

Scripted knowledge about attachment and social competence in preschoolers: overview

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ABSTRACT

The papers in this special issue of *Attachment & Human Development* address questions concerning relations between attachment representations and social competence during early childhood in samples from five different countries. All studies examined these questions using the concept of the "secure base script" that has been widely studied in samples of adults, adolescents, and school-age children. In all samples, the secure base script was scored from attachment-relevant narratives elicited from children in a doll-play task. Consistent with existing literatures, the secure base script score had positive and significant associations with adult ratings of child social competence, even in the presence of potential confounding covariates.

KEYWORDS

Attachment representation;
preschool; secure base
script; social competence

This special issue of *Attachment & Human Development* presents findings from six independently conducted studies that investigated secure base scripts (i.e., attachment representations) in preschool age children and their implications for child adaptive functioning with peers in five different countries. More specifically, the studies explored whether attachment representations conceptualized and assessed as secure base scripts in young children are associated concurrently with children's social competence during early childhood in both preschool and family contexts. The studies were conducted in Korea, Mexico, Peru, Portugal, and the United States. In each study, children's representations of attachment were assessed using the Attachment Story Completion Task (ASCT), scored for the presence and quality of the secure base script. Information about young children's social competence (SC) was obtained from preschool teachers in the Mexican, Portuguese and the two USA samples but for the samples from Korea and Peru, information concerning social competence was obtained from mothers. In the Portuguese study, additional assessments of problem behaviors were also included as dependent variables and in one US sample, additional social competence variables were included in analyses.

John Bowlby and Mary Ainsworth's attachment theory highlights the role of the primary caregiver as a secure base from which an infant can explore and learn about the environment, and as a context for socialization and the development of expectations

about interactions and relationships in general. Bowlby (1969/1982, 1988) suggested that children who experience a rearing environment in which they are consistently successful when they seek support, comfort, or protection from their attachment figures acquire a sense of trust in those figures' availability and responsiveness to their communicative signals. Further, he argued that those children who are able to co-construct that sense of trust with their caregiver(s) also approach the larger social world with confidence and will be likely to sort out challenges and obstacles in that world effectively or, alternatively, would be comfortable seeking help from others with greater skills and/or authority in resolving those challenges. On the other hand, Bowlby argued that children who grow up in less fortunate circumstances would come to see the world as comfortless, unpredictable, and perhaps dangerous. These children would be more likely to respond to that world by withdrawing from it or by struggling against it.

Indeed, attachment researchers have documented associations between the organization of children's attachment behavior, from which attachment security is inferred, and SC. This pathway of relations was anticipated by Waters and Sroufe (1983) and has been instantiated by multiple studies reporting that individual differences in early attachment security (i.e. securely vs. anxiously attached in the early years) significantly predicted ratings of SC when interacting with peers and non-parental adults (e.g. Berlin, Cassidy, & Appleyard, 2008; Groh et al., 2014; Pallini, Baiocco, Schneider, & Atkinson, 2014; Schneider, Atkinson, & Tardiff, 2001; Thompson, 2016). Those findings lend support to the notion that child-parent attachment relationships are foundational elements of individual character that are implicated in children's socialization outcomes as they navigate other social arenas.

The association between attachment security and SC is an important finding that needs to be investigated and explained. That is, the significant association between attachment security and social competence that has been well documented in published research begs the question of how is it that the organization of infant/child behavior, when interacting with primary caregiver(s), carries over and is related to the child's social interactions and relationships in new social contexts? In other words, an account is needed for the pathways through which child-parent attachment relationships influence children's interactions with others. One of the mechanisms hypothesized to account for this association is concerned with the knowledge acquired in the child's transactions with attachment figures. Bowlby (1973, 1988) proposed the concept of an "internal working model" to capture the idea that children acquire knowledge and build mental representations of relationships, themselves, and others in relationships, based on their experiences in interactions with attachment figures. He further suggested that this knowledge is used to negotiate relational issues not only in child-mother exchanges, but also with other social partners in different contexts. That is, children use internal representations of attachment figures to inform their navigation of the wider social world of peers and adults encountered in novel contexts such as preschools.

