# Gender Differences in Interpersonal Complementarity Within Roommate Dyads

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# Gender Differences in Interpersonal Complementarity Within Roommate Dyads

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*Complementarity theory proposes specific hypotheses regarding interpersonal styles that will result in successful relationships. The present study sought to extend previous research on gender differences in complementarity through the examination of same-sex peer dyads and the use of informant reports of interpersonal style. One hundred twenty participants (30 male and 30 female roommate dyads) completed interpersonal circumplex ratings of their roommates and a relationship cohesion measure. Examinations of complementarity indicate that women reported significantly more complementarity than men within their roommate dyads. However, for men and women, the closer the dyad was to perfect complementarity in terms of dominance, the more cohesive the relationship. Results are discussed in relation to gender differences in social development.*

***Keywords:*** *interpersonal circumplex; complementarity; gender differences; peer relationships; relationship quality*

There are a multitude of individuals with whom we interact on an almost daily basis. It is likely that some of these people will eventually become close friends while others may become distant adversaries. Although our interpersonal relationships endure or fail due to a myriad of factors, it seems likely that some individuals get along with each other because their behavioral or interpersonal styles simply fit together. To this end, the present study examines whether males and females tend to complement the interpersonal styles of their same-sex roommates. Additionally, we examine whether roommates who complement each other tend to report more cohesion in the relationship than roommates who fail to complement each other.

Two interpersonal traits, warmth and dominance, have been proposed as the primary components of social behavior and as important determinants of relationship outcomes (Carson, 1969; Kiesler, 1983; Leary, 1957; Wiggins, 1979). A dimensional model that offers an integrative conceptualization of personality is the Interpersonal Circle or Interpersonal Circumplex (IPC; Kiesler, 1983; Leary, 1957; Wiggins, 1979). The IPC model attempts to describe an individual's personality, specifically his or her interpersonal style, using two orthogonal dimensions: warmth (also termed *love*, *affiliation*, or *communion*) and dominance (also termed *assertiveness*, *control*, or *agency*). Any combination of scores on these two dimensions creates a circular continuum on which individuals or groups can be placed (Gurtman & Pincus, 2003; Kiesler, 1983, 1996; Wiggins, 1982; see Figure 1).

The IPC is commonly divided into eight octants that identify various blends of dominance and warmth. For example, a warm and dominant individual is gregarious or extraverted, whereas a cold and submissive individual is aloof or introverted. A cold and dominant individual is hostile or disagreeable, whereas a warm and submissive individual is agreeable. Current applications of this theory have emphasized warmth and dominance as the propaedeutic dimensions of interpersonal models of personality (Ansell & Pincus, 2004; Pincus & Ansell, 2003; Wiggins, 1991; Wiggins & Trapnell, 1996).

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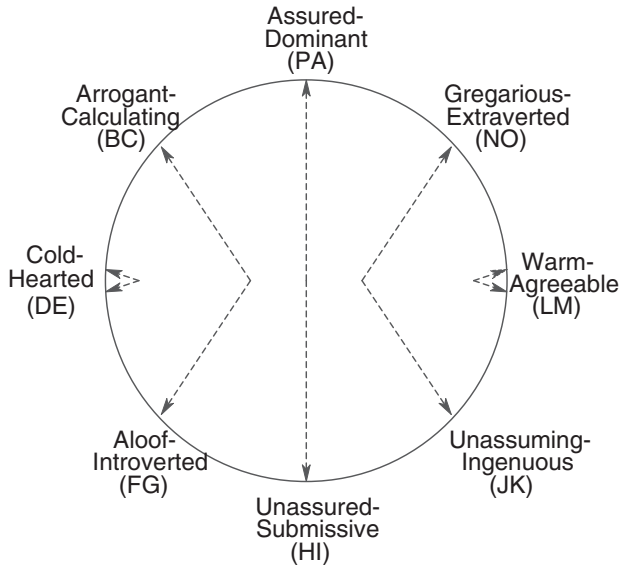


**Figure 1** The octants of the Interpersonal Circumplex with arrows depicting complementarity.

An additional application of the IPC methodology examines the interaction of interpersonal styles in dyadic interactions. Complementarity, originally proposed by Leary (1957) and Carson (1969), makes explicit predictions about the success of interactions between two people based on their respective standing on the warmth and dominance dimensions. Reciprocal or opposite styles on the dominance dimension and corresponding or similar styles on the warmth dimension are considered complementary. An individual who is warm and dominant invites warm and submissive responses from others, and an individual who is cold and submissive invites cold and dominant behaviors from others (see Figure 1). Complementarity assumes that, as interactions take place, members of a dyad accrue information from and about the other person that in turn influences future interactions (Carson, 1969). According to the theory, if the interactions between two people are complementary, their relationship tends to be more stable, more enduring, and more satisfying (Kiesler, 1996). However, investigations of complementarity have offered mixed results as to the empirical validity and applicability of this proposition to real relationship outcomes.

