

IT'S NOT ME, IT'S YOU: SELF- AND PARTNER-SCHEMAS, DEPRESSIVE SYMPTOMS, AND RELATIONSHIP QUALITY

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Depression is associated with a host of interpersonal difficulties, particularly within intimate relationships. Although a significant body of literature has supported the presence of a highly consolidated negative self-representation or self-schema, no studies have examined whether depression is also associated with a highly organized negative “partner-schema”, and whether this represents a risk factor for relationship distress. Given the high degree of similarity between cognitive representations of self and close others, it was predicted that depression would be associated with a partner-schema structure mirroring that of the self-schema: an organized cognitive structure characterized by tightly interconnected negative information, and loosely dispersed positive information. In a sample of 291 undergraduate students, results supported this hypothesis. The findings also revealed that partner-schema structure was associated with relationship quality and attributions about a partner's behaviors over and above self-schema structure. These findings have important implications for understanding the link between cognitive risk factors, relational dysfunction, and depressive symptoms.

Keywords: depression; interpersonal difficulties; cognitive schemas; relationship quality; attributions

Depression is associated with a range of interpersonal difficulties (see Hames, Hagan, & Joiner, 2013, for review). Although

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these difficulties have been examined across a variety of interpersonal contexts, romantic relationships are arguably most critically affected by such processes. Indeed, an association between depression and romantic relationship distress has long been documented in the literature (Beach & O'Leary, 1993; Du Rocher, Papp, & Cummings, 2011; Najman et al., 2014; Paykel et al., 1969; Whisman & Bruce, 1999; Sheets & Craighead, 2014). Not only is relationship distress quite common in depression (Atkins, Dimidjian, Bedics, & Christensen, 2009), research suggests it may have deleterious effects on treatment response (Addis & Jacobson, 1996; Bromberger, Wisner, & Hanusa, 1994) and may also increase risk for depressive relapse (Whisman, 2001). Given the effects of relationship distress on the course of depression, it is critical to identify potential risk factors that may contribute to diminished relationship quality. As a result, researchers have called for the application of cognitive-behavioral theories of depression to understand potential contributors to interpersonal dysfunction in the disorder (Dobson, Quigley, & Dozois, 2014).

Cognitive theories of depression posit that individuals with the disorder have a tendency to view themselves, their personal world, and their future in a pervasively negative manner (Beck, 1967; Beck, Rush, Shaw, & Emery, 1979). Beck referred to this pattern of beliefs as the cognitive triad, and stated that these negative beliefs contribute to the onset and maintenance of depressed mood. An individual's romantic partner may be encompassed in this cognitive triad and also be the recipient of pervasively negative perceptions. Indeed, research suggests that depression is associated with the tendency to make negative attributions about romantic partners' behaviors, referred to in the literature as causal and responsibility attributions (Fincham & Bradbury, 1992). Causal attributions refer to the tendency to place the cause of negative behaviors within the partner, view the cause as stable and unchanging, and perceive it to have a global influence on many aspects of the relationship. Responsibility attributions refer to the tendency to believe that a partner deliberately intended to engage in the negative behavior, was motivated to do so, and deserved to be blamed for the behavior. Depressive symptoms have been linked to both causal and responsibility about a partner's negative behavior (Heene, Buysse, & Van Oost, 2005, 2007).

According to Beck's model, the negative thought patterns associated with depression stem from underlying cognitive structures, known as schemas (Beck et al., 1979). Schemas are cognitive templates that individuals develop based on past experiences, which are subsequently activated and used to guide the processing of one's current experience. Thus, a schema represents a highly individualized lens through which an individual interprets and experiences his or her surroundings (Dozois & Beck, 2008). In the literature, schemas are conceptualized as consisting of both content and structure. Schema structure, or cognitive organization, refers to the degree of interconnectedness or consolidation of content within the schema (Dozois & Rnic, 2015). The degree to which negative information forms a highly consolidated associative network of interconnected nodes may be particularly important in understanding the self-schema in depression (Dozois, 2002, 2007; Dozois & Dobson, 2001a, 2001b). Research suggests that, compared to healthy controls, the cognitive organization of individuals with depression is characterized by more tightly interconnected negative and loosely interconnected positive information about the self (e.g., Dozois, Eichstedt, Collins, Phoenix, & Harris, 2012).

