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International Journal of Behavioral Development

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The quality of maternal secure-base scripts predicts children's secure-base behavior at home in three sociocultural groups

Brian E. Vaughn[a], Gabrielle Coppola[a], Manuela Verissimo[b], Ligia Monteiro[b], Antonio José Santos[b], German Posada[c], Olga A. Carbonell[d], Sandra J. Plata[d], Harriet S. Waters[e], Kelly K. Bost[f], Brent McBride[f], Nana Shin[f], and Bryan Korth[a]

The secure-base phenomenon is central to the Bowlby/Ainsworth theory of attachment and is also central to the assessment of attachment across the lifespan. The present study tested whether mothers' knowledge about the secure-base phenomenon, as assessed using a recently designed word-list prompt measure for eliciting attachment-relevant stories, would predict their children's secure-base behavior, as assessed by observers in the home and summarized with the Attachment Q-set (AQS). In each of three sociocultural groups (from Colombia, Portugal, and the US), scores characterizing the quality of maternal secure-base narratives elicited using the word-list prompt procedure were internally consistent, as indicated by tests of cross-story reliability, and they were positively and significantly associated with the child's security score from the AQS for each subsample. The correlation in the combined sample was $r(129) = .33$, $p < .001$. Subsequent analyses with the combined sample evaluated the AQS item-correlates of the secure-base script score. These analyses showed that mothers whose stories indicate that they have access to and use a positive secure-base script in their story production have children who treat them as a "secure base" at home. These results suggest that a core feature of adult attachment models, in each of the three sociocultural groups studied, is access to a secure-base script. Additional results from the study indicate that cross-language translations of the maternal narratives can receive valid, reliable scores even when evaluated by non-native speakers.

Keywords: attachment script representation task; secure bare relationships

Central to the Bowlby/Ainsworth theory of attachment is the assumption that the attachment figure is a secure base for the attached individual's exploration and is a haven of safety for the attached person in times of stress (Ainsworth, 1967; Ainsworth, Bell, & Stayton, 1974; Ainsworth, Blehar, Waters, & Wall, 1978; Ainsworth & Bowlby, 1991; Bowlby, 1973, 1988; E. Waters & Cummings, 2000). The secure-base phenomenon is evident in attachments across the lifespan, although for adults the role of secure-base provider and receiver can cycle between relationship partners, depending on conditions and need (Crowell et al., 2002); however, during childhood the adult member of the (healthy) attachment relationship is the child's secure base. However else they may be characterized, attachment relationships always imply the secure-base phenomenon (Ainsworth et al., 1978; Bowlby, 1988; E. Waters & Cummings, 2000; H. Waters, Rodrigues, & Ridgeway, 1998; Zimmermann, 2004). On the side of the care-giver, the secure-base phenomenon implies sensitive and co-operative attention to the location and state of the attached person and, on the side of the attached person, it implies the belief that the caregiver is able and willing to intervene on her or his behalf if needed and/or called. This has prompted some attachment theorists to refer to attachments as "secure-base relationships" (E. Waters & Cummings, 2000). We adopt this usage in this article.

A second central assumption of attachment theory is that core features of the child–parent attachment relationship become abstracted and represented internally (i.e., as "internal working models" in Bowlby's terminology) as the child (and the attachment relationship) matures (Bowlby, 1973). Bowlby believed that internal working models were relatively open in the sense that they could be revised in the face of changes in the attachment relationship in the early years of life, which might arise as a consequence of changes in the social–emotional or physical circumstances of the dyad or as the child acquired more and more sophisticated social and relational competencies (Bretherton & Munholland, 1999; Sroufe, Egeland, Carlson, & Collins, 2005). Furthermore, as the child's cognitive and linguistic capacities expand, the working model can assimilate new information about the attachment figure

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and the secure-base relationship through various communicative modalities. Parents frequently take advantage of these cognitive/linguistic advances as they tell the child in both words and deeds that he or she is loved and protected, or not (see Oppenheim & H. Waters, 1995; E. Waters & Cummings, 2000, for extended discussions).

Presumably, attachment-relevant stories that individuals tell must reflect, at least in part, the representations of attachment (i.e., working models) derived from their own experiences in secure-base relationships (Bowlby, 1973; Bretherton & Munholland, 1999; Bretherton, Ridgeway, & Cassidy, 1990; Carlson, Sroufe, & Egeland, 2004). To the extent that parents' internal representations of attachment inform and influence parent–child interactions and the secure-base relationships emergent from those interactions (Karavasilis, Doyle, & Markiewicz, 2003; Pederson, Gleason, Moran, & Bento, 1998; Posada, Waters, Crowell, & Lay, 1995; Ward & Carlson, 1995), we should expect to find that attachment-relevant stories the parents tell are associated with other indicators of attachment representation and with the organization of their children's attachment behavior. The primary purpose of this article is to test the expectation that the quality of maternal secure-base stories and the organization of child secure-base behavior are related, using a recently constructed instrument for eliciting maternal secure-base stories (H. Waters & Rodrigues-Doolabh, 2004) and a widely used, well-understood measure of child secure-base behavior for preschool children, the Attachment Q-set (AQS; van IJzendoorn, Vereijken, Bakermans-Kranenburg, & Riksen-Walraven, 2004; Vaughn & E. Waters, 1990; E. Waters, 1995) as the child measure. The AQS has been used and validated as an attachment indicator for preschool-age children (Park & Waters, 1989; Posada et al., 1995), and van IJzendoorn et al. (2004) suggested that the measure constituted one of three "gold standard" attachment measures (with the Strange Situation and the Adult Attachment Interview).

H. Waters and Rodrigues-Doolabh (2004) explicitly designed their measure to assess the respondent's awareness and use of secure-base knowledge in the context of telling stories about everyday events involving parent–child dyads or adult couples. They reasoned that adults whose personal histories were characterized by secure attachments would have had many opportunities to receive secure-base support from an attachment figure and, most likely, to have served as the secure base for a dyad partner (child or adult) as well. H. Waters and Rodrigues-Doolabh (2001) argued that one result of a lifetime of experience having and being a secure base is the construction of an abstracted summary of how the secure-base phenomenon is experienced and that the structure of this internal representation would resemble a cognitive script, analogous to scripted knowledge about events at a birthday party or behavior in a restaurant, that could be primed with relevant prompts (see also, Bretherton, 1991).