### *Empirical Research on Complementarity*

The earliest research on complementarity was succinctly reviewed by Orford (1986), who concluded that although support can be regularly found for the positive effects of correspondence on warmth, the results for reciprocity on dominance are less conclusive. Orford proposed that mediating variables, such as the setting, the status of the individuals involved, and the duration of the interaction, stipulate the effects of complementarity. However, the studies in Orford's review were carried out prior to important developments in the measurement of interpersonal style (e.g., Wiggins, 1982), more precise specifications regarding the principles of complementarity (Kiesler, 1983, 1996), statistical techniques for quantifying the degree of complementarity (Tracey, 1994, 2004; Tracey, Ryan, & Jaschik-Herman, 2001), and examinations of different orientations of complementarity (Markey, Funder, & Ozer, 2003).

More recently, further requirements for the dyadic interaction have been specified by Kiesler (1996) and the assessments of complementarity specified by Tracey (2004) in order to elicit, maintain, and observe complementarity. Kiesler states,

> The condition of complementarity is likely to obtain and be maintained in a dyadic relationship only if the following conditions are operative: (a) the two participants are peers, (b) are of the same gender, (c) the setting is unstructured, and (d) the situation is reactive (in the sense that what one person does is able to influence what the other person does) (p. 104).

The research reviewed by Orford (1986) and much of the subsequent research fails to meet these guidelines for several reasons. Many of the complementarity experiments use contrived situations and confederates to play scripted roles exhibiting complementary or anticomplementary behavior in brief interactions with a participant (Dryer & Horowitz, 1997; Strong et al., 1988). The setting is often structured around a task such as problem solving, story telling, interviewing, or counseling (Bluhm, Widiger, & Miele, 1990; Estroff & Nowicki, 1992; Kiesler & Watkins, 1989; Markey et al., 2003; Nowicki & Manheim, 1991; Wright & Ingraham, 1986). Laboratory studies offer the opportunity for investigators to control mediating variables and/or record and rate the interpersonal behavior in a methodologically rigorous manner. However, laboratory studies may not allow sufficient time or variety of interactions for the dyadic relationship to feel the effects of complementary or anticomplementary interactions (Markey & Kurtz, 2006; Nowicki & Manheim, 1991; O'Connor & Dyce, 1997). Many studies use previously unacquainted participants who interact for only brief amounts of time (Bluhm et al., 1990; Dryer & Horowitz, 1997; Estroff & Nowicki, 1992; Markey et al., 2003; Strong et al., 1988). These experimental situations may not be effective in creating complementary behaviors according to Kiesler's (1996) criteria.

More effective studies of complementarity may demand greater attention to naturally occurring interactions to allow the predicted effects to emerge.

In response to equivocal evidence for complementarity, Tracey (2004) proposed a simplex representation of the levels of complementarity assessment. These four levels of assessment: trait, aggregate situation, behavioral interchanges, and behavioral interchanges with base rates removed were increasingly predictive of relationship outcomes congruent with complementarity theory. He concluded that previous equivocal outcomes in complementarity research may be attributed to inconsistencies in the level of assessment. He also noted that "the gender composition of dyads might be related to complementarity" (p. 1223).

Despite inconsistencies in complementarity research, more recent studies have determined that interpersonal behaviors do conform to circumplex patterns and complementary behaviors can be identified by observers (Markey et al., 2003). Research has found the presence of complementarity at the more global, stylistic trait level in relatively longer term relationships (Tracey et al., 2001). Further research has also determined that, in naturalistic settings, complementarity of observed behavior between dyad partners increases over time and these changes are reflected in informant ratings but not in self-ratings (Markey & Kurtz, 2006). These findings suggest that, despite the lack of behavioral interchange data, informant ratings of interpersonal style can capture a general behavioral style exhibited in a given relationship sufficiently for the identification of complementarity.

