A Multisource Approach to Self-Critical Vulnerability to Depression: The Moderating Role of Attachment*

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ABSTRACT   The present study investigated the effects of self-criticism, dependency, and attachment variables in depression among couples. We utilized a multisource design that involved self-reports and spouse reports of personality and depression. This approach enabled us to explore the patterns of relations between self-reported and the spouse's report of the partner's view of self-criticism, dependency, and attachment dimensions, as well as the contribution of the latter to the moderation of distress. Participants were 120 couples in their first marriages. It was found that:

(1) Self- and spouses' reported self-criticism are both associated with depression; (2) negative assessments of personality factors and attachment models by the self and spouse contribute uniquely in predicting depressive symptomatology; and (3) beyond the covariation between target's depression and marital maladjustment, attachment models of self and of other as reported by both the self and spouse moderate the effects of self-reported personality vulnerability on depressive symptomatology. Our results indicate that self-ratings and ratings by others must both be considered in the context of depression in close interpersonal relationships. Beyond the methodological implications of multisource data, our findings support the view of depression as an interpersonal process.

In recent years, there has been considerable interest in the relation between marital maladjustment and depression (Bradbury, Fincham, & Beach, 2000; Fincham, Beach, Harold, & Osborne, 1997; Gotlib & Whiffen, 1989; Whisman, 2001). Although some research indicates that marital maladjustment causes one or both spouses to experience depression (e.g., O'Leary, Christian, & Mendell, 1994), other research indicates that depressive symptoms lead to subsequent marital problems (Dew & Bromet, 1991). Related investigations have shown that certain personality factors associated with vulnerability to depression also play a role in marital maladjustment (see Habke & Flynn, 2002; Hewitt, Flett, & Mikail, 1995).

In the present report, we explore the extent to which personality tendencies toward self-criticism and dimensions of attachment are associated with a higher risk of depressive symptomatology among married individuals beyond the depression-marital problems-covariation (*cf.* Gotlib & Hooley, 1988). Although previous research has demonstrated the usefulness of self-reports and spousal reports of personality in marital adjustment problems (Buss, 1991, 1992; Watson, Hubbard, & Wiese, 2000), studies on personality and depression have focused primarily on self-reports, despite expressed concerns about the inherent limitations of relying on self-reports as the sole method of assessment (e.g., Campbell & Fiske, 1959; Flett, Hewitt, Endler, & Bagby, 1995; for the specific relevance for personality research, see Funder, 1999). Theoretically, the exclusive use of self-reports in couples' research may ignore basic aspects of the depression experience, such as the assumption that depression and adjustment are maintained or increased by close relationships (Coyne, 1976). Convergent evidence shows that depressed indivi-

duals can, in fact, induce negative affect and behavior in others with whom they interact closely (e.g., Benazon & Coyne, 2000), consequently affecting the latter's subjective appraisals and attitudes toward them (for a review see: Bradbury & Fincham, 1990). Perceptions of negative appraisals and reduced support are hypothesized to be the most proximal catalyst for depressive reactions (Sacco, 1999; Sacco & Beck, 1995), thus defining a bidirectional interactional process, whereby both the depression-prone individual and his/her marital partner affect each other (Sacco & Nicholson, 1999, p. 298). Accordingly, we expected that partner reports of the depression of the participant would contribute to the prediction of the levels of the participant's depressive symptoms. This perspective allowed for the study of the separate effects, as well as the conjoint effects of self and partners' appraisals of personality, attachment, and depression variables (also see Watson et al., 2000). In line with Sacco and colleagues (see Sacco, 1999; Sacco & Phares, 2001), we assumed that ratings of the target's personality would explain additional variance in depression because the valence of the partner's view of the target contributes to or buffers against depressive symptoms in the target.

The Role of Personality Factors in Depression

In congruence with a long tradition that contrasts other- and self-directedness as two basic modalities of human experience, Blatt and colleagues defined a theory of personality vulnerability to depression involving the dimensions of dependency and self-criticism (Blatt, 1990, 1991; Blatt, Cornell, & Eshkol, 1993; Blatt, Quinlan, Chevron, McDonald, & Zuroff, 1982). According to this model, normal development is characterized by a dialectic interweaving of other- and self-directness, that leads to a flexible balancing of the capacities involved in these two processes (Helgeson, 1994). Moreover, the adequate coordination between interpersonal relatedness and self-definition is thought to reduce stress and lead to physical well-being (Blatt et al., 1993). This model assumes that individual differences in the relative emphasis on each of these processes delineate two personality styles—self-criticism and dependency—each with preferred modes of cognition and coping strategies. An overemphasis on self-critical or dependency motives results in dysfunctional attitudes and is assumed to constitute a vulnerability to depression.

Recently, an important difference between dependency and self-criticism has emerged in the research literature: while the association between self-criticism and depression has been corroborated repeatedly in different contexts, dependency appears to entail both vulnerability and resilience components (Besser & Priel, in press; Blatt, Zohar, Quinlan, Zuroff & Mongrain, 1995; Mongrain, 1998; Priel & Besser, 1999, 2000).

In the context of interpersonal relationships, while dependent individuals tend to activate their social environments in order to cope with stress, withdrawal and avoidance of warm behaviors that promote emotional intimacy are the major strategies of self-critical individuals in the face of distress and interpersonal relationships (Blatt & Schichman, 1983). Our previous research has found that dependency is associated with increased spouse support, and increased spouse support mediates the negative association between dependency and depression (Priel & Besser, 2000). In contrast, self-criticism has been associated with relatively low levels of anticipated and received support from the spouse, which, in turn, are associated with increased levels of depression (Priel & Besser, 2000). Self-criticism is also associated with social avoidance (Alden & Bieling, 1996) and entails a vulnerability to loneliness and lack of intimacy (Blatt, D'Affliti, & Quinlan, 1976; Blatt et al., 1982). Recently, within the context of current relationships, self-criticism was associated with loneliness even after taking related individual differences in levels of depression into account (Besser, Flett, & Davis, in press). Furthermore, in interpersonal contexts, self-criticism was associated with fewer intimacy and fewer affiliative strivings (Mongrain & Zuroff, 1995) and low agreeableness (Zuroff, 1994). However, dependency has been associated with help-seeking behaviors (Bornstein, 1992; Mongrain, 1998), interpersonal warmth and intimacy motivations (Mongrain & Zuroff, 1995), high submissiveness (Santor & Zuroff, 1997), high agreeableness (Zuroff, 1994), and inhibitions about expressing hostility (Fichman, Koestner, & Zuroff, 1994). Finally, Wiseman (1997) found that self-criticism negatively predicted frankness, sensitivity, and trust, whereas dependency positively predicted attachment, giving, and trust.

Thus self-criticism, but not dependency, is emerging as a personality factor that is associated with ambivalence about close interpersonal relations, as well as with fear of disapproval and loss

of control and autonomy. It can therefore be argued that emotionally intimate relationships, such as marriage, might be especially threatening to self-critical individuals. Indeed, in a recent study that investigated the interpersonal contexts associated with self-criticism, Whiffen, Aube, Thompson, and Campbell (2000) found that self-criticism was associated with anxiety toward attachment figures, submissive-cold interpersonal behavior, marital dissatisfaction, and depression. This is in keeping with several other studies showing a link between self-criticism and negative interpersonal outcomes (see Mongrain, Vettese, Shuster, & Kendal 1998; Santor, Pringle, & Israeli, 2000; Vettese & Mongrain, 2000).

Attachment Styles and Depression

The effect of early internal models of relationships is a second factor assumed to influence the association between marital maladjustment and depression. Attachment theory assumes a lifelong continuity from early patterns of interpersonal relationships mediated by internal working models of self and others; these models intervene in the interpretation of and reaction to new relationships (Bowlby, 1969, 1973, 1980). The concept of internal working models of attachment was proposed as a cognitive and affective construct that includes the subject's memories, perceptions, and expectations in relation to significant others. It is believed that the attachment system is activated most strongly under conditions of distress, such as fatigue, illness or fear (Bowlby, 1973, 1979).