The "script" concept has a long history in cognitive psychology research. In general, knowledge structures abstracted from recurring everyday life events (in terms of temporal sequences and expectations about likely outcomes) are considered scripts (Bretherton, 1991; Fivush & Hudson, 1990; Nelson, 1986; Nelson & Hudson, 1988; Oppenheim & H. Waters, 1995). H. Waters and Rodrigues-Doolabh (2001) argued that scripted knowledge concerning having and/or being a secure base for another would entail several elements elaborated in roughly the following sequence: some constructive engagement between members of an attached dyad; an obstacle to continued engagement is encountered; a signal that help is needed is given by one partner, the other partner detects the signal; effective help is offered; the assistance is experienced by the receiver as comforting; resolution and/or return to constructive engagement in the social or physical environment. Their measure is designed to prime this script by providing word lists that could be construed as an outline for the secure-base story. If an adult has access to the secure-base script and uses it, a story based on the work prompts would include many or most of the elements in the aforementioned sequence.

In an initial test of the utility of the word-list prompt measure, H. Waters and Rodrigues-Doolabh (2001) reported correlations from .50 to .62 when scores derived from the narratives elicited by the prompts were correlated with the Coherence scale score from the Adult Attachment Interview (AAI) (Hesse, 1999; Main & Goldwyn, 1998) for a group of mothers. Coherence is considered the central dimension for classifying individuals as secure on the AAI and their results suggest that possession of and access to a well-articulated secure-base script is a part of what it means to think coherently about attachment. More recently, Tini, Corcoran, Rodrigues-Doolabh, and E. Waters (2003) demonstrated that maternal secure-base scriptedness was associated with children's classifications in the Strange Situation, and Guttmann-Steinmetz, Elliot, Steiner, and H. Waters (2003) reported that mothers with higher secure-base script scores were better able (than mothers with lower scores) to help their child co-construct stories about attachment relevant content. Finally (and importantly for the current report) Rodrigues-Doolabh, Zevallos, Turan, and Green (2003) showed that mothers from diverse ethnic and cultural groups (including samples from Peru, Switzerland, Turkey, United Arab Emirates, Zimbabwe, and the US) produced detailed and explicit secure-base narratives when presented with the word-prompt lists used with the initial US samples, although certain of these word-prompt lists were modified, or new lists substituted, in some groups to conform with cultural practices. In these samples, composite scores based on four secure-base stories had acceptably high internal consistency values (Cronbach's alpha). A second purpose of this article is to add two non-English speaking sociocultural samples to those reported on by Rodrigues-Doolabh et al. (2003), from Colombia and Portugal, and to examine the psychometric properties of the story score composites in these samples (as well as assessing the relation between maternal script scores and child secure-base behavior in each sample).

As suggested above, our sample is multinational and multicultural. It is important to test attachment hypotheses cross-culturally for several reasons, perhaps especially because Bowlby (1982) proposed his attachment model as applicable to the species as a whole and not just to members of a single culture. That is to say, Bowlby believed that the behavioral system supporting co-construction of a secure-base relationship was an adaptation fixed in place through the process of natural selection and that evidence of secure-base relationships, including mental representations derived from these relationships, should be observable in any human sociocultural milieu. Although the bulk of evidence reported to date (Posada et al., 1995; van IJzendoorn & Kroonenberg, 1988; and see van IJzendoorn & Sagi, 1999 for a review) is consistent with Bowlby's assumption, aspects of his general model, and especially his assumptions about consequences of

secure-base relationships, have been criticized as being parochially Anglo-centric (Harwood & Miller, 1991; Harwood, Miller, & Irizarry, 1995; Rothbaum, Pott, Azuma, Miyake, & Weisz, 2000).

Central to the cultural criticisms of Bowby's theory is the notion that some cultures, perhaps especially Latin cultures and certain oriental cultures, value an interdependent (versus autonomous) interpersonal stance that is inconsistent with Bowlby's assumption that secure-base relationships foster self-reliance and independence. In such cultures, these critics suggest either that parental preferences for children's behavior and attributes will lead to a different suite of interaction styles and behaviors than those supporting attachment security, or, that security itself will have a unique denotative meaning for these cultures, corresponding to the preferred type for the culture. If either of these interpretations is accurate, we might find significantly different levels of secure-base scriptedness and/or child secure-base behavior across sociocultural groups, or, we might find different patterns of correlation between maternal and child scores in the different groups. Having two samples from different Latin cultures (i.e., Colombia, Portugal) allows us to consider the possibility that cultural differences influence both the form and the function of secure-base representations and secure-base behavior.

Methods

Participants

These are convenience samples that were recruited independently for purposes somewhat different than those to which we put them here and there are several differences between the samples in terms their demographic indicators and of ages at which some assessments were made (these are identified below). Each sample was initially recruited so as to represent "middle-class" populations from their respective sociocultural communities and we would not expect that differences we may identify could be interpreted in terms of education or income levels. Nevertheless, the samples are embedded in three distinct sociocultural milieu and may be expected to be somewhat different with regard to child-rearing values and goals that could influence their own secure-base knowledge and their child's secure-base behavior. It has become common to characterize differences in cultural practices in terms of the dimensions of individualism and collectivism (Oyserman, Coon, & Kemmelmeier, 2002) that subsume parenting practices motivated by a value for autonomy (individualism) versus interdependence (collectivism) in a given culture. Oyserman et al. (2002) included samples from both Colombia and Portugal in their meta-analyses and indicated that the Portuguese culture was more collectivistic and less individualistic than US culture, whereas Colombian culture was higher than the US on both the individualistic and collectivistic dimensions.

Colombian sample. Twenty-five mother–child pairs (15 male children) from a larger study (total $N = 41$) on parental support for secure-base relationships (Posada et al., 2002) comprised the Colombian sample. Participants from Colombia came from middle-class neighborhoods in Bogotá, Colombia. They were contacted originally through a health, housing, and education provider with whom the families were associated when the children were about 1 year of age ($M = 12.4$ months, $SD = 3.34$ months). When initially enrolled, mothers identified themselves as the infant's main principal caregiver, their average age was 31.5 years ($SD = 4.72$ years), and their education level ranged from high school to university degree (7 had a high school degree, 10 had a technical degree, and 8 had a university degree). Eight mothers were homemakers and the other 17 worked outside the home. All families were intact and children lived with both parents. Mothers were their children's primary caregivers at home. When the children were approximately 3 years of age, attempts were made to re-contact the families to recruit them for the maternal word list narrative task. Twenty-seven of the 41 mothers agreed to participate in this second task. Equipment failed during two interviews, leaving a final sample of 25. These mothers are representative of the larger sample in terms of age, education level, and work status.