### *Gender Differences in Complementarity*

The effects of gender on complementarity are largely undetermined. Numerous studies of complementarity have used only female participants or mixed gender interactants (Bluhm et al., 1990; Dryer & Horowitz, 1997; Markey et al., 2003; Markey & Kurtz, 2006; Nowicki & Manheim, 1991; Strong et al., 1988), making it difficult to determine if gender differences exist across studies. One of the conditions specified by Kiesler (1996) is that the participants should be of the same gender. While not specified by interpersonal theory, theories on gender differences in social development suggest that boys and girls learn to influence others with different interpersonal styles (Maccoby, 1990, 1998), supporting Kiesler's (1996) assertion that the gender of both participants is an important consideration in the probability of complementary behaviors.

An examination by Suh, Moskowitz, Fournier, and Zuroff (2004) of social developmental influences on agentic and communal behaviors in same-sex and opposite-sex relationships supports the idea that self-reports of interpersonal behavior fit gender stereotypes found in social development research when looking at same-sex relationships but not opposite-sex relationships. Using self-reported interpersonal behavior collected through event-contingent recording for specific interactions, they determined that women interacting with women were more agreeable, while men interacting with men were more dominant. Although these analyses did not specifically examine complementarity, they support the relevance of same-sex relationships for the study of interpersonal behavior.

Moskowitz, Suh, and Desaulniers (1994) sampled interpersonal behavior in work roles to examine the influences of gender, status, and social roles on expressions of dominance and warmth. They determined that gender did not influence dominant responses. Instead, status roles in the relationship determined the extent to which dominant behaviors were reported. Gender of the interactant and the responder influenced the level of warm behaviors. Specifically, women were overall warmer than men, and women were warmer with other women than men were with other men. These findings confirm the complexity of influences on interpersonal behavior while emphasizing the importance of a more refined examination of gender's influence on complementarity.

Yaughn and Nowicki (1999) explored gender differences in complementarity at the trait level in the same-sex dyads of college men and women who rated both themselves and two friends of differing closeness on an IPC measure. Their findings, based on self-reports of a general interpersonal style, only partially supported the complementarity hypothesis in women (similarity on warmth) and found no support for complementarity in men. Although this finding suggests that male and female dyads might express different degrees of complementarity in interpersonal style, other recent research suggests that this conclusion might be premature. Self-ratings, like the ones used by Yaughn and Nowicki (1999), appear to measure a trait-like (i.e., stable) interpersonal style that describes how a person generally behaves across different interaction partners (Markey & Kurtz, 2006; Tracey, 2004). Since the principles of complementarity assert that the interpersonal styles of individuals are altered by the interpersonal styles of different interaction partners, self-ratings of interpersonal styles are somewhat limited in the information they provide concerning complementarity in specific relationships (Tracey, 2004). It therefore appears that the next logical step to examine gender differences in complementarity would be to utilize a methodology that does not rely on self-ratings to assess complementarity.

### *Current Study*

The current study examines complementarity of informant-rated interpersonal styles specific to the relationship

between college roommates after living together for one semester. College roommates offer a unique interpersonal situation for the study of complementarity; one in which randomly assigned same-sex dyads are forced to interact with one another over an extended period of time. The roommate relationship also provides a unique opportunity to meet Kiesler's (1996) criteria for optimizing complementarity: The participants are peers of the same gender interacting in varied situations without predetermined social roles. Few interpersonal situations offer the same rich opportunity to study the nature of relating without confounds that are found in friendships, family, or workplace social roles. While some status roles may differ between roommates, they essentially enter the situation as equal contributors to the interpersonal situation of dorm living. The roommate relationship also surpasses the more controlled and time limited laboratory relationship in the variation of interaction experiences and potential implications of relationship outcomes. The uniqueness of this situation has offered a fertile ground for interpersonal research (Kurtz & Sherker, 2003; Markey & Kurtz, 2006). However, previous research tends to focus on only female dyads. Given research findings suggesting that the interpersonal dimensions may apply differently to men and women, further examinations of same-sex dyadic relationships using men and women in naturalistic settings over a sufficient period of time is a necessary next step in exploring the complementarity hypothesis.

The present study sought to extend previous research on gender differences in complementarity by utilizing informant reports to examine the complementarity of male and female college roommates. While not an analysis of complementarity at the behavioral interchange level, the informant ratings of style specific to the roommate relationship approximate an aggregated rating of behaviors within the roommate dyad. Data were analyzed with the following questions in mind: (a) Do both female and male informant ratings conform to the expected octant orderings or structure of the IPC?; (b) Are complementary interpersonal styles present in both female and male roommate dyads?; and (c) Are complementary interpersonal styles related to relationship cohesion in both male and female roommate dyads?