The degree of consolidation in schema structure is thought to be a relatively stable vulnerability factor in depression. That is, while negatively biased information processing and surface level cognitions observed in individuals with depression tend to ameliorate as depressive symptoms remit, cognitive organization remains fairly stable despite symptom improvement (e.g., Dozois, 2007). Interestingly, although the cognitive structure of negative self-referent information has been examined across different content domains, the organization of negative interpersonally-related information about the self appears to be a particularly robust and stable predictor of depressive symptoms (Dozois, 2007; Dozois & Dobson, 2001a). That is, the organization of interpersonal information (e.g., being rejected, alone, unlovable) is more consistently and stably linked with depression than is non-interpersonal, achievement-oriented information (e.g., being a failure, incompetent). Given the importance of interpersonal schema content and the effects of underlying schema structures on an individual's thoughts and emotions, it is likely

that relational schemas hold a powerful influence over affect and cognition within the context of intimate relationships and this disorder. To date, research has not yet examined whether depression is also associated with highly organized negative schema structures for one's romantic partner.

Outside of the context of depression, cognitive theories have been used to conceptualize the role of schemas in romantic relationships. For instance, Beck (1988) applied his cognitive model to relationship difficulties and asserted that negative schemas may contribute to certain types of distress-maintaining assumptions about oneself and one's partner in romantic relationships. Similar to Beck's model, Baldwin (1992, 1995) defined relational schemas as cognitive representations that individuals develop based on regularities in relational patterns. These relational schemas are thought to allow individuals to predict which self-generated behaviors will elicit which types of responses from a partner (e.g., If I get angry, my partner will reject me; Baldwin, 1995). Thus, Baldwin's (1992, 1995) relational schemas include both a self-schema and an other-schema that are closely intertwined, yet distinct from one another. Building on Baldwin's theory of relational schemas, Whisman and Delinsky (2002) focused on the component of partner-schema, and defined partner-schemas as "conceptualizations of one's romantic partner, derived from past experience, which organize and guide the processing of partner-related information" (p. 51; Chatav & Whisman, 2009).

No studies to date have examined the role of partner-schema structure in relationship difficulties within the context of depression; however, recent research with romantic dating couples has demonstrated that the organization of partner-schema structures is associated with reduced relationship satisfaction (Chatav & Whisman, 2009; Whisman & Delinsky, 2002), poor relationship quality (Reifman & Crohan, 1993; Showers & Kevlyn, 1999), and more negative thoughts about a partner's behaviors (Chatav & Whisman, 2009). Similar associations have been replicated in married dyads with objective behavioral measures of relationship quality (Campbell, Butzer, & Wong, 2008). Moreover, partner-schema structures have been linked longitudinally to relationship longevity and dissolution (Murray & Holmes, 1999; Showers & Ziegler-Hill, 2004). As such, the extant literature sug-

gests a clear link between partner-schemas and relationship quality; however, despite a strong theoretical impetus (Baldwin, 1992, 1995; Beck, 1967, 1988) and growing body of research supporting the role of schemas in interpersonal functioning, the link between partner-schema structures, depression, and relationship distress remains unexamined.

Most of the aforementioned studies have focused primarily on the role of partner-schemas without taking into consideration the significant effects of self-schemas on affect and cognition. It may be pertinent to examine whether partner-schema structures are robust enough to predict relationship outcomes above and beyond the self-schema, as research suggests that an individual's cognitive representations of self and close others become merged with one another. For instance, the self and other are thought to become integrated into one cognitive category (Aron, Aron, & Smollan, 1992; Aron, Aron, Tudor, & Nelson, 1991; Aron et al., 2004), such that "much of our cognition about the other in a close relationship is cognition in which the other is treated as self or confused with self" (Aron et al., 1991, p. 242). Given the high degree of cognitive overlap between self and close others, it is possible that a partner-schema may not be uniquely predictive of relationship variables above and beyond the powerful effects of the self-schema. If, however, partner schema structure maintains its association with relationship variables while controlling for the effects of the self-schema, this would suggest that partner schema structures might play a particularly important role in interpersonal difficulties in depression.

While most research has focused on the role of the self-schema in depression, there is ample evidence to suggest that schemas held about significant others may be particularly germane to understanding interpersonal difficulties in the disorder. Cognitive-behavioral theories of depression suggest that negatively biased representations of the self and others may contribute to interpersonal difficulties and depressive symptoms (see Dobson et al., 2014). Indeed, Evraire and Dozois (2014) found that schema content, or core beliefs, about self and others predicted interpersonal dysfunction in individuals with depression. Interpersonal variables are the most powerful predictors of depression (e.g., Sheets & Craighead, 2014), yet examinations of the manner by

which people think about and process interpersonal relationship stimuli are relatively under-investigated in the context of this disorder (Gadassi & Rafaeli, 2015). This dearth of research is surprising given the association between depression and relationship distress. As such, the purpose of the present study was to begin to bridge this gap in the literature by examining whether depression is associated with a particular partner-schema structure, and whether partner-schema structure is uniquely associated with relationship dysfunction above and beyond the self-schema.

