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Chong Man Chow
Duane Buhrmester
The University of Texas at Dallas, USA

Abstract

We introduced a 3 × 3 Coping–Support Interdependent Matrix for conceptualizing and investigating dyadic coping and support-giving among friends. By integrating attachment theory with the literatures on coping and support, we identified three prototypic patterns of coping (distance, utilize support, overwhelmed) and three prototypic patterns of support-giving (disengage, responsive, overinvolved). A sample of 113 pairs of college friends completed questionnaires assessing their own and their friend's coping and support-giving patterns. An Actor–Partner Interdependence Model analysis revealed that utilize support coping was associated with friends' responsive support-giving, overwhelmed coping was associated with overinvolved support-giving, and distance coping was associated with disengage support-giving. Coping and support patterns were found related in theoretically expected ways to ratings of friendship closeness and conflict.

Keywords

Actor–Partner Interdependence Model, attachment theory, coping, dyadic coping, friendship quality, support-giving

Responding to stressful situations is often a dyadic, rather than solitary, process (Bodenmann, 2005). Life events trigger stress responses that often spill over into close interpersonal relationships, prompting partners to react to one another in a number of supportive and unsupportive ways. This is particularly true in close friendships during college, where there are high levels of interdependency. Research suggests that close friends

Corresponding author:
Chong Man Chow, School of Behavioral and Brain Sciences, The University of Texas at Dallas, Dallas, TX, USA
Email: chow@utdallas.edu

are among the most common partners young adults turn to when distressed (Fraley & Davis, 1997; Markiewicz, Lawford, Doyle, & Haggart, 2006; Trinke & Bartholomew, 1997) and that receiving social support from friends has important implications for individual well-being (Friedlander, Reid, Shupak, & Cribbie, 2007). Although many studies have investigated individuals' coping behaviors (see Skinner, Edge, Altman, & Sherwood, 2003) and the types of social support available to these individuals (e.g., Cutrona & Russell, 1987), researchers have not yet fully explored how the coping and support-giving behaviors of two friends combine to create particular dynamics at the dyadic level. Therefore, the primary purpose of the current study is to examine the ways in which one person's coping behaviors are related to the types of support offered by his/her friend. Our secondary purpose is to examine how both friends' coping and support behaviors are linked to the quality of their relationship. To accomplish these aims, we begin by offering an analytic framework for describing the dyadic interdependency of partners' coping and support behaviors.

Existing conceptualizations of dyadic coping

Traditional coping and support research has taken an individualistic perspective that focuses on individuals' coping strategies (e.g., emotion- versus problem-focused; Lazarus & Folkman, 1984) and types of support received from partners or networks (e.g., guidance, reassurance of worth; Cutrona & Russell, 1987). Recent work, however, has argued that a *dyadic coping* perspective is needed. Bodenmann (2005) contends that "one cannot examine one partner's stress appraisals or coping efforts without considering the effects on the other partner" (p. 36). Two general dyadic approaches have emerged (see Berg & Upchurch, 2007). The first utilizes statistical interactions between the coping strategies of each partner (Revenson, 2003) to determine the degree of convergence in partners' joint coping efforts (e.g., both partners use similar versus different strategies). The second approach measures a distressed person's perceptions of partner involvement and supportiveness along a number of dimensions (e.g., protective buffering, overprotection, miscarried support, superficial caring; Bodenmann, 2005). While these approaches to dyadic coping have yielded important results, they are limited in two important ways. First, current dyadic approaches have yet to articulate an analytic framework for describing how one partner's coping behaviors are linked to the specific type of support-giving behaviors offered by his/her partner. Second, the approaches are not well integrated with theories of close relationships. That is, although studies often include measures of relationship satisfaction and distress (e.g., Bodenmann, 2005), dyadic coping is not framed in terms of interpersonal processes such as intimacy, attachment, or interdependence (Collins & Feeney, 2000; Kelley & Thibaut, 1978; Reis & Shaver, 1988).

Coping–Support Interdependent Matrix

To address this first limitation, we propose that an interdependent matrix can serve as a useful analytic device for characterizing dyadic coping and support, which we refer to as a Coping–Support Interdependent Matrix (CSIM). Matrix representations have proven useful in interdependency theories of personal relationships (Kelley & Thibaut, 1978) as a way to capture the structure of inter-connectedness between two partners. Figure 1

		Friend 2 Support-giving		
		Disengage	**Responsive**	**Overinvolved**
Friend 1 Coping	**Distance**	***C-Distance S-Disengage***	C-Distance S-Responsive	***C-Distance S-Overinvolved***
	Utilize Support	C-Ut. Support S-Disengage	***C-Ut. Support S-Responsive***	C-Ut. Support S-Overinvolved
	Overwhelmed	***C-Overwhelmed S-Disengage***	C-Overwhelmed S-Responsive	***C-Overwhelmed S-Overinvolved***

Figure 1. Coping–Support Interdependence Matrix (CSIM) with prototypic coping and support-giving behaviors between friends. Italicized pairings were hypothesized to be correlated across partners. C: coping and S: support.

depicts a situation in which two friends, Friend 1 and Friend 2, engage in a coping–support exchange in response to Friend 1 experiencing a stressful event outside of their relationship. Friend 1 (represented on the vertical axis) can engage in a number of coping behaviors while Friend 2 (represented on the horizontal axis) is in the role of the support provider. At the individual level, the rows capture the types of coping behaviors Friend 1 engages in, whereas the columns capture the types of support-giving behaviors Friend 2 engages in. At the dyadic level, the cells within the matrix represent the possible combinations of coping and support-giving behaviors of the pair. Thus, the CSIM captures the possible ways that coping and support-giving behaviors may be interdependent or co-vary at the level of the dyad.