A recent body of empirical research, based on Hazan and Shaver's (1987) pioneering work, explored attachment patterns in adulthood and demonstrated an important association between these patterns and an individual's capacity to use significant others as sources of support and comfort (Simpson, Rholes, & Nelligan, 1992). Bartholomew (1990) and Bartholomew and Horowitz (1991) proposed a theoretical classification of internal working models of attachment defined by the positivity of the model of the self and of the model of the other. The positivity of the self involves the degree to which the self is loveable and worthy and to which others are expected to be responsive. The positivity of the other involves a person's expectations about significant others' availability and support. The model of the self is characterized in terms of "anxiety" about closeness and dependence on others for self-esteem, and the

model of others as "avoidance of intimacy." These dimensions can be either high or low, and they thus define four different patterns of attachment: secure (positive model of self and other); preoccupied (negative model of self and positive model of other); dismissing (positive model of self and negative model of other); and, fearful (negative model of self and other) (Griffin & Bartholomew, 1994a).

Attachment theory has offered important insights for understanding depression. Bowlby extensively studied processes of depression and mourning, assuming that pathological mourning symptoms reflect failures to internalize secure and positive patterns of attachment (Bowlby, 1980). Moreover, empirical research has shown that patterns of attachment influence depressive symptomatology in adult clinical and community samples (Carnelley, Pietro-Manco, & Jaffe, 1994; Priel & Shamai, 1995). Attachment research suggests that positive models of the other, but not of the self, are critical for individuals' perceptions of interpersonal relationships as supportive in stressful situations (Besser, Priel, & Wiznitzer, 2002; Priel, Mitrani & Shahar, 1998). Moreover, Ainsworth, Blehar, Waters & Wall's (1978) basic definitions of patterns of attachment suggest that a positive model of the other may constitute the main dimension involved in affect regulation in stressful situations (e.g., Besser et al., 2002).

Attachment Moderates the Association Between Self-Criticism and Marital Adjustment

In spite of supporting different theoretical positions, both Blatt's personality vulnerability factors (Blatt et al., 1976, 1982) and Bowlby's attachment theory (Bowlby, 1969, 1973, 1980) propose two major types of experiences that lead to depression: the disruptions of gratifying interpersonal relationships (e.g., loss) and the disruptions of an effective, essentially positive, sense of self (e.g., failure and guilt) (Blatt & Maroudas, 1992). Moreover, the introjective (self-critical) and anaclitic (dependency) orientation described by Blatt and his colleagues is not independent of attachment styles. Blatt and Homann (1992) hypothesized that insecure attachment is a factor that is involved in the development of self-criticism and dependency. Analyses of the self-reports of adolescent girls found a link between self-criticism and insecure attachment to parents (Thompson & Zuroff, 1999). Earlier research

by Zuroff and Fitzpatrick (1995) examined the association between attachment styles and the self-criticism/dependency constructs. These authors found an association between self-criticism and fearful-avoidant styles, and between dependency and anxious-attachment styles, as determined by self-reports. In the current research, we sought to extend research in this area by examining how self-reports and spousal reports of self-criticism and dependency related to self-reports and spousal reports of attachment styles.

In the current study, in addition to examining the correlations among the measures, we also tested the possibility that the positive self and positive other dimensions of attachment moderate[1] the association between self-critical personality and depression. Specifically, we hypothesized that levels of depression would be elevated among individuals who were characterized jointly by self-criticism and negative models of the others and/or the self. Self-criticism may interact with negative internal models of self, increasing the depression outcomes because of the reduced ability to use social resources effectively in response to stress and dysphoria. In addition, the negative effects of self-criticism should be exacerbated in the presence of negative internal models of the other by means of an increase of destructive, defensive, or self-protective relationship behavior.

The assumed moderating effect of attachment dimensions is in keeping with the empirical associations found recently between attachment dimensions and an individual capacity to seek and receive social support when in distress (e.g., Besser et al., in 2002; Priel & Besser, 2002). Cotterell (1992) proposed that seeking support in adulthood is parallel to *proximity seeking* in childhood. Anderson, Beach, and Kaslow (1999) noted in this context that attachment style moderates the use of marriage as a supportive context or "safe haven" (p. 284). It is important to note here that similar findings are reported in the literature on personality vulnerabilities to depression: the capacity to enjoy social support in stressful situations has been found to relate positively to

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1. In line with Baron and Kenny (1994), we use the term *moderator* to refer to a variable that qualifies the effect of a predictor (X) variable on a criterion variable (Y). Therefore, *moderators* interact with an X in the latter's effect on a Y.

dependency and negatively to levels of self-criticism (Priel & Besser, 2000; Priel & Shahar 2000).

Findings about dependency as a personality vulnerability to depression are equivocal today. Research on the high dependency personality variable underscores dependent individuals' capacity to use their interpersonal resources positively (Aube & Whiffen, 1996; Bornstein, 1992; Mongrain, 1998), reducing very significantly the assumed association between dependency and depressive symptoms in community samples (Besser & Priel, in press; Mongrain, 1998; Priel & Besser, 1999, 2000). These findings, together with the demonstration that the dependency construct, as operationalized, includes a basic resilience component (Blatt et al., 1995), lead us to the assumption that an individual's style of dependency might associate with depression among married couples, only when it is perceived congruently as such by the marital partners (i.e. when both partners define the target's mode of experience as dependence).

Concordance Interactions Between Self- and Spouses' Reports

Using a multisource strategy (Campbell & Fiske, 1959), we studied participants' self-reports of personality vulnerability, attachment models, and depressive symptoms, as well as their partner's perceptions of these variables (i.e., spouse perceptions of participant's personality vulnerability, attachment models, and depressive symptoms). Forms of personality assessment other than self-report offer many general advantages. For instance, Flett et al. (1995) stated that observer ratings in research on personality and depression should be useful since they appear to be less susceptible to other factors, such as fluctuations in the depressed individual's mood state. In addition, depressed individuals may not be consciously aware of certain aspects of their personality.

In the present research, the use of an additional source was also important in order to address claims that there is considerable overlap between the constructs of depression and self-criticism (Coyne & Whiffen, 1995). According to this argument, self-criticism may be interpreted more accurately as reflecting the effects of depression rather than the effects of vulnerability factors. The use of two sources for each assessment (self-criticism and depression) may contribute to the understanding of this important question; at the very least, the inclusion of spousal reports allows us to examine this

issue independent of any effects of self-report. In this case, if spouse-reported depression associates with self-reported self-criticism or spouse-reported self-criticism associates with self-reported depression, the reason would not simply be a reflection of variance attributable to relying solely on self-reports, but could instead reflect a sequential effect, indicating that spouses with partners who are highly self-critical are likely to perceive them as depressed, and conversely, partners who are depressed are likely to appear highly self-critical to their spouses; indeed, a path analysis will explore these possibilities. In addition, following systems theory perspectives, we assumed that both self- and spouse-reported self-criticism constitute proneness to depression and that higher levels of depression will be evident for people who are described as high in self-criticism by both themselves and their spouses.

In summary, the present study investigated how individual differences in self- and spouse appraisals of personality vulnerabilities and dimensions of attachment and depressive symptoms associate with individuals' levels of depressive symptomatology. We hypothesized that self- and spouse-reported self-criticism constitute vulnerability factors for depressive symptomatology. In addition, we assumed that negative assessments by the self and his or her spouse would contribute uniquely to the prediction and understanding of depressive symptomatology. Finally, we predicted that, beyond the covariation between depression and marital maladjustment, attachment models of self and other, reported by both the self and spouse will moderate the effects of self-reported self-criticism on depressive symptomatology.

METHOD

Participants

Heterosexual couples were eligible for the study if both partners were married for the first time and were at least 22 years old. Initially, 146 couples responded to our call for volunteers to take part in a study on "mood and marriage." Once potential participants found out more about the nature and requirements of the study, 18% did not participate in the study, for the following reasons: couples either changed their mind and withdrew (13%), one or both partners had been married more than once (2%), or the

couple simply did not appear at the scheduled time to complete the questionnaires (3%). Thus, the final sample included 120 couples (82%) who were eligible to participate and complete our questionnaires.[2] See the results section for additional information about the characteristics of the sample.

