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VII. MATERNAL SECURE BASE SCRIPT KNOWLEDGE AND JUDGMENTS OF MOTHER–CHILD INTERACTIONS

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ABSTRACT Previous studies have shown that mothers with high script scores are better at providing secure base support in naturalistic settings. In the current study, we examine whether maternal script knowledge guides mothers' expectations and judgments of mother–child interactions, providing a bridge between their knowledge and behavior. Forty mothers were asked to use a new Parental Secure Base Q-set designed to characterize a typical mother–child play day at a park. Furthermore, video clips from mother–child joint storytelling sessions, already scored for maternal co-construction skills (from Chapter IV), were presented. The mothers rated the videotaped mothers' interaction skills on several quality of interaction scales (sensitivity to signals, cooperation vs. inference, affect regulation). Results indicated that mothers with high script scores showed greater understanding of secure base support (Q-sort data) and an observant "eye" for skillful mother–child interaction, particularly with respect to noting less effective mother–child interactions. These findings support the hypothesis that secure base script knowledge is linked to broad-based understanding of secure base support across contexts.

As already noted in this monograph, Waters and Waters (2006) built upon Bretherton's argument that attachment scripts are the building blocks of attachment representations (Bretherton, 1991; Bretherton & Munholland, 1999) and developed a narrative-based assessment of attachment scripts for adolescents and adults. The Attachment Script Assessment (ASA) not only

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correlates with the Adult Attachment Interview (AAI), but also predicts infants' and young children's attachment status whether assessed by the Strange Situation or the Attachment Q-set (AQS; Tini, Corcoran, Rodrigues-Doolabh, & Waters, 2003; Vaughn et al., 2007; Veríssimo & Salvaterra, 2006; Wong et al., 2011). These findings suggest that maternal secure base script knowledge plays an important role in the development of secure attachment in children. Mothers who have access to and knowledge of a secure base script likely interact with their children in a way that tracks important aspects of the script (i.e., she is sensitive to her child's signals, responds quickly and effectively, diffuses any distress and helps the child reengage with the environment). In turn, the child responds by having confidence in her availability and responsiveness and thus is secure in their relationship.

Several studies, including those in this monograph, go beyond the relation between maternal script knowledge and assessments of child security to link maternal secure base script knowledge to more cognitive-based assessments of mother–child interactions. Bost et al. (2006) demonstrated that maternal script knowledge was positively related to how mothers discussed emotion-laden materials in mother–child reminiscing of shared experiences. Chapters IV and VI of the current monograph relate maternal script knowledge and effective co-construction skills. These findings lead to an interesting question of why mothers with script knowledge excel in situations in which they have an opportunity to discuss attachment-related and emotion-laden events with their children, that is, how does script knowledge translate into attention to, and encoding of, key features of various mother–child interactions?

Secure Base Script Knowledge and Maternal Attention to Interactions

Waters and Waters (2006), in discussing the secure base script, pointed out that scripts of all types impact on social perceptions, expectations, and memory regardless of whether we are dealing with a restaurant script or a secure base script. Furthermore, they proposed that studying script-like representations of secure base experiences should have far-reaching and fundamental implications for understanding attachment-related cognitions, emotions, and behavior. Taking that as our lead, in the current study we explore some of the implications of secure base script knowledge. As the literature has demonstrated, maternal secure base script knowledge is positively related to established behavioral measures of attachment relationships from maternal sensitivity to child secure base behavior. Links to maternal co-construction skills broaden the reach to the cognitive/verbal side of mother–child interaction. But there is a great deal more to explore on the interplay between maternal secure base script knowledge and ongoing, cognitive-based processes that occur during mother–child interactions.

If access to a secure base script establishes a set of expectations of how interactions proceed, mothers asked to describe mother–child interactions should rely upon their script knowledge to fill in the details of an effective interaction and draw their attention to key features of secure base support. In addition, we might anticipate that mothers with access to a secure base script should be more amenable to training that directs their attention to, and encoding of, effective mother–child interactions. Knowing the secure base script should help a mother direct her attention to those features highlighted by the "interaction" training, making her both a better observer and a better learner of secure base support. Such findings would have important implications for how researchers might design attachment interventions in order to help mothers provide effective secure base support. Script knowledge could be a key element in successful outcomes, both in terms of the type of script knowledge mothers bring to the task and specific script-like features of the intervention.

