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## Scripted Attachment Representations of Current Romantic Relationships: Measurement and Validation

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### Abstract

This report describes the development and initial validation of a new coding system for the Current Relationship Interview (CRI) that assesses individual differences in secure base script knowledge with respect to adult romantic partners. Drawing on data from the Minnesota Longitudinal Study of Risk and Adaptation (MLSRA;  $N = 116$ ) a coding system was developed to parallel conceptually the secure base script knowledge coding system for the Adult Attachment Interview (AAI<sub>sbs</sub>; Waters & Facompré, 2021). Specifically, CRIs conducted in young adulthood were re-coded for the extent to which the interviews reflected script-like expectations that romantic partners are reliably sought out, available, responsive, and provide effective support in times of distress (CRI<sub>sbs</sub>). CRI<sub>sbs</sub> was moderately associated with the traditional coding system for the CRI (i.e., CRI coherence) and showed concurrent and/or predictive validity in relation to three markers of romantic adjustment: (1) the observed quality of adults' romantic relationships, (2) self-reports of romantic quality, and (3) interview ratings of the effectiveness with which adults engaged in romantic relationships. Theoretical and practical benefits of the CRI<sub>sbs</sub> coding system are discussed.

### Keywords

Secure Base Script Knowledge; romantic relationships; Current Relationships Interview; longitudinal; validation

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In developmental science, the assessment of individual differences in adult attachment representations has traditionally focused on the coherence of individuals' autobiographical narratives about their attachment figures (parents or romantic partners) in the context of the Adult Attachment Interview (AAI; Main, Kaplan, & Cassidy, 1985) and, to a lesser extent, in the Current Relationships Interview (CRI; Crowell & Owens, 1996). In such work, coherence is scored for the extent to which narratives about childhood experiences with primary caregivers in the AAI or current relationship experiences with romantic partners in the CRI are internally consistent but not emotionally overwrought (see Roisman, 2009; Hesse, 2008; Main et al., 1985 for information). Importantly, there is also a large literature that has investigated the quality of romantic attachment relationships via self-

report measures (e.g., Cohen & Belsky, 2008; Carnelly et al., 2011; Mikulincer et al., 2013; Pascuzzo, Cyr, & Moss, 2013; Donbaek & Elkit, 2014; Viejo et al., 2019) and Q-sort methods (e.g., Chopik & Edelstein, 2015). These measures provide insight into an individual's appraisals of their attachment-related behaviors in close relationships.

In recent years, an alternative approach to operationalizing attachment representations has emerged that instead frames the assessment of these individual differences as the extent to which adults demonstrate access to and knowledge of the secure base script (Waters & Waters, 2006; H.S. Waters, T. E. A. Waters, & E. Waters, 2021). Elements of the secure base script include: (1) the individual is meaningfully engaged in the environment; (2) there is a disruption to that engagement; (3) support is sought from the secure base; (4) support is offered by the secure base; (5) support is accepted; (6) this support effectively solves the problem; (7) comfort is provided; and (8) finally, the individual reengages in meaningful activity in the environment. With this as a foundation, Waters and Waters (2006) developed the Attachment Script Assessment (ASA)—a story telling task where individuals are asked to produce stories with attachment-related themes based on word prompts. These stories are then scored for the extent to which they follow the themes and structure of the secure base script. Attachment representations as measured by the ASA have been found to be correlated with traditional AAI coding systems (e.g., Steele et al., 2014), to have their origins, in part, in early caregiving experiences (Schoenmaker et al., 2015; Dykas et al., 2006; Coppola et al., 2006; Steele et al., 2014; Vaughn et al., 2016), and are associated with psychological adjustment in childhood and adulthood (Waters, Rodrigues, & Ridgeway, 1998; Waters et al., 2015; Waters & Roisman, 2019; Dagan et al., 2020; Ruiz, Waters, & Yates, 2020).

Recently, coding systems have examined the extent to which narratives about specific relationships can be scored for secure base script knowledge. For example, in a sample of 146 undergraduate students, McLean, Bailey, and Lumley (2014) found that individuals' narratives about their *current* relationships (e.g., friendships/romantic relationships) could be scored with a secure base coding system and were associated with self-reported attachment quality. Additionally, an entire special issue was dedicated to evaluating secure base script knowledge in preschool aged children (Vaughn, Posada, & Veríssimo, 2019). Selterman, Apetroaia, and E. Waters (2012) also investigated the extent to which dream narratives about romantic partners could also be scored for secure base script knowledge. Moreover, a larger body of work has focused on a secure base script knowledge coding system reflected in individual's AAI narratives (AAI<sub>sbs</sub>; Waters & Facompré, 2021; Waters, Brockmeyer, & Crowell, 2013; Waters, Ruiz, & Roisman, 2017).

The AAI<sub>sbs</sub> focuses on two types of content: *secure base expectations* and *secure base scenes*. Secure base expectations are general statements that highlight the availability, responsiveness, and effective comforting of attachment caregivers during childhood (e.g., “when I was upset, my mom always made me feel better.”). Secure base scenes provide windows into the extent to which the temporal causal structure of autobiographical events involves instances in which an individual is meaningfully engaged in an activity, distress occurs, the individual seeks their attachment figure, the attachment figure provides both instrumental and emotional support, and the distress is effectively resolved (see Waters & Facompré, 2021, for more information). Additionally, the AAI<sub>sbs</sub> coding system focuses on

evidence of alternative schemas—expectations that directly contradict the secure base script, such as expectations of reoccurring abuse. Furthermore, recent evidence has demonstrated moderate convergent validity between secure base script measured with the ASA and the  $AAI_{sbs}$  ( $r = .50$ ; Waters et al., 2020).