Measures

The Depressive Experiences Questionnaire (DEQ). The DEQ was used to assess vulnerability to depression. The DEQ (Blatt et al., 1976) is a 66-item scale devised to evaluate patterns of experiences that contain predisposition to depressive states and is therefore appropriate for use with a nonclinical population. The DEQ dependency factor reflects preoccupation with abandonment and separation, feelings of being unloved, and fear of loss. The self-criticism factor reflects concerns about failure and guilt, self-criticism, and being unable to meet high standards set by the self and by others; for example, "I set my personal goals and standards as high as possible," "I very frequently compare myself to standards or goals," "I often find that I don't live up to my own standards or ideas," and "I tend to be satisfied with my current plans and goals." Internal consistency, as well as test-retest reliability was adequate (Blatt et al., 1982). Items were converted to *z* scores and multiplied by the factor weight coefficient according to Israeli norms (Priel, Besser & Shahar, 1998). Correlations between the scores obtained, using the English and the Hebrew versions of the DEQ, were .93 ($p < .001$) for self-criticism and .85 ($p < .001$) for dependency (Priel, Besser et al., 1998).

In the present study, two versions of the DEQ were used: each participant completed the original self-report assessments as well as a version in which she or he evaluated her/his spouse on the adapted 66 items of the DEQ. In this adapted version, items assess the participant's perception of his or her spouse's personality vulnerability. For example, item 1 of the DEQ was formulated as "My partner set his/her personal goals and standards as high as possible." In the present sample, we obtained internal consistency reliability

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2. Since couples that did not participate were dropped from further consideration prior to completing the questionnaires, comparisons with participants who completed the study could not be analyzed and presented.

coefficients of $\alpha = .92$ and $\alpha = .90$ for self-report and spouse-report respectively.[3]

The Center for Epidemiological Studies Depression Scale (CES-D). The CES-D (Radloff, 1977) was used to measure depressive symptoms. This is a 20-item scale designed to measure current levels of depressive symptomatology in the general population. Items, assessed on a scale from 0 to 3, are: depressed mood; feelings of guilt and worthlessness; feelings of helplessness and hopelessness; psychomotor retardation; loss of appetite, and sleep disturbances (Radloff, 1977). This scale has been shown to be valid and reliable in many different samples, including pregnancy and postpartum research (see, e.g., Besser & Priel, in press; Priel & Besser, 1999, 2000, 2002). In the present study, two versions were used: the original CES-D self-report, and a version in which each participant evaluated his/her spouse on 20 items adapted from the original CES-D in order to assess the perception of the spouse regarding his/her partner's depressive symptomatology; for example, item 1 was formulated as "My partner was bothered by things that usually do not bother him/her." In the present sample, we obtained internal consistency reliability coefficients of $\alpha = .87$ and $\alpha = .85$ for self-report and spouse-report respectively.

Romantic Attachment Style (RQ). The Relationship Questionnaire (RQ) (Bartholomew & Horowitz, 1991) was used to assess adult romantic attachment style. The RQ consists of four short paragraphs, each describing a prototypical attachment pattern (i.e., secure, preoccupied, fearful-avoidant, and dismissing-avoidant). Participants were asked to select the paragraph that described them most accurately (categorical attachment classification). Two of the categories are described as follows:

[*Secure*]. "It is easy for me to become emotionally close to others. I am comfortable depending on others and having others depend on

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3. Following Blatt and colleagues (1976), each of the 66 items' standardized scores should be multiplied by the factor weight coefficient obtained in the Normed sample for the loadings on both self-criticism and dependency. In this unit weight scoring system, all 66 items relative to their factor weight coefficients contribute to form the final score of both dependency and self-criticism. Thus, internal consistency reliability coefficients are reported only for the entire DEQ questionnaires.

me. I don't worry about being alone or having others not accept me.''

[*Preoccupied*]. "I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.''

Next, participants were asked to evaluate on a 5-point scale the extent to which each of the four paragraphs represents them (continuous attachment classification) (Bartholomew & Horowitz, 1991). Although some concerns have been expressed about the use of single-item measures to assess attachment (see Griffin & Bartholomew, 1994b), the construct validity of this measure has been demonstrated in a variety of contexts (Griffin & Bartholomew, 1994a). For example, RQ self-reports show moderate convergence with interview-based ratings of attachment (Griffin & Bartholomew, 1994a) and are related in theoretically predicted directions to variables such as interpersonal behavior (Bartholomew & Horowitz, 1991), maternal representations (Priel & Besser, 2001), and spousal support (Besser et al., 2002). In addition, the RQ has produced results very similar to those found with a recently developed dimensional measure (Brennan, Clark, & Shaver, 1998).

In the present study, in addition to the RQ reported by each participant about him or herself, a second version of the RQ was used. In this version, the RQ paragraphs were adapted to assess the participant's perception of her or his spouse attachment: paragraphs were formulated as beginning with "My partner…'' instead of "Me'' or "For me.'' Participants were asked to select the paragraph that described their spouses most accurately (categorical attachment classification), for example (wife version):

[*Fearful*]. "My partner is uncomfortable getting close to others. He wants emotionally close relationships, but finds it difficult to trust others completely, or to depend on them. My partner worries that he will be hurt if he will allow himself to become too close to others.''

[*Dismissing*]. "My partner is comfortable without close emotional relationships. It is very important to him to feel independent and self-sufficient, and he prefers not to depend on others or have others depend on him.''

Next, they were asked to evaluate on a 5-point scale the extent to which each of the four paragraphs described their spouse

(continuous attachment classification). In the present sample, we obtained internal consistency reliability coefficients of the continuous attachment classification $\alpha = .81$ and $\alpha = .83$ for self-report and spouse-report, respectively. Following the recommendations on the relevance of continuous over categorical measures of adult attachment (Griffin & Bartholomew, 1994a), our analyses focused on summary scores of the Positivity of Self (PS) and Positivity of Other (PO) in the form of continuous attachment dimensions. The PS dimension was computed by summing the scores of the two attachment patterns with positive models of the self (secure and dismissing) and subtracting the scores of the two attachment patterns with negative models of the self (preoccupied and fearful). The PO dimension was computed by summing the scores of the two attachment patterns with positive models of the other (secure and preoccupied) and subtracting the scores of the two attachment patterns with negative models of the other (dismissing and fearful) (Griffin & Bartholomew, 1994a).

Marital and Dyadic Adjustment Scale (DAS). The DAS (Spanier, 1976) is a 32-item measure of the quality of relationships. In addition to an overall score of adjustment, there are four subscales measuring dyadic consensus (extent of agreement on matters important to the relationship), satisfaction (amount of tension and extent to which the individual has considered ending the relationship), cohesion (common interests and activities), and affection expression (satisfaction with expression of affection in the relationship). Higher scores reflect better dyadic adjustment. Although factor analysis has confirmed the multidimensional nature of the scale (Eddy, Heyman, & Weiss, 1991) following DAS research (e.g., Crane, Busby, & Larson, 1991), we used only total scores as an indication of dyadic adjustment. In the present sample, we obtained an internal consistency reliability coefficient of $\alpha = .86$.

Procedure

After the first contact, eligible couples were invited individually, and each partner independently completed the questionnaire package. After couples completed the background questionnaire, each partner completed the DAS and the self-report assessments of the RQ, DEQ, and CES-D, as well as a spouse-report version of the RQ

(PS and PO dimensions), DEQ, and CES-D that involved rating their partners. We thus obtained two sources of information for these three measures. We will refer to them as self-reported and spouse-reported (i.e. the spouse's report of the partner's view of PS, PO, self-criticism, dependency and depressive mood), respectively. The within and between couples' order of presentation of the questionnaires was randomized.

RESULTS

Sample Characteristics and Preliminary Analyses

On average, participants were in their late 30s (overall $M = 38.48$, $SD = 6.41$ with $M = 37.0$, $SD = 6.40$ for wives and $M = 39.95$, $SD = 6.09$ for husbands) to early 40s and were married for about 15 years ($M = 14.83$, $SD = 4.61$), having 0–4 children ($M = 2.18$, $SD = 1.23$, $Median = 2$). Participants were well educated (overall $M = 12.81$, $SD = 2.09$ with $M = 12.95$, $SD = 1.93$ for wives and $M = 12.68$, $SD = 2.24$ for husbands) with middle management occupations and middle-high socioeconomic status.