Identifying prototypic coping and support patterns

In order to use the CSIM, it is necessary to first identify sets of meaningful coping and support-giving behaviors that occur in close relationships. Although coping and social support researchers have identified a large number of coping (see Skinner et al., 2003) and support-giving behaviors (e.g., Cutrona & Russell, 1987), we sought to identify patterns of coping and support-giving behaviors that were relevant to theories of close interpersonal relationships, thereby addressing the second limitation of existing dyadic coping approaches. Fortunately, recent work by attachment scholars (e.g., Kunce & Shaver, 1994; Mikulincer & Florian, 2001) provides the basis for such an integrative bridge. Although attachment theory is primarily interested in patterns of relationship security and insecurity, empirical research has revealed that there are theoretically meaningful patterns of coping and support-giving behaviors that are correlated with secure, anxious, and avoidant relationship orientations. Based on the attachment and coping/support literatures, we identified what we conceived as ''prototypic'' patterns of coping and support behaviors that roughly parallel attachment styles. We should note, however, that

although attachment researchers' descriptions of people's coping and support-giving behaviors are conceptually useful, it is not necessary to argue that these patterns are caused by a person's attachment history. Rather, we view these patterns as heuristic descriptions that capture much of the important variation in the ways that people cope, and provide support irrespective of the possible origins of these patterns.

Prototypic coping behaviors. Three prototypic ways of coping – *distance*, *utilize support*, and *overwhelmed* – can be identified that have been found be correlated with three attachment styles (see Mikulincer & Florian, 2001). The first prototypic way of coping involves a distance pattern that focuses controlling the primary appraisal of a stressor (through selective in-attention, minimization, denial, suppression, distraction, and escape) so as to short circuit the perception of threat. Attachment scholars report this pattern among avoidant infants and adults who minimize their emotional reactivity to the stressful events, engage in dismissive coping, and actively suppress an overt need for support (see Cassidy, 1994; Mikulincer & Florian, 2001). The coping literature has identified a similar cluster of coping behaviors consisting of denial, escape, and cognitive and behavioral disengagement (e.g., Carver, 1997; Folkman & Lazarus, 1985). The second prototypic pattern, *utilize support*, involves a willingness to turn to partners for assistance in dealing with emotional distress and the objective problem (share emotions and seek understanding, comfort, reassurance, sympathy, advice, and tangible assistance). Attachment researchers report this pattern among secure infants and adults who exhibit moderate emotional reactions to stressors and seek comfort or assistance from caregivers (see Cassidy, 1994; Mikulincer & Florian, 2001). The coping literature has identified two forms of support seeking, instrumental support and emotional support seeking, which conceptually form a similar cluster of coping behaviors, although emotional support seeking is often operationalized in ways that emphasize non-adaptive rumination rather than empowering solace seeking (Carver, Scheier, & Weintraub, 1989). Finally, the *overwhelmed* pattern involves intense and prolonged emotional experience in response to stressful situations, and a tendency to ruminate and self-blame. Attachment researchers report a similar pattern among anxious infants and adults that is characterized by intense emotional reactivity and prolonged experience of negative emotions (see Cassidy, 1994; Mikulincer & Florian, 2001). A similar cluster of coping behaviors is described in the coping literature as emotion-focused and ruminative behaviors (Compas, Conner, Osowiecki, & Welch, 1997; Folkman & Lazarus, 1985; Nolen-Hoeksema, Parker, Larson, 1994).

Prototypic support-giving behaviors. Attachment theory and research have also identified clusters of support-giving behaviors that are correlated with attachment styles (e.g., Kunce & Shaver, 1994). Three prototypic ways that people offer support to a stressed partner can be identified: *disengage*, *responsive*, and *overinvolved.* The *disengage* prototypic pattern is characterized by discomfort and disinterest in helping a partner (withdraw, limited involvement, and rebuff neediness). Attachment researchers find that avoidant support-givers have difficulty understanding their partner's feelings, are less willing to offer comfort and support, and withdraw when faced with a stressed partner (Kunce & Shaver, 1994; Mikulincer & Shaver, 2005). The social support literature has identified a cluster of similar unsupportive behaviors, including "dismiss" and "escape"

support goals (Barbee & Cunningham, 1995) and withdraw/distance unsupportive behaviors (Manne & Schnoll, 2001). In contrast, the *responsive* prototypic support-giving pattern is characterized by empathetic sensitivity signals and needs, and by willingness to provide comfort, reassurance, and affection. Attachment researchers find that secure caregivers are more willing to offer emotional and instrumental support in ways that help partners cope successfully (Kunce & Shaver, 1994; Mikulincer & Shaver, 2005). The social support literature has identified a similar set of effective coping-assistance strategies, including "solve" and "solace" support goals (Barbee & Cunningham, 1995), as well as emotional/instrumental support and cognitive and informational guidance (Manne & Schnoll, 2001). Finally, the *overinvolved* prototypic pattern involves a self-focused need for excessive involvement in the partner's problems (critical, controlling, overinvolved, and enmeshment). Attachment scholars report that anxious caregivers tend to be emotionally overinvolved and overly controlling when offering help (Kunce & Shaver, 1994; Mikulincer & Shaver, 2005). Surprisingly, this cluster of unhelpful behaviors has received less attention in the existing social support literature, although it does share some features with solace support goals and co-rumination interactions (Barbee & Cunningham, 1995; Rose, 2002).

Dyadic linkages between coping and support-giving behaviors

Filling in the CSIM with the three prototypic coping and three support-giving behaviors, Figure 1 depicts nine possible combinations of dyadic coping–support. The first purpose of the current study is to examine the extent to which co-variation among different pairings of coping and support-giving behaviors exist. The direction and strength of associations should reflect the degree to which different coping and support-giving behaviors work in concert or conflict with each other as dynamic processes. Drawing on existing theories and research on interpersonal relationships, several predictions were made. First, virtually all interpersonal theorists suggest that expression of personal vulnerabilities (through self-disclosure or emotional expression) is closely related to the partner's emotional sensitivity and responsive support (Ainsworth, Blehar, Waters, & Wall, 1978; Barbee & Cunningham, 1995; Reis & Shaver, 1988). Indeed, past studies have consistently found that greater support seeking is associated with the partner's sensitivity and responsiveness (e.g., Collins & Feeney, 2000; Laurenceau, Barrett, & Rovine, 2005; Yankeelov, Barbee, Cunningham, & Druen, 1995). Thus, our first hypothesis (H1) is that utilization of support coping will be correlated with partners' responsive support-giving behaviors.

Second, family systems theory (Minuchin, Rosman, & Baker, 1978) suggests that individuals in highly enmeshed relationships often have difficulty distinguishing their partners' feelings versus their own feelings, and consequently, one partner's stress spills over and becomes a preoccupation of the other partner. This pattern closely resembles the phenomenon of "co-rumination" documented in female adolescents' friendships, wherein both friends become involved in excessive discussions of problems and negative feelings (Rose, 2002). Therefore, our second hypothesis (H2) is that overwhelmed coping by one friend will be associated with overinvolved support-giving by the other friend.

