

# Exploring the dynamic nature of “us”: An integrative approach to relationship cognition

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*Most psychiatric disorders are associated with problems in interpersonal relationships. This is not surprising because people’s relationships with others are an influential and integral component of their lives. The cognitive representations of these relationships can be important in understanding these relationships, and both the attachment and relational schema approaches have helped to better understand the nature of these cognitions. The attachment approach is widely researched and established, but it struggles to fully assess the content of relationship knowledge. The relational schema approach provides a strong framework for assessing the content of relationship knowledge, but it does not currently have established measures for this content. In this article, the authors suggest that these two approaches may be particularly suited for integration, and they propose a comprehensive model of relationship cognition. Issues involving the measurement of relational knowledge and future research directions are discussed. Finally, the clinical utility of the proposed model is discussed. (Bulletin of the Menninger Clinic, 79[2], 131–165)*

As John Donne poetically noted in his famous essay “Meditation XVII,” “no man is an island, entire of itself,” highlighting the interconnectedness of humankind. Indeed, we are constantly surrounded by others whose thoughts, feelings, and actions can change the way we view ourselves, others, and the world.

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Researchers in the field of social cognition have been working for decades to better understand not only how this process occurs, but also how these thoughts may be structured and represented in the mind. Many different concepts, including schemas (e.g., Baldwin, 1992), lay theories (e.g., Fletcher & Thomas, 1996), prototypes (e.g., Fehr, 2005), mental models (e.g., Miller & Read, 1991), and working models (e.g., Bowlby, 1973), have been introduced as tools to understand how our cognitions about ourselves and others form, exist, and change. However, despite the distinctions that are made about each of these theories, there is a great deal of overlap. Understanding this overlap is important for operationalizing constructs for measurement in the context of psychiatric disorders. Most psychiatric disorders are associated with impairment in the interpersonal domain. For instance, depression is seen as primarily interactional in nature (Joiner, Coyne, & Blalock, 1999), antisocial behavior disorder is defined explicitly by the disregard for interpersonal relationships (Sharp, 2012), and borderline personality disorder has been defined as a disorder of interpersonal relatedness at its core (Bender & Skodol, 2007). It is essential that the mental representations that sustain or cause the interpersonal problems associated with these disorders be understood, studied, and operationalized so that they can be properly assessed to guide treatment.

Perhaps the two most commonly known and applied concepts describing relationship cognition are working models (Bowlby, 1973) and relational schemas (Baldwin, 1992). Both of these concepts include beliefs and expectations about the self and others that guide subsequent behavior. Despite these similarities, certain distinctions make each approach unique. The attachment approach has a long history and is arguably the most common approach to examining relationship cognition. In addition, there are well-established measures of attachment, both through self-report and interview, that allow a glimpse of the content of working models. However, the relational schema approach offers a framework that can be used to systematically explore schema content, which is something the attachment approach typically does not consider.

It is clear that work in the attachment domain exploring working models and work done on relational schemas have great potential to inform each other. Both models, particularly when considered together, offer a strong theoretical and empirically proven background along with a clear framework for understanding relationship cognition. First, we will discuss the more common framework, attachment theory, to explore the reasons for its popularity and its findings regarding the nature and structure of working models. However, there are limitations to the attachment approach that may be overcome by complementary ideas from the relational schema literature. Second, we will discuss the relational schema concept, focusing on both the strengths and limitations stemming from this approach. On the basis of this discussion, we will present an integrative model of relationship cognition that builds on work and theory in both the attachment and relational schema domains. We will also discuss the issue of measurement and present a detailed example of the benefits of using the proposed method. Finally, we will discuss future directions and clinical implications on the basis of this new model.

## The attachment approach to relationship cognition

### *Theoretical background*

The notion of internal working models has been a cornerstone of attachment theory. Bowlby (1973) first introduced the concept of working models, which he described as mental representations of the self and others that guide behavior and expectations throughout life. Working models are thought to develop through early experiences with a child's primary caregivers, on whom the child depends for the fulfillment of attachment needs, particularly proximity and felt security (Bretherton, 1985; Collins & Read, 1994). Specifically, children with caring and responsive caretakers develop working models of the self as lovable and others as trustworthy, whereas those with inconsistent or unresponsive caregivers will develop working models of the self as powerless and others as unpredictable (Collins & Read,

1994). The first type of working model described is generally referred to as secure attachment, whereas the second type is referred to as insecure attachment.

Attachment was first studied in regard to infant-mother relationships, but Hazan and Shaver (1987) applied work done on attachment in infants to adult relationships. In this work, Hazan and Shaver used the three attachment styles identified by Mary Ainsworth in her studies on infant-mother attachment (e.g., Ainsworth, Blehar, Waters, & Wall, 1978), finding that adults reported attachment styles similar to those found in infant-mother studies. Specifically, Hazan and Shaver found evidence that adults report secure attachment and two forms of insecure attachment: anxious/ambivalent and avoidant. In addition, these attachment styles were found to be represented in roughly equal proportions in both infant and adult attachment studies, supporting the idea that attachment in adults is largely influenced by early life experiences and the working models developed in infancy.

In the past 25 years, attachment theory has been used to explore many different aspects of adult interpersonal relationships, including satisfaction, social support, positive and negative affect, and conflict (e.g., Campbell, Simpson, Boldry, & Kashy, 2005; Hazan & Shaver, 1987; Simpson, 1990). These findings illustrate how the content of an individual's working models (as represented by attachment style or levels of anxious and avoidant attachment) strongly influences a variety of intra- and interpersonal outcomes. Also during this time, attachment researchers began to explore how working models of attachment may be structured in the mind.

### *The structure of working models*

Although attachment researchers have traditionally focused on an individual's attachment style, operating under the implicit assumption that people can have only one, Collins and Read (1994) challenged this assumption. Instead, they suggested a hierarchical structure of mental representations of the self and other, with a general model at the top, which is then differentiated into domain-specific models (e.g., peer relationships,

parent-child relationships), and then further differentiated into specific relationship representations (e.g., friendship with Jane, relationship with mother).