The Current Study

The first goal of the current study was to determine whether secure base script knowledge serves as a basis for mothers' expectations of how an effective mother–child interaction proceeds in a naturalistic setting where mothers typically provide some secure base support. We chose to ask mothers to describe a typical outing with a mother and her 3- to 4-year-old child at a park, and to indicate how this mother would behave with her child so it is a pleasant outing and something they would want to do again. In addition to observations at home, naturalistic observations of maternal secure base support often occur at parks where the child is able to explore and use mom as a secure base (e.g., see studies in this monograph). In order to obtain maternal descriptions, we adapted a parental Q-set that Elliott, Waters, and Gao (2001) developed for describing parental secure base support of preschool children's free play outdoors or in large indoor play centers. We anticipated that mothers with secure base script knowledge, as assessed by the ASA, would produce Q-sort descriptions that better matched an "ideal" sort produced by several attachment researchers.

Our second goal of the study was to test whether secure base script knowledge facilitates learning about secure base support in new contexts. In order to accomplish this, we selected video-taped mother–child joint storytelling sessions from Chapter IV (this monograph) that ranged from high to low scores on maternal co-construction skills. This pool of video-taped mother–child interactions were then scored on several quality of interaction scales (sensitivity to signals, cooperation vs. interference, affect regulation). The high-scoring video clips presented good examples of the interaction scales. The low-scoring clips presented examples of mothers who showed

noticeably less skill on those interaction scales. With these materials in hand, we designed a judgment task that was broken into two phases, the learning phase and the judgment phase. Mothers observed complete storytelling sessions where the experimenter had ample opportunities to point out both good and poor examples of maternal co-construction skills. Once that phase was completed, mothers were asked to view new sets of video clips, partial clips of storytelling sessions that highlighted effective/less effective interactions. Each participant viewed six video clips: three high- and three low-scoring co-construction mother–child pairs. We expected that mothers with secure base script knowledge (ASA) would reflect their training by scoring the presented clips as had the researchers, supporting the hypothesis that their script knowledge enabled them to more effectively encode and apply what they learned in the training phase of the task.

METHOD

Participants

Forty mothers with preschool-aged children were recruited for participation in the study. Some were recruited from flyers posted in community preschools and others recruited from the Psychology Department subject pool. Those recruited from preschools received 20 dollars compensation whereas those recruited from the subject pool received course credit. Seventy-eight percent of the women were white; the remaining were 5% percent Asian, 5% African American, and 12% Hispanic Americans. Their ages ranged from 20 to 47 years, with a mean of 35 years and 6 months and a standard deviation of 6.5 months. Thirty of the mothers were married, one was divorced, another was separated, and the remaining eight were single. The married women had been married from 1 to 16 years. The number of children the women had ranged from one to five, with an average of two children. At the time of the study, 30% of mothers were employed full time, 32% part-time, and 28% were unemployed/stay at home mothers. The remaining 10% reported that they were students. Thirteen percent of the mothers had completed only a high school education, while 32% had completed some college or an associate's degree. Another 30% had completed a bachelor's degree, while a final 25% had received higher degrees.

Procedures

All of the participants were asked to complete the ASA to evaluate their secure base script knowledge. Afterwards, they completed two tasks, one was a

parental Q-set for mother–child interactions at a playground, the other an observational task in which they rated other mothers on the quality of their interactions with their children in video-taped storytelling sessions. Both tasks assessed the participants' understanding of secure base support, one in a naturalistic setting, the other in a more controlled storytelling activity.