Portuguese sample

Fifty-eight mother–child dyads (29 female children) from a larger study of relations between attachment and peer competence comprised the Portuguese sample. Families were recruited from five private childcare centers in a suburb of Lisbon. All but five mothers were working full-time during the period of the assessments and all mothers reported being the primary caregiver at home. Families were predominantly middle-class by local standards in terms of education levels and job titles. All of the families were European. All children were between 30 and 35 months of age at the time of the assessments ($M = 31.4$ months, $SD = 2.1$ months). Mothers' ages averaged 34 years, $SD = 3.52$. Mean years of education was 15.6 years (some university, 60% with first university degree), $SD = 3$ years.

US sample

Forty-seven mother–child dyads (25 male children) from a larger study of social emotional development across the preschool years comprised the US sample. Families were recruited from two childcare centers in a major metropolitan area from a state in the south-eastern region of the US. All mothers were employed or in school 20 hours/week or more. Their average age was 35.6 years ($SD = 4.4$ years). Families were predominantly middle-class by local standards in terms of education levels and job titles (over 60% of mothers reported family incomes greater than $100K/year and only one reported an annual income less than $25K), however, the range of occupations was broad and included graduate students and employees of the local city government as well as a mix of managerial and professional job titles. Approximately 20% of families were of minority ethnic/racial status but their occupational range was representative of the sample as a whole. Over 85% of mothers were college graduates (more than 50% had obtained professional or other post-graduate degrees) and all but one reported attending college or obtaining some post-secondary professional training. For this sample, racial/ethnic status and social class indicators were not confounded. Families were recruited to the sample when their children were between 2.0 and 3.0 years of age and all assessments were completed before the child reached 42 months of age ($M = 35.2$ months, $SD = 4.03$ months). In the home, mothers were primary caregivers for their children.

Measures and procedures

Word-list prompt measure for secure-base scriptedness. The measure designed by H. Waters and Rodrigues-Doolabh (2004) primes the secure-base script using word-list prompts (six different lists) that form the outline of a story. The stories elicited by four of the word-prompt outlines are scored on the basis of the presence (or absence) of the secure-base script and the richness and detail concerning the relationship between characters in the story. A single score summarizing both presence and quality of the secure-base script is given for each of the attachment-relevant narratives, with the average of these being the subject's "scriptedness" score for secure-base knowledge. Low scores (< 4 on the 7-point scale) indicate the general absence of a secure-base script in the narratives and are considered to be "insecure" with respect to attachment. The lowest scores are reserved for stories that both do not include the secure-base script and introduce unusual content into the stories (e.g., a child who has been injured soothes the parent who is upset about the injury). Higher scores (4 or above on the 7-point scale) indicate the presence of the secure-base script and are considered to be "secure". The highest scores are assigned when the secure-base script is elaborated, shows evidence of awareness of the partner's emotional state, reformulates the meaning of the obstacle/conflict in a favorable way, and/or locates the present interaction in the context of the ongoing relationship. The remaining two stories are not relevant to the secure-base script (trip to the park, afternoon shopping) and are not scored for secure-base content.

Prior to data collection, the word lists and the instructions to mothers were translated into the relevant language (Spanish, Portuguese) by fully bilingual translators. A different bilingual translator back-translated these into English and the resulting text was compared with the H. Waters and Rodrigues-Doolabh (2004) original text. Cross-language discrepancies were identified and adjusted until the translations were precisely matched. Although this method of forward and back-translation of the text produced equivalence at the level of denotative meaning, stories elicited in the Colombian sample indicated that the word list for "Jane and Bob's camping trip" had a different meaning than in the other samples. In Colombia, couples typically do not have the experience of going out to the wilderness and away from relatives as a recreational activity and many of the mothers did not understand the premise of the story. In addition, the mothers from Colombia, more than in either of the other two samples, tended to include children in their stories about adult–adult relationships and the resulting stories were judged to be unscoreable by H. Waters and L. Rodrigues-Doolabh. As a consequence, while we use all scored stories to estimate the reliability of the composite scores and cross-rater agreement in each of the subsamples, we only analyze relations between the maternal scriptedness scores and child security scores (AQS) for mother–child stories in this report.

Narrative collection protocols. In each sample, mothers responded to the six word-prompt outlines (H. Waters & Rodrigues-Doolabh, 2004), which were presented one at a time by a research staff member. Each outline consisted of three columns of four words. Mothers were instructed to read down each column from left to right to get a sense of the story outline. The instructions also included an explanation that the stories would be audiotaped and that the mother could stop a story and start it over from the beginning if she chose to do so. Four of the lists were intended to prime secure-base themes (baby's morning, doctor's office, Jane and Bob's camping trip, Sue's accident). Two of the secure-base word-prompt outlines explicitly concerned mother–child content (e.g., baby's morning, doctor's office) and two were designed to elicit stories relevant to adult relationships (e.g., Jane and Bob's camping trip, Sue's accident). As mothers were handed the word-prompt outline, the research staff member identified the expected story content as "mother–child" or "adult relationship". Six different orders for the word-prompt outlines were used, with the convention that the three mother–child word-prompt lists were presented as a cluster and the adult–adult lists were presented as a cluster (i.e., a mother would respond to all three stories in one cluster before being presented with a story from the other cluster). Each list-order was used approximately equally often in each sample and consecutively assessed mothers were not given the stories in an identical order.

For the Colombian sample, maternal narratives were obtained in the context of a home visit that had been explicitly scheduled to complete this task. For the Portuguese sample, maternal narratives were collected at the end of the AQS home visit. When observations were completed, the mother was asked to accompany one of the home visitors to another room to complete the narrative task while the other observer played with the child. In the US sample, the maternal narrative assessment took place in the context of a laboratory visit designed to measure qualities of child–parent interaction, children's emotion knowledge, and child self-control. After approximately 25 min of parent–child interaction, the mother was asked to leave the child with a member of the research staff and go to an adjacent room to complete the word-prompt task. In all three samples, most mothers completed this task in 15–20 min. Audio-recordings of the mothers' stories were transcribed for later scoring. For the US and Portuguese samples, two to four persons blind with respect to the home observation data, including the AQS, read and rated each story transcript using the 7-point scale designed by H. Waters and Rodrigues-Doolabh (2004). Stories for a single word-prompt list (e.g., baby's morning) were grouped together within each sample (e.g., all baby's morning stories for the US sample were scored in the same session). Different stories were scored on subsequent days to minimize the possibility that raters might recognize stories from a single participant.