## METHOD

### *Participants*

Participants were 120 freshman undergraduates (30 female and 30 male roommate dyads). It was required that the roommates were unacquainted with each other prior to the current academic year and randomly assigned to their dorm rooms based solely on gender and smoking preference. Roommate status was verified using records provided by the Office of Residence Life. The majority of participants were recruited through introductory psychology courses and received credit toward course requirements in exchange for participation. Eligible students were also contacted through campus mail about the study. Individual roommates were contacted separately regarding the study, and participation was scheduled separately to promote the inclusion of roommate pairs with varying relationship quality. Members of the roommate pairs who were not enrolled in Introductory Psychology received $10.00 compensation for completing the study protocol.

### *Measures*

*Behavioral style of the roommate.* Participants rated the interpersonal style of their roommates using an informant version of the Interpersonal Adjectives Scale (IAS-R; Wiggins, 1995; Wiggins, Trapnell, & Phillips, 1988). Participants were instructed through verbal and written directions to "rate your roommate based on how your roommate interacts with you." The IAS-R consists of 64 adjective items assigned to one of eight scales. The respondent uses a Likert-type scale ranging from 1 (*extremely inaccurate*) to 8 (*extremely accurate*) to rate how accurately each of the adjectives describes the target person, in this case their roommate. Each scale measures an octant of the IPC (see Figure 1), and they are alphabetically labeled in a counterclockwise direction: assured-dominant (PA), arrogant-calculating (BC), cold-hearted (DE), aloof-introverted (FG), unassured-submissive (HI), unassuming-ingenuous (JK), warm-agreeable (LM), and gregarious-extraverted (NO). Past research has demonstrated that the informant version of the IAS-R can be reliably used to describe the behavioral style of others (Kurtz, Lee, & Sherker, 1999). Reliability, using coefficient alpha, of the octants in the current sample (presented in counterclockwise order starting with PA) were .80, .91, .90, .92, .88, .78, .93, and .94, respectively. Octant and dimensional scores were standardized using gender-specific norms for college students (Wiggins, 1995).

*Roommate relationship cohesion.* Participants reported the level of cohesion in their roommate relationship by completing the Roommate Relationship Questionnaire (RRQ; Kurtz & Sherker, 2003). The Cohesion subscale includes 15 items that assess a sense of closeness and friendship experiences. Sample questions on the Cohesion Scale include, "I consider my roommate a good friend," and "At times I need to avoid my roommate" (reversed-keyed). A 5-point Likert-type

scale was used for rating each statement's frequency of occurrence, with 0 = *never* and 4 = *often*. The alpha of this subscale in the current sample was .95, indicating excellent reliability. Within-dyad agreement on the quality of the roommate relationship was good; the intraclass correlation of cohesion scores was .72. Thus, the two cohesion scores of each roommate pair were averaged to represent the level of dyadic cohesion.

### *Procedure*

Data were collected after participants had been living together for a period ranging from 15 weeks to 26 weeks. If participants attended the session at the same time as their roommate, they were placed in separate rooms when completing their ratings. Participants completed informed consent and were assured of total confidentiality with regard to their ratings. After completion of the questionnaires, participants were given a written debriefing statement and compensated with cash or course credit.

## RESULTS

### *Confirmation of the Informant IAS-R Circular Structure*

It was first examined if the informant IAS-R reports provided by the roommates conformed to the predicted circular structure presented in Figure 1. According to the theoretical IPC structure, the magnitude of the correlations between the IAS-R octant scales has a predictable order. Specifically, correlations between octants closer on the circle should be larger than correlations that are more distal. The correlations of octants separated by 45° (e.g., PA and BC) should be greater than the correlations of the octants separated by 90° (e.g., PA and DE), creating a total of 64 order predictions; the correlations of octants separated by 90° should be greater than the correlations of octants separated by 135° (e.g., PA and FG), creating a total of 64 order predictions; and the correlations of octants separated by 135° should be greater than the correlations of octants separated by 180° (e.g., PA and HI), yielding 32 additional order predictions. The structure of the IPC also implies that the correlations of octants separated by 45° will be greater than octants separated by 135° (creating 64 predictions) and octants separated by 180° (creating 32 predictions). Finally, the octants separated by 90° should have greater correlations than the octants separated by 180° (creating 32 predictions). Therefore, the circumplex structure presented in Figure 1 generates a total of 288 hypothesized order predictions.