Parental Secure Base Q-Set (Playground)

This is a 25-item Q-set describing mother behavior on a typical play day at a park with her 3- to 4-year-old child. The Q-set items are an adaptation of the Elliott, E. Waters, and Gao Parental Secure Base Q-Set (2001) and were written on small 1½ by 5-inch cards. Items included in this Q-set were written to reflect the kinds of parental behavior that occur in naturalistic settings in support of the behaviors included in the standard AQS—Version 3 (Waters, 1995), with additional items to cover support for behaviors specific to free play in such settings (e.g., encounters with other children, ranging out of reach or out of sight). The adaption of the parental Q-set involved reducing the number of items from 49 to 25 items so that Q-sort descriptions were more manageable for the mothers in our sample.

Mothers were instructed to "Imagine you are a typical mom taking her typical 3- to 4-year-old to play in a typical park. You haven't been to this park before, but it has grass and some sand to play in and some toys to climb on. There are also trees and some benches. There are a few other moms and kids around but not too many and no traffic or dogs to worry about." They were then asked to sort the cards to indicate how this typical mom would behave with her typical child so it is a pleasant outing and something they would want to do again. They were not asked to describe themselves in this situation. They were told to start by sorting the cards into three piles, with the left pile containing items that describe how the mother would behave, and the right pile containing items that do not describe how the mother would behave. The middle pile should contain intermediate items. Once the mothers accomplished that, they were asked to further sort the cards into five piles, with five cards in each pile, going from most descriptive of our typical mom to least, from left to right. Mothers were encouraged to read the items carefully and to feel free to adjust the piles until they were satisfied.

In preparation for the study, three attachment experts (researchers with familiarity of Q-sort methodology and extensive observational experience) were asked to provide an "ideal" sort of a secure mother–child pair interacting at the playground using the parental Q-set. Each item on the sort was provided with a 1–5 score reflective of the pile to which it was assigned. A score of "5" represented behavior highly descriptive of the mother–child interaction at the park, with a "1" representing least descriptive behaviors. The three expert sorts were averaged to provide a final score for each Q-set item. Pearson correlations among the three expert Q-sorts ranged from 0.68 to 0.78, with a

Cronbach alpha of 0.89 for the averaged scores. Item scores (pile assignments) from each participant were correlated with the ideal (experts) sort in order to calculate how well the participant's description matched that of an ideal mother–child pair in a secure relationship. Table 1 presents the top and lowest scoring items of the ideal sort. The entire Q-set along with the ideal Q-sort scores is presented in Appendix F.

Judgment Task

Participants viewed video clips of mother–child interactions obtained from the joint storytelling co-construction task from Chapter IV. Before any videotaped materials were used, mothers represented in the videos were contacted and asked whether we could use the collected videotape in the research lab and/or for educational purposes. In order to prepare the materials, high- and low-scoring storytelling sessions on maternal co-construction skills were scored on three 7-point quality of interactions scales, taking advantage of Ainsworth's classic observational scales, adapted for our storytelling co-construction task (Ainsworth, Blehar, Waters, & Wall, 1978/2015). Scale 1 (sensitivity to signals) referred to the mother's ability to perceive and to interpret accurately the signals and communications implicit in her child's behavior, and given this understanding, her ability to respond to the signals appropriately and promptly. Scale 2 (cooperation vs. interference) referred to the extent to which the mother's participation is appropriate in its timing and content. Cooperation maximizes the child's performance by helping the child when

TABLE 1

PARENTAL SECURE BASE Q-SET—PLAYGROUND (25 ITEMS)—TOP AND LOWEST ITEMS

Top items describing ideal mother behavior (5 to 4.33 scores)—attachment experts
• If child gets upset, parent comes close, offers contact, comforts, and helps transition back to play
• Parent readily stops conversation, reading, etc. to supervise or respond to child
• Responds when the child is talking about his actions
• Parent lets the child know she's watching and enjoying his play
• Keeps an eye on what the child is doing and on what the child may do next
• Helps child perform activities that are difficult/challenging for this child
Lowest items describing ideal mother behavior (1.0–1.67 scores)—attachment experts
• Parent ignores bids for attention (e.g., Mommy watch! Mom ignores or only cursory response w/ no further attention)
• Forces child to do things (s)he is afraid to do (key: interfering. Child's distress minimizes benefits of exploration)
• Make clear that there cannot be any misbehaving or they will have to stop playing
• Responds harshly to risky or unsafe behavior the first time it occurs (e.g., parent sees child throw sand or a stone and approaches, raises voice, angry face, threatens and/or slaps on hand or picks child up harshly and carries away from scene of the crime)
• Encourages child to do things even if (s)he is not interested in them at first