The work of Collins and Read (1994) helped inspire many other researchers to test the structure of working models of attachment (e.g., Baldwin, Keelan, Fehr, Enns, & Koh-Rangarajoo, 1996; Cozzarelli, Hoekstra, & Bylsma, 2000; Klohnen, Weller, Luo, & Choe, 2005; Overall, Fletcher, & Friesen, 2003; Pierce & Lydon, 2001; Sibley & Overall, 2008). These researchers have made great strides, and there seem to be several common findings. First, research suggests that individuals have global working models (i.e., models regarding how people interact in general; e.g., Pierce & Lydon, 2001), domain-specific working models (i.e., models regarding how people interact in specific types of relationships; e.g., Sibley & Overall, 2007), and relationship-specific working models (i.e., models regarding how people interact in a specific relationship; e.g., Baldwin et al., 1996). These models differ in terms of specificity, an idea that is also common to the general schema approach to be described later.

Researchers have tested the hierarchical structure suggested by Collins and Read (1994). Overall and colleagues (2003) compared three different hierarchical structures for the representation of working models using confirmatory factor analysis. These researchers found that for both attachment anxiety and avoidance, the model suggested by Collins and Read (with a global working model, domain-specific working models, and relationship-specific working models) was the best fit to the data. This was the case regardless of gender, relationship status, and how attachment was measured (using standard attachment scales or rating relationship exemplars).

Work has also examined the relationship between general and specific working models. Collins and Read (1994) suggested a top-down effect: that global working models of attachment that are formed in infancy become more differentiated over time based on idiosyncratic experiences with different people to form domain-specific and relationship-specific working models. However, research instead seems to support a bottom-up

effect: that relationship-specific working models generalize to influence global and domain-specific working models (Klohnen et al., 2005; Pierce & Lydon, 2001). It does appear that the effect is bidirectional, although as is further discussed later, the relative influence of general and specific working models may depend on many factors, including the duration of important relationships.

Given the differences between general and relationship-specific working models, researchers have questioned whether both should be assessed in a given study or if only one need be assessed in a situation when they largely overlap. Work suggests that although global and relationship-specific working models are related, they are not redundant (Pierce & Lydon, 2001). When examining the differential predictive power of both, researchers have found that general working models tend to be better predictors of global well-being and life satisfaction, whereas relationship-specific working models tend to be better predictors of satisfaction within that particular relationship (Cozzarelli et al., 2000; Klohnen et al., 2005). Whereas relationship-specific working models seem to add additional information above and beyond general working models in predicting general well-being, general working models do not seem to add additional information beyond relationship-specific working models in predicting relationship outcomes (Klohnen et al., 2005). Overall, researchers recommend measuring attachment at the same level of specificity as the outcome (i.e., general working models for general outcomes; relationship-specific working models for relationship-specific outcomes).

Researchers also have hypothesized that general models may be applied when a person is meeting new acquaintances, whereas relationship-specific models may be applied only when the person is interacting with a familiar individual (Cozzarelli et al., 2000). Work has been done examining transference of domain-specific and relationship-specific working models to new acquaintances (Brumbaugh & Fraley, 2007). These results showed that working models of a previous romantic partner were applied to a new potential partner even when the potential partner was not similar to the previous partner (although

it happened more when they were similar). Furthermore, the domain-specific and relationship-specific working models were largely interchangeable in predicting anxiety toward the new target (i.e., common variance between the two predicted anxiety to the target, but neither contributed beyond that shared variance). However, relationship-specific avoidance was more influential than domain-specific avoidance in predicting avoidance toward the new potential partner. Although further work needs to be done, these results suggest that whether and how working models are applied in new situations may depend on what components are measured (e.g., anxiety or avoidance), as well as the level of working models assessed (e.g., domain- or relationship-specific).

### *Strengths and limitations of the attachment approach*

As previously suggested, work in the attachment domain has a variety of strengths, including a long and prolific history, well-established measurement, and theoretical and empirical support regarding the influence and structure of working models of attachment. In addition, the attachment approach benefits from an ability to assess attachment using interviews, without the need to rely on self-report data. Because it may sometimes be the case that cognitions contained in working models may be unconscious, this is particularly notable.

Although work in the attachment domain has made great strides in better understanding the influence and structure of internal working models, it falls short when assessing the content of an individual's working model. While knowing someone is high in anxious attachment implies a great deal about the content of the person's internal working model (e.g., not feeling confident about the self, feeling that the partner will not be there for him or her), it is still not possible to separately identify cognitions about the self, the partner, and the relationship. This separation of the schema into three parts has some important implications.

By simply considering an individual's attachment style or levels of anxious or avoidant attachment, the context-specific nature of internal working models is not considered. For instance,

the Adult Attachment Interview (George, Kaplan, & Main, 1985) and its youth counterparts (e.g., the Child Attachment Interview; Target, Fonagy, & Shmueli-Goetz, 2003) allow for the coding of representations of father and mother, but do not allow for peer coding unless a peer is considered an attachment figure, which is the case only in extraordinary circumstances. Moreover, measures of attachment, whether interview-based or questionnaire-based, typically provide a classification or total score that lumps information across different levels of the hierarchical structure characteristic of attachment schemas. In essence, most attachment measures tap into general working models, but not relationship-specific working models. Taken together, correlations with variables of interest (e.g., psychological and relationship problems) are hard to interpret because the attachment construct cannot easily be delineated beyond the general working model. In accordance with cognitive therapy (e.g., Beck, 1976), understanding the exact cognitions that may be leading to problems (rather than lumping individuals into monolithic groups based on attachment) is an important first step toward implementing change.

### *Summary*

The attachment approach to relationship cognition is well established in psychological research and theory for good reason. A great deal has been discovered about both intra- and interpersonal correlates of attachment, and researchers are also beginning to better understand how working models may be structured cognitively. However, attachment measures tend to either assess patterns of anxious or avoidant attachment (dimensional measures) or classify individuals as monolithic groups that may be more heterogeneous in their working models (categorical measures). As such, these measures provide only one perspective on the content of an individual's working model. The relational schema framework, however, emphasizes the distinction between cognitions related to the self, partner, and relationship, and may be a particularly beneficial approach to consider in conjunction with the attachment approach.