Third, based on observations of infant–mother interactions, attachment researchers have found that uncaring/rejecting maternal behaviors are associated with an avoidant attachment style, which is characterized by the suppression of both negative emotions and comfort seeking (e.g., Ainsworth et. al., 1978; Cassidy, 1994). To date, this dyadic dynamic has received relatively little attention in the adult relationship literature; however, at least one study found that avoidant coping was related to partners' unsupportive behaviors, which were characterized by withdrawal and criticism (Manne, Ostroff, Winkel, Grana, & Fox, 2005). Thus, our third hypothesis (H3) is that distance coping by one friend will be associated with disengage support-giving by the other friend.

The three coping–support pairings described above are expected to be positively correlated with each other, in part because they represent a congruence or synchrony between the focus of coping and support behaviors (i.e., they fall along the diagonal of the matrix). There are reasons to expect, however, that there may be some asynchronous pairings represented by the off-diagonal cells in Figure 1. Christensen (1988) described a "demand-withdraw" communication pattern, which is common among distressed marital couples and represents an asynchronous pairing of goals. This pattern is likely to extend to coping–support interactions. Thus, our fourth hypothesis (H4) is that overwhelmed coping by one friend will be correlated with disengage support-giving by the other friend, because the pressing nature of the overwhelmed partner may prove aversive and prompt the other friend to avoid involvement. Similarly, our fifth hypothesis (H5) is that distance coping by one friend will be associated with overinvolved support-giving, because the evasive nature of distance coping may prompt the second friend to encourage the first friend to deal with the problem and the unexpressed feelings associated with it. There is tentative support for these predictions. For instance, one study (Campbell, Simpson, Kashy, & Rholes, 2001) found that individuals displayed more irritation and aggravation, and behaved more critically toward romantic partners under stress, if the partners were high on attachment avoidance (which was found related to a distance pattern of coping). Further, individuals displayed more distancing and withdrawal toward the stressed romantic partner if the partner was high on attachment anxiety (which was found related to an overwhelmed pattern of coping).

Coping and support patterns and friendship quality

Several scholars have theorized that the quality of close relationships is influenced by how partners jointly respond to stressful situations (Bodenmann, 2005; Reis & Shaver, 1988). Supporting this view, research on social support among couples has consistently found that self-disclosure and partner responsiveness are predictive of greater relationship intimacy (e.g., Laurenceau et al., 2005). In contrast, having a compulsive and controlling (overinvolved) partner is associated with lower trust and greater conflict in relationships (Feeney, 1996; Feeney & Collins, 2001). Although past research provides evidence suggesting that both coping and support-giving behaviors are linked to relationship functioning, little research has investigated these constructs simultaneously in a study. Thus, the second purpose of the current study is to investigate how coping and support behaviors are related to friendship closeness and discord. Specifically, the sixth and seventh hypotheses of this study are that utilizing support coping (H6) and

responsive support-giving (H7) will be associated with friendship closeness. In addition, the eighth and ninth hypotheses of this study are that distance coping (H8) and disengage support-giving (H9) will be associated with lower friendship closeness. Lastly, the tenth and eleventh hypotheses are that overwhelmed coping (H10) and overinvolved support-giving (H11) will be associated with greater friendship discord and with greater closeness because of the hypothesized enmeshed nature of their relationship.

Method

Participants and procedures

Participants were 113 pairs of same-sex friends (78 pairs of women and 35 pairs of men, with age $m = 23.7$ years) attending a medium-sized university. One member from each dyad earned course credits for participating and was asked to recruit a close friend for the study. Fifteen percent of the dyads had been friends for less than one year, 27.4% had been friends for one to three years, 16.8% had been friends for three to five years, 14.2% had been friends for five to seven years, and 26.5% had been friends for more than seven years. Both friends completed computer-administered questionnaires in separate rooms in a university laboratory. Of 120 original dyads, seven dyads were excluded from data analysis due to incomplete questionnaires.

Measures

Prototypic coping patterns. Both members of each dyad rated their own and their partners' prototypic coping on a 26-item questionnaire. Ratings were made on a five-point scale ranging from 1 (*not at all descriptive*) to 5 (*very descriptive*). Because no existing questionnaire adequately captures our three theorized prototypic coping patterns, we used an assortment of items from four questionnaires to measure the constructs. These included 14 items from Folkman and Lazarus' (1985) Ways of Coping checklist, four items from Carver's (1997) Brief COPE Inventory, three items from Rose's (2002) co-rumination questionnaire, and five items from Shaver, Furman, and Buhrmester's (1985) coping questionnaire.

A factor analysis (principal component extraction with varimax rotation) was conducted on the 26 items. Based on the scree plot of eigenvalues and the conceptual meaningfulness of rotated factor loadings, we selected a three-factor solution (see Table 1). These factors generally corresponded to the three prototypic coping patterns identified in our literature review. We labeled the first factor *utilize support* because it included 13 items that reflected the participants' tendency to gain effective emotional and instrumental help from the friend (e.g., "I get help and advice from my friend" and "I often seek emotional comfort from my friend"). Cronbach's alpha coefficients for self- and friend-rating of this scale were both .95. The second factor was defined by six items describing distance coping responses (e.g., "I try to forget the whole thing" and "I refuse to get too serious about it"). Cronbach's alpha coefficients for self- and friend-rating of this scale were .76 and .74, respectively. The third factor was defined by six items describing responses that suggest that the person becomes *overwhelmed* by stressful events (e.g.,