Colombian stories were translated into English, sent to the US, and scored by H. Waters and L. Rodrigues-Doolabh at SUNY Stony Brook. They were blind to all other data for the participants. Intraclass correlations across stories for the two raters ranged from .75 to .87. The US narratives were scored by two native Portuguese speakers who were also fluent in English and by a fully bilingual Italian/English speaker as well as by a native English-speaking rater. Three raters had received an intensive training in decoding the transcripts from H. Waters. Intraclass correlations between raters ranged from .82 to .93 across all stories and 85% of the codes given by different raters were within one scale-point of codes given by the other raters. Cronbach's alpha for the total score (average across all raters) for each story was > .94. These levels of rater agreement suggest that raters need not be native English speakers to master the rules for scoring English language stories. The Portuguese story transcripts were rated by native speakers (who also coded the US transcripts). The intraclass

correlations ranged from .68 to .83 with over 90% of scores being within 1 scale point. Spearman–Brown reliability estimates for individual stories ranged from .82 to .93. One member of the coding team was blind to all AQS data. The second was blind to half the sample but had participated in home visits for the other half of the sample. Scores provided by the privileged rater were not used in the composite scores for primary analyses. Scores for the raters were averaged (see exception noted previously) for each story. To further evaluate rater agreement in the Portuguese sample, 30 stories from this sample were translated into English by a professional translator and these transcripts were scored by a native English speaker. Intraclass correlations for rater-pairs ranged from .52 to .87 and over 90% of the cross-language comparisons agreed within 1.5 scale points with no pair of scores for a given story differing by more than 2.5 scale points for any story score. These analyses suggest that secure-base scriptedness can be scored reliably from translated stories.

In each sample, a parent–child composite score was also obtained by averaging the secure-base scriptedness scores for the two parent–child stories. These composite scores were used in analyses. A two-factor (Sample × Child Gender) ANOVA for the composite score did not yield significant sample or gender differences and the interaction of sample and child gender was not significant, indicating that mean differences among subsamples and between mothers of boys versus mothers of girls were not meaningfully different. These results provide partial justification for combining the samples in subsequent analyses.

Attachment Q-set.   The Attachment Q-set (E. Waters, 1995) consists of 90 items relevant to the child's use of the caregiver as a secure base and haven of safety. Informants (observers in the case of this article) describe the child using the 90 items by sorting them into a specified distribution after some period of observation, in terms of how relevant each item is as a descriptor of the observed child (from *very undescriptive of the child* to *very descriptive of the child*). It is important to recognize that the observations upon which Q-sort descriptions are based are not frequency counts of behaviors defined by some taxonomy, but rather these observations contribute to observers' inferences about the general organization of the child's behavior with reference to using the caregiver as a secure base and haven of safety. In this way, Q-items are analogous to items from a questionnaire that parents or teachers might use to rate temperament, personality, or problem behaviors, with the caveat that instructions for most Q-sorts specify the distribution of scores to categories on the scale (e.g., a fixed number of items get scored at each point on the scale) rather than allowing the respondent to assign a score at any position along the scale for each item. When multiple observer/raters are employed to describe a given child, it is possible to estimate the reliability of the composite Q-sort (aggregate across raters) using the Spearman–Brown prophecy formula or Cronbach's alpha (when more than two observer/raters contribute Q-sort descriptions) by treating the item-distribution provided by single raters as "items" and Q-items as "subjects" in a correlation matrix. When the raw correlations between Q-sorters are reported as indices of rater agreement, they are typically referred to as "Q-correlations" (see below), but it is the reliability of the composite Q-description that is typically of interest to investigators.

Q-sort data lend themselves to a variety of scoring methods, of which, the most common in developmental research is the "criterion score" (Block, 1961; E. Waters & Deane, 1985). To construct a criterion Q-sort, experts with regard to some relevant dimension (e.g., attachment security in the case of the AQS) are asked to use the Q-set to describe an individual at a hypothetical extreme with respect to the dimension (e.g., the most secure preschool child). After checking Q-correlations among respondents and ascertaining that the average across experts has high internal consistency (alpha > .85), the composite (average item placement for each item in the distribution) becomes the criterion for the dimension. Q-sort descriptions for empirical cases (e.g., the young children in the samples reported here), are compared with the hypothetical criterion and the congruence between the two is calculated as the Pearson's product-moment correlation. This is usually treated as the "score" for the hypothetical construct and can be analyzed in relation to other constructs or in tests on group means. When the Q-sort construct of interest (here, attachment security) is found to be associated in theoretically predicted ways with constructs external to the Q-sort, it is a common practice to examine the individual Q-item correlates of that external construct (Block, 1961; Buss, Block, & Block, 1980; Vaughn, Block, & Block, 1988; Vaughn & Martino, 1988) to more descriptively characterize the nature of the relation between the Q-construct(s) and the external dimension or categorical variable. This practice is analogous to (but not the equivalent of) examining factor loadings for scale items loading on some dimension of temperament or personality and is usually initiated from within the context of discovery rather than the context of justification. The results of such descriptive analyses are usually heuristic and not considered prescriptive; that is to say, they do not constitute hypothesis tests even though the results of significance tests are usually reported.

AQS observations.   Because Colombian infants were about 1 year old, two home visits (total of 4 hours) were completed. Two observers went on each visit and both independently described the infant using the AQS. In the Portuguese and US samples, a 2–3-hour home visit was scheduled for the purpose of observing the child and mother together. In the Portuguese sample, two observers went on all home visits and each independently described the child using the AQS after the visit. In the US sample, one or two observers went on each visit and the child was described using the AQS immediately afterwards. In all samples, mothers were asked to go about their daily routines in as normal a manner as possible while the observers were present. The observers attempted to remain unobtrusive for most of the home visit, but they were instructed to respond naturally to any interactive bids from the child or from the mother. If the child did not initiate an interaction with the observer(s) during the first half of the visit, one observer attempted to engage the child in a playful interaction. If the child responded positively, the observer played briefly (usually less than 10 min) with the child before withdrawing. From time to time, the observers asked mothers about items they could not observe (e.g., item 10 asks about child's behavior when getting ready for a nap; item 85 refers to child's response to novel toys or activities) and items they may not have observed during the visit (e.g., item 26 refers to the child's reaction to being left at home with babysitter, father, or grandparent; item 47 refers to the child's acceptance of loud sounds or being bounced around in play if the mother smiles and shows that it

is supposed to be fun). Observers were instructed to query the mother in the last hour of the observation visit regarding such items.