"stuck," while still allowing him to direct the storytelling; picking up on something the child says and further developing it with him. Interference is evident in intrusive behavior that disrupts the flow of the child's storytelling. Finally, Scale 3 (affect regulation) referred to the manner in which the mother deals with both positive and negative affect displayed by the child, with the goal of keeping the child engaged in the task. Effective affect regulation involves moderating child's excitement level so the child stays engaged, keeping the task fun and avoiding boredom, keeping the child from experiencing uncertainty in his progress/success and preventing child from being frustrated.

Two raters, new to these video-taped storytelling sessions, scored the high and low storytelling co-construction sessions ($N = 11$, high co-construction mother–child pairs, and $N = 11$ for low co-construction pairs). Rater scores were within one point on 80% of the scales across sessions, and correlations between raters ranged from 0.45 to 0.56. The raters' scores were averaged for the individual interaction scales and composited for an overall quality of interaction score as well. Cronbach's alpha coefficient for the composite score was 0.74. A *t*-test comparison of composite scores from the high and low co-construction mother pairs (mean interaction scores 5.8, $SD = 0.56$ vs. 4.9, $SD = 0.87$) produced a significant result, $t(20) = 2.63$, $p < .02$, two-tailed test, verifying that there was a difference in the quality of interaction between high and low co-construction mother–child pairs. Selection of video clips for the judgment task was guided by the interaction scale scores and researchers' judgment on what would constitute good examples of effective mother–child interaction.

The judgment task itself was broken into two phases. The first was a training phase in which participant and experimenter jointly viewed storytelling sessions including mother–child pairs scored on the high and low end of effective co-construction. The goal of the training was to explain the three interaction scales mothers would be using to rate additional video-taped mother–child pairs from the storytelling task (Phase II). In Phase I, complete storytelling sessions were used so that the experimenter could stop the videotape on numerous occasions to point out effective and ineffective examples of the three interaction scales (sensitivity to signals, cooperation vs. interference, and affect regulation). Individual storytelling sessions that were viewed ranged from 3 to 5 min; two sets of storytelling sessions were used to provide some variability in materials included in the study. Initially the participant viewed the entire storytelling session with no commentary from the experimenter. Then the experimenter went through the videotape with the participant explaining selected examples of high and low scores on the interaction scales. These stops were standardized across participants. All participants viewed one storytelling session in which the mother scored high on the interaction scales, and then a second session in which the mother scored low on the interaction scales. After the three scales were fully explained and all questions from the participant were answered, Phase II was initiated.

In Phase II, participants were asked to view six video clips of mother–child joint storytelling: three in which the mothers received high scores on the interaction scales, and three in which they received low scores. The clips included both male and female children, all within the 4 to 5 years age range since they were obtained from the Chapter IV study. The high and low clips were randomly arranged so that positive or negative clips did not appear in a row beyond that of two similar clips. These clips were not complete storytelling sessions. Instead, they were short clips that highlighted features that captured the sense of the three interaction scales, and ranged from 60 to 105 s. Participants were given control of the presentation of the video clips (remote control) and asked to view the clips and then rate them on the 7-point scales representing sensitivity to signals, cooperation versus interference, and affect regulation. Although the training phase included more detail and explanation, the rating sheets that the participants used provided single paragraph descriptions of the scales (see Table 2) as they viewed each video clip and rated the mother in the clip on the three interaction scales. These descriptions served as a focal point and further standardized the task across participants. Participants were also told that they were free to stop, pause, and rewind as they wished, and were in fact encouraged to watch each clip at least three times, one for each scale.