Differences between the partners' ages and years of formal education were calculated using independent sample t-tests. The result revealed significant gender differences: wives were younger then husbands ($t[238] = -3.65$, $p < .0001$). No significant gender differences were obtained for formal years of education ($t[238] = 1.02$, ns). The means on the CES-D ($M = 14.74$, $SD = 9.23$; $M = 14.33$, $SD = 9.39$ for wives, and $M = 13.95$, $SD = 9.10$ for husbands, $t[238] = -.31$, ns) and the DAS ($M = 121.73$, $SD = 12.72$; $M = 121.35$, $SD = 11.43$ for wives and $M = 122.10$, $SD = 13.93$ for husbands, $t[238] = -.41$, ns) indicate that the participants were a nondepressed community sample.

Table 1 presents the means and standard deviations for self- and spouse-reports on CES-D, RQ, and the DEQ scores. In a preliminary analysis, no significant gender difference effects were obtained for independent samples' t-tests based on the variables presented in Table 1 (data not shown here). Differences between the scores obtained from self-reports and spouse-reports (across gender) on the CES-D, RQ, and DEQ scales were calculated using paired t tests. The results revealed significant source differences for

Table 1
Means and Standard Deviations for Comparisons of Self-Ratings and Partners' Ratings of Their Spouses

Variables	Participants' Self-Report		Spouse Reports		$t(239)$[a]
Depressive-Symptoms	*M*	*SD*	*M*	*SD*	
CES-D	14.74	9.23	14.70	8.67	$-.97$ ns
Personality					
Self-Criticism	$-.44$	.93	$-.47$	.36	.40 ns
Dependency	.009	1.31	$-.32$	1.59	-3.16***
Attachment					
PS[b]	1.00	2.65	1.20	2.06	$-.99$ ns
PO[c]	.18	2.57	$-.60$	2.45	-4.05***

Note: $N = 240$: 120 married couples, $n = 120$ wives, and $n = 120$ husbands (two-tailed tests).
[a]Differences between reporters scores were calculated using paired t-tests.
[b]Positive-Self (PS) = (Secure + Dismissed) − (Fearful + Preoccupied).
[c]Positive-Other (PO) = (Secure + Preoccupied) − (Dismissed + Fearful).
CES-D = Depressive symptomatology.
***$p < .001$.

dependency and for PO dimension scores, with spouses reporting themselves as more dependent, compared to the levels of dependency attributed to them by their partners. In addition, spouses rated themselves as being higher on PO dimension scores, compared to how their partners evaluated them on the PO dimension scores.

CORRELATIONAL ANALYSES

Preliminary correlation analyses revealed that the results for men and women were very similar; thus, the results are presented for the combined sample of men and women ($N = 240$). All subsequent analyses, however, will control for gender in order to take into account any differences. In Table 2, we present the zero-order correlations among the variables. Positive significant correlations were found between participants' self-reports and their spouses' perceptions of their depressive symptomatology (CES-D), personality vulnerability (DEQ factors), and attachment dimensions (PS and PO dimensions of the RQ).

Table 2
Correlations Among the Study Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Age	—													
2. Education	−.21***	—												
3. Gender	−.23***	.07	—											
Depressive Symptoms														
4. CES-D[a]	−.09	−.38***	.02	—										
5. CES-D[b]	−.15	−.34***	.00	.50***	—									
DEQ														
6. Self-Criticism[a]	−.09	−.36***	−.07	.47***	.24***	—								
7. Self-Criticism[b]	−.19	−.18	.09	.20***	.49***	.29***	—							
8. Dependency[a]	−.01	.24***	.08	−.42***	−.22***	−.16	.02	—						
9. Dependency[b]	.05	.34***	.03	−.44***	−.53***	−.29***	−.19	.38***	—					
RQ														
10. PS[a]	.17	.18	−.09	−.42***	−.26***	−.30***	−.21***	.25***	.24***	—				
11. PS[b]	.13	−.01	−.01	−.13	−.19	−.20***	−.15	−.05	.03	−.15	—			
12. PO[a]	−.14	.22***	.07	−.09	.06	−.09	−.02	.08	.20***	−.23***	−.24***	—		
13. PO[b]	−.02	−.00	.03	−.19	.04	−.03	.14	.02	.15	−.16	−.20***	.29***	—	
Couples Adjustment[a]														
14. DAS	.15	.25***	−.03	−.45***	−.37***	−.30***	−.13	.39***	.35***	.15	.08	.05	−.04	—

Note: $N = 240$: 120 married couples, $n = 120$ wives, and $n = 120$ husbands (two- tailed tests).
[a]Self-Report;
[b]Spouse reports = the spouse's report of the partner's view of PO, PS, Self-criticism, Dependency and depressive mood.
Positive-Self (PS) = (Secure+Dismissed) − (Fearful+Preoccupied);
Positive-Other (PO) = (Secure+Preoccupied) − (Dismissed+Fearful).
CES-D = Depressive symptomatology; DAS = Dyadic Adjustment.
To insure that the overall chance of making a Type I error is still less than .05 a full Bonferroni Correction was implied,
***$p < .001$

As can be seen in Table 2, the most robust correlation between the respondents' scores was obtained for the CES-D (r (240) = .50, $p < .0001$). Moderate correlations were also found between self- and spouse-reports for the DEQ dependency ($r(240) = .38$, $p < .0001$) and self-criticism (r (240) = .29, $p < .0001$) factors and for the RQ's PO dimension scores ($r(240) = .29$, $p < .0001$). The weakest correlation between the respondents was obtained for the RQ PS dimension scores (r (240) = .15, ns). Moreover, as can be seen in Table 2, self-reports and the spouse reports about the self on the DEQ factors and RQ dimensions are significantly correlated in the same direction with self- and spouse reports of CES-D, and with participants' DAS scores.

Hierarchical Multiple Regressions

Data analyses about vulnerability and attachment variables were performed, controlling for the participant's marital adjustment scores and his/her depression levels as reported by the spouse. This analytic strategy allowed us to detect the specific effects of the personality and attachment variables studied on participants' depressive symptomatology, beyond the known effects of spouse perceptions of depression and marital adjustment, as well as for the common variance related to the self-reported method. Data analyses focused primarily on the following three main issues:

1. The relative contribution of attachment internal working models and personality vulnerability variables as assessed by means of participants' self-report and participants' spouses' reports about them to the prediction of depression.
2. The contribution of spouses' reports of attachment internal working models and personality variables to the prediction of depression by self-reported attachment and personality variables.
3. The moderating role of attachment variables (self-reported and spouses' reports) on the associations between self-reported personality variables and depression.

Overview of Statistical Analyses

To explore the three issues presented above, we computed Hierarchical Multiple Regression (HMR) with interaction terms

(Cohen & Cohen, 1983) for the prediction of depressive symptomatology. As can be seen in Table 2, participants' age and formal education demonstrate significant correlations with the study variables. In the HMR, we controlled for participants' gender, education, and age in the first step. In the second step, we controlled for DAS scores, and, in the third step, for spouses' reported CES-D. In the next steps, we entered the self-reported and spouse-reported DEQ factors and the self-reported and spouse-reported RQ variables. These last steps permitted us to test the study's main hypothesis after controlling for the shared variance between the participants' self-evaluations and the evaluations by their spouses for dependency and PO dimension and their associations with the other predictors and the criterion variable. It also permitted us to control for the variables forming the interactions before testing the interactions (Cohen, 1978) (see Table 1). Next, we entered the self-report and spouse reports interactions for each construct (Funder, 1995, 1999; Funder & West, 1993). Finally, after controlling for covariations and main effects, we tested the moderating effects entering each of the self-reported DEQ factors' interactions with each of the self-reported and with each of the spouse-reported RQ variables. Moreover, a path analysis model was explored to test the sequence between self- and spousal reports of self-criticism and depression. Our combined analytic strategy allowed us to take into account the accuracy and bias elements in partners' perceptions of themselves and of each other in close relationships, as suggested by Kenny and Acitelli (2001).

Predicting Participants' Self-Reported Depressive Symptomatology

Table 3 presents the HMR for the prediction of self-reported depressive symptomatology. As can be seen, when controlling for participants' age, education, and gender, DAS scores were significantly associated with depressive symptoms, adding a significant 11% to the explanations of the variance of self-reported depressive symptomatology. Participants reporting higher dyadic adjustment were less depressed.