For the Colombian sample, visits were conducted by trained observers who had obtained interobserver reliabilities of at least .70 in five training tapes prior to going on home visits. Interobserver reliability for the composite sort was calculated from the agreement between the Q-sort descriptions and ranged from .67 to .97. In the Portuguese sample, observers were trained over a period of several weeks. Both observers discussed items and jointly completed Q-sorts with the project coordinator as part of training. Prior to actual data collection, observers reached acceptable levels of agreement in independent Q-sorts (Q-correlations between .60 and .85). Cross-observer Q-correlations for the study sample ranged from $r = .61$ to .89. Q-sort descriptions of the child were completed within 24 hours of the visit. The Q-sort descriptions for a given child were averaged across observers. For the US sample, rater agreement was established (Q-correlations between the raters between .70 and .80 for the full sort) prior to data collection. Q-items for the study sample were sorted by consensus when two observers made the home visit. A single observer completed most of home visits and AQS descriptions ($n = 38$).

In each sample, the items were sorted into a rectangular distribution (9 categories, 10 items in each category) with items judged undescriptive or not characteristic of the child sorted into categories 1–3 and items judged descriptive or more characteristic of the child sorted into categories 7–9. These Q-sort profiles were summarized using the E. Waters Security Criterion sort for the AQS (see E. Waters, Vaughn, Posada, & Kondo-Ikemura, 1995). These scores ranged from −.31 to .79 ($M = .41$, $SD = .22$) for the cases in the combined sample. Children in the US sample had the lowest average scores ($r = .35$) and children in the Colombian sample had the highest average scores ($r = .49$). The security score for the Colombian sample is somewhat higher than reported previously in Colombian samples (i.e., .43 and .46 in Posada et al., 2002; Posada, Carbonell, Alzate, & Plata, 2004) and the difference between Colombian and US means was not itself significant ($z = 1.2$, $p > .25$), suggesting that the samples could be combined for our primary analyses. E. Waters (1995) also provides a Dependency Criterion sort for the AQS and we calculated this score as well. Dependency scores ranged from −.55 to .49 across the full sample with means ranging from −.11 to −.03. Tests on the sample means did not reveal cross-sample differences.

Results

The primary goal of this report is to examine the relation between scriptedness in maternal secure-base stories and the child's secure-base behavior at home. By design, we are able to assess this relation in separate samples from different sociocultural groups and, because the subsamples do not differ in terms of mean levels for the outcome variables and are comparable with respect to social class indicators, we also present correlation analyses for the combined sample. A secondary goal of the study is to add data to the cross-cultural findings relevant to the psychometric properties (rater agreement, internal consistency) of the word-list prompt task and to compare our findings with those reported by Rodrigues-Doolabh et al. (2003). Finally, the data afford opportunities to

explore relations between the maternal representations of secure-base knowledge and details of the child's secure-base behavior that are available from the individual items in the AQS. To maintain continuity in the narrative, we first present results of potential demographic confounds (i.e., income, maternal age, level of education), then the psychometric analyses, and finally the substantive analyses relating secure-base scriptedness to child secure-base behavior. These last analyses are presented at the level of the summary score for security and also at the level of individual Q-set items.

Preliminary analyses

Correlations were calculated for each sample to determine whether maternal age, education level (three levels: high school or less, some post-secondary education but without university degree, university degree or higher), or family income level were significantly associated with either the maternal secure-base scriptedness score or with the child AQS security score. Neither maternal age nor income level showed significant associations with the security outcome variables in any of the three samples. Correlation values for these demographic indicators ranged from −.13 to .15 across the three samples. For the Portuguese and US subsamples, maternal educational attainment was not associated with either security indicator, however, in the Colombian sample, the rank-order correlation was positive and significant, $r_{SP} = .57$, $p < .01$. The rank-order correlation between maternal education level and AQS security was not significant, $r_{SP} = .26$. Education level was retained as a control variable in subsequent analyses.

Reliability analyses

Rodrigues-Doolabh et al. (2003) reported that cross-story (within theme) correlations were quite high across a range of cultural groups. Furthermore, the cross-theme scores (i.e., composites of mother–child × adult–adult themed narratives) were also highly correlated in all cultural groups. The within- and cross-theme correlations, as well as Cronbach's alpha for the total composite (from four stories) values are presented in Table 1 for each of the three sociocultural groups separately, then again for the combined sample. Consistent with the Rodrigues-Doolabh et al. (2003) report, within-theme correlations ranged from .45 to .70 and Cronbach's alpha estimates for the composite narrative score were all above .80 in each sample. Our findings substantially replicate results reported previously and suggest that the method will be widely applicable in samples of literate participants.

Maternal representations and child behavior

To test the hypothesis that maternal secure-base representations would covary with the organization of children's secure-base behavior, we correlated the maternal and child scores. Results are presented in Table 2. The results are consistent with our hypothesis. The composite maternal narrative score (i.e., average of the two mother–child secure-base stories) was positively and significantly correlated with the AQS security score in each sample (range of rs = .35 to .50, ps < .05 in each analysis) and in the full sample, $r(129) = .37$, $p < .001$. Between group z-tests indicated that no pair of correlations differed significantly. Because we had obtained a significant

Table 1

Internal consistency of narrative scores in the full sample and for each sub-sample separately

Colombia		
Mother/child stories ($n = 25$)	$r = .70$★★★	Spearman–Brown = .81
Adult/adult stories	*Not calculated*	
Secure-base composite scores ($n = 25$)		Spearman–Brown = .81[a]
Portugal		
Mother/child stories ($n = 58$)	$r = .63$★★★	Spearman–Brown = .76
Adult/adult stories ($n = 58$)	$r = .43$★★★	Spearman–Brown = .62
Secure-base composite scores		$\alpha = .82$
United States		
Mother/child stories ($n = 47$)	$r = .63$★★★	Spearman–Brown = .78
Adult/adult stories ($n = 47$)	$r = .59$★★★	Spearman–Brown = .74
Secure-base composite scores		$\alpha = .86$
Total sample	Item correlations	Reliability
Mother/child stories ($N = 129$)	$r = .63$★★★	Spearman–Brown = .77
Adult/adult stories ($N = 105$)	$r = .52$★★★	Spearman–Brown = .68
Secure-base composite scores ($N = 105$)		$\alpha = .83$

[a] Reliability estimate based only on scores for two mother–child stories in Colombian sample.
★★★ = $p < .001$.

association between maternal education level and the maternal narrative scriptedness score, we computed the correlation again controlling for education level. This did not appreciably change the magnitude of association for the full sample, $r_{partial} = .38$, and effects for the US and Portuguese samples were similarly not affected. In the Colombian sample, the correlation was somewhat reduced, $r = .43$, but remained significant, $p < .05$.