The first aim of this study was to examine whether depression was associated with an organized schema structure for a current romantic partner. Given the role of the cognitive triad in depression (Beck et al., 1979), the tendency to view one's personal world in a pervasively negative manner could conceivably be extended to an individual's view of his or her romantic partner. Moreover, given the degree of overlap between cognitive representations of the self and close others (e.g., Aron et al., 1992), it is reasonable to expect that one's partner-schema would be similar in organization to one's self-schema. As such, depression was hypothesized to be associated with a partner-schema structure mirroring that of the self-schema (i.e., a partner-schema structure consisting of highly interconnected negative and more diffuse positive content).

Another objective of this study was to examine whether partner-schema structure was associated with facets of relationship quality (such as relationship adjustment, satisfaction, and commitment) and relationship attributions (causal and responsibility attributions) about a partner (Campbell, Butzer, & Wong, 2008; Chatav & Whisman, 2009; Reifman & Crohan, 1993; Showers & Kevlyn, 1999; Whisman & Delinsky, 2002). Moreover, given the cognitive similarity between representations of self and close others, this study examined whether partner-schema structures were predictive of relationship variables above and beyond the self-schema. In addition, this study expanded on the existing literature by using the Psychological Distance Scaling Task (PDST; Dozois & Dobson, 2001a, 200b) as a novel measure of partner-schema structure. A number of the previous studies examining the link between partner-schemas and relationship functioning

have relied primarily on measures designed to tap into a schema's content and its effects on information processing rather than the actual structure of the schemas *per se*. Although schema content is important, the way in which a schema's content is organized is particularly important in the context of depression (Dozois, 2002, 2007; Dozois & Dobson, 2001a, 2001b). Spreading activation models of schema-related cognition posit that activation spreads more readily across schema content or nodes that are more closely interconnected (e.g., Bower, 1981). Therefore, when a negative relationship event activates an underlying partner-schema, more closely interconnected negative nodes should facilitate more readily available negative cognitions about the partner. Thus, a more tightly interconnected negative partner-schema was predicted to be associated with reduced self-reported relationship quality, and the tendency to make more distress maintaining attributions about a partner's negative behavior. In summary, the current study expands upon the extant literature by seeking to replicate previous findings using the PDST, and examining whether the associations between partner-schema structure and relationship variables hold above and beyond the effects of self-schema.

METHODS

PARTICIPANTS

The sample was comprised of 296 undergraduate students recruited from the University of Western Ontario's psychology research participant pool. Participants were required to be currently in a romantic relationship of at least 3 months duration at the time of participation. Four participants were excluded because they reported not currently being in a romantic relationship, and one participant was excluded because she required an electronic language translator to complete the study, leaving a sample size of 291 participants for analyses. The average age of participants was 18.76 ($SD = 2.61$), and the average relationship length was 17.86 months ($SD = 8.88$). The majority of participants reported being in a committed relationship (87.8%); however, some reported their relationship status as casual (8.9%) or open

(3.4%). The majority of relationships were heterosexual (90.7%). The ethnic makeup of the sample was predominantly Caucasian (60.5%). Of the sample, 72.9% were female; 18.2% reported receiving therapy and 9% reported receiving medication for a mental disorder. Participants received course credit in exchange for their participation in the study.

MATERIALS

Beck Depression Inventory—II (BDI-II). The BDI-II (Beck, Steer, & Brown, 1996) is a widely used measure of depressive symptom severity and demonstrates good test-retest reliability, excellent internal reliability, and excellent content, construct, concurrent, and discriminant validity (see Dozois & Covin, 2004, for a review). This measure consists of 21 self-report items, with each item rated on a 4-point scale ranging from 0 (symptom not present at all) to 3 (symptom is severe) based on their mood over the last 2 weeks. A total score is calculated by summing across all items, where higher scores reflect greater depressive symptom severity. In the current sample, the Cronbach's alpha for this instrument was .92.