The  $AAI_{sbs}$  coding system provides at least two advantages over the traditional AAI coding system. First, practically, the  $AAI_{sbs}$  is a far less resource intensive assessment (Waters, 2021). Second, empirically, Waters, Ruiz, and Roisman (2017) found that  $AAI_{sbs}$  was more strongly predicted by direct observations of maternal sensitivity experienced during childhood than was AAI coherence. And, in the same sample,  $AAI_{sbs}$  was similarly found to be uniquely (though not more strongly) associated with experiences of childhood abuse and neglect (Nivison et al., 2020) above and beyond AAI coherence. Taken together, this evidence indicates that individual differences in early caregiving experiences are reflected in individual differences in secure base script knowledge as assessed in the context of the AAI, and that such insights are not redundant with those made possible by more traditional approaches assessing the coherence of adults' AAI narratives. However, whether an individual's narrative about their *romantic relationship* can be validly assessed for secure base script knowledge is at present, not entirely clear.

## Attachment Representations and Romantic Relationships

Though there has been a large literature investigating the predictive validity of attachment representations in the context of the parent-child relationship on later romantic relationship quality (e.g., Roisman et al., 2001; Miga et al., 2010; Kobak et al., 2012; Tarabulsky et al., 2012; Dagan et al., 2020) there has been less focus on attachment representations of the romantic relationship itself. One way in which attachment representations have been assessed in the romantic relationship is via the Current Relationships Interview (CRI; Crowell & Owens, 1996; though see also research using the Couple Attachment Interview; Alexandrov, P. Cowan, & C. Cowan, 2005). The CRI was developed as an analogue to the AAI and adapted many of the coding scales from the AAI (i.e., attachment states of mind and coherence). In a sample of 157 couples, CRI attachment classifications were stable across a 21-month period (Crowell, Treboux, & Waters, 2002) and were moderately-to-highly associated with AAI classifications ( $r = .47$ ) and associated with several markers of romantic relationship functioning (e.g., conflict, intimacy, feelings of closeness; Treboux, Crowell, & Waters, 2004). CRI coherence has also been associated with higher concurrent romantic relationship quality (Roisman et al., 2005; Haydon et al., 2012). In terms of its developmental antecedents, CRI coherence is predicted by childhood maternal sensitivity and early life ego resiliency (Haydon et al., 2012). Likewise, CRI preoccupied (but not dismissing) states of mind were associated with experiences of childhood abuse and/or neglect (Raby et al., 2017) and in turn predict more frequent/severe non-suicidal self-injury (Martin et al., 2017).

Given the recent evidence based on the AAI, evaluating the CRI for secure base script knowledge may be advantageous as it may be a more economical coding system (Waters, 2021) and it may tap distinct areas of attachment representations—specifically, “different modes of representation have different operating characteristics and implications for

developmental analyses” (H. Waters & E. Waters, 2006, p. 187). According to the manual for the traditional coding systems of the CRI, the coherence system is based on how clearly a participant can understand and communicate their experiences in their romantic relationship (Crowell & Owens, 1996) and how well that narrative conforms to Grice’s (1975) maxims (well-organized, informative, truthful/supporting their claims with evidence, and relevant). Attachment coherence more generally is coded not based on the specific autobiographical events, but rather how an individual reflects on those events—their emotion regulation as well as the language they use (Van IJzendoorn, 1995). In contrast, the secure base script coding system focuses on a temporal-causal structure of specific events that taps into the underlying schemas of the attachment relationship. A benefit of the secure base script coding system is that the specific content provides a framework for understanding the specific behaviors of the relationship and to differentiate between general aspects of relationships and attachment specific behaviors (e.g., general warmth versus secure base provision; Waters & Facompré, 2021). Coherence likely gives important insights into the emotion regulation processes when discussing the romantic relationship whereas the secure base coding system provides insight into expectations around how secure base support should unfold.

## Present Study

Building on Waters & Facompré (2021), in the present work the secure base script coding scheme was adapted for the Current Relationships Interview (CRI<sub>sbs</sub>). The present study has two aims. First, we examine the extent to which CRIs can be evaluated for secure base script knowledge by conducting initial reviews examining if transcripts referred either directly or indirectly to themes of the secure base script. Previous work (Waters et al., 2017; Waters et al., 2018; Nivison et al., 2020) has found that the secure base script coding system in the context of the AAI has value added in examining attachment representations above and beyond traditional coding systems. This evidence supports that the secure base coding system is not just “old wine in a new bottle” but that traditional coding systems and the secure base coding system may tap distinct areas of attachment representations. The present study examines whether a secure base script perspective strengthens our understanding of attachment representations in the context of romantic relationships. Lastly, we report the extent to which CRI<sub>sbs</sub> is associated with current romantic relationship quality and predictive of later life romantic relationship quality.