## The relational schema approach

### *Theoretical background*

In a prominent review, Baldwin (1992) discussed many existing theories of social cognition to build his framework called the relational schema approach. As Baldwin noted, his purpose was not to obscure the differences between the approaches or to attempt an integration of them, but rather to explore them in such a way that their key elements could be discovered. Baldwin used these key elements in his relational schema framework with the goal of paving the way for a series of specific and testable hypotheses to arise from his approach.

Baldwin (1992) defined relational schemas as “cognitive structures representing regularities in patterns of interpersonal relatedness” (p. 461). These relational schemas are described as forming out of past experiences with others and helping to guide future experiences. They consist of two kinds of knowledge: declarative and procedural. Declarative knowledge consists of descriptive information about the situation and past encounters, while procedural knowledge consists of information regarding how to achieve desired goals or end states. As individuals interact in different situations, this information is categorized and stored in their relational schemas. These schemas then help the individual in future interactions to guide behavior and understand the social situation.

Relational schemas consist of three parts: (1) a schema for the self, describing characteristics of the self while interacting with a particular person; (2) a schema for the other, describing characteristics of the other while in interaction with the self; and (3) an interpersonal script describing interactions between oneself and others (Baldwin, 1992). As Baldwin noted, the interpersonal script by necessity also consists of role information for the self and other as experienced in the particular situation. This means that across time, relational schemas develop based on individuals’ interactions with others and the related perceptions of self and other in these situations.

Baldwin (1992) defined the models of the self and other as generalizations that can be used to guide the processing of social

information. He raised the issue that while research in impression formation is often interested in what an individual is generally like, what may be more important is what that individual is like “with me.” This is the foundation of the other schema in the relational schema approach; it consists of an individual’s expectations and generalizations based on past experiences about characteristics and behaviors of the other person. These expectations also influence the way that the individual will act in return. For example, when seeking a raise, an employee who sees the boss as friendly and approachable is likely to experience quite different cognitive processing and subsequent behavior than an employee who sees the boss as domineering and cold.

Baldwin (1992) emphasized the social nature of the self-schema. As he noted, “even if it is possible to describe *what* one’s characteristics are in a relatively asocial manner, it may be possible to experience *who* one is only in relationship to others” (p. 469). This idea is a fundamental one in psychology, dating back notably to James’ (1890) assertion that people have as many different social selves as people about whose opinion they care. As Baldwin (1992) noted, more recent approaches, such as Ogilvie and Ashmore’s (1991) concept of the self-with-other, continue this focus on multiple selves that vary depending on the particular social context. From a relational schema framework, the self-schema portion of the relational schema describes the unique way an individual is while interacting with the other. For example, a person may see herself as quiet and withdrawn around new acquaintances, while among old friends she sees herself as genial and outgoing.

Finally, the interpersonal script component of the relational schema consists of generalizations based on past experiences about a particular sequence of events expected to constitute a particular relational pattern (Baldwin, 1992). This knowledge is represented as if-then statements about the likelihood of different thoughts, feelings, goals, and behaviors occurring given a particular situation. It is important to note that people not only consider their own goals when planning interactions with others, but they also make inferences about how the other is likely to respond based on that person’s own goals or beliefs.

For example, Jane’s goal of getting the day off from work may be stymied by the belief that her boss is worried about falling behind on an important deadline. Although generally she may believe that if she were to ask her boss for a day off, he would say yes, given his goal to get the project done, Jane may try a new approach in reaching her goal (e.g., she may suddenly develop a horrible case of the flu). All three of these components—the model of the self, the model of the other, and the interpersonal script—influence the way individuals think and behave throughout their various interpersonal interactions.

### *Past work on relational schemas*

Much of the past work on relational schemas has been approached from an attachment perspective, and attachment measures have been used to assess cognitions present in the relational schema. This is likely due to the wide availability of established attachment measures, which is not true of the relational schema domain. Regardless, researchers have explored many important issues stemming from the relational schema framework. In keeping with its social cognitive roots, work on relational schemas has focused on the representation, activation, and application of these schemas (Baldwin & Dandeneau, 2005).

In support of the theorized representation of relational schemas, research has found that the if-then statements that form the interpersonal script component of relational schemas vary depending on attachment style (Baldwin, Fehr, Keedian, & Seidel, 1993). Similarly, individuals also differed in their expectations about interactions with others depending on their levels of self-esteem, which is a component of their self-schema (Baldwin & Keelan, 1999). These results suggest that different (and potentially unique) interpersonal scripts may be associated in particular ways with other relational schema components (i.e., a model of the self that is associated with negative feelings about the self may also indicate a script that expects negative interactions with others).

Researchers have also theorized that relational schemas should function as other knowledge structures, such as stereo-

types, self-schemas, or implicit personality theories, to aid in the processing of social information (Baldwin & Dandeneau, 2005). Baldwin and colleagues (1993) theorized that based on an individual's relational schemas, a certain situation (i.e., the "if") should lead to the activation of a particular outcome (i.e., the "then"), thus expediting information processing. These researchers exposed participants to the beginning of a sentence fragment, which was then followed by either a word (e.g., think) or a nonword (e.g., shink), and the participants were asked to identify as quickly as possible whether the letter string was a word or a nonword. The results supported their hypothesis, as participants were quicker to identify the stimulus as a word or not when it was consistent with their interpersonal scripts (e.g., avoidant individuals were quicker to identify *hurt* as a word when it followed a phrase about *trusting one's partner*). Similarly, another study suggests that individuals with low self-esteem have stronger links between performance and social outcomes (Baldwin & Sinclair, 1996). In fact, research suggests that insecurity can be triggered by the expectancies contained in an individual's relational schema even within the first milliseconds of thinking about a social event (Baldwin, Baccus, & Fitzsimons, 2004; Baldwin & Dandeneau, 2005), which demonstrates how immediately influential an individual's relational schemas can be.

