
Complementarity of Interpersonal Behaviors in Dyadic Interactions

Patrick M. Markey
Villanova University

David C. Funder

Daniel J. Ozer

University of California, Riverside

An important assumption of interpersonal theory is that during social interactions the behavior of one person tends to invite complementary behavior from the other person. Past research examining complementarity has usually used either confederates or fictitious interaction partners in their designs and has produced inconsistent results. The current study used observational ratings of behaviors of 158 participants as they interacted with partners across three different dyadic social situations. Randomization tests of hypothesized order relations found that the behaviors exhibited during these interactions tended to occur in a circular pattern predicted by the interpersonal circumplex. These tests also indicated support for Leary's (1957) orientation of the control and affiliation dimensions of the interpersonal circumplex and Carson's (1969) notion that dominant behavior induces submissive responses and friendly behavior encourages friendly responses.

Keywords: complementarity; circumplex; interpersonal; behavior

A young man and woman meet for the first time as participants in a psychology experiment. They are seated on a couch and an experimenter explains that for the next 5 min they will have the opportunity to become acquainted. The experimenter leaves the room and activates a camera to record their behaviors. When this video is later observed, it is apparent that many of the mundane behaviors the participants exhibited were almost completely determined by the actions of the other participant. When one participant stuck out a hand to greet the other, the other quickly responded by shaking their hand. When one was laughing, the other laughed in response. They took turns speaking and even reciprocated expressions of emotions. These behaviors remind us of the reciprocal nature of our interactions with oth-

ers. Without direct instruction, these participants have learned the appropriate way to respond to each other's verbal and behavioral acts.

Although the impact of others' actions on these concrete behaviors is obvious, the reciprocity of individuals' behaviors becomes less clear when more abstract forms of behavior are examined. Just as laughter was contagious for these participants, would other behaviors reflecting love or dominance also be contagious? If one participant behaved in a hostile and condescending manner, it seems probable that the other participant would have reciprocated this behavior to some degree and acted hostile and condescending in return. In this sense, for each interpersonal behavior, whether it is a mundane handshake or an unkind action, there may be a complementary behavior that it invites.

This notion that our behaviors are affected by the actions of others is not new. Extensive research has examined interpersonal influences on behavior and has demonstrated that the expectations that people have about their interaction partners can affect what they do (Berk & Andersen, 2000; Zebrowitz, Andreoletti, Collins, Lee, & Blumenthal, 1998). For example, research on "expectancy effects" (Rosenthal, 2002) demonstrates that people will sometimes live up (or down) to the image other people have of them, whereas research on "self-verifica-

Authors' Note: Data gathering for this research was supported by Grant R01-MH42427 from the National Institute of Mental Health awarded to the second author. The authors wish to thank Charlotte N. Markey and Robert Rosenthal for their insight and helpful comments. Correspondence concerning this article should be addressed to Patrick M. Markey, Department of Psychology, Villanova University, 800 Lancaster Ave., Villanova, PA 19085.

PSPB, Vol. 29 No. 9, September 2003 1082-1090
DOI: 10.1177/0146167203253474

© 2003 by the Society for Personality and Social Psychology, Inc.

tion” (Swann & Ely, 1984) examines the circumstances under which people will endeavor to convince others that their initial impressions of them are mistaken. Historically, Harry Stack Sullivan’s (1953) interpersonal theory of personality stressed the importance of the individual’s social context. According to Sullivan, personality is inextricably tied to social situations; to understand personality, it is important to examine reoccurring patterns of social relations in real social contexts. Timothy Leary (1957) later operationally defined what was meant by such interpersonal complementarity: “Interpersonal reflexes tend (with a probability significantly greater than chance) to initiate or invite reciprocal interpersonal responses from the ‘other’ person in the interaction that lead to a repetition of the original reflex” (p. 123). Such a view implies that every behavior carries information regarding how the other should respond, and thus, each behavior elicits or constrains subsequent behavior from others.

In an attempt to examine how these “interpersonal reflexes,” or behaviors, are related to each other, Leary (1957) introduced a circular ordering of interpersonal variables known as the interpersonal circumplex. This circumplex structure implies that variables that measure interpersonal relations are arranged on the circumference of a circle orientated by the primary dimensions of dominant-submissive (i.e., control) and hostile-friendly (i.e., affiliation). The exact number of interpersonal variables and their ordering have gone through a number of revisions by various researchers (e.g., Kiesler, 1983; Strong et al., 1988; Wiggins, 1982). Figure 1 displays the circular ordering of the eight octant labels presented by Wiggins, Trapnell, and Phillips (1988). In this ordering, variables that fall close together are expected to be more positively related than variables that fall further apart, variables at right angles are unrelated, and variables at the opposite pole of a diameter are negatively related.

Using the two main dimensions of the interpersonal circle, Robert Carson (1969) specified the particular directions in which complementarity transpires. In his scheme, complementarity occurs when individuals are opposite on the control dimension (i.e., dominance induces submission and submission induces dominance) and similar on affiliation (i.e., cold-heartedness induces cold-heartedness and warmth induces warmth). For example, if person A behaved in an affectionate and submissive manner, the likely response of person B would be to complement this behavior by acting in an affectionate and dominant style.