Psychological Distance Scaling Task (PDST). The PDST (Dozois, 2002, 2007; Dozois & Dobson, 2001a, 2001b) was used to assess the structure of self- and partner-schemas. Participants completed two versions of the task; the original version was used to assess organization of self-schema, and an adapted version was created to assess organization of partner-schema. In the original version of this task, participants are presented with a 21.5 cm by 23 cm rectangular grid on a computer monitor. In the middle of this grid is a horizontal line, anchored with the statements *Not at all like me* on the left side of the grid and *Very much like me* on the right. A vertical line is also shown in the middle of the grid with the anchors *Very positive* at the top of the grid and *Very negative* at the bottom. As such, the *x*-axis represents an adjective's degree of self-reference, and the *y*-axis reflects the adjective's valence. Adjectives are presented one at a time in the center of the grid, and respondents are instructed to move the mouse to the position on the grid that best characterizes the degree of self-relevance and degree of valence of the word. After each adject-

tive placement, the participant is presented with a new grid and adjective until all adjectives have been rated. The x - and y -axis coordinates for each adjective placement are recorded by the computer and used for scoring. In the adapted partner-version of this task, participants completed the same procedure as outlined above, but positioned adjectives in the grid based on the degree of partner-relevance with the horizontal anchors of *Not at all like my partner* and *Very much like my partner*. The same list of adjectives was presented for both the self and partner versions of the task; words were presented to participants in random order. Participants completed 4 practice trials and 120 experimental trials (60 trials for partner ratings, and 60 trials for self ratings).

The stimuli for the PDST were comprised of 60 adjectives (30 positive and 30 negative; see Dozois & Dobson, 2001b). Positive and negative word lists were selected from a list of previously used stimuli for this task and were matched on the average frequency of word use in the English language, word length, emotional intensity, and imaginability (Dozois, 2007; Dozois & Frewen, 2006). In order to examine the degree of schema interconnectedness of self- or partner-relevant information, the x/y coordinate point for each adjective was used to calculate the average interstimulus distances between adjectives. The average interstimulus distances for the self-referent positive and negative adjectives for each participant were then calculated using an idiographic formula (see Dozois & Dobson, 2001b; Seeds & Dozois, 2010). Four interstimulus distance scores (ISDs) were calculated for each participant: self positive, self negative, partner positive, and partner negative. Greater distance among adjectives is believed to indicate less interconnectedness or consolidation of information, whereas less distance is thought to reflect greater interconnectedness or consolidation (Dozois & Frewen, 2006). The psychometric properties of the PDST have been supported in previous studies in depressive and non-depressive samples (Crits-Christoph, Gallop, Diehl, Yin, & Gibbons, 2017; Dozois, 2002, 2007; Dozois & Dobson, 2001b).

Revised-Dyadic Adjustment Scale (R-DAS). The RDAS (Busby, Christensen, Crane, & Larson, 1976) measures global relationship adjustment and can be used to distinguish between clinically distressed couples and non-distressed couples (Anderson

et al., 2014). This instrument consists of 14 self-report items, each rated on 6-point Likert-type rating scales (with the exception of one item, which uses a 5-point scale). For example, items may ask participants to rate how often particular events (e.g., a disagreement or a calm discussion) occur in their relationship, using a scale ranging from *All the time* or *Every day* to *Never*. Lower scores on this measure reflect higher couple distress. Research supports the psychometric properties of this measure (e.g., Alves et al., 2015; Crane, Middleton, & Bean, 2000). Cronbach's alpha in this sample was .77.

Investment Model Scale: Satisfaction & Commitment Facets. The Investment Model Scale (Rusbult, Martz, & Agnew, 1998) is a widely used instrument that includes subscales measuring relationship satisfaction and commitment. Participants are asked to indicate their level of agreement with each statement on an 8-point scale with endpoints labeled 1 (don't agree at all) and 8 (completely agree). The satisfaction facet includes items such as "My partner fulfills my needs for intimacy," and "My relationship is close to ideal," whereas items from the commitment facet include "I am committed to maintaining my relationship with my partner" and "I want our relationship to last forever." The original satisfaction scale (consisting of 10 items) and the 15-item version of the commitment scale (Rusbult, Kumashiro, Kubacka, & Finkel, 2009) were used in this study. Research supports the reliability, and convergent, discriminant, and predictive validity of this measure (Rusbult, Martz, & Agnew, 1998). Internal consistency in the current sample was .95 for the commitment scale, and .91 for the satisfaction scale.

Relationship Attribution Measure (RAM). The RAM (Fincham & Bradbury, 1992) was used to examine the degree to which participants endorse a number of distress-maintaining attributions about their partners' undesirable behaviors. Participants are presented with four hypothetical negative partner behaviors (e.g., Your partner criticizes something you say). For each of the four behaviors, participants are instructed to rate their agreement with 6 statements indicating the degree to which they endorse causal and responsibility attributions for a partner's negative behaviors. The causal attributions subscale measures the belief that