Data were drawn from the Minnesota Longitudinal Study of Risk and Adaptation (MLSRA; Sroufe et al., 2005), a prospective longitudinal study that has thus far followed individuals prenatally through age 39 years. The MLSRA contains extensive data on romantic relationships in young adulthood, including observed romantic relationship quality, self-reported romantic relationship quality, and the CRIs, which were previously coded using the traditional attachment state of mind and coherence scales (Roisman et al., 2005). After adapting the secure base script knowledge coding scheme for the AAI to the CRI interview, we coded the CRIs for secure base script knowledge and in turn, assessed the extent to which CRI<sub>sbs</sub> is associated with CRI coherence. Furthermore, following the logic of Waters et al. (2018), which examined the extent to which AAI<sub>sbs</sub> was uniquely associated with observed romantic relationship quality, self-reported relationship quality, and romantic

relationship effectiveness controlling for AAI coherence, we examined the extent to which  $CRI_{sbs}$  was either more strongly and/or incrementally associated with these same three romantic relationship quality variables controlling for CRI coherence.

## Methods

### Participants

Between 1975 and 1977, 267 primiparous mothers living in Minneapolis, Minnesota seeking free prenatal care from local clinics were recruited to participate in the Minnesota Longitudinal Study of Risk and Adaptation (MLSRA; Sroufe et al, 2005). Participants were recruited if they were living at or below the poverty line at the time of their child's birth. Forty-eight percent of participating were adolescents, 65% were single, and 42% had not completed a high school education.

The current subsample consists of 116 participants (48% female; 69% White, non-Hispanic) who had completed at least one Current Relationships Interview (CRI) in young adulthood (more detailed information below). The subsample did not differ significantly from those who attrited from the original sample based on race or biological sex. However, compared to the analytic sample ( $n = 116$ ,  $M = 12.44$ ,  $SD = 1.80$ ) those excluded ( $n = 150$ ,  $M = 11.79$ ,  $SD = 1.73$ ) had mothers with significantly lower education levels ( $t[242.71] = -2.98$ ,  $p < .01$ ,  $r = .18$ , equal variances not assumed). Nonetheless, average levels of maternal education in the current subsample were still approximately equal to a high school education, consistent with this being a high-risk cohort. When compared to the analytic sample ( $n = 116$ ,  $M = 24.31$ ,  $SD = 11.49$ ), those excluded ( $n = 84$ ,  $M = 19.66$ ,  $SD = 6.78$ ) had significantly lower childhood socioeconomic status ( $t[190.95] = -3.58$ ,  $p < .001$ ,  $r = .24$ , equal variances not assumed). This study, titled Early Life Stress, Developmental Processes, and Adult Health, received IRB approval from the University of Minnesota's IRB under protocol number 1104S98312.

### Measures

**Current Relationships Interview.**—The CRI was developed by Crowell and Owens (1996) as an assessment of participants' attachment representations with respect to adult romantic partners in a manner that parallels the Adult Attachment Interview (AAI; Main et al., 1985). The CRI is a 16-question, semi-structured interview that inquires about an individual's romantic relationship experiences more broadly, but also focuses on one specific partner. Individuals are asked to provide five adjectives to describe their relationship with this partner and to provide specific examples supporting those adjectives. Individuals are also asked about being upset, sick, or hurt and separations in the context of their romantic relationship. Finally, participants are asked about how this relationship has affected them as an individual and any other factors that may have influenced this relationship.

In the MLSRA, the CRI was administered both when participants were 20-21 years old and when they were 26-28 years old. In order to qualify for these assessments, participants were required to be in a romantic relationship for at least four months. Consistent with Raby et al. (2017), when participants had completed both romantic relationship assessments,

the latest CRI assessment (i.e., age 26-28 assessment) was selected for analysis ( $n = 83$ ). The remaining participants completed only the 20-21 year assessment ( $n = 33$ ) for a total combined sample of 116 individuals.

Participants were 24.8 years of age on average ( $SD = 3.06$ ) and had been with their romantic partner for  $M = 46.3$  months (range 4-132 months;  $SD = 33.97$ ). The sample consisted of 58 heterosexual couples (though being currently involved in an opposite-sex relationship was not an inclusion criterion). CRIs were originally coded following the traditional coding guidelines established by Crowell and Owens (1996), which were developed in parallel to the AAI (Main et al., 1985). CRIs transcripts were coded for overall coherence of the transcript, which is assessed in relation to Grice's (1975) maxims for conversational implicature (Crowell & Owens, 1996; Main, Goldwyn, & Hesse, 2003-2008); specifically, that an individual's narrative about their romantic relationship is well-organized, informative, truthful (supporting their claims with evidence), and relevant. Coherence is scored a 9-point scale with higher scores reflecting higher coherence of transcript.

More recently, CRIs were coded for *secure base script knowledge* ( $CRI_{sbs}$ ) a coding system developed for this report. The  $CRI_{sbs}$  scale was adapted from the secure base script coding system for the AAI ( $AAI_{sbs}$ ; Waters & Facompré, 2021; Waters, Brockmeyer, & Crowell, 2013; Waters et al., 2017). In order to examine whether secure base script content was prevalent in the CRI, an initial review of partner CRIs (which were not included in the present analysis) was conducted in a similar manner as the review of AAIs for secure base script knowledge, as outlined in Waters and Facompré (2021). Specifically, transcripts were assessed for the extent to which CRI narratives explored themes relevant to the secure base script (e.g., availability of partner, responsivity, support given, etc.).