In the next step, spouse reports of depressive symptomatology added a significant 8% to the explanation of the variance of

self-reported depressive symptomatology.[4] Among the attachment dimensions variables, self-reported PS, as well as the spouse-reported, PO scores were associated negatively with self-reported depressive symptoms, and contributed an additional 15% to the explanation of the variance of self-reported depressive symptoms. In the next step, we entered the personality variables and found that only self-reported dependency and self-reported self-criticism were significantly associated with participants' depressive symptoms. High levels of self-criticism were positively associated with high depressive symptoms, while high self-reported dependency was associated with low levels of depression. This step added a significant 6% to the prediction of the variance of depressive symptomatology.[5] In the following steps (Steps 6 and 7) a total of 12

4. No change in the pattern of findings emerged when we conducted a similar HMR as the one presented in Table 3, but this time without entering the spouse's report of depression: Romantic Attachment variables (PS and PO of the RQ) entered in Step 3 added a significant 17% of variance (Adjusted $R^2 = .44$, F change $[4,231] = 18.49$, $p < .0001$). In the next step (Step 4), Personality variables (DEQ) added another 6% of the explained variance (Adjusted $R^2 = .49$, F change $[4,227] = 7.19$, $p < .0001$). The self- and spouse reports interactions were entered in Step 5 and added another 4% (Adjusted $R^2 = .52$, F change $[4,223] = 4.44$, $p < .002$). Finally, in the last step, the moderating effects of PS and PO variables were entered and added another 10% (Adjusted $R^2 = .62$, F change $[8,215] = 8.13$, $p < .0001$). The complete model explained 66% (Adjusted $R^2 = .62$) of the variance in target's depressive symptoms.

5. Another HMR analysis was performed on the final model in order to explore the relative contribution of the Personality variables (DEQ) and the Romantic Attachment variables (PS and PO of the RQ). We again computed the regression presented in Table 3, reversing Steps 4 and 5. In Step 4, we entered the Personality variables. Personality variables accounted for an additional 12% of the explained variance in the target's depression scores (F $[9,230] = 23.70$, $p < .0001$, F change $[4,230] = 12.96$, Adjusted $R^2 = .46$). Reversing the order did not alter the effects found in Table 3; again only self-reported self-criticism and dependency were significant ($\beta = .30$ and $-.22$, $p < .0001$ for self-reported self-criticism and dependency, respectively). Romantic Attachment variables entered in Step 5 added another 9% of the explained variance in target's depression scores (F $[13,226] = 22.76$, $p < .0001$, F change $[4,226] = 11.19$, Adjusted $R^2 = .54$). This step also did not alter the effects found in Table 3; as before, only self-reported PS and spouse-reported PO were significant ($\beta = -.26$ and $-.23$, $p < .0001$ for self-reported PS and spouse-reported PO, respectively). These last analyses demonstrated that DEQ and RQ variables are related but independent constructs and that each of them makes a specific contribution when seeking to account for the variance in target's depressive symptoms.

Table 3

Hierarchical Multiple Regression of Participants' Self-Reported Depressive Symptomatology

Predictors	R	R^2	Adjusted R^2	ΔR^2	β	t/F	$p<$
Step 1: Demographic Variables	.42	.17	.16	.17		16.56	.0001
Age					-.17	-2.75	.006
Education					-.42	-6.90	.0001
Gender					.00	<1	ns
Step 2: Dyadic Adjustment	.53	.28	.27	+.11		36.31	.0001
DAS					-.35	-6.03	.0001
Step 3: Depressive Symptoms – Spouse Report	.60	.36	.35	+.08		29.38	.0001
CES-D					.32	5.42	.0001
Step 4: Romantic Attachment	.72	.51	.49	+.15		17.30	.0001
PS–Self-Report					-.34	-6.65	.0001
PO–Self-Report					-.09	<1	ns
PS–Spouse Reports					-.08	<1	ns
PO–Spouse Reports					-.25	-5.17	.0001
Step 5: Personality	.75	.57	.54	+.06		7.27	.0001
Self-Criticism–Self-Report					.22	4.16	.0001
Dependency–Self-Report					-.17	-3.37	.001
Self-Criticism–Spouse Reports					-.07	<1	ns
Dependency–Spouse Reports					.05	<1	ns
Step 6: Self and Spouse Reports Interaction	.79	.62	.59	+.05		7.32	.0001
Self-Criticism–Self-report × Self-Criticism–Spouse Reports					.52	2.76	.006
Dependency–Self-Report × Dependency–Spouse Reports					-.03	<1	ns

Predictor					β	t	p
PS–Self-Report × PS–Spouse Reports					.15	2.52	.01
PO–Self-Report × PO–Spouse Reports					.16	3.08	.002
Step 7: Moderating Effects of Positive Self and Positive Other	.84	.72	.68	+.10		8.79	.0001
Self-Criticism–Self-Report × PS–Self-Report					−.16	−2.39	.02
Dependency–Self-Report × PS–Self-Report					−.07	<1	*ns.*
Self-Criticism–Self-Report × PO–Self-Report					.14	2.52	.01
Dependency–Self-Report × PO–Self-Report					.26	4.26	.0001
Self-Criticism–Self-Report × PS–Spouse Reports					−.27	−3.73	.0001
Dependency–Self-Report × PS–Spouse Reports					−.04	<1	*ns.*
Self-Criticism–Self-Report × PO–Spouse Reports					−.31	−5.00	.0001
Dependency–Self-Report × PO–Spouse Reports					−.12	−2.34	.02

Note: $N = 240$: 120 married couples, two-tailed test; $t = t$ value associated with β; $F = F$ associated with the changes in R^2; CES-D = Depressive symptomatology; DAS = Dyadic Adjustment. Positive-Self (PS) = (Secure+Dismissed) − (Fearful+Preoccupied); Positive-Other (PO) = (Secure+Preoccupied) − (Dismissed+Fearful). Spouse reports = the spouse's report of the partner's view of PO, PS, Self-criticism, Dependency and depressive mood

interactions were entered; four in Step 6, representing the self- × spouse report of personality and of attachment variables, and eight in Step 7, representing the moderating effect of self- and spousereport of attachment variables on the association between self- and spouse-report personality variables and depression. Significant interactions ($p < .05$) were plotted according to Cohen and Cohen's (1983, p. 323 and p. 419) recommendation and will be described and discussed in the following sections. However, to highlight the strongest effects obtained, only interactions found to reach significance at a strict criteria of $p < .001$ are followed by a Figure.[6]

In Step 6 of this HMR, we entered self- × spouse-report interactions, adding a significant 5% to the explanation of the variance of self-reported depressive symptomatology. In this step, three significant interactions were obtained between self- and spouse reports: (1) Self-reported self-criticism × spouse-reported self-criticism ($p < .006$); (2) self-reported PS × spouse-reported PS ($p < .01$); and (3) self-reported PO × spouse-reported PO ($p < .002$). In the following, the nature of each interaction will be described but not accompanied by figure illustrations since these interactions did not reach the strict $p < .001$ criteria.

1. Self-reported self-criticism × spouse-reported self-criticism: high self-criticism was found to associate positively with depressive symptomatology when both participants and their spouses reported that participants had high levels of self-criticism. Participants who reported themselves as high in self-criticism, but who were perceived by their spouses as low in self-criticism, reported lower levels of depression. Thus, spouse perception moderated the effect of self-reported self-criticism on depression.

2. Self-reported PS × spouse-reported PS: low positivity of the self-attachment dimension was associated with depressive symptomatology when both participants and their spouses reported that participants had low PS scores. Participants who reported themselves as low in PS, but were perceived by their spouses as high in PS, reported significantly lower levels

6. Figures plotting these interactions (i.e., with $p < .05 > .001$) are available upon request.

of depression. Thus, the spouse perception moderated the effect of self-reported low PS on depression.

3. Self-reported PO × spouse-reported PO: low positivity of the other attachment dimension was associated with depressive symptomatology when both participants and their spouses reported that participants scored low in the PO dimension. Participants who reported themselves as low in PO, but were perceived by their spouses as high in PO, reported significantly lower levels of depression. Thus, spousal evaluations moderated the effect of self-reported low PO on depression.