TABLE 1. Descriptive Statistics for Variables of Interest

Variable	<i>n</i>	<i>M (SD)</i>	Min	Max
BDI-II	291	12.31 (9.68)	0.00	51.00
R-DAS	291	49.64 (7.50)	25.00	65.00
IMS-Com	290	5.54 (1.63)	0.53	8.00
IMS-Sat	291	50.40 (9.45)	13.33	60.00
Interstimulus Distances				
Self ISD (+)	291	.08 (.22)	-.42	1.30
Self ISD (-)	279	.75 (.42)	-.06	2.36
Partner ISD (+)	291	.03 (.20)	-.68	.89
Partner ISD (-)	273	.94 (.50)	-.51	2.44
RAM				
Causal Attributions	290	3.49 (.74)	1.00	5.58
Responsibility Attributions	290	2.80 (.87)	1.00	6.00

Note. BDI-II = Beck Depression Inventory—II; R-DAS = Revised Dyadic Adjustment Scale; IMS = Investment Model Scale; ISD = Interstimulus Distance, as measured by the PDST; RAM = Relationship Attribution Measure.

the causal locus of the behavior is within the partner, and that this cause is stable and global. The responsibility attributions subscale reflects the degree to which participants believe their partner engaged in the behavior intentionally, and whether the partner deserves to be blamed for the behavior. Research supports the RAM's test-retest reliability, internal consistency, and validity (Fincham & Bradbury, 1992). Cronbach's alpha in current sample was .78 for the causal attributions scale, and .86 for the responsibility attributions scale.

PROCEDURE

Informed consent was obtained from all individual participants included in the study. Participants were run in groups of up to six individuals and completed all measures on individual computer workstations. After providing some demographic information, participants completed the BDI-II, PDST (self and partner versions), R-DAS, IMS, and RAM (the order of measures was randomized). Upon completion of the study, participants were debriefed, thanked for their participation, and provided with credit for their introductory psychology class. Participants were

TABLE 2. Correlations Among the Variables of Interest

	1	2	3	4	5	6	7	8	9	10
1. BDI-II		-.37**	-.10	-.39**	-.31**	.42**	-.18**	.29**	.20**	.16**
2. R-DAS			.37**	.58**	.21**	-.27**	.38**	-.34**	.33**	-.35**
3. IMS-Comm				.51**	-.02	-.06	.09	-.17**	-.05	-.08
4. IMS-Sat					.17**	-.24**	.30**	-.43**	-.35**	-.35**
5. Self ISD (-)						-.20**	.46**	-.22**	-.10	-.15*
6. Self ISD (+)							-.18**	.44**	.09	.06
7. Part ISD (-)								-.27**	-.31**	-.34**
8. Part ISD (+)									.22**	.19**
9. RAM-Causal										.56**
10. RAM-Responsibility										

Note. BDI-II = Beck Depression Inventory — II; R-DAS = Revised Dyadic Adjustment Scale; IMS = Investment Model Scale; ISD = Interstimulus Distance, as measured by the PDST; RAM = Relationship Attribution Measure. **p* < .05; ***p* < .01

given a list of psychological resources and were encouraged to access them if needed.

RESULTS

Descriptive statistics for the main study variables are found in Table 1, and bivariate correlations between all study variables of interest are presented in Table 2. Notably, positive and negative self ISDs were positively and significantly correlated with positive and negative partner ISDs, respectively. Moreover, depressive symptoms were positively and significantly correlated with both self- and partner-schema ISDs in the expected directions.

To examine whether partner-schema structures were associated with relationship quality variables and attributions about a partner, five separate hierarchical regression analyses were conducted for each of the relationship criterion variables: relationship adjustment, satisfaction, and commitment; as well as responsibility and blame attributions. As BDI-II scores correlated significantly with the criterion variables (except commitment), this variable was entered as a covariate in the first step of each analysis. To facilitate ease of interpretation and to maintain parsimony, both positive and negative domains of self-schema structures were entered into the same step of the regression. Similarly, positive and negative domains of partner-schema

TABLE 3. Hierarchical Multiple Regression Predicting Relationship Quality from Schema Organization