Consistent with the  $AAI_{sbs}$  coding system, the majority of  $CRI_{sbs}$  content was found within the first few questions of the interview. As such, and in line with the  $AAI_{sbs}$ ,  $CRI_{sbs}$  was assessed using the first seven questions of the interview—up to and including “what do you do when your partner is upset?”  $CRI_{sbs}$  is scored on a 9-point scale and focuses on the extent to which the provided narrative follows the themes of the secure base script. Coders focus on two types of content: general expectations of secure base support (i.e., proximity seeking, responsivity, effective comforting, open communication, supporting exploration, availability, always there, fond, motivated) and recall of specific autobiographical memories. Secure base expectations are general statements that are not necessarily supported by specific evidence; for example, “when I'm upset, I go to my partner, and they make me feel better.” Whereas details of specific events, rather than general statements, give insight into the actual mechanism by which an individual signals their partner, the support the partner may or may not provide, and the possible resolution of distress—the specific narrative provides evidence that a partner is indeed available, responsive, and an effective comforter (see Table 1 for specific examples of expectations, scenes, and fails/misses).

Importantly, transcripts were scored for both support received and support provided as romantic relationships are mutual support systems whereas secure base support in the parent-child relationship should be driven by caregivers providing support for their

children (Ainsworth, 1985, 1991; Crowell & Owens, 1996; Crowell, Treboux, & Waters, 2002; Weiss, 1982). Transcripts scoring a 9 contain multiple specific events that follow the structure of the secure base script as well as several positive general expectations; transcripts scoring a 4 contain no specific events surrounding the secure base script but do contain multiple secure base script expectations. Transcripts scoring a 3 focus largely on instrumental caregiver or contain several negative secure base expectations, but no specific events surrounding the secure base script. Transcripts scoring a 2 contain at least one secure base miss or fail where in a specific event support is signaled but either missed or made worse by the attachment figure; the transcript may also contain several secure base expectations. Transcripts scoring a 1 may contain several event narratives that directly violate the secure base script (e.g., partner is signaled, but partner care is not offered) and can often reflect alternative relationship schema (e.g., partner rejecting). A score of 1 can also reflect that an individual does not use their partner as a secure base (e.g., when given the opportunity to seek support, refuses to go to partner). Although transcripts can contain both positive and negative expectations, coding is based on the quality and frequency of the general expectations as it reflects the underlying schema of the attachment relationship (see Waters & Facompré, 2021 for more detailed information).

Target participants' CRIs were coded by two trained and reliable coders, with 50% of CRIs double coded ( $ICC = .78, p < .001$ ). The secure base coders were not formally trained or certified to code the CRI using the traditional, coherence-based coding system and were blind to the original coding of the CRIs for coherence. All coder disagreements were resolved through consensus. The remaining CRIs were coded by a single coder.

### **Outcome variables**

**Observed romantic relationship quality:** Participants and their partners underwent two structured interactions. First, participants were tasked with resolving a relationship conflict for 10 minutes (Cox, 1991). Second, partners were asked to perform an “ideal couple” task through collaboration with one another (Collins et al., 1999). Trained coders reviewed videotapes of these interactions and rated their observed quality on a seven-point scale. Higher scores indicate more supportive relational interactions; lower scores indicate either a general lack of support or the presence of negative features. There was strong interrater reliability for overall quality ratings:  $ICC = .92$  (19 double-coded cases) for assessment of ages 20-21,  $ICC = .93$  (12 double-coded cases) and  $ICC = .79$  (35 double-coded cases) for assessment of ages 26-28. Observed romantic relationship quality was assessed concurrently with the CRI at each assessment—where participants had completed multiple romantic relationship assessments, only the observation concurrently assessed with  $CRI_{sbs}$  was retained in analyses to allow for a contemporaneous comparison of measures (participants from the age 20-21 and the age 26-28 assessments did not differ on observed romantic relationship quality across assessments).

**Self-Reported Romantic Relationship Quality:** The Relationship Assessment Scale (RAS; Hendrick, 1988; Hendrick, Dicke, & Hendrick, 1998) was used to assess self-reported relationship quality. The RAS was used during the same waves as the observational data (ages 20-21 and 26-28 years). This self-report questionnaire uses seven items to assess

romantic relationship satisfaction (e.g. “how well does your partner meet your needs?”), with higher scores indicating greater perceived relationship satisfaction and quality. These items were averaged to create total scores within assessment periods (Cronbach’s  $\alpha = .82$ , and  $.89$ , respectively). Self-reported romantic relationship quality was assessed concurrently with the CRI at each assessment—where participants had completed multiple romantic relationship assessments, only the self-report concurrently assessed with  $CRI_{sbs}$  was retained in analyses (participants from the age 20-21 and the age 26-28 assessments did not differ on observed romantic relationship quality across assessments).

**Romantic Relationship Effectiveness of Engagement.** At age 32 years participants were administered semi-structured interviews (developed by the MLSRA team) focused on participants’ romantic histories and current relationships. Trained coders listened to interview audiotapes, using a 5-point scale to code age-appropriate effectiveness in romantic relationship engagement. Higher scores represented histories with mutual caring, trust, emotional closeness; concern for/sensitivity to the needs/wishes of others; experiences and enjoyment shared with others; placing value on faithfulness, loyalty, and honesty. Lower scores indicated these characteristics were either lacking, or the participant was unable to maintain a long-term relationship. Strong interrater reliability was present (with 37 overlapping cases) for these ratings ( $ICC = .94$ ).