To determine if the informant IAS-R reports provided by roommates conformed to the predicted circular structure presented in Figure 1, correspondence indices (CI) were computed (Hubert & Arabie, 1987). The CI serves as an index of fit of the original correlation matrix with the order predictions and is computed by comparing an obtained correlation matrix with the 288 order predictions using the following formula:

$$CI = \frac{\textit{number of correct predictions - number of incorrect predictions}}{\textit{total number of predictions}}$$

A CI can range from +1.0 (all order predictions were met) to –1.0 (no order predictions were met), with a CI of 0.0 indicating the number of predictions violated is equal to the number of predictions met. Randomization tests of hypothesized order relations (Hubert & Arabie, 1987; Rounds, Tracey, & Hubert, 1992) were then used to evaluate significance of the CI. This test yields an exact probability of obtaining the CI in the observed correlation matrix under the null hypothesis that the eight octant scales are relabeled at random. This test makes no assumptions about the independence of the order predictions. In a correlation matrix with 8 variables, there are a total of 8! (40,320) random matrices that were used to created a comparison distribution for evaluating the fit of the original matrix. Randomization tests and CIs were computed using the statistical package RANDALL (Tracey, 1997) in order to examine the 288 predicted order relations for both men and women. As seen in Table 1, all of the randomization tests examining the circular structure of the informant IAS-R octant scales were significant, and none of the random matrices fit the circular structure of the IPC better than the original correlation matrices. Women's reports of their roommates' interpersonal styles fit the circular structure slightly better than the male reports of their roommates' interpersonal styles (CI difference = .06, $p < .05$; Tracey, 1994; Tracey et al., 2001). However, the high CIs in Table 1 indicate that both men's and women's reports of their roommates interpersonal styles strongly conformed to the circular structure presented in Figure 1.

### *Complementarity of Roommate Interpersonal Styles*

To examine if both female and male roommates tended to complement each other, the correlations of IAS-R octant scales across roommates were examined. As suggested by Griffin and Gonzalez (1995), pairwise intraclass correlations are appropriate in situations involving indistinguishable or exchangeable dyad pairs.

**TABLE 1:** Randomization Tests of the Circular Order Relations for the Informant Interpersonal Adjectives Scale (IAS-R) Ratings

| | *Circular Ordering of the Informant Ratings of Roommates' Behavioral Styles (IAS-R)* | | | |
|---|---|---|---|---|
| | *Predictions Made* | *Predictions Met* | *Correspondence Index* | p |
| Female roommates | 288 | 282 | .95 | < .001 |
| Male roommates | 288 | 262 | .85 | < .001 |

**TABLE 2:** Intraclass Correlation Matrices for Male and Female Informant Ratings of Roommates' Interpersonal Styles (Interpersonal Adjectives Scale; IAS-R)

| | *Female IAS-R Octant Scales* | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | *Assured-Dominant (PA)* | *Arrogant-Calculating (BC)* | *Cold-Hearted (DE)* | *Aloof-Introverted (FG)* | *Unassured-Submissive (HI)* | *Unassuming-Ingenuous (JK)* | *Warm-Agreeable (LM)* | *Gregarious-Extraverted (NO)* |
| PA | –.44 | | | | | | | |
| BC | –.24 | .10 | | | | | | |
| DE | –.19 | .16 | .31 | | | | | |
| FG | .06 | .41 | .38 | –.02 | | | | |
| HI | .23 | .15 | .11 | –.10 | –.08 | | | |
| JK | .18 | –.08 | –.16 | –.45 | –.16 | –.01 | | |
| LM | .17 | –.32 | –.34 | –.33 | –.12 | .30 | .39 | |
| NO | .01 | –.38 | –.38 | –.11 | .02 | .41 | .37 | .21 |
| | *Male IAS-R Octant Scales* | | | | | | | |
| | *Assured-Dominant (PA)* | *Arrogant-Calculating (BC)* | *Cold-Hearted (DE)* | *Aloof-Introverted (FG)* | *Unassured-Submissive (HI)* | *Unassuming-Ingenuous (JK)* | *Warm-Agreeable (LM)* | *Gregarious-Extraverted (NO)* |
| PA | .12 | | | | | | | |
| BC | –.20 | .31 | | | | | | |
| DE | –.05 | –.23 | –.27 | | | | | |
| FG | .04 | .02 | –.13 | –.09 | | | | |
| HI | –.03 | .03 | –.10 | –.11 | .02 | | | |
| JK | .02 | .23 | .20 | –.05 | .00 | –.15 | | |
| LM | .02 | .22 | .20 | –.07 | .00 | –.16 | –.13 | |
| NO | .00 | .01 | .12 | –.03 | .05 | .00 | .04 | .08 |