Additional analyses tested possible relations between the narrative scriptedness score and child Dependency scores from the AQS. The association between these variables did not reach significance for the full sample, $r(129) = .16$, *ns*, and the relation was not significant in either the US or the Portuguese samples. However, in the Colombian sample, maternal narrative scriptedness was significantly associated with Dependency from the AQS, $r = .42$, $p < .05$. Perhaps interestingly, the AQS Security and Dependency scores from this sample were also significantly associated for the Colombian sample, $r = .56$, $p < .01$, but this pattern of association was not obtained for either the US or the Portuguese samples, rs = .20 and −.02, *ns*, for the US and Portuguese samples, respectively. A partial correlation analysis controlling for AQS Security reduced the relation between AQS Dependency and the maternal narrative scriptedness score to .19. It appears that the relation between

AQS Dependency and the narrative scriptedness score is due to their joint relation with AQS Security.

To consider the relation between scriptedness in maternal representations of secure-base knowledge and their children's secure-base behavior in more detail, we examined the individual AQS item correlates of the narrative scores. For these analyses, we combined the subsamples and correlated each of the 90 AQS items with the composite derived from the two mother–child stories. A total of 25 AQS items (over 27% of the 90-item pool) proved to have a significant association with the maternal scriptedness score (Table 3) and 20 of these items were also significant correlates of the AQS Security criterion score (marked with an asterisk in the AQS Security correlate column of Table 3). Significant correlations were signed in the same direction for the AQS security and maternal scriptedness scores. Although these 25 item-correlates do not exhaust the secure-base content of the AQS (67 Q-sort items were significantly correlated with the security criterion), they suggest that the secure-base scriptedness score for the mother is, in fact, attracting this content from the AQS. A mother who used the secure-base script to shape her narratives tended to have children who tended to pay attention and understand her, to readily share with her, and to enjoy physical contact with her. They tended to be less demanding or impatient, less likely to act like the mother would interfere with their activities, less likely to fuss or get angry when the mother did not do what they wanted right away, and more likely to turn to her after finishing with an activity or if in need of assistance. We also identified five item correlates of the narrative scores that were not also significant correlates of security. Mothers with higher total narrative scores had children who tended to be better coordinated physically and more curious with new toys, to make an effort to keep track of mother's location in the house and to go to her when bored, and who tended to be more positively oriented to unfamiliar adults. Although there is diversity of content in these item correlates, our results suggest that it is primarily child secure-base content in the AQS that is predictable from the scriptedness of maternal secure-base stories. That is, mothers with well-scripted secure-base knowledge have children who treat them as a secure base for exploration at home.

Table 2

Correlations between maternal narrative scores and child secure-base behavior at home

Colombia	
Mother/child stories ($n = 25$)	$r = .50$★
Portugal	
Mother/child stories ($n = 58$)	$r = .35$★★
United States	
Mother/child stories ($n = 47$)	$r = .38$★★
Total sample	
Mother/child stories ($N = 130$)	$r = .37$★★★

Note. Attachment composite score uses only the mother/child stories in Colombian sample.
★$p < .05$; ★★$p < .01$; ★★★$p < .001$.

Table 3
AQS item correlates of maternal mother–child scriptedness score

AQS item		Correlation with scriptedness	AQS Security correlate
AQS(18)	Child follows mother's suggestions readily, even when they are clearly suggestions rather than orders.	.28***	⋆
AQS(41)	When mother says to follow her, child does so.	.28***	⋆
AQS(32)	When mother says "no" or punishes him, child stops misbehaving. Doesn't have to be told twice.	.24**	⋆
AQS(53)	Child puts his arms around mother or puts his hand on her shoulder when she picks him up.	.23**	⋆
AQS(21)	Child keeps track of mother's location when he plays around the house.	.22*	⋆
AQS(46)	Child walks and runs around without bumping, dropping, or stumbling.	.22*	
AQS(19)	When mother tells child to bring or give her something he obeys.	.20*	⋆
AQS(1)	Child readily shares with mother or lets her hold things if she asks to	.20*	⋆
AQS(43)	Child stays closer to mother or returns to her more often then the simple task of keeping track of her requires	.19*	
AQS(11)	Child often hugs or cuddles against mother without her asking or inviting him.	.17*	⋆
AQS(83)	When child is bored, he goes to mother looking for something to do	.17*	
AQS(40)	Child examines new objects or toys in great detail. Tries to use them in different ways or to take them apart	−.17*	
AQS(37)	Child is very active. Always moving around. Prefers active games to quiet ones	−.17*	⋆
AQS(23)	When mother sits with other family members, or is affectionate with them, child tries to get mom's affection for himself	−.18*	⋆
AQS(2)	When child returns to mother after playing, he is sometimes fussy for no clear reason	−.18*	⋆
AQS(30)	Child easily becomes angry with toys	−.19*	⋆
AQS(52)	Child has trouble handling small objects or putting small things together	−.21*	⋆
AQS(35)	Child is independent with mother. Prefers to play on his own, leaves mother easily when he wants to play	−.21*	⋆
AQS(69)	Rarely asks mother for help	−.21*	⋆
AQS(59)	When child finishes with an activity or toy, he generally finds something else to do without returning to mother	−.22*	⋆
AQS(54)	Child acts like he expects mother to interfere with his activities when she is simply trying to help him with something	−.24**	⋆
AQS(72)	If visitors laugh at or approve of something the child does, he repeats it again and again.	−.24**	
AQS(79)	Child is easily angry at mother	−.25**	⋆
AQS(38)	Child is demanding and impatient with mother. Fusses and persists unless she does what he wants right away	−.25**	⋆
AQS(74)	When mother doesn't do what child wants right away, he behaves as if mom were not going to do it at all	−.25**	⋆

⋆ $p < .05$; ⋆⋆$p < .01$; ⋆⋆⋆$p < .001$.