The secure base script

Bowlby (1969/1982, 1973) assumed that internal working models were "real" in the sense that they accomplished specific functions relevant (ultimately) to the survival of the individual and (proximally) to the individual's day-to-day social/emotional

adaptation to current social contexts. However, he never settled on a specific structural characterization of representational processes for storing and retrieving attachment-relevant information that could influence the construction of future attachment relationships. Moreover, he never explicitly operationalized the construct and did not specify either its content or structure (Hinde, 1988; Thompson, Laible, & Ontai, 2003; Waters, Ruiz, & Roisman, 2017). However, as attachment theory and research evolved over the last three decades, it has become clear that questions concerning the nature of attachment information and how this information¹ is organized require an explanation.

Drawing on advances in the study of cognition and mental representation in young children, Bretherton (1987, 1990, 1991) suggested that the notions of event schemas and scripts could be used to conceptualize and study the development of internal working models of attachment relationships. Scripts are mental structures that organize knowledge and inform our understanding of the world. They consist of mentally represented, related sequences of actions that characterize frequently experienced events and, in turn, guide expectations and behaviors in everyday situations similar to those experiences (Nelson, 1986). Scripts are organized around a goal. The recurring experience of a particular event creates an internalized representation of the likely temporal-causal sequence of actions, participants, and props within the context of the event. In brief, children construct a cognitive structure of the order in which events transpire when they are exposed repeatedly to the same context (e.g. eating a meal, getting a haircut, going to the grocery store, being comforted by an attachment figure). Bretherton (1991) suggested that attachment scripts could be construed as representational building blocks that are derived from actual child-parent transactions. She further suggested that those representations are organized at different levels of a hierarchy from very experience-near to a more general representation (i.e. schemata) that subsumes a variety of lower-level generalized events. So, for example, a child may experience a range of different "comforting" contexts (e.g., when tired, when injured, when hungry, when frightened) and co-construct experience near scripts for each context and these are, in turn, subordinate to a more general "my caregiver is available to comfort me when needed" script.

More recently, Harriet Waters (e.g. Waters, Rodrigues, & Ridgeway, 1998; Waters & Waters, 2006) proposed that one set of mental representations about attachment relationships could be construed as a higher level secure base script. Drawing on Bretherton's idea that script representations are the building blocks of attachment internal working models and using the secure base phenomenon construct (Ainsworth, 1967; Bowlby, 1988), H. Waters and colleagues suggested that early secure base experiences characteristic of child-caregiver interactions are represented cognitively as a secure base script (SBS; Waters & Waters, 2006). This script contains several key elements. Specifically, its sequence involves, (1) active engagement of child or caregiver-child dyad in the environment, (2) an interruption of interaction by an obstacle (e.g., child hurts knee), (3) a bid for help that is recognized by the caregiver, (4) the caregiver offers help that is accepted by the child, (5) the help is effective in overcoming the problem, and (6) a return to normalcy. Because scripts are powerful cognitive tools that assist memory, anticipation, planning, and action guidance in related experiences (Kuebli & Fivush, 1994; Nelson, 1986; Waters & Waters, 2006), it is likely that a history of consistent secure base support results in accessible, complete, and clear (i.e., those

containing all key elements) secure base scripts that are readily available when presented with attachment-relevant events (Waters & Waters, 2006).

A growing body of research supports the notion that the SBS can be assessed from narratives about attachment-related events (Waters et al., 1998; Waters & Waters, 2006). Use of the Attachment Script Assessment (ASA) in attachment research has increased over the past decade or so. Empirical support for its validity has been robust in studies conducted with adults (Schoenmaker et al., 2015; Steele et al., 2014; Waters, Brockmeyer, & Crowell, 2013), adolescents (Dykas, Woodhouse, Cassidy, & Waters, 2006), and older children (Waters, Bosman, Vandervivere, Dujardin, & Waters, 2015). The script approach has not been widely used to study attachment representations during early childhood (but see Posada & Waters, 2018), despite the fact that the script approach had its beginnings in a study of young children's attachment-relevant stories elicited in a story completion task (Waters et al., 1998). In this special issue, we return attention to mental representations of attachment during the preschool years using narratives obtained using the *Attachment Story Completion Task*, (ASCT; Bretherton, Ridgeway, & Cassidy, 1990).