Interviews rating effectiveness of engagement were also available at age 23 years. These interviews had strong interrater reliability, with 35 double-coded cases ( $ICC = .93$ ). 23-year effectiveness of engagement ratings were included as a covariate for only the analyses predicting effectiveness at age 32 years, in order to make stronger inferences about direction of effects.

## Results

Table 1 presents de-identified example narratives extracted from the CRIs and Table 2 contains bivariate associations and descriptive statistics for all variables. As outlined in Table 2, the  $CRI_{sbs}$  was significantly associated with CRI coherence ( $r = .39$ ), observed romantic relationship quality ( $r = .24$ ), self-reported romantic relationship quality ( $r = .44$ ), and age 32-year romantic relationship effectiveness ( $r = .32$ ). In contrast, CRI coherence was significantly associated with observed romantic relationship quality ( $r = .30$ ), but neither participant-reported romantic relationship quality nor age 32-year romantic relationship effectiveness.

### **Is $CRI_{sbs}$ more strongly associated with markers of romantic relationship quality than CRI coherence?**

A series of Steiger’s Z tests were conducted to address whether  $CRI_{sbs}$  was more strongly associated with observed and self-reported romantic relationship quality and 32-year effectiveness of engagement than was CRI coherence.  $CRI_{sbs}$  was not more strongly associated with observed relationship quality ( $Z = -0.54, p = .59$ ) or 32-year effectiveness of engagement ( $Z = 1.48, p = .14$ ) than was CRI coherence.  $CRI_{sbs}$  was, however, more strongly associated with self-reported romantic relationship quality ( $Z = 2.94, p < .01$ ) than was CRI coherence.



### Is CRI<sub>sbs</sub> incrementally associated with markers of romantic relationship quality controlling for CRI coherence?

In order to examine whether CRI<sub>sbs</sub> was uniquely associated with observed and self-reported romantic relationship quality and 32-year effectiveness of engagement above and beyond CRI coherence a series of hierarchal linear regressions were run.

**Observed Romantic Relationship Quality**—As outlined in Table 3, CRI<sub>sbs</sub> was included in the first step where CRI<sub>sbs</sub> explained 6% of the variance in observed romantic relationship quality. To test whether CRI<sub>sbs</sub> was uniquely predictive of observed relationship quality net of CRI coherence, a second step examining CRI coherence was added to the hierarchal linear regression. This regression demonstrated that CRI<sub>sbs</sub> did not uniquely predict observed relationship quality net of CRI coherence ( $\beta = .14$ ,  $t[97] = 1.35$ ,  $p = .18$ ). The addition of CRI coherence significantly explained an additional 5% of the variance in observed romantic relationship quality. Together, CRI<sub>sbs</sub> and CRI coherence explained 11% of the variance in observed romantic relationship quality and CRI coherence was uniquely associated with the observed quality of adults' romantic relationships ( $\beta = .24$ ,  $t[97] = 2.28$ ,  $p < .05$ ).

**Self-reported Relationship Quality**—As outlined in Table 3, CRI<sub>sbs</sub> was included in the first step with CRI<sub>sbs</sub> explaining 19% of the variance in self-reported relationship quality. To test whether CRI<sub>sbs</sub> was uniquely predictive of self-reported relationship quality net of CRI coherence, a second step examining CRI coherence was added to the hierarchal linear regression. This regression demonstrated that CRI<sub>sbs</sub> did uniquely predict self-reported relationship quality net of CRI coherence ( $\beta = .45$ ,  $t[113] = 4.86$ ,  $p < .01$ ). CRI coherence, in contrast, was not uniquely associated with self-reported relationship quality ( $\beta = -.02$ ,  $t[113] = -.16$ ,  $p = .87$ ) and did not significantly explain more variance in observed romantic relationship quality.

**Effectiveness of Engagement**—As outlined in Table 4, CRI<sub>sbs</sub> was included in the first step with CRI<sub>sbs</sub> explained 12% of the variance in 32-year effectiveness of engagement. To test whether CRI<sub>sbs</sub> was uniquely predictive of age 32 effectiveness of engagement net of effectiveness of engagement measured at age 23 years, a second step examining age 23 year effectiveness of engagement was added to the hierarchal linear regression. This regression demonstrated that CRI<sub>sbs</sub> did uniquely predict CRI<sub>sbs</sub> net of age 23 effectiveness of engagement ( $\beta = .24$ ,  $t[99] = 2.69$ ,  $p < .01$ ). Age 23 effectiveness of engagement was also uniquely associated with 32-year effectiveness of engagement ( $\beta = .39$ ,  $t[99] = 4.30$ ,  $p < .001$ ) and significantly explained an additional 14% of the variance in 32-year effectiveness of engagement. To test whether CRI<sub>sbs</sub> was uniquely predictive of 32-year effectiveness of engagement quality net of 23-year effectiveness of engagement and CRI coherence, a third step examining CRI coherence was added to the hierarchal linear regression. CRI<sub>sbs</sub> remained uniquely associated with 32-year effectiveness of engagement above and beyond 23-year effectiveness of engagement and CRI coherence ( $\beta = .22$ ,  $t[98] = 2.29$ ,  $p < .05$ ); 23-year effectiveness of engagement was also uniquely associated with 32-year effectiveness of engagement ( $\beta = .38$ ,  $t[98] = 4.21$ ,  $p < .001$ ). CRI coherence was not uniquely associated

with 32-year effectiveness of engagement ( $\beta = .05$ ,  $t[98] = .54$   $p = .59$ ) and did not significantly explain more variance in observed romantic relationship quality.