Step and Variable Entered	<i>F</i>	<i>R</i>	Adj <i>R</i> ²	ΔF	<i>B</i>	<i>SE of B</i>	β	<i>t</i>
Dyadic Adjustment								
Step 1:	36.91***	.35	.12	36.91***				
BDI-II					-.27	0.04	-.35	-6.08***
Step 2:	14.92***	.38	.14	3.56*				
Self ISD (-)					1.72	1.13	0.09	1.54
Self ISD (+)					-4.36	2.13	-.13	-2.05*
Step 3:	19.04***	.52	.25	21.68***				
Partner ISD (-)					5.17	0.92	0.34	5.60***
Partner ISD (+)					-6.27	2.35	-.16	-2.67***
Relationship Satisfaction								
Step 1:	45.96***	.39	.15	45.96***				
BDI-II					-.38	0.06	-.39	-6.78***
Step 2:	16.06***	.39	.15	1.09*				
Self ISD (-)					.41	1.45	0.02	.28
Self ISD (+)					-3.89	2.73	-.09	-1.42
Step 3:	23.28***	.56	.30	28.97***				
Partner ISD (-)					4.72	1.16	0.24	4.08***
Partner ISD (+)					-17.13	2.95	-.34	-5.81***
Relationship Commitment								
Step 1:	3.08*	.15	.02	3.08*				
BDI-II					-.02	0.01	-.11	-1.83
Rel Months					.01	0.01	.11	1.78
Step 2:	1.92	.17	.01	.75				
Self ISD (-)					-.27	.27	-.07	-1.02
Self ISD (+)					-.39	.50	-.05	-.77
Step 3:	4.03**	.29	.06	8.05***				
Partner ISD (-)					.50	.23	.15	2.14*
Partner ISD (+)					-1.78	.58	-.21	-3.07***

Note. BDI-II = Beck Depression Inventory-II; ISD = Interstimulus Distance, as measured by the PDST. All values are rounded to two decimal digits. * $p < .05$; ** $p < .01$; *** $p < .001$.

structures were entered simultaneously. The regression analyses for each relationship quality variable, and attribution type, regressed onto schema structures are summarized in Tables 3, and 4, respectively.

The results indicated that partner-schema organization significantly added to the prediction of dyadic adjustment, R^2 change = .12, $F(5, 260) = 19.04$, $p < .001$, satisfaction, R^2 change

TABLE 4. Hierarchical Multiple Regression Predicting Attributions from Schema Organization

Step and Variable Entered	F	R	AdjR ²	ΔF	B	SE of B	β	t
Causal Attributions								
Step 1:	10.75***	.20	.04	10.75**				
BDI-II					.01	.00	.20	3.28**
Step 2:	3.99***	.21	.03	.64				
Self ISD (–)					–.13	.12	–.07	–1.10
Self ISD (+)					–.07	.22	–.02	–.34
Step 3:	6.65***	.34	.10	10.20***				
Partner ISD (–)					–.41	.10	–.28	–4.21***
Partner ISD (+)					.28	.25	.07	1.10
Responsibility Attributions								
Step 1:	5.26*	.14	.02	5.26**				
BDI-II					.01	.01	.14	2.29*
Step 2:	2.30	.16	.02	.82				
Self ISD (–)					–.17	.14	–.08	–1.24
Self ISD (+)					–.11	.26	–.03	–.41
Step 3:	8.34***	.37	.12	16.97***				
Partner ISD (–)					–.63	.12	–.36	–5.40***
Partner ISD (+)					.44	.30	.09	1.48

Note. BDI-II = Beck Depression Inventory–II; ISD = Interstimulus Distance, as measured by the PDST. All values are rounded to two decimal digits. * $p < .05$; ** $p < .01$; *** $p < .001$.

= .15, $F(5, 260) = 23.28$, $p < .001$, and commitment, R^2 change = .06, $F(6, 258) = 4.03$, $p = .001$, after controlling for the effects of depression and self-schema structure. Specifically, both negative and positive ISDs were associated with these relationship variables, suggesting that a partner-schema structure characterized by both highly organized negative information and loosely dispersed positive information is associated with lower levels of dyadic adjustment, satisfaction, and commitment. Findings were similar for relationship attributions, wherein the models indicated that partner-schema organization significantly added to the prediction of both causal, R^2 change = .07, $F(5, 259) = 6.65$, $p < .001$, and responsibility, R^2 change = .11, $F(5, 259) = 8.34$, $p < .001$, attributions above and beyond the effects of depression and self-schema structure. Specifically, only the organization of negative partner information (not the organization of positive

partner information) was independently associated with both causal and responsibility attributions, suggesting that their associations with partner schema organization was driven by negative partner-schema structure.

DISCUSSION

The current study examined whether depressive symptoms were associated with an organized partner-schema structure, and whether that schema structure was associated with relationship quality and attributions about a partner's negative behaviors. The first hypothesized finding was that depressive symptoms would be associated with a highly organized partner-schema structure similar to the depressive self-schema structure repeatedly observed in the literature. In particular, depression has been linked to a self-schema structure characterized by tightly interconnected negative information about the self, and loosely interconnected positive self-referent information (Dozois & Dobson, 2001a, 2001b; Dozois et al., 2012; Dozois & Frewen, 2006; Lumley, Dozois, Hennig, & Marsh, 2012; Quilty, Dozois, Lobo, Ravindran, & Bagby, 2014). As predicted, the current findings suggest that a similar structure emerged for the partner-schema. In particular, depressive symptoms were significantly associated with a partner-schema structure characterized by highly interconnected negative information about a partner, and loosely dispersed positive partner information.