The studies reported in this special issue address methodological issues associated with assessing the secure base script (SBS) from narratives obtained from preschool age children and relations between the presence and use of the secure base script in preschoolers' attachment-related stories and a range of adaptive behaviors, including SC, assessed using adult (i.e. teachers or mothers) reports, direct observations, and standardized tests of verbal intelligence. Each of the substantive studies test the hypothesis that children's secure base script representations are significantly associated with reports about their social competence as well as with other indicators of adaptive social and cognitive functioning in the preschool setting, such that children with highly scripted secure base knowledge would be rated as more well adapted by adults in a preschool or home setting. In every substantive study, the SC construct was assessed and the association between SBS and SC unifies the set of studies.

The initial paper describes the protocol followed in each study to collect the child narratives, so as to reduce the redundancy across papers regarding this procedural detail. It also presents the scoring protocols that were used in the several studies in terms of their relation to the protocol described in the original Waters et al. (1998) study and in terms of their relations with each other. In addition, validation data for each protocol is provided (i.e., relations between these SBS scores and other attachment-relevant measures for early childhood). The following three papers present data from four samples (two from the USA, one from Portugal, and one from Mexico) testing the hypothesis that young children's SBS scores are positive, significant correlates of teacher-rated social competence. The last of these three papers and the next paper in the issue (presenting data from Peru and Korea) test the same hypothesis but mothers rather than teachers are the informants. The Korean study and the sixth study (using one of the USA sample reported on in the second substantive paper) also test relations between the SBS score and a range of domains relevant to adaptive functioning in early childhood (e.g. aspects of maternal and child conversational styles, teacher/child relationship quality, executive functioning, verbal IQ, temperamental effortful control).

In a recent review of the literature on the topic of the cross-cultural generality of attachment theory and the implications of attachment relationships for people outside of middle-class, Caucasian, industrialized countries, Mesman, van Uzendoorn, and Sagi (2016)

argued that very few studies have explicitly addressed this topic and they called for more research. The studies presented here clearly constitute one response to this call. Because the studies were conducted in five different countries with very different socio-cultural constraints (despite being generally "middle" or "upper-middle" class by the standards of their local communities, we were able to examine the generality of the security-SC link in distinctly different cultural contexts. The results of the studies will speak for themselves.

Disclosure statement

No potential conflict of interest was reported by the authors.

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References

- Ainsworth, M. D. S. (1967). *Infancy in Uganda: Infant care and the growth of love*. Baltimore: Johns Hopkins University Press.
- Berlin, L. J., Cassidy, J., & Appleyard, K. (2008). The influence of early attachments on other relationships. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research and clinical applications* (pp. 333-347). New York, NY: The Guilford Press.
- Bowlby, J. (1969/1982). *Attachment and loss* (Vol. I). Attachment. New York, NY: Basic Books Inc.
- Bowlby, J. (1973). *Attachment and loss* (Vol. II). Separation. New York, NY: Basic Books Inc.
- Bowlby, J. (1988). *A secure-base*. New York, NY: Basic Books Inc.
- Bretherton, I. (1987). New perspectives on attachment relations: Security, communication, and working models. In J. Osofsky (Ed.), *Handbook of infant development* (2nd ed, pp. 1061-1100). New York, NY: Wiley.
- Bretherton, I., Ridgeway, D., & Cassidy, J. (1990). Assessing internal working models of the attachment relationship: An attachment story completion task for 3-year-olds. In M. Greenberg, D. Cicchetti, & E. M. Cummings (Eds.), *Attachment in the pre-school years: Theory, research and intervention* (pp. 273-308). Chicago: The University of Chicago Press.
- Bretherton, I. (1990). Open communication and internal working models: Their role in the development of attachment relationships. In R. Thompson (Ed.) *Nebraska Symposium on Motivation: Vol 36. Socio-emotional development* (pp. 57-113). Lincoln, NE: University of Nebraska Press.
- Bretherton, I. (1991). Pouring new wine into old bottles: The social self as internal working model. In M. Gunnar & L. A. Sroufe (Eds.), *Self-processes and development. Minnesota symposia on child psychology* (Vol. 23, pp. 1-41). Hillsdale, NJ: Earlbaum.
- Dykas, M. J., Woodhouse, S. S., Cassidy, J., & Waters, H. S. (2006). Narrative assessment of attachment representations: Links between secure base scripts and adolescent attachment. *Attachment & Human Development*, 8, 221-240.
- Groh, A. M., Roisman, G. I., Booth-LaForce, C., Fraley, R. C., Owen, M. T., Cox, M. J., & Burchinal, M. R. (2014). The adult attachment interview: Psychometrics, stability and change from infancy, and developmental origins: IV. Stability of Attachment Security from Infancy to Late Adolescence. *Monographs Of The Society for Research in Child Development*, 79(3), 51-66.
- Hinde, R. A. (1988). Continuities and discontinuities. In M. Rutter (Ed.), *Studies of psychosocial risk: The power of longitudinal data* (pp. 367-384). Cambridge, England: Cambridge University Press.
- Kuebli, J., & Fivush, R. (1994). Children's representations and recall of event alternatives. *Journal of Experimental Child Psychology*, 58, 25-45.