A great deal of research has also examined how relational schemas may be primed in everyday experience, thus influencing the way an individual interprets an event. These studies have shown that relational schemas can in fact be primed (e.g., by having a person imagine a significant other), which then can affect self-evaluation, self-regulation, and future behavior (Baldwin & Holmes, 1987; Baldwin et al., 1996; Baldwin & Sinclair, 1996). In addition, relational schemas can be primed subliminally, simply by flashing a significant other's name or picture (Baldwin, 1994). These results again suggest the importance of relational schemas in influencing the ways in which individuals view themselves and the world, even when activated outside of conscious awareness.

Baldwin and colleagues (e.g., Baldwin & Dandeneau, 2005) have also suggested that people hold multiple relational schemas that may be associated with different relationships or, potentially, are referring to the same relationship. As previously discussed, work in the attachment domain has further examined this idea, with strong support for the existence of multiple relational schemas for a particular individual. However, the question of whether these different schemas are describing different relationships or if people may also hold multiple relational schemas for a particular relationship is still an open theoretical and empirical question.

### *Measurement of the content of relational schemas*

As previously noted, there is not currently a clear way to measure the content of relational schemas. Baldwin (1992) made some suggestions about how relational schemas could be assessed, with the methods varying from direct to indirect, nomothetic to idiographic. However, in practice, relational schemas are rarely measured, and when they are, the techniques used vary widely. The abundance of social cognitive theories regarding mental models adds to the problem; it is often uncertain to what extent a measure of working models, interpersonal expectancies, or relationship patterns is reflective of relational schemas. We now review several potential approaches to assessing the content of relational schemas, focusing on the strengths and weaknesses of each approach.

*Attachment Measures.* As previously noted, adult attachment measures (e.g., Bartholomew & Horowitz, 1991; Fraley, Hefernan, Vicary, & Brumbaugh, 2011; Fraley, Waller, & Brennan, 2000; Hazan & Shaver, 1987) are commonly used as measures of relational schemas or working models focusing on levels of anxious and avoidant attachment (e.g., Fraley et al., 2011; Fraley et al., 2000) or by identifying different types of attachment, such as secure, dismissing, preoccupied, and fearful (e.g., Bartholomew & Horowitz, 1991). These measures are well es-

tablished and frequently used, and they could certainly be used as a way of assessing particular patterns of relational schemas.

Although a great deal of work has been done establishing the measures of working models in the attachment domain, they do have some limitations. First, generally speaking, the measurement of working models is a contested issue, with little agreement over the appropriate approach (Cozzarelli et al., 2000). Collins and Read (1994) described working models as consisting of memories, beliefs, attitudes, expectations, goals, and strategies to achieve those goals. However, most commonly used measures of attachment focus instead on patterns of anxious and avoidant attachment. Although these attachment styles likely reflect aspects of an individual's working models, they do not provide detailed information on that person's perceptions of the self and other.

*Script Measures.* As Baldwin (1992) described, the interpersonal script is a very important part of the relational schema. Two such measures of the interpersonal script are the Interpersonal Schema Questionnaire (ISQ; Hill & Safran, 1994) and the Relationship Patterns Questionnaire (RPQ; Körner et al., 2004; Kurth, Körner, Geyer, & Pokorny, 2004; Kurth & Pokorny, 1999). These measures attempt to assess the if-then nature of the interpersonal script by presenting participants with a particular scenario or behavior and asking participants to indicate how they would respond in such an instance, as well as how they would expect their partners to respond. These models are both based on circumplex models of interpersonal behaviors (e.g., Benjamin, 1974; Kiesler, 1983; Leary, 1957), which allows for the exploration of both positive and negative behaviors and expectancies. These measures benefit from directly measuring both the "ifs" and the "thens" involved in the interpersonal script. In addition, these measures have been reported to have adequate reliability and validity (Hill & Safran, 1994; Kurth et al., 2004).

However, there are also limitations associated with the script measures of relational schemas. First, their very nature makes them somewhat confusing and cumbersome to use. Because interpersonal scripts vary widely from person to person and

situation to situation, any measure of them must be fairly comprehensive and have a wide enough scope to encompass these variations. Because of this complexity, the measures consist of a final set of 16 scores for one individual on the RPQ and a final set of 8 scores for one individual on the ISQ. The abundance of scores may make interpretation of the results particularly cumbersome. In addition, the manner in which the scripts are assessed is different between the two measures. Whereas the ISQ considers first a response of self and then asks the participant to indicate the expected response of the other, the RPQ does both (i.e., considers the response of other and the associated response of self and then vice versa). It is unclear whether one method is superior to the other, but the inconsistency in conceptualization raises the concern that different results may arise by using one approach over another. Finally, although these script measures do assess the interpersonal script component of the relational schema, the self and partner components are not considered.

*Trait Measures.* Other measures exist that could assess the relational schema components using trait measures, including the Partner and Relationship Ideal scales (Fletcher, Simpson, Thomas, & Giles, 1999) and the Interpersonal Qualities Scale (Murray, Holmes, & Griffin, 1996a, 1996b). These scales present participants with trait descriptors, such as “understanding,” “irrational,” and “honest,” and ask participants to indicate the extent to which these traits are descriptive of either themselves, their current partner, their ideal partner, or their ideal relationship. While the Partner and Relationship Ideal scales focus on positive qualities (derived inductively using factor analysis) associated with both the partner and the relationship, the Interpersonal Qualities Scale includes both positive and negative qualities (derived from the interpersonal circle) that can describe the self, the partner, and the ideal partner. These scales have demonstrated good reliability, internal validity, convergent validity, and predictive validity (Campbell, Simpson, Kashy, & Fletcher, 2001; Fletcher et al., 1999; Murray et al., 1996a, 1996b).

Although these trait measures have great potential for assessing each component of the relational schema, they also have some limitations. First, the Partner and Relationship Ideal scales

suffer from only assessing the positive end of the spectrum of possible expectancies. Relational schemas are not the same as ideals, in that relational schemas consist of an individual's beliefs and expectancies about a particular relationship, which contain positive, negative, and neutral information. Individuals may have a view of relationships that is not upsetting to them but that would not generally be considered a component of an ideal or even good relationship. For example, individuals may develop maladaptive schemas early in life, perhaps from witnessing unhealthy relationship patterns (e.g., an individual who grows up in an abusive household may develop the belief that relationships are characterized by power and control of one person over the other).