## Discussion

The present study had two aims: (1) to examine whether adults' narratives about their romantic partners could be scored for secure base script knowledge and (2) to document the extent to which CRI<sub>sbs</sub> was associated with other markers of romantic relationship quality above and beyond CRI coherence. The first aim focused on the development of a secure base script coding system for the CRI. Paralleling the process outlined in Waters & Facompré (2021), CRI transcripts were initially reviewed for the extent to which the narrative contained direct or indirect references to secure base script content, whether reflected in explicit events or broader expectations. After it was determined that there was enough secure base script content present in the CRIs, a coding system was developed by adapting the AAI<sub>sbs</sub> coding system (Waters & Facompré, 2021; Waters et al., 2013; Waters et al., 2017) as the CRI was originally developed as an analogue to the AAI and follows the same structure (though questions were altered to be about romantic partners rather than caregivers).

The secure base concept is important and relevant to romantic relationships as it outlines the ways in which individuals seek support and accept care from their romantic partner, and in turn, provide support and care to their romantic partners, which could offer insight into the quality and functioning of romantic relationships (Waters et al., 2018). For example, the following is a de-identified excerpt from a CRI transcript:

“I had this time this past winter where I was at a friend's house and one guy just was being a real jerk and screaming and yelling and, you know, swearing at me and I just totally got emotional about it and took it personally and, you know, I-I called [my partner], I remember, and like- right after it happened and of course I was still upset, so, I talked to him for a minute and then I was like, well I gotta go 'cause I'm like gonna cry if I start talking about it, so he was just really good and, you know, I think we just met up and we just went on a walk or whatever and it helped to just kinda talk it through. I know someone else, you know, supported me and, you know, made me feel better about things and was like, 'Well, that guy's just probably having a bad day, you know, and is taking it out on you.' so it was really good to have something to talk about like that.”

The above example outlines that in a very specific moment of distress the individual sought the support of their partner who offered care by both talking with them on the phone and physically going to them so they could discuss the incident further. The speaker of this narrative also explicitly states that the actions of their partner “made [them] feel better.” This example outlines how romantic partners can serve as a source of comfort in times of distress. On the other hand, narratives can also highlight when an individual's needs are not being met:

“**Interviewer:** ‘Do you go to your partner when you are upset?’

**Interviewee:** ‘No. When I’m upset about something, [my partner] is not supportive at all. It makes [my partner] like all stressed out and [my partner] is not somebody that I can talk to about things because it just makes it twenty times worse if I talk to [my partner] about it.’”

Both of these examples reflect the attachment relevant expectations in these relationships, which could provide some explanation as to why relationships vary in quality across dyads. The examples also demonstrate how the specific narrative surrounding romantic relationships may provide insight into the quality of those relationships, above and beyond the traditional coding systems which focuses more so on providing narrative in an emotionally coherent manner. As such, in addition to secure base content being identifiable, it was also possible to reliably rate variation in secure base script knowledge. In addition, the variability in CRI<sub>sbs</sub> scores allowed us to examine almost the full range of secure base script knowledge in this high-risk sample given the variation in secure base script scores.

The second aim of this study was to examine the extent to which CRI<sub>sbs</sub> was associated with other measures of romantic relationship quality and offered added value when considering the traditional CRI coding system. CRI<sub>sbs</sub> in young adulthood was significantly associated with all markers of romantic relationship quality. In terms of the incremental validity of the CRI<sub>sbs</sub> coding system above and beyond CRI coherence, CRI<sub>sbs</sub> was significantly more strongly associated with self-reported relationship quality (but not observations or relationship effectiveness) than was CRI coherence. Furthermore, CRI<sub>sbs</sub> was uniquely associated with self-reported romantic relationship quality (but not observations) above and beyond CRI coherence. CRI<sub>sbs</sub> was also uniquely predictive of 32-year romantic effectiveness, above and beyond CRI coherence and 23-year romantic effectiveness.

These findings parallel those reported by Waters et al. (2017) which examined the incremental and predictive validity of a secure base script coding system for the AAI, such that there may be value added in examining attachment representations surrounding romantic partners in terms of the secure base script. Furthermore, that CRI<sub>sbs</sub> and CRI coherence are uniquely associated with varying aspects of romantic relationship quality suggests that coherence and the secure base script coding systems may be tapping into at least partially distinct aspects of attachment representations, consistent with previous literature examining coherence and AAI<sub>sbs</sub> (Waters et al., 2013; Waters et al., 2018). CRI<sub>sbs</sub> may also offer some more practical benefits. First, training and reliability efforts are reduced using the CRI<sub>sbs</sub> system compared to the traditional coding systems as CRI<sub>sbs</sub> only contains one scale. Second, the CRI<sub>sbs</sub> coding system only focuses on the first seven questions as compared to the full 16 question interview which substantially shortens both the transcription and coding process. Moreover, CRI<sub>sbs</sub> can be applied to existing CRIs that were originally scored with the traditional coding systems. In sum, these findings suggest that CRI<sub>sbs</sub> may provide both empirical and practical value in assessing attachment representations in the context of romantic relationships.