Although Carson’s conception of complementarity is fairly straightforward, its operationalization when using the interpersonal circumplex depends on the orientation of the control and affiliation dimensions. Past theo-

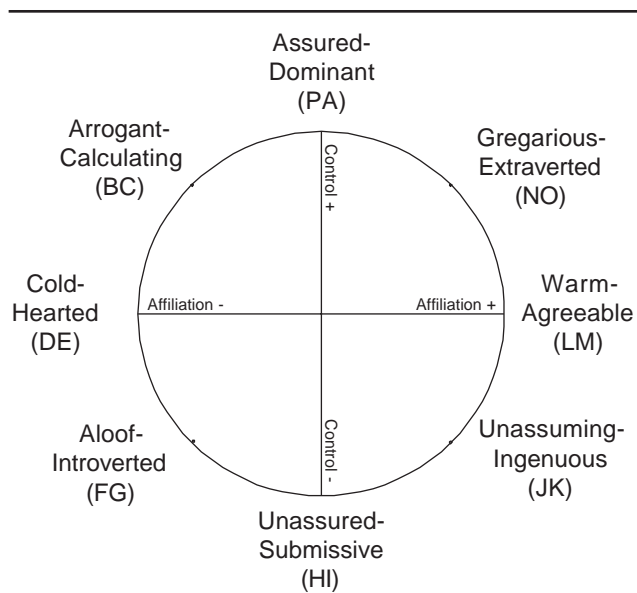
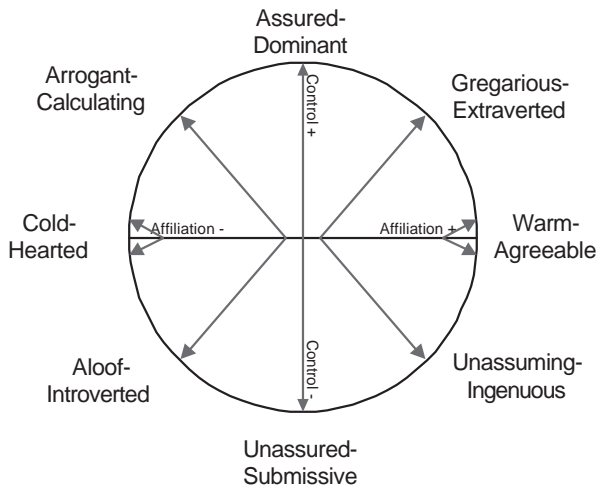


Figure 1 Wiggins, Trapnell, and Phillips’s (1988) Interpersonal Circumplex.

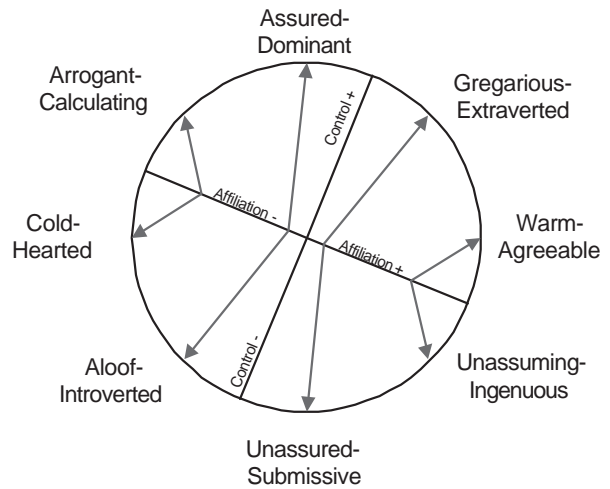
rists and researchers have placed these dimensions in three slightly different locations. As noted by Tracey, Ryan, and Jaschik-Herman (2001), Leary’s mathematical definitions located the control dimension intersecting the assured-dominant and the unassured-submissive octants and the affiliation dimension intersecting the cold-hearted and the warm-agreeable octants. However, Myllyniemi (1997) argued that the dimensions should be rotated 22.5° counterclockwise, placing control between the assured-dominant and the arrogant-calculating octants while affiliation is located between the warm-agreeable and the gregarious-extraverted octants. Strong et al. (1988) present a third orientation, rotating the axis 22.5° clockwise from Leary’s location, locating control between the assured-dominant and the gregarious-extraverted octants and affiliation between the warm-agreeable and the unassuming-ingenuous octants. These rotations do not alter the circular relations between the octants on the circumplex. However, the specific location of the affiliation and control dimensions does have an impact on which octants are predicted complements of each other. Figure 2 uses arrows to graphically display each behavior’s complementary behavior for each model. For example, if person A behaves in an arrogant-calculating manner, Leary’s model predicts that person B would likely respond by behaving in an aloof-introverted fashion, Myllyniemi’s model predicts an unassured-submissive response, and Strong et al.’s model predicts a cold-hearted response.