The emergence of an association between depressive symptoms and partner-schema structure is a novel finding that has not yet been reported elsewhere in the literature, but is in line with predictions made based on two major theoretical approaches. First, drawing on Beck and colleagues' (1979) cognitive theory of depression, individuals with the disorder have negative views of the self, the world, and the future. As such, it was expected that this tendency to view one's personal world in a pervasively negative manner would extend to a depressed individual's view of his or her romantic partner. Second, a long history of theory and research in psychology has suggested that representations of self are delicately intertwined with, and mutually influenced by, representations of close others (e.g., Aron et al., 1991; Aron et al.,

1992; Baldwin, 1992, 1995; Bowlby, 1973, 1980). Indeed, a shared core feature that cuts across classic and contemporary models of romantic relationships is that the integration of self and romantic partner represents a defining feature of interpersonal closeness (see Finkel, Simpson, & Eastwick, 2017, for review). As such, the findings of this study are consistent with the expected similarity between self- and partner-schema structures, and provide preliminary support for the assertion that depressive self-schema structure is mirrored for romantic partners.

Research supports the notion of the cognitive integration of self and other, and suggests that not only does structural similarity (e.g., Brown, Young, & McConnell, 2009) and processing efficiency (e.g., Kuiper & Rogers, 1979) increase with closeness, but representations of self and other actually overlap such that individuals may be unsure of where they end and their partner begins (Mashek, Aron, & Boncim, 2003; Slotter & Gardner, 2009). Thus, the question of whether self and romantic partner can actually be disentangled is an intriguing one and suggests that separating self and partner representations conceptually and empirically may be a difficult task. In the current study, the zero order correlations demonstrated that self-schema organization was significantly but only moderately correlated with partner-schema organization. This finding is especially meaningful, as it suggests that while self- and partner-schemas are related, they are not entirely overlapping and represent distinct constructs. Thus, while multiple theorists have emphasized the importance of the interconnectedness of self and other schemas (e.g., Aron et al., 1992, 1991; Baldwin, 1992, 1995), these findings support the idea that they remain as distinct schematic components and that there are likely some aspects of self and partner that remain cognitively separate. As such, this moderate correlation lends further credence to the idea that the subsequent analyses examining whether partner schema is predictive of relationship variables beyond self-schemas is a meaningful and stringent analysis.

The second hypothesis was that partner-schema structure would be associated with relationship quality and attributions, and that these associations would hold above and beyond the effects of self-schema structure. Consistent with cognitive frameworks (e.g., Beck et al., 1979; Bower, 1981) and past research ex-

aming partner-schemas (e.g., Campbell et al., 2008; Showers & Kevlyn, 1999), the current study supported the hypothesis and revealed that partner-schema structures were associated with dyadic adjustment, satisfaction, and commitment; as well as causal and responsibility attributions. Specifically, partner-schemas characterized by highly organized negative information and loosely interconnected positive information were linked with lower levels of reported dyadic adjustment, satisfaction, and commitment. In addition, highly organized negative partner-schemas were associated with the tendency to make distress-maintaining attributions about a partner's negative behavior.

One novel contribution of the current study is the use of the PDST to operationalize partner-schema structure. While the majority of studies examining partner-schemas have used information processing schema measures, the PDST is unique in its ability to capture the organization of information about a romantic partner. This may be particularly important for understanding the role of partner schemas in depression, as research suggests that while biases in surface level cognitions and information processing tend to dissipate as depressive symptoms remit, underlying cognitive structures (as measured by the PDST) tend to remain stable despite the amelioration of symptoms (e.g., Dozois, 2007). In addition, research suggests that interpersonal difficulties may represent stable vulnerabilities in individuals with depression (Petty, Sachs-Ericsson, & Joiner, 2004). Therefore, identifying the stable, underlying cognitive risk factors that may contribute to these chronic difficulties may be particularly important for understanding the etiology of interpersonal dysfunction and informing interventions.