Table 2 presents the pairwise intraclass correlations of IAS-R ratings for the female and male roommate dyads. Table 3 displays the correlations that would occur if perfect complementarity occurred in a manner predicted by Figure 1. As seen in this table, correlations between complementary octants (e.g., PA and HI) would be greater than the correlations between octants 45° from complementarity (e.g., PA and JK), which would be greater than octants 90° from complementarity (e.g., PA and LM), which would be greater than octants 135° from complementarity (e.g., PA and NO), which would be greater than octants 180° from complementarity (e.g., PA and PA). Taken together, this set of hypothesized order relations yields a total of 800 separate order predictions when the correlation matrix is symmetrical (Markey & Kurtz, 2006). As with the earlier analysis, a CI and a randomization test of hypothesized order relations can be computed in order to evaluate fit of the obtained female dyads and male dyads IAS-R correlation matrices (see Table 2) with 800 order predictions. These randomization tests and CIs were computed using a version of RANDALL (Tracey, 1997) that was modified by Tracey to examine complementarity with symmetrical correlation matrices.

The results of the randomization tests of hypothesized order relations and the corresponding CI for complementarity for both women and men are presented in Table 4. As shown in this table, the interpersonal styles of female roommates strongly complemented each other (CI = .88, $p < .001$); however, the interpersonal styles of

**TABLE 3:** Hypothesized Intraclass Correlation Matrix of Interpersonal Adjectives Scale Octant Scales According to Carson's (1969) Definition of Complementarity

| | *Assured-Dominant (PA)* | *Arrogant-Calculating (BC)* | *Cold-Hearted (DE)* | *Aloof-Introverted (FG)* | *Unassured-Submissive (HI)* | *Unassuming-Ingenuous (JK)* | *Warm-Agreeable (LM)* | *Gregarious-Extraverted (NO)* |
|---|---|---|---|---|---|---|---|---|
| PA | –1.000 | | | | | | | |
| BC | –0.707 | 0.000 | | | | | | |
| DE | 0.000 | 0.707 | 1.000 | | | | | |
| FG | 0.707 | 1.000 | 0.707 | 0.000 | | | | |
| HI | 1.000 | 0.707 | 0.000 | –0.707 | –1.000 | | | |
| JK | 0.707 | 0.000 | –0.707 | –1.000 | –0.707 | 0.000 | | |
| LM | 0.000 | –0.707 | –1.000 | –0.707 | 0.000 | 0.707 | 1.000 | |
| NO | –0.707 | –1.000 | –0.707 | 0.000 | 0.707 | 1.000 | 0.707 | 0.000 |

**TABLE 4:** Randomization Tests of Complementary Order Relations for the Informant Interpersonal Adjectives Scale Ratings of Roommates' Behavioral Styles

| | *Complementarity of informant ratings of roommates' behavioral styles (IAS-R)* | | | |
|---|---|---|---|---|
| | *Predictions Made* | *Predictions Met* | *Correspondence Index* | p |
| Female roommates | 800 | 749 | .88 | < .001 |
| Male roommates | 800 | 358 | –.07 | .69 |
| Female vs. male roommates[a] | | | .48 | .001 |

a. To examine the difference in complementarity of female and male roommates, a correspondence index difference statistic was computed.

male roommates failed to complement each other (CI = –.07, $p$ = .69). To test if the women and men displayed significantly different levels of complementarity, a CI difference was computed. The CI difference is defined as the proportion of predictions met by the first correlation matrix (i.e., women's IAS-R ratings) minus the proportion of predictions met by the second correlation matrix (i.e., male IAS-R ratings). In a manner similar to the CI, the CI difference can range from +1.0 (all predictions were confirmed by the first matrix and none was confirmed by the second matrix) to –1.0 (none of the predictions was confirmed by the first matrix and all were confirmed by the second matrix), with a CI difference 0.0 indicating that the model of complementarity fit both correlation matrices equally well. The CI difference can be tested for significance by using a randomization test comparing the obtained CI difference against the permutations of the row and columns of the correlation matrices (Tracey, 1994; Tracey et al., 2001). As shown in Table 1, the degree of complementarity observed in female roommate dyads was significantly greater (CI difference = .48, $p$ = .001) than the complementarity observed in male roommate dyads.