In the final step (Step 7) of the HMR, we entered the interactions between attachment and personality vulnerability variables in order to investigate the moderating effect of attachment on the association between personality variables and depression. As can be seen in Table 3, these interactions added a significant 10% to the prediction of the variance of self-reported depressive symptomatology. In this step, six (three pairs) significant interactions were obtained: (1) Self-reported self-criticism × self-reported PS ($p < .02$), and self-reported self-criticism × spouse-reported PS ($p < .0001$); (2) self-reported self-criticism × self-reported PO ($p < .01$) and self-reported self-criticism × spouse-reported PO ($p < .0001$); and (3) self-reported dependency × self-reported PO ($p < .01$) and self-reported dependency × spouse-reported PO ($p < .0001$). As can be seen among the 3 pairs of interactions the moderation effect of spouse-reported attachment on the association between target's partner personality and depression reached stronger significance than the moderation of the targets' self-reported attachment on the association between self-reported personality and depression. In the following, the meaning of each of these interactions will be described. However, since only the interactions involving the spouse-reported attachment reached the $p < .001$ strict criteria, they will be followed by figures.

1. Self-reported self-criticism × self-reported PS and self-reported self-criticism × spouse-reported PS: high self-reported self-criticism was associated positively with depressive symptomatology when participants reported themselves or their spouses perceived them as low in PS. Participants who reported themselves as high in self-criticism, but who also reported themselves, or were perceived by their spouses, as being high in PS, were significantly less depressed. Thus,
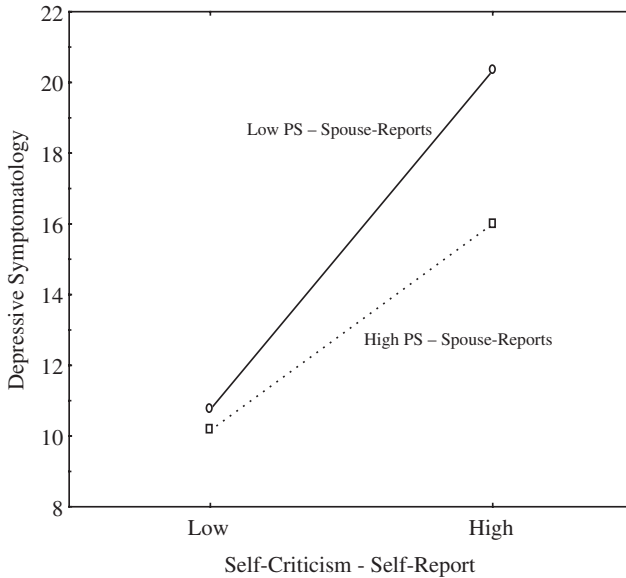
Figure 1
The relations between high (1 *SD*) and low (− 1 *SD*) levels of self-report self-criticism and depressive symptomatology for high (1 *SD*) and low (− 1 *SD*) levels of spouse-reports PS.

among couples, both self-reported and spouse-perceived PS levels were found to moderate the effect of self-reported self-criticism on depression. The self-reported self-criticism × spouse-reported PS is presented in Figure 1.

2. Self-reported self-criticism × self-reported PO and self-reported self-criticism × spouse-reported PO high self-reported self-criticism was found to be positively associated with depressive symptomatology when participants reported themselves or their spouses perceived them as low in the PO dimension of attachment. Participants who reported themselves as high in self-criticism, but also reported themselves or were perceived by their spouses as being high in the PO dimensions, had significantly lower levels of depressive symptomatology. Thus, among couples, both self-reported and spouse-perceived high PO levels were found to moderate the effect of self-reported self-criticism on self-
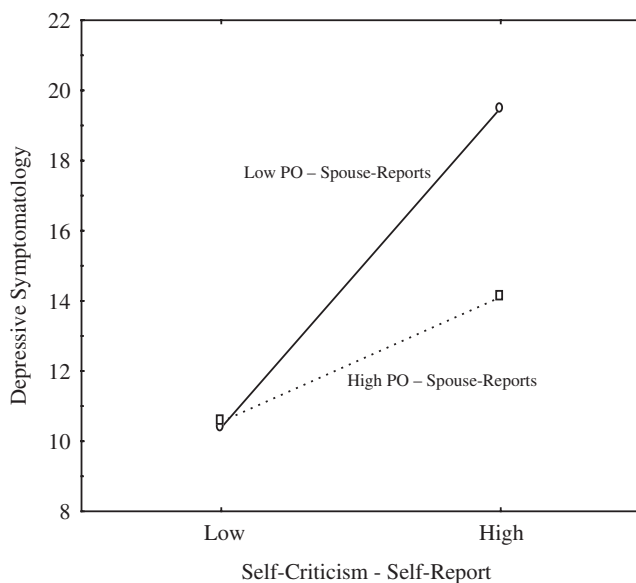
Figure 2
The relations between high (1 *SD*) and low (− 1 *SD*) levels of self-report self-criticism and depressive symptomatology for high (1 *SD*) and low (− 1 *SD*) levels of spouse-reports PO.

reported depression. The self-reported self-criticism × spouse-reported PO interaction is presented in Figure 2.

3. Self-reported dependency × self-reported PO and self-reported dependency × spouse-reported PO: low self-reported dependency was found to be positively associated with depressive symptomatology when participants reported themselves or their spouses perceived them as low in PO. Participants, who reported themselves as low in dependency, but who reported themselves, or were perceived by their spouses as being high in PO, had significantly lower levels of depression. Thus, among couples, both self-reported and spouse-perceived PO levels were found to moderate the effect of self-reported low dependency on depression. The self-reported dependency × spouse-reported PO interaction is presented in Figure 3.

Overall, the complete regression model explained 72% (Adjusted $R^2 = .68$) of the variance of depressive symptom scores. Beyond the
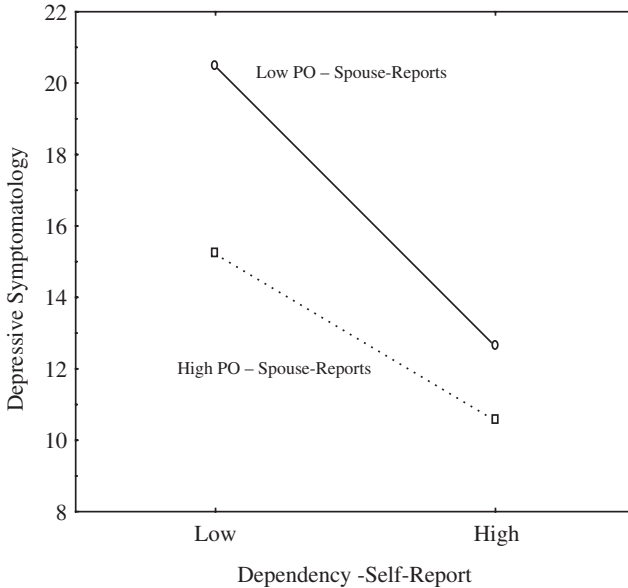
Figure 3
The relations between high (1 *SD*) and low (− 1 *SD*) levels of self-report dependency and depressive symptomatology for high (1 *SD*) and low (− 1 *SD*) levels of spouse-reports PO.

effects of spousal ratings of depressive symptoms, participants' age, education, and marital adjustment, the attachment and personality variables added 36% to the explanation of the variance of depressive symptomatology. The Hierarchical Multiple Regressions model did not address the possibility of a causal sequence between self- and spouse's reported self-criticism and depression: Spouses with partners who are highly self-critical are likely to perceive them as depressed, and conversely, partners who are depressed are likely to appear highly self-critical to their spouses. In order to evaluate these possibilities, while assessing measurement errors in the dependent (spouse perceptions of partner's depression and self-criticism) and independent variables (partner's depression and self-criticism) two path models—using Structural Equation Modeling (SEM; Hoyle & Smith, 1994)—were performed. Using AMOS 4.0 software based on the variance–covariance matrix (AMOS 4.0, Arbuckle,

1999), we tested the fit of the models, using maximum likelihood estimations.[7]

Path Models

In both models, self-reported self-criticism and depression were the predictors, and spouse's reports of self-criticism and depression were the criteria. In addition, we controlled for the shared variance of self-criticism and depression among self-reports and among spouse reports (i.e. controlling for their association relating to the same source of report).