Table 1. Item factor loading for the prototypic coping patterns assessment

Items	Factors loadings		
	Utilize support	Over whelmed	Distance
I try to get my friend to talk with me about it.	**.805**	–.076	–.059
I seek reassurance from my friend.	**.722**	.140	.068
I often seek emotional comfort from my friend.	**.787**	.036	–.051
I discuss the problem with my friend repeatedly.	**.674**	.305	–.038
I need my friend to understand my feelings of stress.	**.616**	.309	–.120
I talk to my friend about my feelings and hope that he/she will understand me.	**.852**	.053	–.040
I go to my friend for sympathy.	**.648**	.245	–.097
I get help and advice from my friend.	**.855**	–.051	.031
I consult my friend about what to do.	**.816**	.019	.039
I talk to my friend to figure out the situation.	**.855**	.023	–.006
I talk to my friend and try to come up with a solution.	**.867**	.032	–.055
I seek advice from my friend so that I can see things from another person's perspective.	**.762**	–.079	–.039
I discuss with my friend in order to make a plan to alter the situation.	**.797**	–.007	.043
I criticize myself.	–.013	**.736**	.062
I blame myself for things that happened.	.002	**.737**	.107
I have a hard time kicking off my bad feelings.	.052	**.779**	–.023
I get depressed.	.031	**.814**	.103
I run the whole thing again and again in my mind.	.158	**.680**	.064
I feel sorry for myself.	.080	**.809**	.013
I refused to get too serious about it.	–.138	–.012	**.587**
I refused to think too much about it.	–.070	–.108	**.763**
I try to forget the whole thing.	–.026	.147	**.754**
I act like nothing has happened.	–.313	.303	**.523**
I work or do other activities to take my mind off things.	.150	.003	**.702**
I do something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.	.151	.162	**.693**

Factor loadings were based on varimax rotation.

"I have a hard time kicking off my bad feelings" and "I get depressed"). Cronbach's alpha coefficients for self- and friend-rating of this scale were .86 and .85, respectively.

Prototypic support-giving patterns. Kunce and Shaver's (1994) 32-item Caregiving Questionnaire was used to assess prototypic support-giving behaviors. Participants rated their own and their friends' behaviors. Ratings were made on a six-point scale ranging from 1 (*not at all descriptive*) to 6 (*very descriptive*). The questionnaire was originally designed to capture four facets of caregiving: proximity versus distance, sensitivity versus insensitivity, cooperation versus control, and compulsive caregiving. Each scale included both positive and negative valence items.

Table 2. Item factor loading for Kunce and Shaver's (1994) caregiving questionnaire.

	Factors loadings		
Items	Responsive	Over involved	Disengage
When my friend seems to want or need a hug, I'm glad to provide it.	**.652**	–.035	–.187
When my friend is troubled or upset, I move closer to provide support and comfort.	**.792**	.058	–.140
I feel comfortable approaching my friend when s/he needs physical signs of support and reassurance.	**.780**	–.004	–.209
When my friend cries or is stressed, my first impulse is to comfort him/her.	**.734**	.005	–.306
I'm very good about recognizing my friend's needs and feelings, even when they are different from my own.	**.812**	–.108	.006
I am very attentive to my friend's non-verbal signals for help and support.	**.778**	.065	–.014
I can always tell when my friend needs comforting, even when s/he doesn't ask for it.	**.745**	.004	.065
I'm good at knowing when my friend needs my help or support and when s/he would rather handle things alone.	**.756**	–.017	.106
I tend to be too domineering when trying to help my friend.	–.057	**.657**	.171
When I help my friend with something, I tend to want to do things "my way".	–.183	**.672**	.214
When my friend tells me about a problem, I sometimes go too far in criticizing his/her own attempts to deal with it.	–.198	**.511**	.352
I often end up telling my friend what to do when s/he is trying to make a decision.	.089	**.702**	.093
I tend to get overinvolved in my friend's problems and difficulties.	.140	**.729**	–.096
I frequently get too "wrapped up" in my friend's problems and needs.	.037	**.787**	–.072
I tend to take on my friend's problems and then feel burdened by them.	.010	**.656**	–.031
I create problems by taking on my friend's troubles as if they were my own.	–.014	**.663**	–.051
I sometimes draw away from my friend's attempts to get reassurance from me.	–.290	.343	**.424**
I sometimes push my friend away when s/he reaches out for needed reassurance or comfort.	–.279	.212	**.320**
When my friend is crying or emotionally upset, I sometimes feel like withdrawing.	–.405	.314	**.496**
I don't like it when my friend is needy and clings to me.	–.102	.238	**.594**
When necessary I can say "no" to my friend's requests for help without feeling guilty.	.096	–.290	**.605**

(continued)

Table 2 (continued)

Items	Factors loadings		
	Responsive	Over involved	Disengage
I can easily keep myself from becoming overly concerned about or overly protective of my friend.	–.110	–.209	**.605**
When it's important, I take care of my own needs before I try to take care of my friend's.	.030	.108	**.602**

Factor loadings were based on varimax rotation.

Our conceptualization argues that there are three dimensions, whereas Kunce and Shaver's (1994) measure was intended to measure four dimensions. Therefore, we conducted factor analyses examining both three-factor and four-factor solutions. Interestingly, the four-factor solution did not replicate Kunce and Shaver's analysis. In fact, the scree plot supported a three-factor solution and the patterns of loadings for the four-factor solution did not correspond to Kunce and Shaver's findings.[1] The three-factor solution, however, identified three dimensions that largely corresponded to our proposed three prototypic support-giving dimensions, although nine items did not clearly load on one and only one of these three factors (i.e., had cross-loadings). After dropping these nine items, we re-ran the three-factor solution to create a "clean" simple structure pattern of loadings (see Table 2). The first factor captured a *responsive* support dimension that was defined by eight items describing sensitivity to friends' needs and willingness to offer comfort and reassurance (e.g., "I can always tell when my friend needs comfort and support"). Cronbach's alpha coefficients for self- and friend-rating of this scale were .89 and .92, respectively. The second factor was defined by eight items that described *overinvolved* support that included control and compulsive caregiving items (e.g., "I frequently get too 'wrapped up' in my friend's problems and needs"). Cronbach's alpha coefficients for self- and friend-rating of this scale were .84 and .86, respectively. The third factor was defined by seven items describing *disengage* support that included distancing and insensitive items (e.g., "I sometimes draw away from my friend's attempts to get reassurance from me" and "I don't like it when my friend is needy and clings to me"). Cronbach's alpha coefficients for self- and friend-rating of this scale were .65 and .62, respectively.

Friendship quality. Perceptions of friendship quality were assessed with Furman and Buhrmester's (1985) Network of Relationships Inventory. This 30-item questionnaire measured five features of supportive *closeness* (companionship, intimate disclosure, emotional support, approval, and satisfaction) and five features of relational *discord* (conflict, criticism, dominance, pressure, and exclusion). For example, one closeness item was "How much does this person like or approve of the things you do?", whereas one discord item was "How often do you and this person argue with each other?" Participants rated how much/often each feature occurred in their friendships on a five-point scale ranging from 1 (*Never or hardly at all*) to 5 (*Always or extremely much*). Composite indexes for closeness and discord dimensions were computed by averaging

across the respective subscales listed above. Alpha coefficients of closeness and discord dimensions were .93 and .86, respectively.