Discussion

At the outset of this article, we emphasized the centrality of the secure-base concept in the Bowlby/Ainsworth theory of attachment. When the caregiving member of an attached dyad provides support for the attached member's exploration of a local and distant physical, cognitive, and social environments, by monitoring, assisting, or intervening on the behalf of the other, he or she is acting as a secure base. When the caregiving member welcomes, nurtures, or comforts that attached member upon return to proximity after exploration or other circumstance involving separation, she or he is acting as a secure base. When the attached member *knows* that the caregiving member of the dyad is able and willing to provide this support for exploration and succor upon reunion, he or she can more confidently maintain engagement during exploration and will be more enthusiastic at the prospect of reunion. For young children, it is this apparent confidence in exploration and the satisfaction of the child at reunion with the attachment figure that supports the inference that she or he believes that the parent is a secure base and that the child is, indeed, secure in her or his attachment with the caregiver. The nature of secure-base support and the manner in which such support is provided, as well as the child's expressed need for support, may fluctuate over developmental periods but the secure-base phenomenon is a feature of attachment relationships at every age (Sroufe et al., 2005). So critical was this idea, that Bowlby titled his last volume of published essays on attachment, "*A Secure Base*".

The second critical assumption of attachment theory that we highlighted was the notion that the attached individual co-constructs, with the assistance of the attachment figure, an internal working model of the attachment relationship itself, as well as correlated models of the self and of the caregiver. Because the secure-base phenomenon figures so prominently in the formation and maintenance of attachment relationships, we expect to find information about having a secure base and (possibly) being a secure base for another embedded in the working models co-constructed by the attachment dyad (Bowlby, 1973, 1982, 1988), at least for those individuals with secure attachment histories (see Oppenheim & H. Waters, 1995; E. Waters & Cummings, 2000 for related discussions). Although some of the more widely used protocols for assessing attachment beyond infancy and childhood do not explic-

itly dimensionalize secure-base information (George & West, 2001; Main & Goldwyn, 1984, 1998), these protocols imply the presence of secure-base phenomena when they classify cases as secure versus insecure. By way of contrast, the H. Waters and Rodrigues-Doolabh (2004) word-list prompt measure was designed explicitly to assess secure-base knowledge and the individual's access/use of that knowledge, when confronted with a story-telling task. H. Waters and Rodrigues-Doolabh (2004) assumed that internal working models of secure-base knowledge would have a formal structure similar to other domains of knowledge built on repeated experiences in a circumscribed set of parameters; that is to say, they believed that this knowledge would be abstracted and generalized in the form of a secure-base script. Their measure and scoring procedures provide means to quantify individual differences regarding the presence and use of secure-base scripts adults in the construction of stories about routine and emergency events for attached dyads.

H. Waters and associates have examined both the generality and the implications of secure-base scripts for adults. In several studies (Rodrigues-Doolabh et al., 2003), findings suggest that scripted knowledge of secure-base relationships are found in wide range of societies, many of which differ markedly from North American society. Tini et al. (2003) provided important data regarding the convergent validity of the script measure by demonstrating a significant relation between maternal secure-base script scores and infant classifications n the Strange Situation. We organized the data from the three samples included here to extend findings reported by Rodrigues-Doolabh et al. (2003) and Tini et al. (2003) by adding new cultural groups (from Colombia and from Portugal) to the list of countries in which secure-base scriptedness was present and by showing that an assessment of child attachment security other than the Strange Situation is associated with maternal secure-base scriptedness scores.

With respect to extending the range of sociocultural groups for which reliable assessments could be obtained, we found that correlations within and across types of stories were similar to those reported by Rodrigues-Doolabh et al. (2003) and that the reliability of a composite made up of both mother–child and adult–adult stories was satisfactory ($\alpha > .8$) in the US and Portuguese samples. The Spearman–Brown prophecy formula suggests that reliability of the composite will also be above .8 in Colombian samples. These findings suggest that the word-prompt story method of obtaining secure-base narratives will be useful in cross-cultural studies of the secure-base phenomenon and secure-base relationships. However, we caution potential consumers for this measure that the current set of word-prompt lists does not necessarily constitute a universal kit that can be applied in any sociocultural group. As Rodrigues-Doolabh et al. (2003) reported, if a particular story theme does not apply in the cultural context (as the camping trip story did not in our Colombian sample), for a sociocultural group, it will be necessary to design a word prompt list that is relevant to the particular culture. This sort of solution was applied successfully in the United Arab Emirates sample reported by Rodrigues-Doolabh et al. (2003). We also discovered that considerable pilot testing was required in presenting the task to mothers. In the Colombian sample, the translated instructions (even though they had been back-translated to be equivalent to the English text) apparently prompted mothers to tell stories focused on children rather than on adults in the adult–adult themed word-prompt lists. Instruc-

tions for the adult–adult word-prompt lists now include an explicit statement that the adults in the story are a couple (married or romantic partners) and that the story is supposed to be *about them*. In our ongoing research using the word-list prompt measure, this small adjustment to instructions has all but eliminated adult-themed stories including children.

A second caution concerns the typical length of stories in a given sociocultural group. Although secure-base scriptedness scores are not necessarily a function of story length, this is both because some very long stories can be bereft of secure-base content and because some relatively short stories can be scored at "4" or above. For example, in the US sample, the correlation between story length and scriptedness was $r = .21$, *ns*, but adding a story length variable in a regression changed neither the beta value for scriptedness nor the total R^2 for the AQS security score. Nevertheless, it is generally true that shorter stories (i.e., < 75 words) will receive scores of "3" or less because they do not establish the relationship between story protagonists and do not provide any relevant detail about the meaning of events in the story or the relevance of the story events to the protagonists. Likewise, stories receiving the highest secure-base scriptedness scores provide considerable detail about the relationship between dyad members and demonstrate that the caregiving partner understands the emotional and motivational states of the attached partner. To provide this detail, these stories will necessarily be relatively long (i.e., > 250 words).

We have found that presenting the word-prompt lists as outlines for a story and asking the respondent to tell a "full" or "complete" story based on the words in the outline is generally sufficient to prompt a range of story lengths (resulting in a full range of scores along the 7-point scale developed by H. Waters & Rodrigues-Doolabh, 2004). Nevertheless, it will be important for any research team to pilot test the instructions and review stories after 10–15 pilot participants have been tested to assure that both longer and shorter stories are represented. If 80% or more of the stories are brief (i.e., < 75 words), it will not be possible to get the expected range of scores for a given sample and some revision to the instructions will be required for that particular sociocultural group. Revised instructions should also be pilot tested until it is clear that respondents are providing the full range of story lengths and scores. While it is anticipated that some (< 25%) of stories in a sample of 25 or more adults will be short (and generally will receive scores lower than 4, indicating that the secure-base script was not present in the story), we do not expect to find more than 50% of a nonclinical sample with insecure attachment representations. Thus, pilot testing to establish the best instruction and the most appropriate interpersonal technique for creating an environment conducive to mothers producing their best stories will be beneficial for most research investigations.