Using Foa and Foa’s (1974) notion of social exchange, Wiggins (1979) presents a different definition of complementarity than that presented by Carson

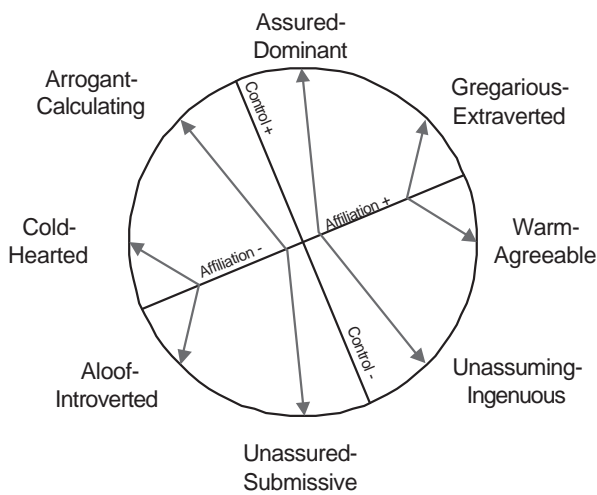
Complementarity Based On Leary's Orientation



Complementarity Based On Strong et al.'s Orientation



Complementarity Based On Myllyniemi's Orientation



Complementarity Based On Wiggins's Definition

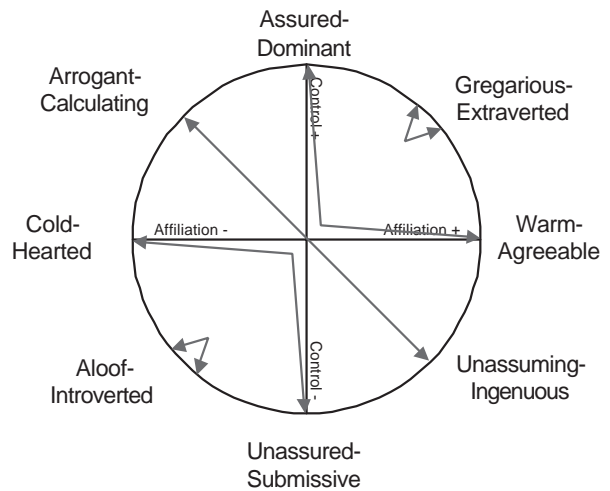


Figure 2 Different definitions of complementarity.
 SOURCE: Adapted from Tracy, Ryan, and Jaschik-Herman (2001).

(1969). Wiggins suggests that every behavior carries with it information that grants or denies status (to the self and the other) and love (to the self and the other). The complementary behavior is therefore defined as that behavior's logical match. For example, assured-dominant behavior grants both status and love to the self but only love without status to the other. The complement response would therefore be warm-agreeable behavior, which grants love without status to the self and both love and status to the other (Wiggins, 1979). As shown in Figure 2, whereas Wiggins's control and affiliation dimen-

sions are located in the same position as Leary's model, his predictions represent a 45° counterclockwise rotation from Leary's predictions of complementarity (see Tracey et al., 2001, for additional details about these different models of complementarity).

Research findings concerning which of the above models best predicts behavior have been inconsistent. In a review of 10 studies, Orford (1986) concluded that Leary's orientation predicted behaviors fairly well, whereas Wiggins's definition failed to do better than chance. Since Orford's review, Tracey (1994) has pre-

sented evidence that all the models are fairly equal in their ability to predict behavior and more recently, Tracey et al. (2001) concluded that the Strong et al. (1988) orientation was actually the best predictor of behavior. One reason for these inconsistent conclusions might be the methodologies commonly employed by researchers when examining complementarity in nonclinical settings. Such research often has examined the behavior of participants while they interacted with confederates who were coached to act in accord with one of the eight octants of the interpersonal circle (e.g., Bluhm, Widiger, & Miele, 1990; Strong et al., 1988). Other research has examined complementarity by simply asking participants to predict how they and a fictitious interaction partner might behave during an interaction (e.g., Tracey et al., 2001). It could be the case that the different methodologies employed by these researchers are a cause for these inconsistent findings. It is also unclear whether the results of such studies apply to more realistic interactions in which both participants are allowed more freedom to express a variety of behaviors. Such a natural interaction would allow for greater generalizability to the dyadic interactions that are encountered in everyday life.

The current study investigates the behaviors exhibited during dyadic interactions across three real, diverse situations. Judges ratings of directly observed interpersonal behaviors are statistically analyzed to address whether these behaviors occur in the manner predicted by the interpersonal circumplex. Further analyses assess whether the behaviors exhibited by one participant are related to the behavior of the other participant. Finally, the differing definitions of complementarity (i.e., Leary's, Myllyniemi's, Strong et al.'s, and Wiggins's) are compared to determine which best predicts behavior.

METHOD

Participants

Data were collected from a sample of 158 participants who were undergraduate students paid for their participation. This sample was composed of 79 men (50%) and 79 women (50%). These data were collected as part of a larger project examining predictors of accuracy on personality judgment (e.g., Funder, 1999). The present analyses have not been previously reported.

Dyadic Interactions

Each participant engaged in three dyadic interactions with a randomly assigned, opposite-sex stranger (another participant). These interactions lasted approximately 5 min and were videotaped with the participants' knowledge. The first situation was an unstructured inter-

action in which the two participants were seated on a couch and allowed to talk about anything they liked. The second situation was a cooperative interaction in which they were both seated at a table and given the task of building a tinker toy to match a model. If they succeeded in this task, each was paid \$1. The final situation presented a competitive task in which the participants played the memory game "Simon." In this situation, the winner of three out of five games was paid \$1.