In addition, the Partner and Relationship Ideal scales do not provide a mechanism for measuring the self component of the relational schema. Fletcher and colleagues (e.g., Fletcher & Simpson, 2000) argued that the self component is reflected by that individual's unique wishes and desires for the relationship, which may be true to some degree; however, the measure suffers from not directly tapping into cognitions about the self. Lastly, the descriptors included in the Partner and Relationship Ideal scales, which are designed for use with romantic relationships and grouped according to warmth, vitality, status, intimacy, and loyalty, may not generalize to other relationship types.

Although the Interpersonal Qualities Scale is more comprehensive than the Partner and Relationship Ideal scales in that it includes both positive and negative information that can describe both the self and the partner, it also has some limitations. The trait descriptors were drawn from the interpersonal circle (e.g., Leary, 1957) and also included other words, such as "intelligent" and "lazy," which were added to represent commodities in the social exchange process (Murray et al., 1996a, 1996b; Rubin, 1973). It is unclear to what extent these theoretically derived traits are representative (or fully inclusive) of the common expectancies people may hold about their relationships. In addition, many of the traits may not generalize well when describing the relationship component of the relational schema (e.g., "self-assured"). Finally, it is unclear whether the Partner



and Relationship Ideal scales and the Interpersonal Qualities Scale assess the if-then nature of the interpersonal script, which Baldwin (1992) considered particularly important.

*Other approaches.* One interesting measure that could be used to assess the content of relational schemas is the Central Relationship Questionnaire (CRQ; Barber, Foltz, & Weinryb, 1998). The CRQ focuses on three categories of interpersonal expectancies: wishes, responses of the self, and responses of the other. This measure is unique in that it includes items that could be said to assess all three components of the relational schema: self (“In my relationship with my \_\_\_\_, I am independent), partner (“In my interactions with my \_\_\_\_, my \_\_\_\_ treats me badly), and interpersonal script (“In my relationship with my \_\_\_\_, I wish to support my \_\_\_\_ when he or she is in pain”). Work on the CRQ revealed that it has acceptable internal consistency, test-retest reliability, and good convergent and divergent validity (Barber et al., 1998). In addition, the CRQ has also been tested on a Swedish sample, finding internal reliability and validity results similar to those of the English version (Weinryb, Barber, Foltz, Göransson, & Gustavsson, 2000).

Despite the promise of the CRQ, it also has some limitations as a relational schema measure. First, although it does include items that separately consider the self, the other, and the interpersonal script portion of the relational schema, the nature of the items and scoring tends to confound these components. Some items may reflect expectancies of both the self and the partner. For example, endorsing an item such as “I wish to let my \_\_\_\_ make decisions for me” implies both something about the individual (that he or she may be indecisive or submissive) and the partner (that he or she is willing to make those decisions). Particularly difficult to assess is the interpersonal script component; although there are examples of this component, it is not a focus of the measure and is subsumed by other categories (i.e., wishes, responses of self, responses of others). In this way, these scripts are not as clearly defined as the other script measures previously discussed. In addition, similar to the script measures, the scoring of the CRQ is confusing. This measure

has a total number of final scores ranging from 16 (using higher-order factors) to 33 (using subscales). Having so many scores for one individual makes interpretation of the results particularly difficult.

Finally, it is possible that schema content could be coded from open-ended or interview reports. This approach can be very flexible, as participants are not restricted to simply endorsing certain ideas but are able to freely express their views and expectations about their relationships. These open-ended responses can then be coded according to the particular content of interest, although such work in the past has not focused on the different components of relational schemas (e.g., Ogilvie & Ashmore, 1991; Rusbult, Onizuka, & Lipkus, 1993). Recent work has explored changes in romantic partner domain-specific relational schemas by coding open-ended responses for the different schema components, finding that changing certain components of the schema after breaking up with a previous partner were differentially associated with self and current relationship outcomes (Brunson, Øverup, & Acitelli, 2014).

Although there are many benefits to using a qualitative approach when assessing the content of relational schemas, it does have some limitations. First, this approach can be very time and resource consuming, requiring multiple raters to be trained and code responses. Second, it can be difficult to establish reliability, validity, and generalizability of the findings (e.g., Hodges, 2011). Because of these limitations, qualitative approaches may be best used in conjunction with more quantitative approaches.

### *Strengths and limitations of the relational schema approach*

As previously noted, perhaps the main strength of the relational schema approach is its strong emphasis on separate cognitions about the self, partner, and relationship expectancies. These separate components may differentially predict important outcomes, and as previously noted, focusing only on attachment-related categories may mask important within-category differences (e.g., the different ways secure or insecure individuals may view themselves or their partners). Assessing all three components allows for a more differentiated view of the relation-

al schema. Similar to the attachment approach, the relational schema approach is also widely accepted, and research has supported the strong influence of relational schemas on intra- and interpersonal outcomes.

Despite its strengths, the relational schema approach also has certain limitations. These limitations primarily concern measurement; there currently exists no measure of relational schemas that separately considers the self, partner, and interpersonal script components. This is likely the reason why many relational schema researchers have relied on attachment measures as a way of assessing schemas. Similarly, although attachment researchers can assess attachment representation through the use of interview techniques, no such technique is available that separately considers the relational schema components. Because some interpersonal expectations may be unconscious, the lack of implicit measures of relational schemas is an important limitation.