Results

Data reduction

Our assessment design yielded two scores for each construct, a self-report score and a partner-report score. Examination of correlations across these pairs of scores revealed significant and modest-to-moderate convergence in ratings ($r = .13$ to .48, mean $r = .27$). Thus, in order to simplify the complexity of analyses, scores for each construct were averaged across self-report and partner-report scores for the measure of coping and support behaviors. All of these aggregate scores were acceptably reliable when computed at the level of items from both reporters (range .74–.95, mean $\alpha = .84$).[2]

Descriptive results

Table 3 contains the means and standard deviations of the coping and support scores. To evaluate possible gender differences, *t*-tests were conducted for all variables. As would be expected, females were more likely than males to utilize support from their friend when coping with stress. In addition, when their friends were stressed, females offered more responsive support to friends, whereas males were more disengaged and over-involved supporters.

Table 3 also contains correlations among the coping and support-giving scores for friends. Because the roles of the same-sex friends were indistinguishable, we followed Kenny, Kashy, and Cook's (2006) advice and utilized the "double entry method" to structure our dyadic data set (see Kenny et al. (2006) for an illustration). The bivariate correlations presented in Table 3 were based on the double entry data structure.[3]

Dyadic associations between coping and support

The first purpose of the current study was to investigate five hypotheses about how a person's coping behaviors are related to his/her friend's support-giving behaviors. We tested these associations using the Actor–Partner Interdependence Model (APIM; Kenny, Kashy, & Cook, 2006), which enabled us to estimate the interpersonal effects of one friend's coping on another friend's support-giving scores (a partner effect) while controlling for the relationships between individuals' own coping and support-giving scores (an actor effect), and the similarities of the friend dyads (intraclass correlations). The APIM was estimated with AMOS 5.0 (Arbuckle, 2003) and included 12 observed variables: three coping and three support-giving scores for each of the two friends (see Figure 2). Because the APIM has a fully saturated (just-identified) model, it is not possible to compute indices of model fit (see Bollen, 1989 for information about model identification). Table 4 contains the unstandardized path coefficients, along with respective standard errors, from a model predicting support-giving behaviors from coping behaviors.

The *partner effects* (see Table 4) largely confirmed our hypotheses: (a) utilize support coping was strongly associated with friend's responsive support-giving (H1); (b) an

Table 3. Correlations among dyadic responses to stressor and reactions to partner's stressor for Friend A and Friend B.

	A dis	A uti	A owh	A unr	A res	A oiv	B dis	B uti	B owh	B unr	B res	B oiv
A dis	–											
A uti	.05	–										
A owh	.21	.22	–									
A unr	.22	–.24	.01	–								
A res	–.15	.49	–.14	–.54	–							
A oiv	.18	.16	.28	.32	–.26	–						
B dis	.52	.09	.29	.21	–.14	.17	–					
B uti	.09	.67	.02	–.13	.52	.12	.05	–				
B owh	.29	.02	.35	.25	–.19	.35	.21	.22	–			
B unr	.21	–.13	.25	.47	–.40	.22	.22	–.24	.01	–		
B res	–.14	.52	–.19	–.40	.75	–.16	–.15	.49	–.14	–.54	–	
B oiv	.17	.12	.35	.22	–.16	.43	.18	.16	.28	.32	–.26	–
♀ Mean	2.29	2.91	2.13	2.58	4.82	2.01	2.29	2.91	2.13	2.58	4.82	2.01
♀ SD	.47	.59	.60	.62	.65	.69	.47	.59	.60	.62	.65	.69
♂ Mean	2.39	2.65	2.23	2.90	4.41	2.32	2.39	2.65	2.23	2.90	4.41	2.32
♂ SD	.51	.67	.58	.53	.76	.55	.51	.67	.58	.53	.76	.55
t-test	**–1.30**	**2.90****	**–1.20**	**–3.83****	**4.10****	**–3.27****	**–1.30**	**2.90****	**–1.20**	**–3.83****	**4.10****	**–3.27****

Owh: overwhelmed, uti: utilize support, dis: distance, oiv: overinvolved, res: responsive, unr: disengage.
Coefficients were computed based on double-data entry. ** $p < .01$.

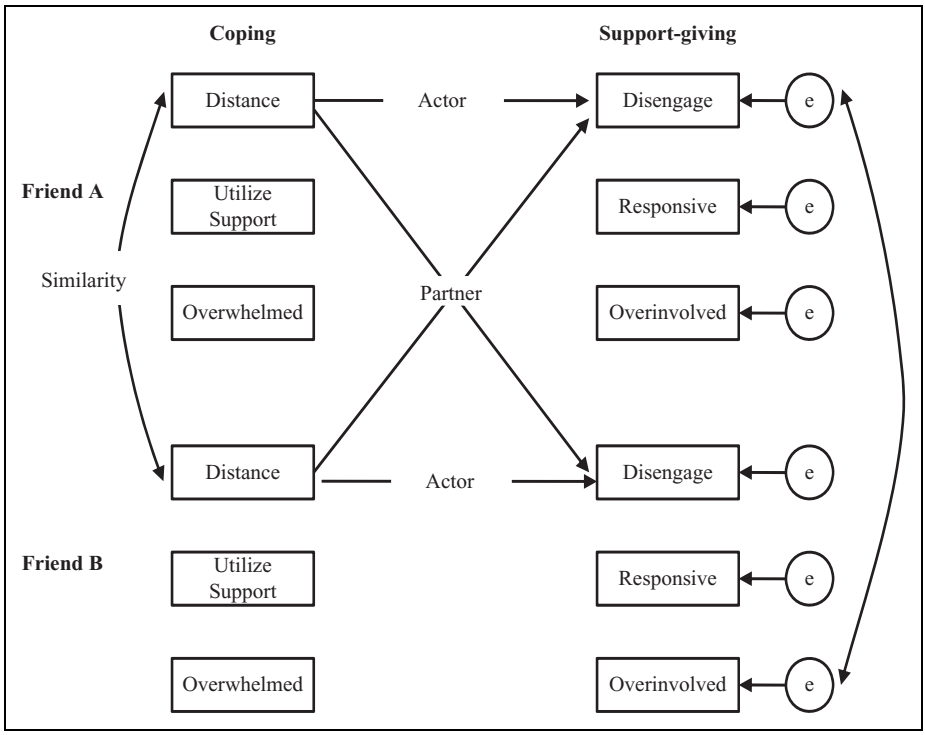

Figure 2. A simplified conceptual representation of the Actor–Partner Interdependence Model (involving interchangeable partners) for coping and support-giving scores. To reduce redundancy, each arrow represents all the possible individual pathways between the coping and the support-giving variables. The interchangeable roles are dealt with by using double-entry data. As a result, corresponding parameters for Person A are equal to those of Person B (e.g., the Actor path between Distance and Disengage for Person A is constrained to be equal to the same path for Person B). All residuals (denoted as es) were allowed to co-vary.