Coding Behaviors

In each situation, participants' behaviors were rated using the 64-item version of the Riverside Behavioral Q-Sort (RBQ) (Funder, Furr, & Colvin, 2000). The RBQ consists of items designed to measure behaviors at a level of generality between narrowly defined motor activities and more abstract behavioral styles (e.g., "expresses warmth," "offers advice," "behaves in a cheerful manner"). Each item of the RBQ is printed on a card and judges describe the behavior of a target by ordering the cards into a nine-category, forced-choice, quasi-normal distribution. Cards placed in category 1 indicate behaviors that were extremely uncharacteristic of the participant, those placed in category 5 were behaviors that were neither characteristic nor uncharacteristic of the participant, and behaviors placed in category 9 indicate those behaviors that were extremely characteristic of the participant. To obtain reliable descriptions of behavior, four codings of each participant in each situation were obtained. Each coder independently watched assigned videotaped interactions and provided RBQ descriptions of the participants. Each judge coded many different participants but viewed only one interaction for any given participant. In addition, no judge coded the interaction partners of any of the participants they coded. The average four-judge composite reliability of the RBQ items during the unstructured situation was .53, in the cooperative situation it was .49, and in the competitive situation it was .50 (see Shrout & Fleiss, 1979, equations ICC [1,1] and ICC [1,k]). For further details on how these ratings were made and how reliability was computed, see Funder et al. (2000).

In addition to including many diverse interpersonal behaviors (e.g., "exhibits condescending behavior"), the RBQ also measures many intrapersonal (e.g., "aware of being on camera or in experiment") behaviors. Therefore, not all of the RBQ behaviors are expected to be related to the interpersonal circumplex. To examine relevant interpersonal behaviors, three RBQ items were selected that seemed to best represent each octant of the interpersonal circumplex as defined by Wiggins et al. (1988; see Figure 1). These three items were then used to create a composite score for each octant during each

TABLE 1: Items Used to Define Each Riverside Behavioral Q-Sort (RBQ) Octant Scale

(PA) Assured-Dominant
57. Speaks in a loud voice
5. Tries to control the interaction
6. Dominates the interaction
(BC) Arrogant-Calculating
18. Talks at rather than with partner (e.g., conducts a monolog, ignores what partner says)
28. Exhibits condescending behavior (acts as if self is superior to partner)
55. Emphasizes accomplishments of self, family, or housemates
(DE) Cold-Hearted
61. Seems detached from the interaction
20. Expresses criticism (of anybody or anything)
35. Expresses hostility (to anyone or anything)
(FG) Aloof-Introverted
14. Exhibits an awkward interpersonal style (e.g., mumbles, has difficulty knowing what to say)
23. Shows physical signs of tension or anxiety (e.g., fidgets nervously, voice wavers)
37. Behaves in a fearful or timid manner
(HI) Unassured-Submissive
51. Gives up when faced with obstacles
22. Expresses insecurity (e.g., seems touchy or overly sensitive)
27. Seeks reassurance from other person (e.g., asks for agreement, fishes for praise)
(JK) Unassuming-Ingenuous
4. Is interested in what other person has to say
19. Expresses agreement frequently
30. Seeks advice from partner
(LM) Warm-Agreeable
8. Exhibits social skills (e.g., does things to make the partner feel comfortable)
33. Expresses warmth (to anyone)
29. Seems likeable
(NO) Gregarious-Extraverted
16. Shows high enthusiasm and high energy levels.
21. Is talkative
63. Acts playful

interaction (see Table 1). The alpha reliabilities of the RBQ octant scales during each interaction are presented in Table 2.

RESULTS

Circular Structure of Interpersonal Behaviors

It was first important to determine whether the eight RBQ octant scales were related to each other in a manner predicted by the interpersonal circumplex. The magnitude of correlations among the octant scales has a predictable order if the circular structure presented in Figure 1 is appropriate. The correlations for the octants separated by 45° (e.g., PA and BC, BC and DE, DE and FG, etc.) should be greater than the correlations for the octants separated by 90° (e.g., PA and DE, BC and FG, DE and HI, etc.), creating a total of 64 order predictions; the correlations for the octants separated by 90° should

TABLE 2: Reliabilities of Each Riverside Behavioral Q-Sort (RBQ) Octant Scale During Each Interaction

	<i>Unstructured</i>	<i>Cooperative</i>	<i>Competitive</i>
PA	.73	.70	.69
BC	.47	.34	.51
DE	.59	.42	.46
FG	.83	.80	.79
HI	.49	.46	.54
JK	.61	.65	.55
LM	.54	.53	.43
NO	.64	.76	.84

NOTE: PA = Assured-Dominant, BC = Arrogant-Calculating, DE = Cold-Hearted, FG = Aloof-Introverted, HI = Unassured-Submissive, JK = Unassuming-Ingenuous, LM = Warm-Agreeable, NO = Gregarious-Extraverted.

be greater than the octants separated by 135° (e.g., PA and FG, BC and HI, DE and JK, etc.), yielding 64 predictions; and the correlations for the octants separated by 135° should be greater than the correlations for the octants separated by 180° (e.g., PA and HI, BC and JK, DE and LM, etc.), creating another 32 order predictions. By implication, the circular structure also suggests that the correlations of octants separated by 45° will be greater than those separated by 135° (creating 64 predictions) and those separated by 180° (creating 32 predictions), and the correlations of the octants separated by 90° will be greater than the octants separated by 180° (creating 32 predictions). Therefore, the circular structure implied in Figure 1 generates a total of 288 order predictions.