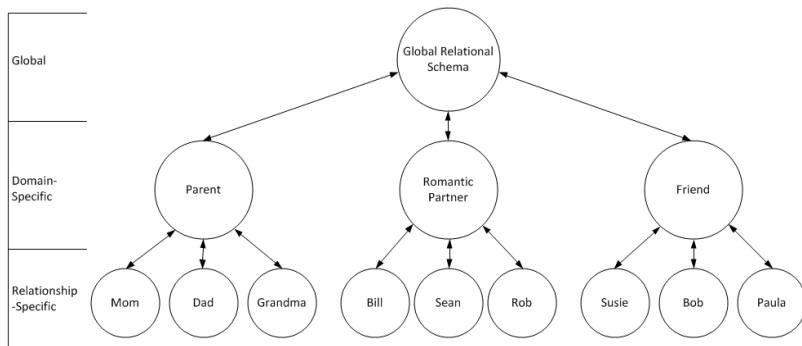
### *Summary*

In sum, the relational schema approach is another valuable way of exploring relationship cognition. Schemas have been shown to be highly influential for information processing, and relational schemas in particular have been linked to important social and personal outcomes. Although one of the greatest strengths of the relational schema approach is its strong distinction between the self, partner, and interpersonal script components of the relational schema, it suffers from lack of adequate measurement of these components. However, considering both the strengths and limitations of both the attachment and relational schema approaches, it seems that they may be particularly well suited to be included in an integrative model of relationship cognition.

### Integrative model of relationship cognition

#### *Proposed model*

The proposed model incorporates attachment-related findings on the structure of working models while including the relational schema framework. This model is shown in Figures 1



**Figure 1.** Proposed structure of relational schemas, with the global relational schema at the highest level, domain-specific relational schemas at the next level, and relationship-specific relational schemas at the lowest level.

and 2. The term *relational schemas* was used to describe the knowledge structures at each level (rather than working model) as a way of emphasizing the wide range of expectations that are contained therein (whereas working models are assumed to focus only on attachment-related experiences). Figure 1 displays the three levels of specificity of relational schemas, ranging from the most general (global relational schemas) to the most specific (relationship-specific relational schemas), with domain-specific relational schemas falling in the middle. Figure 2 displays the self, partner, and script components of relational schemas that are present at each level of specificity. Figure 2 also includes example sentiments that could be expressed for each component at the different levels.

As can be seen in Figure 1, at the top there is a global relational schema that contains general information about how people interact in the world. The global relational schema is also tripartite (see Figure 2); it consists of global information about the self (e.g., I am intelligent), others (e.g., people often lie), and interpersonal interactions (e.g., if I ask someone a question, I may not be able to trust the response). The self component of the global relational schema consists of general information about the self in relationships, although this information is not tied to a specific type of relationship.

The next level of the model in Figure 1 consists of domain-specific relational schemas. Here, general information about the

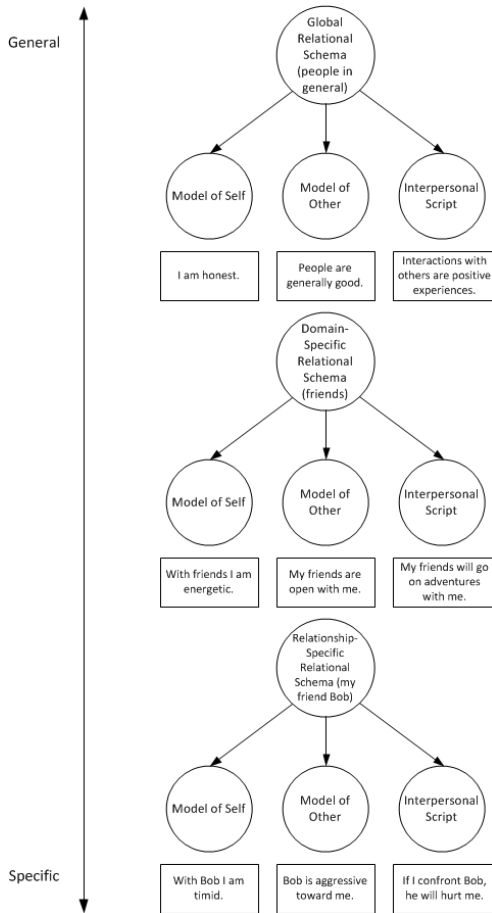


Figure 2. Breakdown of each level of relational schemas into a self, other, and interpersonal script component, with boxes containing example sentiments at each level.

nature of different types of information is included. A person may have a general relational schema for friend relationships, romantic partner relationships, classmate relationships, and employee-supervisor relationships, just to name a few. Again, the information consists of three components (see Figure 2): a model of the self in this type of relationship (e.g., with friends I am easygoing and fun), a model of the other in this type of relationship (e.g., my friends are understanding and supportive toward me), and a script describing interaction patterns in this

type of relationship (e.g., if I fail my math test, my friends will like me anyway).

Finally, the lowest level of the hierarchy in Figure 1 consists of relationship-specific relational schemas. This level consists of information that is specific to a particular relationship with a particular person. While an individual has a domain-specific relational schema for friends, he or she also has specific relational schemas for each person considered a friend. Here again, the three components are represented (see Figure 2), including information about the self (e.g., with Susie I am often uncomfortable fully disclosing information about myself), the partner (e.g., Susie can sometimes be judgmental toward me), and the relationship (e.g., if we talk about politics, then Susie will start an argument with me).

Much of the past research in attachment theory on working models has not made a clear distinction between the global relational schema and domain-specific relational schemas. Often, it is difficult to ascertain whether the general working model mentioned is general in respect to a relationship type (i.e., a domain-specific relational schema), or general in terms of interactions with others in general (i.e., a global relational schema). However, there are clearly important differences between the two: Global relational schemas are the most general, containing cognitions of the self and other generally, whereas domain-specific relational schemas are further differentiated by containing cognitions about the self and other in a particular kind of relationship, such as romantic partners or coworkers. Researchers need to carefully consider this distinction when designing and interpreting studies.

Note also that the lines in Figure 1 are bidirectional, suggesting that lower-level relational schemas influence higher-level ones and vice versa. Past work in attachment theory has begun to explore these complex relationships, and, as previously noted, there is evidence for both top-down and bottom-up effects (i.e., global schemas influencing specific schemas, and specific schemas influencing global schemas). Theory suggests that top-down effects may be more influential early in life, as experiences lead knowledge structures to adapt and change to fit a variety

of different contexts. The dynamics of schema change may vary throughout the life span, with top-down effects more common early in life as global relational schemas set up the basis for default specific relational schemas. As individuals spend more time in different relationships, they further elaborate their specific relational schemas (Klohnen et al., 2005).