In the first model, we delineated the effect of self-reported depression on spouses' reported self-criticism and the effect of self-reported self-criticism on spouse-reported depression (these two paths represents "Bias": depressed target leads his/her spouse to perceive him/her as more self-critical and/or self-critical target leads his/her spouse to perceive him/her as more depressed). The model specified resulted in the following nonacceptable indices of fit: RMSEA = .40; $\chi^2[2, \ N = 240] = 80.18$; $\chi^2_{/df} = 40.09$; $p < .0001$; GFI = .87; AGFI = .34; CFI = .61. Partners' levels of self-criticisms *did not* affect the spouses' perception of them as high depressive (path coefficient = .11, *ns.*); conversely, partners' levels of depression did not affect the spouses' perception of them as highly self-critical (path coefficient = $-$ .01, *ns.*). These models explained 0% and 0.1%

7. In evaluating the overall goodness-of-fit for the path models, the following criteria were used: (i) the chi-square (χ^2) *p*-value, which if $p > .05$, indicates that there are no statistically significant discrepancies between the observed data and the hypothesized model and the chi-square/*df* ratio; (ii) the Adjusted Goodness of Fit Index (AGFI; Bentler & Bonett, 1980), which specifies the amount of covariation in the data that is accounted for by the hypothesized model relative to a null model that assumes independence among variables; (iii) the Robust Comparative Fit Index (CFI; Bentler, 1990) and the Goodness of Fit Index (GFI; Jöreskog & Sörbom, 1984), which adjust for the sample size (for the CFI, GFI and AGFI a cutoff of 0.90 is generally accepted as indicating a good fit, where 1.0 indicates a perfect fit); and (iv) the Root Mean Square Error of Approximation (RMSEA; Browne & Cudeck, 1993), which should be less then 0.05. We have chosen to accept a model in which the chi square divided by the degrees of freedom ratio is ≤ 2 or in which the CFI, GFI and AGFI are greater then 0.90. These moderately stringent acceptance criteria will clearly reject inadequate or poorly specified models, while accepting consideration models that meet real-world criteria for reasonable fit and representation of the data (Kelloway, 1998).

of the variance of spouses' perceptions of their partners' self-criticism and depressive mood, respectively.

In the second model, we delineated the effects of self-reported depression on spouse- reported depression and of self-reported self-criticism on spouses' reported self-criticism (these two paths represent "Accuracy": depressed target leads his/her spouse to perceive him/her as more depressed, and/or self-critical target leads his/her spouse to perceive him/her as more self-critical). The model specified resulted in the following acceptable indices of fit: RMSEA = .000; $\chi^2[2, \quad N = 240] = 1.76$; $\chi^2_{/df} = .88$; $p > .41$; GFI = .1.0; AGFI = .98; CFI = 1.0. Partners' levels of self-criticism affected the spouses' perception of them as highly self-critical (path coefficient = .28, $t = 4.93$, $p < .0001$); partners' levels of depression affected, as well, the spouses' perception of them as highly depressive (path coefficient = .47, $t = 9.15$, $p < .0001$). This model explained 8% and 22% of the variance of spouses' perceptions of their partners' self-criticism and depressive mood, respectively.

Results of the path model[8] (for final model, see Figure 4) indicate that levels of self-criticism as seen by the partner are not simply a symptom of the target's depression (i.e. the "Bias" model). Moreover, the path model indicates additional confirmation of the regression model's (i.e. the incremental variance explanation by the inclusion of spouse ratings of depression, see Table 3) findings of the partner's role in depression-generating factors (i.e. the "Accuracy" model) as well as a buffer against the depressive symptoms (i.e. the interactions in the HMR model).

DISCUSSION

The main interest of the present work was the delineation of the convergence of personality and attachment variables in the study of

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8. A Combined model estimating the simultaneous "Bias" and "Accuracy" paths yielded identical results; that is, there was a nonsignificant effect for self-reported depression on spouse-reported self-criticism (path coefficient = .09, ns) and a significant effect on spouse-reported depression (path coefficient = .49, $t = 7.75$, $p < .0001$). The effect of self-reported self-criticism on spouse-reported depression was nonsignificant (path coefficient = .01, ns), but was significant on the spouse-reported self-criticism (path coefficient = .25, $t = 3.58$, $p < .0001$). However, this model had zero degrees of freedom, so fit indices could not be estimated.
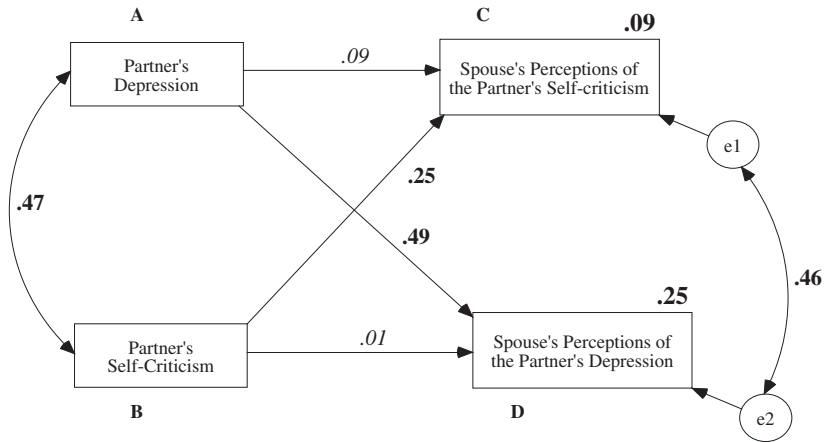
Figure 4
A path model: Spouse's perceptions of the partner's self-criticism and depression. *Note. accuracy* being the paths from **A** to **D** and from **B** to **C**, and *bias* the paths from **A** to **C** and from **B** to **D**. Bold estimates are standardized maximum likelihood parameters that are statistically significant at $p<.0001$. Small circles represent residual variances, bi-directional arrows reflect correlations, and unidirectional arrows depict hypothesized directional, or "casual", links.

depressive symptoms in the context of marital relationships. To the best of our knowledge, this is the first time that self and other ratings with respect to self-criticism and dependency have been investigated. Using a multisource design, we explored the patterns of relations between self-reported and spouse-reported self-criticism, dependency, and attachment dimensions, as well as the contribution of the latter to the moderation of distress. While consistent with the distress–marital maladjustment covariation assumptions in the literature, the present study findings broadened this hypothesis to include the significant effects of the depression, self-criticism, and attachment dimensions as reported by a spouse. Beyond the methodological implications of multisource data, our findings support the view of depression as an interpersonal process (Coyne, 1976; Sacco, 1999). We propose that the spousal perception of the target participant's personality and depression makes a unique contribution to the latter's levels of psychological distress.

Significant differences between self- and spouse-reported mean assessments were found for the dependency and positive-other

variables, with partners perceiving their spouses as less dependent and lower in the positive-other dimension than the target participants' self-reported evaluations; no mean differences were found for the other variables studied. These results point to differences between the two partners' perceptions of marital interactions (Arias & O'Leary, 1985). Furthermore, in the context of marriage, dependency and positive-other scores might relate to the underlying process of *proximity seeking*, and, therefore, might be important in the use of marriage as a supportive "safe haven" (Anderson et al., 1999). In the present study, spouse-reported positive-other was found to interact with self-reported positive-other, self-criticism, and dependency, moderating their effect on self-reported depression. High self-reported positivity of the other is associated with the individual's tendency to seek closeness and his/her expectations that significant others are available for him/her. Perceptions of a partner as high in the positive-other dimension of attachment might reflect the perceivers' positive characterization of his/her own relationship (Jacobson & Moore, 1981) and the marital relations as a whole, i.e., a perception of a relationship where needs for closeness are adequately fulfilled. Our results point to significant associations between self-criticism and the attachment dimensions of positive self and positive other, on one hand, and self-reported depressive symptoms, on the other. Higher levels of self-reported positive-self and of spouse-reported positive-other relate to reduced levels of depressive symptomatology, while only self-reported self-criticism associates positively with depressive symptoms levels.

This latter finding is congruent with a growing number of empirical findings, which indicate that self-criticism is a vulnerability factor (e.g., Besser & Priel, in press; Priel & Besser, 1999, 2000). Close interpersonal relationships, such as emotionally intimate relationships, might be especially threatening to self-critical individuals. According to the interpersonal characteristics attributed to self-criticism, vulnerability in this context might be interpreted in terms of the possible fear that revealing feelings could lead to disapproval and rejection.