Wakefield and Doughtie (1973) present a method to examine the significance of the order predictions that exist in a correlation matrix based on the binomial distribution. Although this method has been one of the more popular techniques to test the hypothesized order of relations, Hubert and Arabie (1987) criticized it because it incorrectly assumes that the order predictions are independent. As an alternative approach for testing the order predictions, they suggested a randomization test of hypothesized order relations. This test makes no assumption about the independence of the order predictions and yields an exact probability of obtaining the predicted order among the correlations in a data matrix under the null hypothesis that the eight-octant scales are relabeled at random. The probability associated with the randomization test corresponds to the proportion of predictions met by the correlation matrix versus the number of predictions met with random labeling. In a correlation matrix with eight variables there are a total of 8 (40,320) possible random matrices that can be compared to the original data matrix. The fit of these random matrices to the hypothesized order predictions serves as the comparison distribution for evaluating the

fit of the original matrix (see Rounds, Tracey, & Hubert, 1992, for additional information and additional applications of this randomization test). Hubert and Arabie (1987) also proposed a correspondence index (CI) that serves as an index of fit of the original matrix with the order predictions. The CI is the number of agreements of the original matrix with the order predictions minus the number of disagreements divided by the total number of predictions made. The CI can range from +1 (perfect fit) to -1 (no predictions were met), with a CI of 0.0 indicating that the number of predictions met was equal to the number violated.

Randomization tests were computed to examine the 288 predicted order relations for both men and women during the three different interactions.¹ As can be seen in Table 3, all of the randomization tests were significant. In fact, none of the random matrices fit the predicted order relations better than the original matrix. The average CI for the six random tests was .84, indicating that the RBQ octant scales were adequately fit by a circular structure.

Comparing Models of Complementarity

To determine which model of complementarity fit the data best, the correlations of the octant scales across interaction partners were next examined. Table 4 presents the correlations of male octant scales with their female partner's octant scales for the unstructured, cooperative, and competitive situations. If complementarity exists in these data, the correlations between complementary scales would be greater than the correlations between scales 45° from complementarity, which also would be greater than scales 90° from complementarity, which would be greater than scales 135° from complementarity, which would be greater than scales 180° from complementarity. This set of hypothesized order relations yields 1,600 different order predictions. Therefore, each of the different orientations and definitions of complementarity presented in Figure 2 can be used to create slightly different sets of the 1,600 order predictions.

The results of the randomization tests of hypothesized order relations and the corresponding CI for each situation and each model are presented in Table 5. Leary's orientation significantly fit the data during the three interactions and its average CI was the highest of the four models (average CI = .68). Myllyniemi's orientation significantly predicted the data in all three interactions and yielded an average CI (average CI = .50) comparable to Strong et al.'s orientation (average CI = .41) that significantly predicted the data in two of the situations. Finally, Wiggins's definition did not fit the data

TABLE 3: Randomization Tests of Circular Order Relations for the Riverside Behavioral Q-Sort (RBQ) Octant Scales

Sample	n	Predictions Made	Predictions Met	Correspondence Index	p
Unstructured situation					
Men	79	288	267	.86	.000
Women	79	288	253	.76	.000
Cooperative situation					
Men	79	288	263	.83	.000
Women	79	288	269	.86	.000
Competitive situation					
Men	79	288	263	.83	.000
Women	79	288	268	.87	.000

(average CI = .05), reaching significance only during the unstructured interaction.

DISCUSSION

Past research examining which of the various models of complementarity best predicts interpersonal behavior has yielded inconsistent results (e.g., Orford, 1986; Tracey, 1994; Tracey et al., 2001). This irregularity may be due to a methodological artifact: Researchers tend to use unrealistic interpersonal scenarios employing either confederates or fictitious interaction partners in their designs. In an effort to overcome this limitation, the current study examined the behavior of participants as they naturally interacted with each other across three different situations. By examining the behaviors exhibited by participants during these three interactions, the results obtained from this study may be more easily generalized to diverse interpersonal situations encountered in everyday life.

As expected, it was found that during dyadic interactions, the behavior of one participant had an important and real impact on the behavior of the other participant. This can be easily seen in the correlations presented in Table 4. Because participants were randomly paired with each other, if one's behavior had no impact on the other's behavior, these correlations would be near zero. However, the effect sizes found in these interactions were fairly large, ranging from $r = -.48$ to $r = .35$ in the unstructured situation, $r = -.51$ to $r = .54$ in the cooperative situation, and $r = -.62$ to $r = .47$ in the competitive situation. These results underlie the reciprocal nature of social interaction, in which an individual's behavior both causes and is caused by that of his or her interaction partners. Such results are anticipated by Sullivan's (1953) notion of "reciprocal emotion" and Leary's (1957) operational definition of complementarity, which both pos-

TABLE 4: Correlations Matrices of the Riverside Behavioral Q-Sort (RBQ) Octant Scales Across Dyads

