

# Towards Assessing Attachment on an Emotional Security Continuum

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## *Abstract*

The report by Fraley and Spieker serves to remind the discipline of the possible virtues of assessing attachments on continua, a practice that has a long history in attachment research. This commentary further develops the potential contributions of this approach to assessment and advocates for renewed efforts towards assessment attachments on a single continuum of emotional security. A contention is that theory is essential as a guide for new direction in attachment assessment and that Bowlby's notion of secure base and emotional security provides the needed conceptual foundation for these further developments (Waters & Cummings, 2000). Moreover, challenges that have been made historically to scoring attachment on a security continuum are addressed. New means to continuously score attachment are advocated as a supplement to the primary direction of categorically assessing attachment patterns.

Although attachment is typically scored in terms of categorical patterns of attachment, the practice of rating patterns of attachment on continua also has a long history. In the decade or so following publication of *Patterns of Attachment* by Ainsworth, Blehar, Waters and Wall (1978) many investigators scored attachment on security continua as well as scoring patterns of attachment (e.g., Main, Kaplan, & Cassidy, 1985). In addition, some studies in effect used security continua by collapsing attachment groups into comparisons of secure versus insecure. Increasing evidence of patterns that did not fit Ainsworth three-group system lead Cummings (1990) to argue for the development of a security continuum that could encompass attachments that could and could not be classified by Ainsworth's system onto a single scale, thereby allowing comparisons among all organizations of attachment and avoiding the practice of forcing attachments into groups to which they did not seem to truly belong. About the same time Main and colleagues (Main & Hesse, 1990; Main & Solomon, 1990) proposed the existence of a D category of disorganized/ disoriented attachments for classifying many attachments that did not fit the traditional three-group system. Notably, the original conceptualization of the D category also included the recommendation that D categories should be scored on a continuum pertinent to the degree to which children's responses in the strange situation reflected responses characteristic of that category.

The notion of scoring attachment on continua subsequently seems to have lost momentum for several reasons, including questions about whether scoring attachments on continua could ever truly capture patterns of attachment (e.g., Ainsworth, 1990) and the more mundane problem that cogent scales for scoring attachments on continua of security were not forthcoming. Fraley's and Spieker's conceptually elegant and statistically sophisticated report serves to remind the discipline of the virtues of scoring attachments on continua. They also make a startling new proposition based on their analyses of strange situation data from the NICHD Study of Early Child Care: Attachment are fundamentally ordered along continua of the indicators of attachment rather than categorically in terms of three qualitatively distinct organizations of attachment. Additionally, they challenge the long-held proposition that categories can reflect organizations of attachment behavior but continua of attachment are inherently inappropriate to such sophisticated assessments of children's responses. That is, they make the case that there is no necessary reason why one cannot integrate complex assessments of attachment behavior on continua and they further argue that the ratings scales for indicators of attachment outlined by Ainsworth et al. (1978) did just that. *Towards Ordering Attachment on a Continuum of Emotional Security*

The statistical and logical case made by Fraley and Spieker for continua underlying attachment patterns is impressive. However, the report does not show how ratings of attachment can be ordered on a single continuum of attachment security, which historically was the goal of many efforts to rate attachment security (e.g., Waters & Deane, 1985). Rating attachment on a security dimension has advantages in terms of fostering comparisons among patterns of attachment on a single metric. The report also falls short of suggesting new directions for scoring attachment on continua. Indeed, this was inevitable since the statistical treatment was limited to Ainsworth et al.'s (1978) original scales for scoring responses of infants in the strange situation, which was a pragmatic result of the fact that only these scales were scored in the large-scale ( $n = 1139$  infant-mother dyads) NICHD Study of Early Child Care.

Important new evidence was reported for proximity seeking versus avoidant, and angry and resistant, strategies, respectively, as reflecting continua underlying classifications of infants as A, B, or C in the strange situation based on the techniques developed by Meehl and colleagues for testing taxonic hypotheses. However, it is difficult to see how scores on two different scales can be as informative for hypothesis testing in attachment research as comparisons among the several attachment categories, or ratings of attachment on a single security continuum. That is, one cannot interpret a high score on proximity seeking as meaningful in itself because such scores can reflect either secure or resistant attachments, as is illustrated by their data in Table 2 of their report. Similarly, one cannot interpret low resistance and anger scores in themselves for purposes of hypothesis testing about attachment organization because such ratings can reflect either secure or avoidant categories or subcategories (see Tables 2 and 3). Thus, the report does not provide what may be most essential for the re-emergence of continua ratings as an adjunct to category scoring, that is, a basis for comparing organizations of attachment on a single security continuum.