RESULTS

The first section presents the results from the mothers' descriptions of an enjoyable outing at a park (parental Q-set task). The second section presents the results of the judgment task, that is, their assessments of the video-taped

TABLE 2

QUALITY OF MOTHER–CHILD INTERACTION SCALES (7-POINT SCALES)—JUDGMENT TASK

Sensitivity to signals	
	Attentiveness to child's signals, may look at the child, lean toward the child. Mother respond to the child's signals that he/she needs a hint to continue story, or that they need reassurance that their interpretation of the story is correct
Cooperative versus interfering	
	Degree to which mom's interventions or initiations facilitate or interrupt the child's ongoing storytelling. Cooperation can take the form of helping when the child is stuck, picking up what the child says and further developing it with them, going with the child's pace, not rushing him/her
Affect regulation	
	Moderates child's excitement to guarantee their engagement, keeps the child interested and makes the interaction fun, keeps the child from experiencing uncertainty

Note. These brief descriptions of the three interaction scales were printed on the rating sheets to remind mothers of the scale descriptions which were more detailed during the training phase of the judgment task.

interactions of mother–child joint storytelling. For both tasks, the relation to maternal secure base script knowledge is examined.

Relations Between Maternal Script Knowledge and Descriptions of Secure Base Support

Mothers' attachment narratives from the ASA were scored by two independent scorers on the 7-point scriptedness scale (Waters & Rodrigues-Doolabh, 2004). Disagreements higher than two points on the 7-point scale are typically discussed and then rescored independently. However, with this sample, all raters' scores were within two points. ICCs for the four attachment narratives from the ASA ranged from 0.75 to 0.88. Correlations among the averaged script scores of the four attachment narratives ranged between 0.43 and 0.65, and were all significant at $p < .01$. Cronbach's alpha coefficient for the mothers' composite script scores was 0.88. The mean composite script score (averaged across all four attachment narratives) was 3.87, $SD = 1.05$, with a range of mean script scores from 1.9 to 6.5.

With regard to the Q-sort data, item scores (pile assignments) from each participant were correlated with the ideal sort in order to calculate how well the participant's description matches that of an ideal mother–child pair in a secure relationship at the park. These correlations ranged from −.01 to 0.58, with a mean of 0.32, $SD = 0.17$. The correlation between mother's script scores and their Q-sort agreement with the ideal sort produced by attachment researchers was $r = 0.44$, $p < .01$, two-tailed test, indicating that mothers with secure base script knowledge have greater understanding of secure base support in a naturalistic setting such as that of a park. Education level (four levels: high school, some college, BA/BS degree, graduate degree) was not related to the Q-sort data, $r = .02$, *ns*, nor was it significantly related to mothers' script scores, $r = 0.24$, *ns*, although the correlation was not zero. The partial correlation between maternal script scores and Q-sort data, controlling for education level, remained at 0.44, $p < .01$, two-tailed test. As noted in previous chapters, the role of education or general intellectual skills may have a greater impact in more diverse, more at-risk samples.

Relations Between Maternal Script Knowledge and Judgments of Mother–Child Interactions

Individual mothers' ratings on each interaction scale were averaged for the three high- and the three low-scoring co-construction video clips of joint storytelling. Table 3 presents the mean ratings for high- and low-scoring clips across the three intersection scales. A 2 (high/low clips) by 3 (scales) within-subjects analysis of variance produced two significant main effects. Overall, mothers consistently gave effective co-construction clips higher scores on the

TABLE 3

MOTHERS' MEAN RATINGS OF MOTHER–CHILD INTERACTIONS AND CORRELATIONS WITH SCRIPT KNOWLEDGE

	Mean Rating Scores (7 to 1 Scale)	
	High-Scoring Clips	Low-Scoring Clips
Sensitivity to signals	5.46	3.17
	$SD = 0.93$	$SD = 1.11$
Cooperation vs. interference	4.98	2.81
	$SD = 0.99$	$SD = 1.05$
Affect regulation	5.58	2.92
	$SD = 1.00$	$SD = 1.12$
–		
	Correlations between mother's script scores and their ratings of mother–child interactions	
Scripts and sensitivity	.03	$-.29^{\dagger}$ (.26)
Scripts and cooperation vs. interference	.09	$-.33^{*}$ (.32*)
Scripts and affect regulation	−.10	$-.32^{*}$ ($.29^{\dagger}$)

Note. Partial correlations with education level controlled are in parentheses.
$^{*}p < .05$, $^{\dagger}p < .10$.

three interaction scales, $F(1, 39) = 160.89$, $p < .001$. In addition, there was a smaller, but significant difference among scales, with slightly lower scores for the cooperation versus interference scale, $F(2, 78) = 11.56$, $p < .001$. A Newman–Keuls post hoc test indicated that there was no significant difference in mean scores between the sensitivity to signals and affect regulation scale scores, but that the cooperation versus interference scale scores were significantly lower compared to the other scales, $p < .01$.