Men	Women							
	PA	BC	DE	FG	HI	JK	LM	NO
Unstructured situation								
PA	-.48*	-.09	.19	.17	.29*	.30*	.06	-.44*
BC	-.10	-.18	.13	.11	.17	.22*	-.02	-.17
DE	.04	-.08	.17	.14	.07	-.11	-.23*	-.05
FG	.04	.14	.11	.26*	.03	-.12	-.16	-.15
HI	.05	.07	.02	.04	.10	-.02	.05	-.09
JK	.25*	.16	-.19	-.23*	-.22*	-.16	.04	.35*
LM	-.02	.02	-.15	-.19	-.11	.04	.07	.22*
NO	-.11	.02	-.05	-.20	-.11	.06	.31*	-.07
Cooperative situation								
PA	-.51*	-.13	.29*	.54*	.38*	.39*	-.19	-.43*
BC	-.22*	.04	.31*	.49*	.37*	.12	-.31*	-.35*
DE	.15	.10	.07	.23*	-.04	-.22*	-.09	-.11
FG	.44*	.32*	.03	.03	.07	-.19	-.03	-.02
HI	.49*	.29*	-.05	-.20	-.10	-.26*	.00	.19
JK	.41*	.34*	-.10	-.35*	-.13	-.19	.02	.20
LM	.02	-.10	-.19	-.43*	-.27*	.01	.18	.30*
NO	-.25*	-.24*	-.22*	-.20	-.04	.12	.26*	.12
Competitive situation								
PA	-.62*	-.16	.37*	.46*	.47*	.28*	-.03	-.44*
BC	-.06	.07	.25*	.33*	.22*	-.12	-.39*	-.20
DE	.12	.15	.10	.14	.08	-.21	-.34*	-.08
FG	.39*	.12	-.07	-.15	-.12	-.34*	-.18	.20
HI	.25*	.10	-.07	-.02	-.19	-.06	.01	.01
JK	.33*	.01	-.22*	-.36*	-.13	-.09	.09	.24*
LM	-.27*	-.23*	-.10	-.05	.05	.30*	.35*	.01
NO	-.28*	-.19	-.12	-.02	-.06	.25*	.34*	-.05

NOTE: $df = 77$. PA = Assured-Dominant, BC = Arrogant-Calculating, DE = Cold-Hearted, FG = Aloof-Introverted, HI = Unassured-Submissive, JK = Unassuming-Ingenuous, LM = Warm-Agreeable, NO = Gregarious-Extraverted.
 * $p < .05$, two-tailed.

tulate that an individual's behaviors are interrelated with the behaviors of others.

In attempting to predict exactly how these behaviors complement each other, Carson (1969) hypothesized that interaction partners would likely behave opposite to each other on control but behave similarly on affiliation. However, when using a circumplex to examine complementarity, the exact orientation of these two defining dimensions has varied (Leary, 1957; Myllyniemi, 1997; Strong et al., 1988). Of the four models of complementarity examined in this study, Leary's orientation of affiliation and control predicted the data best. Myllyniemi's and Strong et al.'s orientation predicted equally well, but not as well as Leary's, and Wiggins's definition of complementarity fit the data least. It is equally noteworthy that in the current study, the effect sizes (CI) yielded from Leary's orientations

TABLE 5: Randomization Tests of Complementarity Order Relations Across Different Definitions of Complementarity

Situation	Leary's Orientation		Strong et al.'s Orientation		Myllyniemi's Orientation		Wiggins's Definition	
	CI	p	CI	p	CI	p	CI	p
Unstructured	.57	.0003	.17	.1126	.62	.0003	.27	.0409
Cooperative	.71	.0001	.41	.0036	.55	.0001	.08	.2476
Competitive	.76	.0001	.65	.0001	.34	.0169	-.19	.9046

(average CI = .68) tended to be greater than effect sizes found in previous studies that employed confederates (average CI = .26) (Tracey, 1994) or fictitious interaction partners (average CI = .29²) (Tracey et al., 2001). It appears that when less natural interactions have been examined, the utility of the interpersonal circumplex for predicting behavior may have been underestimated.

The evidence provided here, suggesting that Leary's orientation best predicts complementary behavior, must be tempered with the limitations of this study. This article presents the first attempt at using the RBQ as a tool to measure the interpersonal circumplex. Although the RBQ octant scales used in this study possess face validity and conformed to a circular structure, evidence as to their construct validity is still somewhat limited. It would be useful to examine the convergent and discriminant validity of these RBQ scales with more traditional self-report measures of the interpersonal circumplex (e.g., Interpersonal Adjective Scales-Revised [Wiggins et al., 1988], Inventory of Interpersonal Problems [Horowitz, Rosenberg, Baer, Ureno, & Villaseñor, 1988], etc.). Such measures have been commonly used by researchers and have demonstrated impressive construct validity (Gurtman, 1995, 1996; Wiggins, Phillips, & Trapnell, 1989).

It should be noted that the way in which the RBQ was employed in this study does have some distinct advantages over some of these traditional measures. Because these traditional measures require the self to recall behaviors from the past, they are susceptible to various response biases (John & Robins, 1993; McCrae & Costa, 1989). These biases have even led some to question the objective circular ordering of these behaviors, suggesting that this ordering reflects nothing more than a pre-existing cognitive structure (Shweder & D'Andrade, 1979). By having unacquainted judges use the RBQ to rate the behaviors of participants directly from observations of their dyadic interaction, the current study found a clear circular ordering of behaviors that was predicted by the interpersonal circumplex. Although using the RBQ in this manner does not negate all cognitive biases, this finding does lend additional support to the notion

that this circular ordering of interpersonal behaviors is real and is more than a cognitive artifact.

