it is an inescapable aspect of close relationships, but too much of it is harmful to a relationship.

In contrast to conflict, the lack of association between competition and friendship closeness, as represented by companionship and intimacy, indicates that competition does not become more intense as friendships develop. Why? The reason may lie in the bases of conflict and competition. Conflict exists in a relationship when the two persons have different preferences (Braiker and Kelley 1979); competition exists when two persons vie with each other to win. Having different preferences (e.g., having different musical tastes or favoring different political candidates) is something one discovers in the course of developing a relationship; such disagreements may be arousing or aggravating, especially if the two persons have discrepant goals for joint activities (e.g., roommates wanting to listen to different musical artists). But conflicts are not likely to threaten either person's self-evaluation. Interpersonal competition can arise from disagreements, but it implies something more—that the persons believe and will try to demonstrate to one another that their preference (or ability or performance) is best. The SEM model of competition implies that this may occur at any time in the development of a relationship; it depends on the relevance or importance of the dimension to the persons' self-evaluations and, when relevant, the closeness of their levels of performance. Trying to prove one's superiority is not only arousing; it is personally threatening. Therefore, competition may be harmful to a relationship at any stage of development.

Embarking on a new line of inquiry, the present study has several limitations but also suggests several promising directions for future research. First, the sample was limited to college students, and even though friendship is central to the lives of this group (Fehr 1996), making it a particularly

apt target of research, friendship patterns change over the life span (see Sherman et al. 2000). The decline in competition that others have found in grade school and high school and that we found across the college years raises questions about the prevalence and impact of interpersonal competition beyond college. The sample was limited further to one region of the US; at the least, it seems safe to assume that the results would be quite different in nations with a collectivistic rather than individualistic orientation.

This study also focused on "close" friends. Closeness has been an important variable in friendship research. Comparisons made across a continuum of closeness—strangers, acquaintances, friends, close friends, best friends—have identified several differences in interaction. For example, with increasing closeness, there is more self-disclosure and less negative affect (see Fehr 1996). Studying close friends in the present study may have underestimated the nature and impact of competition in friendships. Given its apparent negative affect, interpersonal competition may inhibit friendship formation; its presence may be inversely related to the closeness of the relationship; and it may lead to the breakdown and dissolution of relationships. These are testable hypotheses, but each requires an analysis of friends at different levels of closeness.

The impact of interpersonal competition on friendships also may be affected by other variables. Individual competitiveness is likely to influence the level of interpersonal competition within friendships; we would expect, for example, to find the greatest competition between two friends who are individually competitive and the least competition between friends who are noncompetitive. But will the effects of competition on relationship quality operate independently of the competitiveness of the individuals in the relationship? Or are openly competitive individuals better able to manage their competitive feelings, as Ruben (1980) and Rubin (1985) imply?

Another factor that may moderate the impact of interpersonal competition is the normative context. Rees and Segal (1984) found that when equity was the norm for allocating status, perceived equity mitigated the potential negative effect of status competition on interpersonal attraction. Specifically, football players liked and respected competitors—team members vying for the same position whose performance was better than their own—more than noncompetitors, provided that they perceived equity in the assignment of positions on the depth chart. More generally, this pattern implies that different norms regarding feelings and reactions toward competitors may operate at different stages of competition. As Rees and Segal (1984) concluded,

At times there is overt competition for reward (such as starting roles, merit pay, promotions, etc.). During these periods, attraction between rivals may be low and they

may avoid each other. Once the rewards have been distributed, e.g., the status hierarchy set, at least until the next competition period, competitors who have won over one's self may be accepted and social solidarity renewed, providing the results are viewed as equitable. (p. 234)

Although Rees and Segal are referring to the competitive process within groups, there may be a similar ebb and flow to competition within friendships. Initially, competition on a given dimension may decrease attraction between rivals, but once one person's superiority on that dimension is established or legitimated, competition subsides and attraction is restored.

Recently Felmlee and Sprecher (2000) called for more research on the "dark side of relationships," pointing out that research on close relationships has tended to focus on the positive aspects of relationships and to ignore unpleasant, stressful, and destructive aspects. The present study fills this void, suggesting that the fullest understanding of friendship must consider the influence of an apparently negative dimension, interpersonal competition.

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