Our key study question was whether mothers with higher attachment script scores were better judges of the mother–child interactions (see bottom of Table 3). For each type of clip (high- and low-scoring co-construction clips), and each of the three interaction scales, mothers' script scores were correlated with their averaged ratings for the three high- and three low-scoring clips. We used more conservative two-tailed tests due to the small sample size, although we were testing unidirectional hypotheses. Partial correlations with education level controlled are also presented in Table 3. Education was not significantly related to the scale scores, but *r*s ranged from .05 to 0.17. Interestingly, mothers with higher script scores had a particularly "good eye" for low-scoring interactions, giving those video clips relatively lower scores compared to mothers with lower secure base script scores. In contrast, there was no link between script scores and ratings for the high-scoring co-construction video clips. All of the mothers seemed

to know a smooth interaction when they saw it. Mothers with secure base script knowledge appear to benefit more from the training on the three interaction scales, and were better adept at applying the scale descriptions to the presented mother–child video clips in that they picked up on the "rough edges" of the low scoring interactions. Mothers without script knowledge did give lower scores for the low scoring co-construction video clips as well, but were not as pronounced. The strong main effect of type of video clips reported in the analysis of variance above indicates that all mothers participating showed some performance effects in response to training.

Table 4 presents all the intercorrelations between maternal script scores, Q-sort performance, and composite interaction ratings, along with partial correlations with education level controlled, two-tailed tests. For the judgment task, we averaged the mothers' assigned scores on the individual interaction scales for the high- and low-scoring co-construction clips in order to use an overall interaction score for each type. The correlations among mothers' scores for the three scales for the high-scoring clips ranged from 0.57 to 0.81, Cronbach's alpha = 0.86, whereas the correlations among the scales for the low-scoring clips ranged from 0.65 to 0.81, Cronbach's alpha = 0.89. It is important to note that the composite interaction score correlations reflect the patterns we see with the individual scale data in Table 3, and are significant with and without education controlled. It is also worth noting that the two tasks (Q-sort descriptions, judging interactions) were not correlated although both were significantly related to maternal secure base script knowledge. Most likely this can be explained by differing task demands. But perhaps the more important conclusion is that the availability of a secure base script is linked to broad-based understanding of secure base support across different situations.

TABLE 4

CORRELATIONS AMONG MATERNAL SCRIPT KNOWLEDGE, JUDGMENTS OF PLAYGROUND INTERACTIONS (Q-SORT), AND JUDGMENTS OF VIDEO-TAPED MOTHER–CHILD INTERACTIONS

	Script Knowledge	Playground Interactions	Overall Ratings of Mom Interaction Skills (Low-Scoring Clips)
Overall ratings mom interaction skills (high-scoring clips)	.01	.10	.19
Overall ratings mom interaction skills (low-scoring clips)	−.34* (−.32*)	−.03	
Playground interactions	.44** (.44**)		

Note. Partial correlations with education level controlled are in parentheses.
**$p < .01$, *$p < .05$.

DISCUSSION

The current investigation examined the interplay between secure base script knowledge and mother's expectations and judgments of mother–child interactions in two different tasks. High-script mothers were better able to describe effective secure base support in a naturalistic setting such as a playground. These same mothers showed better skills in learning how to observe and evaluate mother–child joint storytelling sessions in terms of maternal interactive skills. In particular, they were more likely to pick up on rough edges in the mother–child interactions they viewed and gave them lower scores on our interaction scales. These findings support our hypothesis that secure base scripts frame an individual's expectations of how mother–child interactions proceed in a range of contexts, impacting both their observational skills and their judgments of what constitutes effective interactions.