overwhelmed response was positively and moderately associated with friend's over-involved support-giving (H2); and (c) distance coping was associated with friend's disengage support-giving (H3). There was mixed support for our hypotheses about asynchronous pairings. As predicted, overwhelmed coping was positively associated with disengage support-giving (H4). Distance coping, however, was not associated with overinvolved support-giving (H5). Unexpectedly, overwhelmed coping was also found to be related to less responsive support-giving. It is noteworthy that these significant partner effects were estimated while controlling for the actor effects.

The APIM *actor effects* (see Table 4) examined the extent to which a person's way of coping with stress is related to that same person's way of offering support to friends. Although actor effects were not a primary focus of the current study, we report them here because both attachment theorists and social support researchers have argued that styles of coping and support-giving should be correlated within a person (e.g., Barbee & Cunningham, 1995; Kunce & Shaver, 1994; Thoits, 1986). The APIM analysis provided

Table 4. Partner and actor path coefficients from the APIM regressing support-giving scores on coping scores.

	Disengage	Support Responsive	Overinvolved
Coping		Partner Effects	
Distance	.18(.08)*	–.09(.08)	.05(.09)
Utilize support	–.07(.07)	.47(.07)**	–.07(.08)
Overwhelmed	.24(.07)**	–.26(.06)**	.33(.07)**
		Actor effects	
Distance	.15(.08)†	–.12(.08)	.07(.09)
Utilize support	–.19(.07)**	.28(.07)**	.17(.08)*
Overwhelmed	–.10(.07)	–.11(.06)†	.13(.07)†

Unstandardized path coefficients (standard error in the parentheses) were estimated with the APIM depicted in Figure 2.
† $p < .10$; * $p < .05$; ** $p < .01$.

mixed support for this perspective: utilize support coping was significantly associated with responsive support, but distance coping and overwhelmed coping were only marginally associated with disengage support-giving and overinvolved support-giving, respectively. Interestingly, utilizing support was significantly and positively related to overinvolved support, but negatively related to disengage support.

The APIM *similarity correlations*, or intraclass correlations, represent the degree to which friends employ similar coping and support-giving behaviors. Although these correlations were not a primary focus of the current study, other "dyadic coping" theorists (e.g., Revenson, 1994) have hypothesized that spousal similarity in coping strategies has long-term impact on a dyads' psychological outcomes. All of the *similarity correlations* were significant: distance, $r = .52$; utilize support, $r = .67$; overwhelmed, $r = .35$; disengage, $r = .17$; responsive, $r = .75$; and overinvolved, $r = .43$, indicating that, on average, friends are moderately-to-highly similar in terms of their coping and support-giving styles.[4]

Dyadic coping–support and friendship quality

Our secondary purpose was to examine how both friends' coping and support behaviors are linked to the quality of their relationship. Two separate APIM analyses were conducted where the first model regressed friendship variables (closeness and discord) on coping scores, and the second model regressed the same friendship variables on support-giving scores (see Table 5). As predicted, the APIM analysis for coping scores revealed that utilize support coping was related to both self-perceptions (captured in the actor effect) and friend perceptions (captured in the partner effect) of friendship closeness (H6). Also as predicted, overwhelmed coping was related to self-perceptions of friendship discord (H10). Counter to predictions, distance coping was not related to self-perceptions of friendship closeness (H8), but was related to greater friend-perceived discord. Overall, about 48% of the variance in friendship closeness and 13% of the variance in friendship discord was explained by the coping scores.

Table 5. Two APIM analyses regressing friendship qualities (closeness and discord) on coping scores and support-giving scores.

	Coping scores			
	Self-report (actor effect)		Friend report (partner effect)	
	Closeness	Discord	Closeness	Discord
Distance	.00 (.09)	.08 (.08)	–.01 (.09)	.16 (.08)*
Utilize support	.60 (.08)**	–.11 (.07)	.25 (.08)**	.05 (.07)
Overwhelmed	–.02 (.07)	.15 (.06)*	–.12 (.07)†	.09 (.06)
	Support-giving scores			
	Self-report (actor effect)		Friend report (partner effect)	
	Closeness	Discord	Closeness	Discord
Disengage	–.08 (.08)	.03 (.06)	.10 (.08)	–.02 (.06)
Responsive	.21 (.09)*	–.02 (.07)	.49 (.09)**	–.07 (.07)
Overinvolved	.19 (.07)**	.13 (.05)*	.07 (.07)	.25 (.05)**

Unstandardized beta coefficients (standard error in the parentheses) are presented based on two separate APIM analyses.
† p <.10; * p < .05; ** p <.01.

The APIM analysis for support-giving scores (see Table 5) confirmed that responsive support was related to both self-perceptions and friend perceptions of friendship closeness (H7). Also consistent with predictions, overinvolved support was related to self- and friend perceptions of friendship discord (H11). Interestingly, overinvolved support was also positively related to self-perceptions of friendship closeness. Counter to predictions, disengage support was not negatively related to self- or friend perceptions of friendship closeness (H9). Overall, about 40% of the variance in friendship closeness and 22% of the variance in friendship discord was explained by the support-giving scores.

Discussion

This study investigated a number of hypotheses about the ways that the coping behaviors of one person are linked to the types of support offered by his/her friend, and the ways that specific coping and support behaviors are linked to the closeness and discord of his/her friendship. We began by conceptualizing dyadic coping and support in terms of a 3×3 interdependent matrix where the cells represented nine possible combinations of three prototypic coping (distance, utilize support, and overwhelmed) and three prototypic support-giving patterns (disengage, responsive, and overinvolved). The overall results demonstrated that there are specific links between friends' coping and support behaviors, and that the ways in which friends respond to stressful events together are related to the qualities of their friendships.