### *Relating Complementarity to Dyadic Cohesion*

Although the above results suggest that only women exhibited complementary interpersonal styles, this does not necessarily imply that complementarity is an unimportant predictor of interpersonal cohesion in men. In order to examine if complementarity of interpersonal styles among roommates predicts interpersonal cohesion, the degree of complementarity observed in each dyad was quantified for each dimension using the following formulas:

$$COMP_{Warm} = \sqrt{(Warm_A - Warm_B)^2}$$

$$COMP_{Dom} = \sqrt{(Dom_A + Dom_B)^2}$$

where

$COMP_{Warm}$ = A dyad's total deviation from perfect complementarity on the warmth dimension
$COMP_{Dom}$ = A dyad's total deviation from perfect complementarity on the dominance dimension
$Warm_A$ = the IAS-R warmth score of person A
$Warm_B$ = the IAS-R warmth score of person B
$Dom_A$ = the IAS-R dominance score of person A
$Dom_B$ = the IAS-R dominance score of person B

In the above equations, $COMP_{Warm}$ and $COMP_{Dom}$ provide assessments of each dyad's deviation from perfect complementarity. Because the dimensional scores of warmth and dominance are standardized, a COMP value of 0 indicates that a dyad had perfect complementarity

**TABLE 5:** Regression Analysis Predicting Dyadic Cohesion from the Gender of a Dyad and a Dyad's Deviation from Complementarity

| | B | SE | *Beta* | *Increment to* R, F, (df) |
|---|---|---|---|---|
| Main effects | | | | .47, 5.37**, (3,56) |
| Intercept | 48.29 | | | |
| Gender of dyad (GD) | –7.12 | 2.86 | –.30* | |
| Deviation from warmth complementarity (WC) | –.31 | .19 | –.20† | |
| Deviation from dominance complementarity (DC) | –.92 | .43 | –.25* | |
| Interaction effects | | | | .01, .43, (2,54) |
| GC × WC | .45 | .56 | .17 | |
| GD × WC | –.55 | .91 | –.11 | |

†$p < .10$. *$p < .05$. **$p < .01$.

(i.e., the members were exactly opposite each other in terms of dominance or exactly similar to each other in terms of warmth), and as a dyad deviates from perfect complementarity the coefficient COMP becomes larger.

Regression analyses were performed at the level of the dyad to examine if deviation from complementarity predicted dyadic cohesion and if the gender of a dyad (0 = *female dyads* and 1 = *male dyads*) moderated this relationship. The dyad's average total RRQ Cohesion score served as the dependent variable. As seen in Table 5, there was a tendency for female dyads to report more dyadic cohesion than male dyads ($t(56) = –2.49$, $p < .05$, $sr = –.30$). Central to the aim of the current study, $COMP_{Dom}$ ($t(56) = –2.13$, $p < .05$, $sr = –.27$) was significantly negatively related to dyadic cohesion. Additionally, $COMP_{Warm}$ ($t(56) = –1.69$, $p < .10$, $sr = –.22$) was negatively related with dyadic cohesion. It should be noted that, although the effect of $COMP_{Warm}$ was not significant at the $p < .05$ level, it was only based on a sample of 60 dyads and is significant at the .10 level in the theoretically predicted direction. The nonsignificant interaction effects between gender and the COMP scores suggest that complementarity predicts dyadic cohesion equally well in female and male dyads.

## DISCUSSION

Complementarity has maintained a salient, if inconsistent, presence at the center of the study of interpersonal situations and relationship outcomes. The current study sought to expand on previous investigations by examining potential gender differences in complementarity within male and female roommate dyads. The roommate relationship provides a unique opportunity to meet Kiesler's (1996) criteria for optimizing complementarity: The participants are peers in a same-sex dyad interacting over a period of time in varied situations without predetermined social roles. These circumstances allow an optimal environment for the expression and maintenance of interpersonal complementarity. Informant ratings specific to the roommate relationship were used to identify interpersonal styles exhibited by the partner within the dyad and to examine the complementarity of these styles. While not an examination of the behavioral interchange of the roommates, the informant reported interpersonal style specific to the roommate relationship has demonstrated complementarity effects previously (Markey & Kurtz, 2006). Relationship cohesion was also assessed and predicted by the level of dyad complementarity on dominance.

Our results indicate that interpersonal ratings by informant roommates are consistent with the hypothesized ordering predicted by the IPC model (Rounds et al., 1992). More important, examination of complementarity within the roommate dyad indicates that female dyads demonstrate significantly more complementarity than male dyads. However, for men and women, the closer the dyad is to perfect complementarity on dominance, the more cohesive the relationship. Thus, informant reports of female roommate interactions conform to proposed rules of complementarity and are positively related to relationship cohesion. Informant reports of male roommate interactions, in general, did not conform to proposed rules of complementarity, but male roommate dyads who were complementary in terms of dominance do report more relationship cohesion. This effect likely accounts for the observed differences in relationship cohesion between male and female roommate pairs.