Very likely these findings are in part due to years of experience with secure base relationships. Most of the mothers were married and had many years of experience with their own children. Through the back and forth of interaction with their own children, mothers with secure base script knowledge may very well enrich and elaborate upon the secure base script they brought to their relationship with their children. That enrichment may in turn further guide their attention to, and encoding of, ongoing interactions with their children. But without a secure base script as a starting point, there is no dynamic interplay leading to increasing maternal skill in applying their script knowledge and providing effective secure base support.

Studies in the last few years have reported evidence of a generalized secure base script in both adolescent and adult samples (Waters et al., 2015) and even in some findings from late middle childhood (Boldt, Waters, & Kochanska, 2017; Waters et al., 2017), supporting our interpretation that script knowledge tends to be broad based. Confirmatory factor analyses indicated an underlying latent generalized script knowledge that encompassed a range of attachment narratives included in the different age-appropriate ASAs. Nonetheless it is possible that there are components of relationship-specific scripts and the move to more broad-based script representation is influenced by developmental processes and experience. By adulthood, however, it is likely that mothers bring to bear fairly generalized secure base scripts that can be adapted to any number of contexts although the script must be instantiated in specific contexts and therefore should be amenable to learning.

Consequently, we might argue that the dyadic, dynamic relationship between mother and child is an opportunity to build upon and elaborate secure base script knowledge for both. Whereas mothers with secure base script knowledge may come to the task of interacting with their preschoolers

ready and able to discuss emotion-laden and attachment-relevant content (see earlier chapters in monograph) and with expectations about smooth and effective interactions (this study), mothers without secure base script knowledge may fall short. To the degree that secure base script knowledge provides a framework for informing a parent's cognitions (i.e., shaping ideas and evaluations of how to be available to the child), the ability to assess script knowledge could be an important tool for screening individuals in different parenting interventions. Explicitly building secure base script knowledge into parenting skills training may also help establish such representations in the parent and promote secure base script knowledge in their children. The work on early script development has demonstrated that preschoolers are adept at encoding commonalities across individual events and experiences, and that their scripts become more elaborate over time, and with experience (Fivush & Slackman, 1986; Nelson & Gruendel, 1986). The co-construction findings of this monograph suggest that a parental partner with secure base script knowledge could help frame a young child's experience and lead to effective attachment script representation.

In sum, the current study provides evidence that a mother with secure base script knowledge "sees" mother–child interactions through a secure base lens. That certainly explains the current findings, as well as many of the co-construction results presented earlier. But these findings should be coupled with the literature on early script development that suggests that young children play an important role in the construction of their own scripts, albeit with some help and guidance from their parents or other adults, even siblings. We hope the dynamic relationship framework emphasized in this monograph will lead to new research on the interplay between maternal and child representational organization, and that different approaches to attachment interventions (e.g., Berlin, Zeanah, & Lieberman, 2016; Bernard et al., 2012; Powell, Cooper, Hoffman, & Marvin, 2014) incorporate some of the insights that arise from this work.

REFERENCES

Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978/2015). *Patterns of attachment.* Hillsdale, NJ: Erlbaum.

Berlin, L. J., Zeanah, C. H., & Lieberman, A. F. (2016). Prevention and intervention programs to support early attachment security: A move to the level of the community. In J. Cassidy & P. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (3rd ed., pp. 739–758). New York, NY: Guilford Press.

Bernard, K., Dozier, M., Bick, J., Lewis-Morrarty, E., Lindheim, O., & Carlson, E. (2012). Enhancing attachment organization among maltreated children: Results of a randomized clinical trial. *Child Development*, **83**, 623–636.

Boldt, L. J., Waters, T. E. A., & Kochanska, G. (2017). *Generalization of attachment across mother- and father-child relationships: A longitudinal study from 15 months to 12 years.* Paper presented at a Symposium "The secure base script in middle childhood and early adolescence: Construction, organization, and impacts on psychopathology" at the Biennial Meeting of the Society for Research in Child Development, Austin, TX.