Prototypic coping and support

We utilized the interdependent matrix as a simple framework for visualizing how different types of coping and support-giving behaviors might be paired, or co-occur, in dyadic relationships. When coping and support are viewed from this vantage point, two questions almost inevitably present themselves: (1) how often do different combinations occur, or co-vary, in real life and (2) how are the dyadic characteristics related to different relationship features? In order to explore these questions, we first needed to settle upon sets of coping and support-giving behaviors to "fill in" the matrix. In hopes of bridging the gap between research on interpersonal relationships and coping/support, we turned to findings by attachment researchers suggesting that there may be distinguishable clusters of coping and caregiving behaviors that are correlated with avoidant, secure, and anxious attachment orientations (e.g., Kunce & Shaver, 1994; Mikulincer & Florian, 2001). Rather than relying on measures of attachment styles as indirect assessments of these clusters of behavior, we utilized questionnaire measures that directly assessed these clusters of behavior, which we think of as prototypic ways of coping and support-giving.

Our factor analysis of items from several existing coping measures yielded three dimensions that correspond reasonably closely to the prototypic ways of coping that we had identified in our review of attachment and coping studies. When viewed against the backdrop of theory and research on coping with stress, our three dimensions of coping build on, but are somewhat different from, past work. The items of our utilize support coping scale capture two families of social support: emotional support seeking and instrumental assistance seeking. Interestingly, infant attachment theory also assumes that both emotion-focused and problem-focused coping strategies work in concert with one another, and that both involve "social support", because infants must rely on parents to help them cope with both the objective stressor and with their emotional distress (Cassidy, 1994). It is noteworthy that traditional models of coping, however, may view problem-focused coping, emotion-focused coping, and social support seeking as rather distinctive coping behaviors (e.g., Carver et al., 1989; Lazarus & Folkman, 1984). Further research, therefore, is needed to more fully investigate how our dimension of utilize support is related to traditional individual-based measures of emotion- and problem-focused coping, as well as measures of different types of social support seeking.

Our distance coping scale parallels in some respects the cognitive/behavioral distancing dimension found in many coping measures (e.g., Carver et al., 1989). Importantly, our overwhelmed coping scale unquestionably departs from the coping literature's conceptual definition of coping. Most contemporary theorists argue that only effortful or purposeful actions undertaken to constructively deal with stress should be considered as "coping" (Lazarus & Folkman, 1984) and they explicitly argue that involuntarily responses of the sort we describe as overwhelmed behavior cannot be considered as such. We do not view overwhelmed behaviors as either volitional or constructive efforts to cope with stress, but rather as largely failed or maladaptive responses to stressful events. Recently, coping researchers have described *dual process* models of stress reactions, where initial, automatic "hot" emotional responses to stressors are followed by, or co-occur with, "cold" effortful regulatory processes intended to address the stressful situations or emotional reactions (Skinner & Zimmer-Gembeck, 2007). Within the dual process framework, our

overwhelmed dimension seems to represent an intense hot response to stressors that is accompanied by relatively ineffective regulatory processes. Interestingly, there is some overlap in our overwhelmed scale items with certain measures of emotion-focused coping (Carver et al., 1989; Nolen-Hoeksema, Parker, & Larson, 1994). It is not surprising from our perspective, therefore, that past studies of emotion-focused coping strategies have found them to be ineffective in coping with stress and generally associated with poor adaptation (e.g., Carver et al., 1989; Nolen-Hoeksema et al., 1994).

Our factor analysis of Kunce and Shaver's (1994) Caregiving Questionnaire yielded, after the elimination of several items, three dimensions that corresponded closely to the prototypic support-giving patterns that we identified in our review of attachment scholars' work on caregiving and social support researchers' work on types of support. These three dimensions fundamentally parallel the parenting behaviors that Ainsworth et al. (1978) found to be associated with secure, insecure-avoidant, and insecure-ambivalent infants. The three dimensions also have some correspondence to Barbee and Cunningham's (1995) four types of support goals (solve, dismiss, escape, and solace). Our dimension of responsive support seems to involve elements of both solve and solace support goals, whereas our dimension of distance coping seems to involve elements of both dismiss and escape goals. Interestingly, our overinvolved dimension is not clearly represented in Barbee and Cunningham's framework, perhaps because they were primarily interested in positive and helpful aspects of support.

Interdependence of coping and support behaviors

Although there have been numerous studies on coping (e.g., Lazarus & Folkman, 1984) and social support (e.g., Cutrona, 1996), our findings are among the first to shed light on how different coping behaviors are related to types of support offered within friendship pairs. As predicted, the strongest correlation across partners was between the extent to which one friend sought emotional/instrumental support and the other friend sensitively responded with support. This finding is consistent with interpersonal theories of reciprocity of disclosure and support (e.g., Barbee & Cunningham, 1995; Reis & Shaver, 1988) and with attachment theory's contention that sensitive and responsive caregiving is the foundation for restoring a partner's felt security (Ainsworth et al., 1978). This correlation may reflect, on the one hand, that individuals who routinely experience sensitive and responsive support from friends are more confident about their friends' availability and, therefore, are more comfortable relying on them for instrumental and emotional assistance. Cause may also run the other direction, wherein individuals who openly express their needs and emotions allow their friends to detect easily their signals, which enable the friends to react more responsively and effectively.

Another somewhat weaker, but nonetheless interesting, correlation occurred between distance coping and disengage support-giving. This finding supports our prediction derived from attachment research that avoidance of caregivers in times of stress is an emotion regulation strategy (i.e., compulsive self-reliance and suppression of attachment needs) intended to cope with an uncaring partner. We do not necessarily assume, however, that the causal links run from support-giving to coping in adult friendships. Indeed, when a person copes with stress by denying or dismissing the importance of the stressor,

his/her avoidance orientation puts little direct impetus on the partner to provide a supportive response. That is, if the friend does not want to acknowledge that he/she has a problem, then the partner is implicitly asked not to offer support, and thus it is equally possible that a person's distance coping may cause the friend to react with disengagement rather than the reverse direction of cause.