### **Strengths, Limitations, and Future Directions**

The study provides some of the first evidence that individual’s autobiographical narratives about their romantic relationship can be coded for secure base script knowledge. Furthermore, this study allowed us to examine the extent to which CRI<sub>sbs</sub> is associated

with *multiple* measures of romantic relationship outcomes (i.e., observed interaction tasks, self-reported quality, and interview rated romantic relationship quality). Finally, the study allowed us to not only examine concurrent associations with romantic relationship quality, but also the longitudinal design allowed us to investigate the predictive significance of  $CRI_{sbs}$  while controlling for prior relationships which increased our ability to make causal inferences.

Despite the notable strengths, the sample size is only moderately large and predominately White and non-Hispanic. Future research should continue to examine the validity of  $CRI_{sbs}$  in the context of larger, more diverse, and normative-risk samples. This is particularly important given that past research has found associations between secure base script knowledge and ethnicity and markers of socioeconomic status in a variety of samples (e.g., Steele et al., 2014). Therefore, we may need more demographic variability in order to fully disambiguate the impact of secure base script knowledge on outcomes from those related to more structural elements of the environment.

The current study only examined  $CRI_{sbs}$  at one point in time. It would be beneficial to follow a sample of romantic partners longitudinally to examine stability and change in  $CRI_{sbs}$ . Specifically, whether secure base script knowledge in the context of romantic relationships grows over time. Future studies can also examine the dyadic nature of romantic relationships and investigate how partners can influence one another's secure base script knowledge and how that relates to romantic and psychological functioning or how romantic history, such as breakups or divorce impact secure base script knowledge in the romantic context, which could be beneficial both in the research context, but also for clinical practice. Specifically,  $CRI_{sbs}$  coding would give clinicians using the CRI in practice a tool that provides a detailed account of the secure base dynamics in a romantic partnership that may not be represented in coherence-focused coding (e.g., when the support is sought, when it is not, how signals for support are communicated, how often are they missed, and what is the expected response/resolution to distress).

Previous work found that secure base script knowledge as measured in the AAI is associated with higher quality parenting in the next generation (Waters et al., 2018), future research could investigate whether higher  $CRI_{sbs}$  scores are also associated with higher parenting quality in the next generation. Furthermore, research could investigate the interaction of secure base script knowledge as measured in the AAI and CRI on parenting outcomes. This would allow researchers to evaluate the extent to which higher secure base script knowledge with a romantic partner may amplify one's ability to provide supportive care to their own child. In addition to the potential for romantic security to inform caregiving, previous experiences with caregivers may inform our romantic functioning in important ways. For example, a recent study (An et al., 2021) found that securely attached preschool aged children were more receptive and positive to accepting the maternal agenda (e.g., cooperation) in their relationships with their parents than insecurely attached children—it is possible that receptiveness to accepting the romantic partner's agenda is rooted in childhood experiences and in turn may influence the quality of the adult romantic relationship. This could, in turn, provide a significant indirect pathway by which early caregiving experiences can influence the quality of parenting in the next generation.

Attachment theory posits an individual's primary attachment figure shifts (or transfers) in adulthood from one's own caregiver to one's romantic partner (Bowlby, 1969/1982; Hazan & Shaver, 1987; Crowell & Waters, 1994). Practically, turning to one's romantic partner in times of distress rather than one's parents can be adaptive in many ways as romantic partners are usually readily available/near, are more of a peer rather than authority figure, romantic relationships are bidirectional in nature, and romantic partners are typically around even after parents have passed away. Additionally, romantic relationships tend to be a unique type of relationship and partners may provide comfort that others cannot. Although the concept of a transfer of attachment figure has been speculated about in the literature, few studies have empirically assessed this transfer empirically (but see, Fraley & Davis, 2005; Zhang, Chan, Teng, 2011; Feeney, 2014). Two studies (Fraley & Davis, 2005; Feeney, 2014; Umemura et al., 2018) found that the longer one is in a relationship outside of the caregiver-child relationship, the more likely they are to use a peer/romantic partner as a primary attachment figure. However, these studies have all assessed attachment to caregivers and peers/romantic partners at one time point using self-report measures to evaluate what are fundamentally longitudinal processes. Future research could follow individuals, longitudinally, to understand the process by which the primary attachment figure *transfers* from parent to romantic partner using the secure base script system as it may offer insights into the specific descriptive events for when an individual is more likely to turn to a romantic partner rather than a parent, especially given that recent work has evaluated secure base script knowledge in the preschool years (i.e., Vaughn et al., 2019 as well. Using a consistent operationalization of attachment representations across relationships and across the lifespan (i.e., AAI<sub>sbs</sub>, CRI<sub>sbs</sub>) would be ideal for understanding the transfer of primary attachment figures across the lifespan more fully.