However, it may be that relationships that are particularly significant (perhaps because of relationship type or relationship length) may in turn affect the way an individual thinks about relationships more generally (i.e., a bottom-up effect). This suggests that certain linkages may be more influential than others, not only in terms of schema change and influence but also in terms of accessibility, or the likelihood of that relational schema being applied in new situations. The latter is supported by work on transference in the relational self domain that shows that people often apply existing mental representations of others in new relationships, even if the new individual is not similar to the existing representation (Andersen, Glassman, Chen, & Cole, 1995).

Work in both the attachment and relational schema domains has been invaluable in suggesting the structure of relationship knowledge. In sum, relational schemas are assumed to exist at three levels of specificity: global relational schemas, domain-specific relational schemas, and relationship-specific relational schemas. These schemas are also assumed to influence each other through both top-down and bottom-up processes. Finally, schemas at each of the three levels include information about the self, the partner, and the relationship. Although this approach provides a strong framework for exploring relationship cognition, it may be of little value until the problem of measurement has been resolved. To this end, a method for assessing the content of relational schemas is now discussed.

### *Proposed measurement of relational schemas*

As discussed, adequate measurement of relational schemas is a particularly difficult issue. We believe trait measures show particular promise for assessing schema content because they can easily be modified to refer to the self, the partner, or the

relationship, and are fairly straightforward, consisting simply of descriptive words or phrases. In addition, trait measures can easily be modified to refer to different levels of specificity (relationship-specific, domain-specific, or global) by making a slight change to the instructions.

Because of this, one approach to developing a trait measure of relational schemas would be to combine elements from both the Partner and Relationship Ideal scales (Fletcher et al., 1999) and the Interpersonal Qualities Scale (Murray et al., 1996a, 1996b). Following the methodology of Fletcher and colleagues, research participants could be asked to provide different words and phrases that describe the way they view themselves, the other person, and the relationship for a variety of different relationships. Synonymous words and phrases could be combined, and a preliminary set of items could be formed. These items could then be tested out for multiple relationships, and factor analyses could be performed separately for each component and relationship type to identify factor structure and poorly functioning items. From this, a reduced set of items could be decided upon.

There is also the issue of whether trait measures can assess the if-then nature of the interpersonal script. One way to explore this issue would be to take a script measure, such as the ISQ (Hill & Safran, 1994), and derive words or phrases that would describe the cognitions of someone who might endorse each option. For example, given the situation “Imagine yourself expressing genuine interest and concern for \_\_\_\_,” expecting the partner to respond by being distant or unresponsive may indicate expectations of a cold, unloving, stale relationship. These words can then be grouped by response option, such that all words for the first response option (i.e., “will take charge, or try to influence me”) are grouped together, all words for the second response option (i.e., “would be disappointed, resentful, or critical”) are grouped together, and so on for all response options. The resulting list of items can then serve as a trait measure of interpersonal scripts that can be scored in the same way as the ISQ. Significant correlations between the ISQ and the trait measure would suggest that the essence of interpersonal scripts can be contained in a trait measure. The items from this trait



measure could also be included with the items generated from research participants and be part of the final trait measure of relational schemas.

Although this proposed method for developing a measure of relational schemas is just one of a variety of different options, it offers simplicity of administration and scoring, can assess cognitions separately for each component and different relationships, can be used at varying levels of specificity of relational schemas, and can be tested to ensure that it also reflects cognitions from the interpersonal script. In order to illustrate the utility of examining cognitions separately for the self, partner, and relationship components, as well as to better demonstrate what the proposed measure of relational schemas would show versus more common attachment measures, a detailed example is presented.

### *A detailed example*

Consider the case of Elaine. When given the Experiences in Close Relationships—Revised Scale (ECR-R; Fraley et al., 2000), one of the most well known and researched measures of self-reported attachment, Elaine’s scores suggest that she is high in anxious attachment and about midrange on avoidant attachment. From this, it can be assumed that she worries that her partner will not reciprocate her feelings or be as close as she would like. In addition, it seems that she may be somewhat uncomfortable with her partner being close; perhaps she was hurt in the past. Based on established correlations between anxious and avoidant attachment and other measures, it is possible to infer some other things about Elaine (e.g., she may report lower relationship quality than someone who is securely attached); however, her level of anxious and avoidant attachment is all that can really be known just from that measure.

On the other hand, when Elaine is given a measure of relationship cognition that separately considers the self, partner, and relationship components of the relational schema, a somewhat different picture emerges. In terms of her view of herself as a romantic partner, her scores suggest that she tends to endorse negative items (e.g., argumentative, angry, annoyed) as more in-

dicative of herself and positive items (e.g., happy, considerate, caring) as less indicative. Interestingly, she does not see herself as particularly uncomfortable, nervous, or distant, qualities typically associated with insecure attachment. When considering her view of her romantic partner, she sees the positive items as less indicative of her partner than herself. However, she did not report particularly high scores for him on the negative items. So although Elaine tends to see herself less positively and more negatively as a romantic partner, she only sees her partner less positively. Elaine did tend to see her partner as higher on the qualities that are typically associated with insecure attachment (e.g., uncomfortable, nervous, distant). Finally, in terms of the relationship, Elaine's results suggest that she views her relationship less positively (e.g., strong, safe, affectionate) and more negatively (e.g., full of conflict and problems), verifying the assertion that she would report lower relationship quality.

Overall, the results from the relational schema components measure suggest that Elaine views herself, her partner, and their relationship fairly negatively. In addition, although she does not see herself as particularly insecurely attached, she does view her partner that way. It does not seem that she feels her partner is as close, intimate, or comfortable with her as she would like, supporting the ECR-R results that she is high in anxious attachment. So while the ECR-R may imply certain perceptions of the self and other, the relational schema measure goes a step further by actually delineating those perceptions.