It is also important to note that all respondents evaluated to date have been literate (even well educated) and could comprehend the word-list prompts easily. It may be that the low correlations between scriptedness scores and education level that we report here arise because we recruited primarily middle-class participants with relatively high education levels to these studies. Recall also that in the Colombian sample, the group with the greatest heterogeneity for education levels, mothers with a university degree had higher scriptedness scores than did those less education. This did not, however, severely attenuate the relation between scriptedness and AQS Security

scores for the Colombian sample. Finally, it is always preferable to elicit narratives in the respondent's native language. Pilot testing using foreign visitors/immigrants in the US (Posada, 2004, unpublished data) suggested that some ESL participants, had difficulties providing stories that could be scored using the H. Waters and Rodrigues-Doolabh (2004) coding rules.

With respect to the major goal for the study, we found that the secure-base scriptedness scores derived from the maternal narratives were positively and significantly associated with the child security scores from the AQS. This was true in each of the three sociocultural groups and the finding was reproduced in the full sample. The fact that we obtained predicted associations across measures holds in the face of sample differences (different cultures, ethnic/racial makeup of groups, education levels) suggests that the basic finding is robust. We interpret our results as support for important premises arising from the Bowlby/Ainsworth attachment theory regarding relations between maternal internal working models and child attachment behavior. Although there was a range of correlations across samples ($rs = .35–.50$), no correlation value differed significantly from any other, when tested across samples. Our findings are comparable with results of other studies linking maternal AAI security classifications to AQS security scores (Posada, Waters, et al., 1995; Tarabulsy et al., 2005). The results suggest that the word-prompt narrative procedure has utility for assessing script-like representations of secure-base knowledge for adults and that individual differences in scriptedness scores map onto children's secure-base behavior in a predictable manner. We also found that, in general, the maternal scriptedness scores were unrelated to the Dependency dimension scored from the AQS. At the level of individual subsamples, nonsignificant associations were found in the two sociocultural samples for which the AQS had been completed at the end of toddlerhood, however, for the sample observed as infants (i.e., Colombia), Dependency was significantly associated with both Security and with maternal scriptedness scores. Such a finding is consistent with a discussion of security and dependency by E. Waters and Deane (1985), who noted that these two constructs were both conceptually and empirically related for infants but not for preschool age children (see also, Sroufe et al., 2005 for a related discussion).

We also examined the individual AQS item correlates of maternal scriptedness scores derived from the maternal narratives so as to describe the relation between child secure-base behavior and maternal secure-base scriptedness in greater detail. We found 25 of the 90 AQS items to be significantly associated with maternal narrative scores and 20 of these items were also significant correlates of AQS security. The positive AQS item correlates (e.g., willing to share, hugs and cuddles with mother, follows suggestions readily, obeys when told to bring something) suggest a warm and mutually satisfying relationship between the child and mother. Similarly, the negative AQS correlates (e.g., child is demanding or impatient with mother, acts like he expects mother to interfere, is easily angered by mother) suggest a relatively more conflicted mother–child relationship. These item-level correlates suggest that mothers who have ready access to a secure-base script interact with their children in a manner that fosters a secure relationship. Although finding these child-relevant correlates of the maternal scriptedness score is consistent with our broader theoretical position regarding secure-base relationships, we caution that our correlation data are intended to be broadly

representative of the sorts of relations expectable for these measures and we do not mean to imply that these items necessarily constitute "the" secure-base correlates of maternal secure-base scriptedness. Studies with larger sample sizes and with observations made across more occasions by more raters will likely find additional significant associations between the Q-sort items and maternal scriptedness.

Our data also make a modest methodological point. From time to time, we have received (negative) feedback about problems that arise from etic approaches to understanding people in sociocultural groups different from the investigators. It is not our intention to enter into the debate about the relative value of emic versus etic approaches here; nevertheless, our data suggest that the measures used in this study transcend (at least some) sociocultural boundaries. In all three sociocultural groups we find a significant association between mothers' secure-base scriptedness and child secure-base behavior. Furthermore, our rater agreement data suggest that one need not be a native speaker of English to accurately score narratives produced by native English speakers. In addition, and importantly, narratives elicited from non-English speakers (Portuguese and Spanish, in our case) can receive valid interpretations and produce reliable and valid scores when translated into English and scored by monolingual English speakers. Portuguese and Italian native speakers were able to decode and score English language narratives with a high degree of fidelity to an English speaker's scores. The English speaker achieved a substantial degree of agreement (from translated protocols) with Portuguese protocols scored from the native language transcripts. Finally, stories translated from Spanish to English were scored by two observers (blind to all other study data), who were not Spanish speakers, and these scores were significantly correlated with AQS scores that had been obtained two or more years prior to the narrative assessments. These findings should encourage researchers in non-English speaking countries that data gathered using the etic procedure can produce valid data about secure-base scriptedness, even if it is necessary to translate the original narratives into English for expert scoring. We are presently preparing a multinational study to test this speculative hypothesis.

We believe that our results constitute evidence for the cross-cultural validity of the Bowlby/Ainsworth attachment theory and of the utility of the AQS and the word-list prompt assessments. Of course, identifying a theoretically consistent link between maternal secure-base representation and child secure-base behavior in different sociocultural groups does not mean that the behavioral mechanism underlying that link has been specified. Just what it is that mothers do (and how they do it) with their children, that leads to the convergence between maternal representation and child behavior remains unexplored here. Traditionally, this link has been identified as "maternal sensitivity to child communicative signals" (Ainsworth et al., 1978) but evidence for sensitivity as a mediating mechanism is equivocal, with some investigators failing to find evidence for mediation (Atkinson et al., 2005) and others reporting that sensitivity mediates between maternal state of mind and attachment security, but only when controlling for relevant demographic and personality variables (Tarabulsy et al., 2005). It is possible that mothers in different sociocultural groups, who endorse different child-rearing values, goals, and practices may link maternal representations to child behavior using different transactional means. To test for such possibilities, it will be necessary to study secure-base

phenomena across several different cultural groups and to include comprehensive assessments of parent–child interaction and parenting values, in addition to measures of secure-base organization. Having demonstrated the possibilities of the word-prompt and Q-sort measures here, we are more confident to initiate larger and more comprehensive studies that will include measures of possible cultural differences that might inform our understandings of both similarities and differences across groups from different sociocultural milieu.

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