There are several theoretical factors that may account for the findings that female roommate relationships more frequently exhibit the presence of complementary interpersonal styles than male roommate relationships. Theory and research on social development has identified gender differences in behaviors and traits conceptually linked to the two dimensions of the IPC that may help explain the complementarity differences. It seems well established that different relationship styles are formed within same-sex girls' versus boys' peer groups (Benenson, Apostoleris, & Parnass, 1997; Leaper, 1994; Maccoby, 1998), with girls spending more time engaged in prosocial behaviors, social conversation, and self-disclosure than boys, and boys

spending more time engaged in competitive, organized, or rough-and-tumble play, and with greater focus on dominance hierarchies than girls (Ladd, 1983; Lempers & Clark-Lempers, 1993; Moller, Hymel, & Rubin, 1992; Pellegrini, Blatchford, Kato, & Baines, 2004; Rose, 2002; Rose & Asher, 1999; Savin-Williams, 1979). These developmentally evoked relationship style differences may result in the different emphases of peer relationships among freshman college roommates. If social conversation and self-disclosure differ between male and female college roommates, it could influence relationship development through the increased presence and opportunity for influence of complementary processes.

While differences appear small in early childhood, these relationship differences increase in adolescence (Rose & Rudolph, 2006). Maccoby (1990) hypothesizes that early separation into same-sex play groups leads girls to develop a more polite and affiliative influencing style and leads boys to develop a more demanding influencing style. Adolescent girls report caring more about having friendships than do adolescent boys (Benenson & Benarroch, 1998), and girls are more likely to endorse goals that develop and maintain the relationship, such as mutual participation, friendliness, intimacy, supportiveness, and peer problem resolution (Chung & Asher, 1996; Jarvinen & Nicholls, 1996; Murphy & Eisenberg, 2002; Rose & Asher, 1999, 2004; Strough & Berg, 2000). If these differences in relationship goals persist into the college years, the salience of complementarity for maintaining relationships may differ between male and female roommate dyads. Further research examining the presence of these gender differences in relationship goals in the early college years may help explain the relative lack of complementarity in male roommate dyads.

A limitation of the present study is the use of informant ratings of general style specific to the relationship. Research suggests that the negotiation of interpersonal complementarity is most prevalent at the behavioral interchange level (Tracey, 2004). Given this methodological limitation, it is difficult to determine if complementarity in female dyads was a result of interpersonal negotiation over a period of time. Previous research on female roommate dyads using the informant rating method does indicate an increase in complementarity over time (Markey & Kurtz, 2006). However, it is difficult to determine if the interpersonal process leading to an increase in complementarity failed in male dyads or if a different process of behavioral interchange occurred. Future studies should examine gender differences in complementarity at the behavioral interchange level to elucidate the causal pathway of the current study's findings.

A limitation in the current study and possibility for future consideration when examining gender at the behavioral interchange assessment level includes differences in interpersonal power. Interpersonal power refers "in general to the ability to have an effect on the other person's behavior and response" (Carson, 1969, p. 153). It may be that same-sex dyadic interactions differ in the relative interpersonal power of the interactant to influence the other, depending on the gender of participants. Perhaps, considering the social developmental differences reviewed above, women in peer relationships possess more interpersonal power to influence their dyad partner and be influenced by that partner than men in similar peer dyads. Assessment of interpersonal power, conforming to the Carson definition, in future examinations of complementarity may help clarify these gender differences.

Given the possible homogeneity of the dyads examined in the present study, future research should also seek to replicate these findings with larger samples and different age groups. Research examining why male dyads are less likely to report complementarity may do well to assess the time spent interacting with the roommate, the types of activities shared, and the size of social groups the roommates interact within. Research in which real-life roommate relationships are combined with lab scenarios involving behavioral interchange assessment may help elucidate the impact that informant-rated interpersonal styles have on dyad members and whether negotiating interpersonal behaviors, in fact, occurs in male dyad members, or whether the process ends prior to that. This would help confirm whether or not male dyads are behaviorally eliciting complementarity and whether or not they are interpersonally sensitive enough to pick up on interpersonal provocations. In contrast to previous research on gender and complementarity, the current study's findings emphasize the importance for future complementarity research to consider Kiesler's (1996) criteria for optimal interpersonal situations when selecting relationship dyads for research.

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