- Mesman, J., van IJzendoorn, M. H., & Sagi-Schwartz, A. (2016). Cross-cultural patterns of attachment: Universal and contextual dimensions. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research and clinical applications* (pp. 852-877). New York, NY: The Guilford Press.
- Nelson, K. (1986). Event knowledge and cognitive development. In K. Nelson (Ed.), *Event knowledge: Structure and function in development* (pp. 231-247). Hillsdale, NJ: Erlbaum.
- Pallini, S., Baiocco, R., Schneider, B. H., & Atkinson, L. R. (2014). Early child-parent attachment and peer relations: A meta-analysis of recent research. *Journal of Family Psychology*, 28, 118-123.
- Posada, G., & Waters, H. S. (2018). The mother-child attachment partnership in early childhood: Secure base behavioral and representational processes. *Monographs of the Society for Research in Child Development* (Serial No. 331, Vol. 83, No. 4, pp. 1-185).
- Schneider, B. H., Atkinson, L. R., & Tardif, C. (2001). Child-parent attachment and children's peer relations: A quantitative review. *Developmental Psychology*, 37, 86-100.
- Schoenmaker, C., Juffer, F., van IJzendoorn, M. H., Linting, M., van der Voort, A., & Bakermans-Kranenburg, M. J. (2015). From maternal sensitivity in infancy to adult attachment representations: A longitudinal adoption study with secure base scripts. *Attachment & Human Development*, 17, 241-256.
- Steele, R. D., Waters, T. E. A., Bost, K. K., Vaughn, B. E., Truitt, W., Waters, H. S., & Roisman, G. I. (2014). Caregiving antecedents of secure base script knowledge: A comparative analysis of young adult attachment representations. *Developmental Psychology*, 50, 2526-2538.
- Thompson, R. A., Laible, D. J., & Ontai, L. L. (2003). Early understandings of emotion, morality, and self: Developing a working model. In R. V. Kail (Ed.), *Advances in child development and behavior* (pp. 137-171). San Diego: Academic Press.
- Thompson, R. A. (2016). Early attachment and later development: Reframing the questions. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research and clinical applications* (pp. 330-348). New York, NY: The Guilford Press.
- Waters, E., & Sroufe, L. A. (1983). Social competence as a developmental construct. *Developmental Review*, 3, 79-97.
- Waters, H. S., Rodrigues, L. M., & Ridgeway, D. (1998). Cognitive underpinnings of narrative attachment assessment. *Journal of Experimental Child Psychology*, 71, 211-234.
- Waters, H. S., & Waters, E. (2006). The attachment working models concept: Among other things, we build script-like representations of secure base experiences. *Attachment & Human Development*, 8(3), 185-197.
- Waters, T. E. A., Bosmans, G., Vandevivere, E., Dujardin, A., & Waters, H. S. (2015). Secure base representations in middle childhood across two Western cultures: Associations with parental attachment representations and maternal reports of behavior problems. *Developmental Psychology*, 57, 1013-1025.
- Waters, T. E. A., Brockmeyer, S. L., & Crowell, J. A. (2013). AAI coherence predicts caregiving and care seeking behavior: Secure base script knowledge helps explain why. *Attachment & Human Development*, 15, 316-331.
- Waters, T. E. A., Ruiz, S. K., & Roisman, G. I. (2017). Origins of secure base script knowledge and the developmental construction of attachment representations. *Child Development*, 88, 198-209.