An additional contribution of the current study is that it offers a preliminary investigation of the relative importance of self- versus partner-schemas structures in predicting a number of relationship variables. Specifically, the findings suggest that partner schemas may be particularly important in predicting relationship quality and attributions about one's partner, above and beyond the effects of self-schemas. Interestingly, self-schema structures were not linked as strongly to the relationship criterion variables as could be expected. For instance, research shows

that an individual's own negative self-views have been associated with underestimations of relationship quality and reduced relationship well-being (DeHart, Pelham, & Murray, 2004; Murray, Holmes, & Griffin, 2000), suggesting that self-schema content may influence relationship variables. Although there is a difference between structure and content, these findings may provide indirect support for the idea that a negative self-schema structure would also be associated with dysfunctional attributions about a partner's negative behavior. It is worth noting that the relationship attribution measure used in the current study asked participants to rate possible reasons for a partner's negative behavior (e.g., being critical, inattentive) from a variety of response options, including whether this behavior was a result of something within their partner or something within themselves. As such, a negative underlying self-schema structure could reasonably be associated with scores on this measure. While this lack of an association between self-schema structure and attributions about a partner's behavior is surprising, it may have important implications given that cognitive theory has heavily emphasized the role of the self-schema in understanding the difficulties experienced by individuals with depression.

These findings provide preliminary support for the notion that partner-schema structures may be stronger predictors of interpersonal difficulties in depression than the self-schema. For example, while depression has been associated with the tendency to make distress-maintaining attributions about a partner's negative behaviors (e.g., Heene et al., 2005, 2007), the literature has yet to elucidate the underlying cognitive risk factors contributing to this tendency. While traditional research informed by cognitive models of depression would have likely emphasized the role of self-schemas in predicting dysfunctional relationship cognitions, the findings of the current study suggest that a more fruitful line of investigation would be an examination of partner-schemas. Moreover, by controlling for the effects of self-schema structures, these results provide an especially conservative test and thereby increase our confidence in the uniqueness of the contribution of partner schemas to relationship variables.

Overall, the findings of the current study were in line with the hypotheses and can be understood in the context of cognitive

models of depression. According to Beck and colleagues' (1979) cognitive theory of depression, individuals with depression have negative views of the self, the world, and the future. In particular, cognitive models posit that highly organized underlying schema structures contribute to negatively biased information processing and surface level cognitions, such as attributions about the self and others. Moreover, the more closely linked negative schema content is, the more readily accessible negative cognitions (and associated affective states) are (e.g., Bower, 1981). While previous research has focused on the role of the self-schema, the current study is the first to suggest that this tendency to view one's personal world in a pervasively negative manner would extend to a depressed individual's view of his or her romantic partner. The current study also suggests that partner-schema organization may have important implications for relationship quality and cognitions about one's current romantic partner. The findings of this study support the idea that, particularly when it comes to understanding cognitive vulnerabilities to interpersonal difficulties in the disorder, the organization of partner-schema structures may be an important piece of the puzzle that has yet to be integrated.

While this study puts forth a novel contribution and begins to bridge an important gap in the literature, it is important to note that this study was conducted with a sample of university undergraduate students, thereby limiting generalizability to individuals of more diverse socioeconomic status, relationship types and lengths. Nonetheless, the presence of highly organized partner-schemas in relatively new dating relationships suggests that partner-schemas develop and begin to exert an influence on romantic relationships in their early stages. In addition, while the current study sought to examine the link between partner schemas and depression, it is important to note that a clinical sample was not used. This may not necessarily represent a limitation; however, as there is no evidence to refute the idea that schema structure would be associated with depressive symptoms in a continuous fashion (Dozois, 2002; Haaga & Solomon, 1993). Finally, given that the data were collected cross-sectionally and are

correlational, any conclusions about causality or the direction of effects cannot be made based on the current data. But the cross-sectional methods employed may have been well-suited given the exploratory nature of these research questions and relatively novel findings.

The findings of this study have the potential to generate a new line of research examining underlying cognitive vulnerabilities to interpersonal difficulties in depression. Indeed, researchers have acknowledged the need for more research in this area (e.g., Dobson et al., 2014; Gadassi & Rafaeli, 2015). The cognitive model of depression posits that the negative thoughts, feelings, and behaviors an individual experiences in interpersonal interactions stem from highly organized, negative underlying schema structures. The current study facilitates a better understanding of the cognitive vulnerabilities underlying poor relationship adjustment by examining the role of partner schemas in deteriorating relationship quality and distress-maintaining cognitions. Overall, the findings were in line with predictions and suggest that partner-schema structure may be an important component when it comes to understanding cognitive risk factors contributing to interpersonal difficulties in depression. Given that problems in interpersonal functioning are associated with poorer treatment response (e.g., Quilty, Mainland, McBride, & Bagby, 2013) and greater chance of relapse (e.g., Whisman, 2001), it is critical to understand factors that may contribute to these difficulties in individuals with depression. Focusing on the self-schema at the expense of understanding relational schemas may be problematic when it comes to understanding depression and its associated interpersonal difficulties. Both theory and clinical practice could benefit from a more thorough understanding of the interplay between cognitive and interpersonal vulnerabilities in this disabling disorder.

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