By using the RBQ to code behavior, it was found that Carson's (1969) definition of complementarity predicted participants' behavior in each of the three interaction contexts examined in this study. However, it seems reasonable to expect that complementarity might ultimately prove to be, to some degree, situation dependent. Relatively unstructured situations that allow for the expression of a wide range of behavior (i.e., weak situations) (Snyder & Ickes, 1985) might yield greater complementarity than situations that have rigid norms or rules governing behavior of individuals, thus restricting behavioral variance (i.e., strong situations). For example, situations characterized by defined roles (e.g., a teacher interacting with a student) or that limit the intensity of behavior (e.g., Internet chat rooms) would likely lower complementarity (Kiesler, 1983).

Not only might elements of the situation alter complementarity but the quality of the relationship between interaction partners could be an important factor. The current study examined the behaviors of unacquainted opposite-sex dyads. It is presently unknown to what degree these findings would generalize to same-sex dyads or couples with established relationships. Research by Tracey et al. (2001) suggests that happily married couples might exhibit greater levels of complementarity than divorced couples. Similarly, complementarity has been related to relationship satisfaction (Dryer & Horowitz, 1997) and productivity (Estroff & Nowicki, 1992). Such findings are consistent with interpersonal theory that stresses the importance of complementarity in relationship longevity (Kiesler, 1983). Future research could examine such moderating influences on complementarity by using the methodology presented in this study to examine interpersonal behavior in even more diverse contexts and with couples in different types of relationships (e.g., married couples, same-sex interactions, employee-employer interactions, etc.).

Sullivan's (1953) interpersonal theory of personality suggests that behavior and personality are inevitably related to social situations. By directly observing the behavior of participants as they interacted with each other in real social contexts, the current study empirically demonstrated that interpersonal behaviors exhibited during a dyadic interaction can elicit or constrain subsequent behaviors from interaction partners. These findings do not negate the importance of personality traits in predicting behavior in the long run and across situations. Rather, it confirms that although there are consistent aspects of personality, people are not blind to social situations.

NOTES

1. The RANDALL (Tracey, 1997) set of computer programs were used to conduct all randomization tests in this study.

2. To allow for comparability to the current studies results, this is the average correspondence index (CI) (Tracey, Ryan, & Jaschik-Herman, 2001) found for Leary's orientation. However, even the Strong et al. (1988) orientation, which Tracey et al. (2001) concluded was the best orientation, still yielded an average CI (.47) lower than the one reported in the current study.

REFERENCES

- Berk, M. S., & Andersen, S. M. (2000). The impact of past relationships on interpersonal behaviors: Behavioral confirmation in the social-cognitive process of transference. *Journal of Personality and Social Psychology, 79*(4), 546-562.
- Bloom, C., Widiger, T. A., & Miele, G. M. (1990). Interpersonal complementarity and individual differences. *Journal of Personality and Social Psychology, 58*(3), 464-471.
- Carson, R. (1969). *Interaction concepts of personality*. Chicago: Aldine.
- Dryer, D. C., & Horowitz, L. M. (1997). When do opposites attract? Interpersonal complementarity vs. similarity. *Journal of Personality and Social Psychology, 72*(3), 592-603.
- Estroff, E., & Nowicki, S. (1992). Interpersonal complementarity, gender interactions, and performance on puzzle and word tasks. *Personality and Social Psychology Bulletin, 18*(3), 351-356.
- Foa, U. G., & Foa, E. B. (1974). *Societal structures of the mind*. Springfield, IL: Charles C. Thomas.
- Funder, D. C. (1999). *Personality judgment: A realistic approach to person perception*. San Diego, CA: Academic Press.
- Funder, D. C., Furr, R. M., & Colvin, C. R. (2000). The Riverside Behavioral Q-Sort: A tool for the description of social behavior. *Journal of Personality, 68*(3), 451-489.
- Gurtman, M. B. (1995). Personality structure and interpersonal problems: A theoretically-guided item analysis of the Inventory of Interpersonal Problems. *Psychological Assessment, 2*(4), 343-361.
- Gurtman, M. B. (1996). Interpersonal problems and the psychotherapy context: The construct validity of the Inventory of Interpersonal Problems. *Psychological Assessment, 8*(3), 241-255.
- Horowitz, L. M., Rosenberg, S. E., Baer, B., Ureno, G., & Villasenor, V. (1988). Inventory of Interpersonal Problems: Psychometric properties and clinical application. *Journal of Consulting and Clinical Psychology, 56*(6), 885-892.
- Hubert, L., & Arabie, P. (1987). Evaluating order hypotheses within proximity matrices. *Psychological Bulletin, 102*(1), 172-178.
- John, O. P., & Robins, R. W. (1993). Determinants of interjudge agreement on personality traits: The Big Five domains, observability, evaluativeness, and the unique perspective of the self. *Journal of Personality, 61*(4), 521-551.
- Kiesler, D. J. (1983). The 1982 interpersonal circle: A taxonomy for complementarity in human transactions. *Psychological Review, 90*(3), 185-214.
- Leary, T. (1957). *The interpersonal diagnosis of personality*. New York: Ronald.
- McCrae, R. R., & Costa, P. T. (1989). The structure of interpersonal traits: Wiggins's circumplex and the five-factor model. *Journal of Personality and Social Psychology, 56*(4), 586-595.
- Myllyniemi, R. (1997). The interpersonal circle and emotional undercurrents of human sociability. In R. Plutchik & H. R. Conte (Eds.), *Circumplex models of personality and emotions* (pp. 271-298). Washington, DC: American Psychological Association.
- Orford, J. (1986). The rules of interpersonal complementarity: Does hostility beget hostility and dominance, submission? *Psychological Review, 93*(3), 365-377.
- Rosenthal, R. (2002). The Pygmalion effect and its mediating mechanisms. In J. Aronson (Ed.), *Improving academic achievement: Impact of psychological factors on education* (pp. 25-36). San Diego, CA: Academic Press.
- Rounds, J., Tracey, T. J., & Hubert, L. (1992). Methods for evaluating vocational interest structural hypotheses. *Journal of Vocational Behavior, 40*(2), 239-259.