Bost, K. K., Shin, N., McBride, B. A., Brown, G. L., Vaughn, B. E., Coppola, G., et al. (2006). Maternal secure base scripts, children's attachment security, and mother-child narrative styles. *Attachment & Human Development*, **8**, 241–260.

Bretherton, I. (1991). New wine in old bottles. In M. Gunnar & L. A. Sroufe (Eds.), *Concepts of self. Minnesota Symposia on Child Psychology* (Vol. 23, pp. 1–34). Hillsdale, NJ: Erlbaum.

Bretherton, I., & Munholland, K. A. (1999). Internal working models in attachment relationships: A construct revisited. In J. Cassidy & Ph. R. Shaver (Eds.), *Handbook of attachment. Theory, research, and clinical applications* (pp. 89–111). New York, NY: Guilford Press.

Elliott, M. E., Waters, E., & Gao, Y. (2001). *Attachment representations and secure base support of young children: Are mothers and fathers different?* Minnesota: Paper presented at the Biennial Meetings of the Society for Research in Child Development.

Fivush, R., & Slackman, E. (1986). The acquisition and development of scripts. In K. Nelson (Ed.), *Event knowledge: Structure and function in development* (pp. 71–96). Hillsdale, NJ: Erlbaum.

Nelson, K., & Gruendel, J. (1986). Children's scripts. In K. Nelson (Ed.), *Event knowledge: Structure and function in development* (pp. 21–46). Hillsdale, NJ: Erlbaum.

Powell, B., Cooper, G., Hoffman, K., & Marvin, B. (2014). *The circle of security intervention: Enhancing attachment in early parent-child relationships.* New York, NY: Guilford Press.

Tini, M., Corcoran, D., Rodrigues-Doolabh, L., & Waters, E. (2003, April). *Maternal attachment scripts and infant secure base behavior.* Paper presented at the Biennial Meetings of the Society for Research in Child Development, Tampa, FL.

Vaughn, B. E., Coppola, G., Veríssimo, M., Monteiro, L., Santos, A. J., Posada, G., et al. (2007). The quality of maternal secure base scripts predicts children's secure base behavior at home in three socio-cultural groups. *International Journal of Behavioral Development*, **31**, 65–76.

Veríssimo, M., & Salvaterra, F. (2006). Maternal secure-base scripts and children's attachment security in an adopted sample. *Attachment & Human Development*, **8**, 261–273.

Waters, E. (1995). The attachment Q-set, Version 3.0 [Appendix A]. In E. Waters, B. Vaughn, G. Posada, & K. Kondo-Ikemura (Eds.), *Monographs of the Society for Research in Child Development* (Vol. 60, 2–3, Serial No. 244, pp. 234–246). https://doi.org/10.1111/j.1540-5834.1995.tb00214.x

Waters, H. S., & Rodrigues-Doolabh, L. (2004). *Manual for decoding secure base narratives.* Unpublished manuscript, State University of New York at Stony Brook.

Waters, H. S., & Waters, E. (2006). The attachment working model concept: among other things, we built script-like representations of secure base experiences. *Attachment & Human Development*, **8**, 185–197.

Waters, T. E. A., Facompre, C., Dujardin, A., Van de Walle, M., Boldt, L. J., Kochanska, G., et al. (2017). *Discontinuity in the latent structure of the secure base script: Taxonomics reveal a representational shift in middle childhood.* Paper presented at a Symposium "The secure base script in middle childhood and early adolescence: Construction, organization, and impacts on psychopathology" at the biennial meeting of the Society for Research in Child Development, Austin, TX.

Waters, T. E. A., Fraley, R. C., Groh, A. M., Steele, R. D., Vaughn, B. E., Bost, K. K., et al. (2015). The latent structure of secure base script knowledge. *Developmental Psychology*, **51**, 823–30.

Wong, M., Bost, K. K., Shin, N., Verissomo, M., Maia, J., Monteiro, L., et al. (2011). Preschool children's mental representations of attachment: Antecedents in their secure base behaviors and maternal attachment scripts. *Attachment & Human Development*, **13**, 489–502.