Our findings support the interpersonal orientation associated with dependency (Blatt, 1990), as well as findings regarding dependent individuals as more prone to regulate their moods by spending time with others (Fichman, Koestner, Zuroff, & Gordon, 1999). Dependent individuals appear to be more focused on connecting

with others, while self-critics may fail to develop such social skills as interpersonal sensitivity, which results in less marital adjustment and more depressive symptomatology (e.g., Mongrain et al., 1998; Vettese & Mongrain, 2000).

It was assumed from the outset of our research that, although there was a likely association between self-criticism and negative working models of the self, there would be enough of a distinction between these measures to warrant the investigation of possible interactions involving the DEQ variables and internal working models of attachment. Some of the distinctions can be related to the fact that this study focused on global, generalized assessments of self-criticism versus romantic attachment style measures that involve the interdependency of the self in relation to a significant other. It is important to note here that, while self-criticism describes individuals' experiences or behavior, attachment dimensions tap the individual's intrapsychic-cognitive organization of the interpersonal world (see Levy, Blatt, & Shaver, 1998). Moreover, as noted by Thompson and Zuroff (1999), many additional factors are likely to be involved in the development of self-criticism, including temperament factors.

In light of these observations, it is interesting to note that we did not find a substantial association between self-criticism and internal working models of the self. The correlational analyses indicated that there were small, but significant, negative correlations between self-reported self-criticism and positive-self ratings of attachment, as reported by the participants and their spouses. However, when the analyses focused solely on spousal ratings, self-criticism and ratings of the positive-self were not significantly associated. This pattern of results underscores the need to go beyond self-report.

Interactions of Self- and Spouse Reports

Our findings suggest that marital partners' appraisals make a unique contribution toward predicting depression in close interpersonal relationships. Moreover, beyond the main effects that were obtained, the interaction between self-reported and spouse-reported attachment and personality vulnerability variables seems to constitute an important indicator of psychological distress. Specifically, spouse-reported variables were found to moderate the vulnerability effect of high self-reported self-criticism, low self-reported positive-

self and low self-reported positive-other on self-reported depression. In all these cases, more positive spousal appraisals buffer the effects of these variables on participants' depressive symptoms. Our findings also showed that, when self- and spouse assessments are congruent, that is, when both are positive or both are negative, they contribute together to the explanations of vulnerability and resilience to depression, respectively.

These moderation effects corroborate the reciprocal effects of depressive mood pointed out in the context of family system perspectives (Benazon & Coyne, 2000; Coyne, 1976) showing that an increased risk is associated with negative appraisals from marital partners (also see Sacco & Phares, 2001). The more positive spouse appraisals, either congruent or incongruent with the target participant's self-perceptions, seem to provide the basis for resilience to depressive symptoms among married couples. The concordant interactions found between self- and spouse reports are congruent with the empirical interest in the interpersonal aspects of depression. Specifically, the ability to detect accurately the experience of others with whom one interacts—interpersonal acuity—has been proposed as an important skill in promoting effective social behavior (Aube & Whiffen, 1996), and marital and psychological adjustment (Noller, 1980; Sabatelli, Buck, & Kenny, 1986). Our path model supported the spouse's accuracy, showing that the spouse perceptions of the partner's personality is not simply a symptom of partner's depression, and similarly, evaluations of the partner's depression are not a reflection of the partner's levels of self-criticism. Consequently, these results suggest that, among couples, the partner's ability to "read" a spouse's personality accurately and/or positively is an interpersonal buffer to the apparent vulnerability to depression. Of course, this does not rule out the possibility that the partner is interacting with his/her spouse in a manner that also contributes to these effects.

The Moderating Effects of Attachment Dimensions

In the present study, positive-self and positive-others attachment dimensions moderated the effects of high levels of self-criticism. Specifically, both high levels of self-reported and spouse reported positive-self and positive-other attachment dimensions moderated the effect of self-reported self-criticism on depressive symptomatol-

ogy. Participants high in self-criticism, but low on self-reported or spouse-reported positive-self and positive-other variables were the most vulnerable to depressive symptomatology. These findings corroborate our earlier observations that self-criticism and attachment dimensions are related but distinguishable constructs. According to our findings, if self-critical individuals conserve relatively positive models of others or the self, self-criticism does not result in depressive symptomatology. It is the convergence of negative models of others and self with self-critical attitudes that constitutes a risk of depression.

Our findings on the association between low dependency and high levels of depressive symptomatology join the accumulating evidence indicating that self-criticism, but not dependency, serves as a vulnerability to depression (e.g., Besser & Priel, in press; Priel & Besser, 1999, 2000; Mongrain et al., 1998; Vettese & Mongrain, 2000). Moreover, in the present study, this main effect implies that low dependency may predispose to depressive symptomatology. It was found that the effects of low dependency on depressive symptomatology were moderated by high levels of self-reported and spouse-reported positive-other's attachment dimension. Participants low in dependency but high in self- or spouse reports of positive others were less vulnerable to depressive symptomatology. The present study suggests that dependency is not a vulnerability factor in the context of close interpersonal relationships, emphasizing the importance of the personality contextual interaction. While self-criticism seems to be a vulnerability factor across various contexts, the effects of dependency seem to differ according to the context under investigation.

Several factors could be responsible for feelings of low positive-self and self-criticism and for positive-other and dependency, which might contribute to mood and adjustment outcomes. For instance, an additional speculation might be that, at least in close interpersonal contexts, both the positive-other attachment dimension and dependency might have a *closeness-seeking* component (or interpersonal relatedness), which associates with adjustment and affect regulation. Conversely, a *distance-seeking* component (or self-definition) that associates with maladjustment and depression might underlie both the low positive-self attachment dimension and self-criticism. Therefore, in interpersonal relationship contexts, combinations of personality vulnerability factors and attachment dimen-

sions might define interpersonal styles: "positive relatedness" (e.g. high positive-other and dependency) and "negative relatedness" (e.g. low-positive self and self-criticism). Further research should examine the association between these interpersonal styles and other related interpersonal outcomes.

In addition to the implications for research on personality and marital functioning, the results from the current study may have implications for family and marital therapy treatment for depression. From a systems perspective, for instance, the current findings indicate that the inclusion of spouse appraisals regarding the target partner are important. Considering the inclusion of spouses as part of the treatment might also compensate for the possibility that depressed targets may not be consciously aware of certain aspects of their personalities (Flett et al., 1995, p. 329). Thus, this approach might strengthen the validity of therapist observations, and, consequently, might increase the accuracy of their contextual interpretations.

The interpretation of the present study findings should take into account the limitations involved in cross-sectional designs. Further research, using interview techniques, assessment of individual behavior in dyadic social interaction (e.g., Funder, Furr, & Colvin, 2000), and external assessments of variables, for instance, those evaluating predictors of outcomes following treatment for depression and psychiatric disorders, might implement the present study's multisource interactional model, using a longitudinal design that controls for baseline levels of depression and personality variables. Finally, it should be noted that with respect to the dependency findings, the results are specific to the DEQ dependency subscale, and, as illustrated by Pincus and Wilson (2001), different ways of conceptualizing and assessing dependency may be associated with related differences in interpersonal outcomes and attachment styles. The results of the current study need to be reexamined with alternative measures of the personality constructs.

In summary, although there are some limitations, the current study represents a first attempt to examine self-criticism, dependency, attachment, and depression within the same study, with both members of the dyad rating themselves and their partners. We believe that the inclusion of spousal ratings in addition to self-reports is a promising approach that, in some respects, is more in keeping with the interpersonal nature of depression in married

individuals. The findings about the additional contribution to the prediction of depression made by the interaction of both self-criticism and attachment style, as well as by the spouse's perception of these variables, underscore the complexity and challenges faced by clinicians treating a married individual suffering from depression. In general, the results of the current study support the importance of incorporating partner perceptions in the explanation and treatment of depression. From a methodological perspective, multiple reporters and multiple indicators strengthen our findings by reducing some of the method variance biases that have been problematic in prior studies. This approach might be useful also for the assessment of other personality constructs.

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