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Table 1

CRI<sub>sbs</sub> narrative examples

CRI Coding	De-identified example	Commentary
<b>Positive scene</b>	<p>"I was reading a book that upset me and I couldn't get a hold of Person 1 and I was having just a really bad just like reaction to this book and I really couldn't, you know, grasp anything and when he got home, he just- I don't- he just knew what exactly what to do and it- like if I had come home and someone had been freaking out the way I was freaking out, I'd probably be scared and think, what am I gonna do, you know? But he just kind of sat me down on the couch and held me until I stopped and then we talked about it and it was okay and that felt really warm."</p>	<p>In this example, the individual encounters distress and tries to reach their partner, eventually they wait for their partner to return—once they do, the partner recognizes their distress and offers emotional care through holding them, and instrumental care by talking through the distress, and the individual's distress is effectively resolved, stating that "it was okay and that felt really warm."</p>
<b>Negative scene</b>	<p>"So I was kind of frustrated and I wanted to talk to him about— because they were kind of like more intimate issues that I wanted to talk to him about and he was on the phone when I came home and I was like, "hey, could you get off 'cause I want to talk to about, you know, what happened." He was like, "I need to do this right now," and that- he feels a lot of pressure in that and I understand that, but I was like, "I don't care what you're doing, I'm gonna talk to you about our family. This is a big deal," and I guess he kind of was just like- just wasn't in a mood to just like drop everything he was doing and come and talk to me and I just took offense to it because I was- I just didn't understand what could be more important than our family, so that was a time where he just didn't have the capacity to just- I don't know. He just didn't want to talk about it that moment."</p>	<p>This example highlights a secure base <i>fail</i>. The individual has encountered a distressing situation and seeks their partner. The partner is busy and rejects the individual's pleas for support, but the individual attempts again to get the attention of their partner, which is again rejected. This results in the partner feeling worse ("I took offense")—so not only does the partner miss the signal, but they seem to make the individual's distress worse.</p>
<b>Positive expectation</b>	<p><i>Interviewer question: When you are upset emotionally, or if you are sad or worried, what do you do?</i>                      Example 1: "When I'm feeling down or whatever, having a bad day, and she's there."                      Example 2: "And if I'm really sad I usually just sit down and cry and then [partner] comes by and talks to me about it."</p>	<p>The first example is a general statement scored for the positive expectation of "available." Generally speaking, the individual knows that whenever they encounter distress their partner will be available. The second example is a general statement scored for positive "responsive." Generally speaking, the individual knows that their partner can recognize when they are in distress and will respond to the distress.</p>
<b>Negative expectation</b>	<p>Example 1: <i>Interviewer question: Do you go to your partner when you are upset?</i>                      "If I was sad or worried or something like that I wouldn't, you know, I wouldn't you know add to her stress."                      Example 2: <i>Interviewer question: What does your partner do when you're sick?</i>                      "Pretty much just lets me be. Whether I'm in another room or sleeping or, just kind of leaves me alone— she just lets-lets me be in my room"</p>	<p>The first example is a general statement scored for negative "proximity seeking". Generally, when the individual is experiencing distress the individual will <i>not</i> go to their partner for support.                      The second example is a general statement scored for negative "responsive." Generally, when the individual is sick the expectation is that the partner does not provide care whether that be emotional (e.g., asking how they're doing) or instrumental (e.g., medicine, food).</p>

**Table 2**

Bivariate associations among all study variables

	1	2	3	4	5
1. CRI <sub>sbs</sub>	—				
2. CRI Coherence	.39**	—			
3. Observed Romantic Relationship Quality	.24*	.30**	—		
4. Participant-Reported Romantic Relationship Quality	.44**	.16	.23*	—	
5. Age 32 Romantic Relationship Effectiveness	.32**	.17	.30**	.33**	—
Mean	3.41	4.68	4.66	5.85	3.81
<i>SD</i>	1.77	1.82	1.53	.96	1.19
<i>N</i>	116	116	100	116	109

Note. CRI<sub>sbs</sub> = secure base script knowledge coded from Current Relationship Interviews in young adulthood

\*  
 $p < .05$

\*\*  
 $p < .01$

**Table 3**

Hierarchical regression of CRI<sub>sbs</sub> and CRI coherence predicting observed and self-reported romantic relationship quality

Variable	<u>Observed Relationship</u>				<u>Self-Report Relationship</u>			
	<u>Quality</u>				<u>Quality</u>			
	$\beta$	SE	R <sup>2</sup>	R <sup>2</sup>	$\beta$	SE	R <sup>2</sup>	R <sup>2</sup>
<b>Step 1</b>								
CRI <sub>sbs</sub>	0.24*	0.08	0.06		0.44**	0.05	0.19	
<b>Step 2</b>								
CRI <sub>sbs</sub>	0.14	0.09	0.11	0.05*	0.45**	0.05	0.19	0.00
CRI Coherence	0.24*	0.09			-0.02	0.05		

*Note.* *Ns*: Observational data only = 100, Self-report only = 116. Dependent variable = observed romantic relationship quality and self-reported romantic relationship quality. CRI<sub>sbs</sub> = secure base script knowledge coded from Current Relationship Interviews in young adulthood.

\*  
 $p < .05$

\*\*  
 $p < .01$

**Table 4**

Hierarchical regression of CRI<sub>sbs</sub>, CRI coherence, and 23-year romantic relationship effectiveness predicting 32-year romantic relationship effectiveness

Variable	$\beta$	SE	$R^2$	$R^2$
<b>Step 1</b>				
CRI <sub>sbs</sub>	0.34**	0.06	0.12	
<b>Step 2</b>				
CRI <sub>sbs</sub>	0.24**	0.06	0.26	0.14**
23-year romantic relationship effectiveness	0.39**	0.09		
<b>Step 3</b>				
CRI <sub>sbs</sub>	0.22*	0.06	0.26	0.00
23-year romantic relationship effectiveness	0.38**	0.09		
CRI Coherence	0.05	0.06		

Note.  $N = 102$ . Dependent variable = 32-year romantic relationship effectiveness of engagement. CRI<sub>sbs</sub> = secure base script knowledge coded from Current Relationship Interviews in young adulthood.

\*  
 $p < .05$

\*\*  
 $p < .01$