These results can become even more telling if Elaine is asked to complete the relational schema measure for a different relationship or relationship type. Then it becomes possible to explore a multitude of research questions. For example, if Elaine also reports on her past romantic relationships, it would be possible to explore to what extent her tendency to view herself and her partner negatively remains stable across these relationships, or varies depending on characteristics of a particular relationship. If Elaine generally views herself or her partner much more positively in romantic relationships, it could be possible to identify what it is about her current relationship that is leading to the increased negative cognitions. It is also possible to explore

whether her negative views are present in other relationship types (e.g., her friends, her coworkers, her family) or generalize to reflect overall negative feelings about herself and others (global relational schemas). Certain relationships that reflect or influence her more general views could be identified, and by assessing the relational schemas of those around her, it is even possible to identify the extent to which her views are influenced by those of her parents, her friends, or her romantic partners. The possibilities are endless.

Future directions and conclusions

### *Origin and change of relational schemas*

In addition to exploring the components of relational schemas, as exemplified in the detailed example, another issue that can be explored is the origin and change of relational schemas. As previously noted, it is unclear how relational schemas develop and change, specifically whether general relational schemas are differentiated into more specific relational schemas, or if specific relational schemas generalize to form more general relational schemas. It is suspected that both of these processes occur. Future work could examine schema change across the life span to further explore the directionality of these relationships.

When examining the influence of specific relational schemas on general relational schemas, an important question is what qualities of that specific relationship make it particularly influential over other possible relationships. Klohnen and her colleagues (2005) began to address this issue by noting that the length of the romantic relationship influenced how associated that specific relational schema was to the general relational schema. However, other qualities of the relationship may also predict the influence of specific relational schemas on more general relational schemas. In addition, this effect may vary for different relationships, such that relationship length may not be such an important factor when examining friendships or parent relationships. Another interesting question is the extent to which important others influence our relational schemas for different relationships. For example, it is possible to explore the

extent to which an individual's romantic relationship relational schemas are related to those of the individual's friends or parents. Even though all individuals have their own unique experiences, these experiences do tend to be shared with others, which may in turn help shape the way everyone views the world. There is also the possibility that because relational schemas are assumed to include part of an individual's personality (i.e., the self component both at the specific and general levels), the content of the schema may be based, at least in part, on genetics.

Related to the issue of schema influence is the question of what life events may cause changes in one's relational schemas. Although schemas are thought to remain fairly static throughout life, certain events or information may force changes in cognitive schemas when reality conflicts with expectations (Pietromonaco, Laurenceau, & Barrett, 2002). These changes may be particularly likely during stressful life events (e.g., Cobb & Davila, 2009). For example, past work has found that perceptions of support and anger in the relationship predicted changes in attachment orientations during the transition to parenthood (Simpson, Rholes, Campbell, & Wilson, 2003). In addition, experiencing an incidence of infidelity may lead one to view romantic partners as less trustworthy and relationships as more potentially harmful. It has been proposed that previous romantic partners and particularly the breakup with a partner may cause changes in an individual's relational schema, and this has been supported by recent research (Brunson et al., 2014). Other life events may similarly cause changes in both general and specific relational schemas, such as the transition to college life, marriage, child rearing, and the death of close others. Future research examining whether these events have an influence, as well as the nature of their influence, would be beneficial in better understanding how relational schemas develop and change.

### *Outcomes associated with relational schema components*

By separately considering the self, partner, and relationship components of relational schemas, research can explore how beliefs in certain components may have particularly influential effects for both the self and relationships. For example, domain-

specific partner expectancies may be more influential in determining future partner choice than self or relationship components. Past work (e.g., Hill & Safran, 1994; Kurth et al., 2004) has shown that certain relational schemas, such as expecting negative reactions from others, are associated with depression and other psychological difficulties. However, this work did not examine the relational schema components separately. It may be possible to identify one particular component that is associated with negative outcomes. Individuals may have healthy and adaptive views of both the partner and the relationship, but because they hold maladaptive beliefs about themselves they may struggle interpersonally.

It may also be that changing certain relational schema components may be differentially related to important outcomes. For example, a recent study that coded open-ended responses to reflect which components of the domain-specific relational schema changed both after breaking up with a previous partner and after beginning to date a current partner suggests that these components do show distinct patterns of associations with other outcome variables (Brunson et al., 2014). For example, after breaking up with a past partner, changing the partner component of the relational schema was significantly related to both satisfaction and social support in the current relationship, whereas changing the self or relationship components was unrelated to satisfaction, commitment, closeness, or social support in the current relationship. Although these results are an important first step in developing a deeper understanding of the structure and function of relational schemas, future research that continues to investigate how the different components and change in those components differentially predict important outcomes is invaluable.

## Conclusion

Relationship cognition has been examined within many different frameworks to unravel the dynamics behind the way people think about themselves and their interactions with others. However, although well known and influential, the relational schema

approach has not been widely used in recent years. The reason may be the lack of a cohesive measure of relational schemas, leading researchers to instead adopt the attachment approach with its well-established measures. The current article represents an attempt to combine and integrate work done under both the attachment and the relational schema frameworks in proposing an integrative model of relationship cognition, as well as suggesting a way to measure schemas under this framework. The proposed model suggests that relational schemas vary from specific to general, with schemas at each level including a model of the self, the other, and the relationship. These schemas and their individual components strongly influence an individual's everyday life, through interpersonal expectations, behaviors, self-evaluation, self-regulation, and more. These views have important implications for relationship quality and the duration of relationships.

Overall, the relational schema approach to relationship cognition ties together important information and findings from existing literature in order to suggest exciting new avenues for research. By adopting this framework, researchers can continue to expand their understanding of the way individuals think about themselves and others, which has continual implications for nearly every area of life. Crucially, the current framework may serve as the basis for developing measurement tools that can be used in conjunction with measures of attachment in clinical settings. Measures of attachment (especially interview-based measures) are often cumbersome to use in clinical settings; yet nobody disputes the value of a clinical formulation that contains rich information about the relationship lives of patients. The framework presented here may help in providing a more nuanced picture of the relationship lives of patients informed by strong social psychological theory, with the ultimate aim of identifying malleable relationship-based treatment targets.

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