Interestingly, overwhelmed coping was significantly associated with all three types of friend support behaviors. One possible interpretation of this finding is that when faced with a friend who is overwhelmed and not readily consoled, the partner sequentially engages in more than one way of providing support. For example, if a friend fails to reduce the partner's distress by being responsive, then he/she may progress to being more overinvolved or eventually resort to disengagement. Thus, an overwhelmed coping response may force the partner to engage in more, *and more varied*, bids to deal with the friend's stressor. Another possible explanation is that there may be individual differences in reacting to an overwhelmed friend; whereas some individuals tend to react in a less responsive fashion, others become overinvolved or disengage, resulting in an association between overwhelmed coping and all three types of support-giving.[5]

In addition to dyadic associations across partners' coping to support behaviors, the APIM analyses also examined the within-person "actor effect" correlations between coping and support-giving styles. The results provide only weak support for attachment and social support researchers' (Barbee & Cunningham, 1995; Kunce & Shaver, 1994; Thoits,1986) assertion that individuals' choices of support-giving behaviors are closely tied to their coping (or attachment) behaviors. Whereas individuals high in responsive support-giving also tended to utilize support as a coping strategy, similar significant correlations were not found between disengage support and distance coping, or between overinvolved support and overwhelmed coping. It is noteworthy that these associations were estimated, while the partner effects were controlled. Thus, the failure to find these latter associations may imply that there is no common disposition or internal working model that shapes both coping and support behaviors, but instead, the coping and support behaviors may be more influenced by situational factors, such as the behaviors of the partner.

Finally, the APIM intraclass "similarity" correlations revealed that friends were moderately-to-strongly similar to each other in the way they cope with stressful events and offer support. This indicates that friends are "birds of a feather", but it is impossible to tell from these findings alone whether this similarity is a *selection effect* (i.e., attraction to peers with similar coping and support-giving styles) or an *influence effect* (e.g., modeling, shaping, conforming, reciprocity, etc.), or some combination of the two. Further experimental and longitudinal research would be needed to tease apart the relative influence that selection and influence processes each contribute to creating similarity among friends.

Coping, support, and friendship quality

As predicted, the APIM analyses revealed that perceived closeness in friendship was associated with friends utilizing support from each other and providing responsive support to each other. In contrast, perceived discord in friendship was associated with both distance and overwhelmed responses to stressful events, and with disengage and overinvolved reactions to partner stress. Taken together, these findings suggest

that styles of dyadic responding to stressful events are integrally tied to the qualities of close relationships (Reis & Shaver, 1988). The correlational nature of these findings, however, precludes conclusions about the direction of cause. Indeed, we suspect that they are reciprocally related to each other. For instance, Rusbult, Martz, and Agnew's (1998) model suggests that individuals who feel less satisfied with their relationships are also reluctant to invest personal effort into these relationships (i.e., reacting supportively). On the other hand, Reis and Shaver (1988) argue that affirming responses (i.e., responsive support-giving) result in an increase in partner self-disclosure (i.e., utilize support coping) and greater feelings of intimacy and closeness.

Conclusions

This study had several limitations. One was the sole reliance on questionnaire data. This limitation was offset, to some degree, by gathering ratings from both friends in the dyad about themselves and about their partner. There were moderate levels of convergence across the friends' ratings of the same target, suggesting that there is some consensus about coping and support-giving styles. This fact bolsters our confidence that the associations we observed are more than mere self-report biases or implicit self-theories. Future research, however, would profit from the inclusion of observational data. Another limitation was that our questionnaire measures did not specify the locus of stressful events. We agree with other researchers that it makes a difference whether a stressor comes from outside or inside the relationship itself, and whether the stressor directly affects just one partner or both partners (e.g., Bodenmann, 2005). While our questionnaire did not specify a specific locus, open-ended comments from participants suggested that they were predominantly thinking in terms of stressful events outside their relationship that directly affected one rather than both friends. Future research should explore the possible effects of these different loci of stressors on dyadic responses to stressful events.

In summary, the current findings provide evidence that there are certain pairings of coping behaviors and friend support behaviors that are likely to occur. Further, the current findings provide evidence that these dyadic characteristics were closely related to levels of closeness and discord in the friendships.

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Conflict of interest statement

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Notes

1. Interestingly, our three factors were not a simple subset of Kunce and Shaver's (1994) four dimensions, but rather a complex, yet conceptually interpretable, combination of items from multiple scales. Our responsive dimension included the positively valenced items from their proximity-versus-distance and sensitive-versus-insensitive scales, while our overinvolved dimension included negatively valenced items from their cooperation-control and compulsive caregiving scales; our

disengage dimension included negatively valenced items from their proximity-distancing and compulsive caregiving scales. The nine dropped items were mostly positively valenced cooperation-versus-control items and negatively valenced sensitive-versus-insensitive items.

2. We also conducted all subsequent analyses for non-aggregated within-informant scores and across-informant scores. Although the results of these analyses were complex, they are easily summarized. The analyses of within-informant scores revealed essentially the same patterns of findings as the results for the aggregated scores presented in this paper, except that the effect sizes were almost always more robust. In contrast, the results for the across-informant scores, while generally in the same direction, were always weaker and often did not achieve statistical significance. Thus, the aggregate-score findings should be viewed as more conservative than the within-informant findings, but as less conservative than the across-informant findings.
3. We also estimated the correlation matrix for males and females separately to examine possible differences. In general, the patterns of across-partner correlations were very similar for male and female friendship pairs. Noteworthy, however, was that two across-partner correlations were found to be significantly different for males and females (via r-to-z transformation): (1) when one partner copes with stress in an overwhelmed fashion, the other partner is more likely to react in a disengaged way, amongst female as opposed to male friendship pairs; (2) when one partner copes with stress in an overwhelmed fashion, the other partner is less likely to react in a responsive way, amongst female as opposed to male friendship pairs.
4. The similarity (intraclass) correlations for the coping variables were modeled as predictor variables in the APIM and therefore could be estimated within the APIM; they were identical to those estimated with the bivariate approach (see Table 3). Because the support-giving variables were modeled as exogenous variables in the APIM, the intraclass correlations could not be estimated in the model and therefore the correlations reported above were estimated with the bivariate approach (Table 3).
5. We would like to thank an anonymous reviewer for the suggestion of this second possible explanation.

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