- Shrout, P. E., & Fleiss, J. L. (1979). Intraclass correlations: Uses in assessing rater reliability. *Psychological Bulletin*, 86(2), 420-428.
- Shweder, R. A., & D'Andrade, R. G. (1979). Accurate reflection or systematic distortion? A reply to Block, Weiss, and Thorne. *Journal of Personality and Social Psychology*, 37(6), 1075-1084.
- Snyder, M., & Ickes, W. (1985). Personality and social behavior. In G. Lindzey & E. Aronson (Eds.), *Handbook of social psychology* (3rd ed., Vol. 2, pp. 883-948). Reading, MA: Addison-Wesley.
- Strong, S. R., Hills, H., Kilmartin, C. T., DeVries, H., Lamer, K., Nelson, B. N., et al. (1988). The dynamic relations among interpersonal behaviors: A test of complementarity and anticomplementarity. *Journal of Personality and Social Psychology*, 54(5), 798-810.
- Sullivan, H. S. (1953). *The interpersonal theory of psychiatry*. New York: Norton.
- Swann, W. B., & Ely, R. J. (1984). A battle of wills: Self-verification versus behavioral confirmation. *Journal of Personality and Social Psychology*, 46(6), 287-1302.
- Tracey, T. J. G. (1994). An examination of complementarity of interpersonal behavior. *Journal of Personality and Social Psychology*, 67(5), 864-878.
- Tracey, T. J. G. (1997). RANDALL: A Microsoft FORTRAN program for a randomization test of hypothesized order relations. *Educational and Psychological Measurement*, 57(1), 164-168.
- Tracey, T. J. G., Ryan, J. M., & Jaschik-Herman, B. (2001). Complementarity of interpersonal circumplex traits. *Personality and Social Psychology Bulletin*, 27(7), 786-797.
- Wakefield, J. A., & Doughtie, E. B. (1973). The geometric relationship between Holland's Personality Typology and the Vocational Preference Inventory. *Journal of Counseling Psychology*, 20(6), 513-518.
- Wiggins, J. S. (1979). A psychological taxonomy of trait-descriptive terms: The interpersonal domain. *Journal of Personality and Social Psychology*, 37(3), 395-412.
- Wiggins, J. S. (1982). Circumplex models of interpersonal behavior in clinical psychology. In P. C. Kendall & J. N. Butcher (Eds.), *Handbook of research methods in clinical psychology* (pp. 183-221). New York: John Wiley.
- Wiggins, J. S., Phillips, N., & Trapnell, P. (1989). Circular reasoning about interpersonal behavior: Evidence concerning some untested assumptions underlying diagnostic classification. *Journal of Personality and Social Psychology*, 56(2), 296-305.
- Wiggins, J. S., Trapnell, P., & Phillips, N. (1988). Psychometric and geometric characteristics of the Revised Interpersonal Adjective Scales (IAS—R). *Multivariate Behavioral Research*, 23(4), 517-530.
- Zebrowitz, L., Andreoletti, C., Collins, M. A., Lee, S. Y., & Blumenthal, J. (1998). Bright, bad, baby faced boys: Appearance stereotypes do not always yield self-fulfilling prophecy effects. *Journal of Personality and Social Psychology*, 75(5), 1300-1320.

Received September 4, 2002

Revision accepted February 22, 2003

Request Permission or Order Reprints Instantly

Interested in copying, sharing, or the repurposing of this article? U.S. copyright law, in most cases, directs you to first get permission from the article's rightsholder before using their content.

To lawfully obtain permission to reuse, or to order reprints of this article quickly and efficiently, click on the "Request Permission/ Order Reprints" link below and follow the instructions. For information on Fair Use limitations of U.S. copyright law, please visit [Stamford University Libraries](#), or for guidelines on Fair Use in the Classroom, please refer to [The Association of American Publishers' \(AAP\)](#).

All information and materials related to SAGE Publications are protected by the copyright laws of the United States and other countries. SAGE Publications and the SAGE logo are registered trademarks of SAGE Publications. Copyright © 2003, Sage Publications, all rights reserved. Mention of other publishers, titles or services may be registered trademarks of their respective companies. Please refer to our user help pages for more details: <http://www.sagepub.com/cc/faq/SageFAQ.htm>

[Request Permissions / Order Reprints](#)