The challenge thus is to take an organizational analysis of patterns of attachment another step further and integrate Fraley's and Spieker's proximity seeking versus avoidance, and resistance and anger, scales onto a single security continuum. Moreover, as Fraley and Spieker note in their report, there may well be other scales of behavioral indicators that might be integrated in forming a single security continuum, including Main and colleagues'

ratings of disorganized/disoriented strategies, which are not included in the present analyses, apparently for technical statistical reasons. Notably, some years ago Cummings (1990) proposed a template for integrating multiple sources of information about attachment onto a single security continuum and also made a case for several additional rating scales for indicators of attachment: Conflicted, difficulty comforting, depressed affect, and disconnectedness. The extant literature (Crittenden, 1985; Radke-Yarrow, Cummings, Kuczynski, & Chapman, 1985) also suggested that simultaneous avoidance and resistance in infants' reunion with the parent in the strange situation might also be considered as an index of attachment at the very insecure end of a security continuum.

#### *Challenges and Potential Contributions*

There are challenges and potential pitfalls in attempting to extend the highly-successful enterprise of coding attachments into categories to include continuum scoring as a companion direction in assessment. Our contention is that theory is essential as a guide for new directions in attachment assessment (Waters & Cummings, 2000), including integrating behaviors onto a single continuum of attachment security and for adding any new indicators of attachment into an organizational analysis of individual differences in attachment. Otherwise, in the absence of theory as a guide, the danger of confusing attachment indicators and correlates of attachment is a potentially serious problem (Ainsworth, 1990). My colleagues and I have elsewhere contended that Bowlby's notion of secure base and emotional security provides the needed conceptual foundation for further developments in the assessment of attachment, including the move towards family-wide models for the influences on children's emotional security (Davies & Cummings, 1994; Waters & Cummings, 2000). Although it is not as often discussed as Bowlby's other contributions, he espoused a family-wide as well as life-span model for the origins of an individuals' sense of emotional security (Ainsworth, 1985; Ainsworth, 1990; Marvin & Stewart, 1990; Waters & Cummings, 2000). Thus, ideally a goal for attachment assessment is to develop scoring criteria that can be extended to additional age periods, other family contexts (e.g., the intersection of the marital and child subsystem), and other contexts of assessment (e.g., other stressful contexts of everyday family life pertinent to children's sense of emotional security).

Before further addressing the requirements for scoring attachment security on a continua, which

is also pertinent to the additional question of scoring emotional security from broader family functioning than the parent-child relationship, it is worthwhile to consider some of the possible virtues of such an enterprise. Rating attachments on continua improves the specificity of assessment of attachment, even when attachments fit the requirements for scoring in the traditional three-group system. Fraley's and Spieker's demonstration that continuous rather than categorical distributions underlie the traditional patterns of attachment reinforces this point. Relatedly, an individual's true attachment organization may be on the borderline between distinct categories. For example, an individual's attachment may be on the border between A versus B, or between B versus C, respectively. Rating attachment on well-delineated security continua reduces potential errors in measurement that are associated with such decisions and also provides a representation of the relative security of attachment organization. Rating attachments on a continuum can also encompass very deviant and normative attachment patterns on the same scale, thereby fostering quantitative and statistical comparisons. In particular, some of the most problematic patterns of attachment potentially linked with later developmental problems (Cummings & Cicchetti, 1990), for example, attachments reported among maltreated children and children of depressed parents (e.g., Crittenden, 1985; Spieker & Booth, 1985), may include attachment disturbances that are not readily captured by categorical analysis and that therefore may not be adequately considered in these assessments of attachment (Cummings, 1990). Finally, the statistical power to detect effects may be increased substantially by scoring responses continuously. Fraley and Spieker cogently demonstrated this point based both on statistical model testing and analyses of the NICHD attachment data.

### **Theoretical Considerations**

The notion of attachment as a control system with felt-security as its set-goal provides a dynamic model for the operation of attachment in terms of emotional security conceptualization (Sroufe & Waters, 1977). In important respects this view is consistent with Bowlby's original formulation, especially secure base concepts and the control systems model. However, it is important to realize that felt-security does not mean that the individual is always consciously aware of their true level of emotional security in a situation, which has been an objection sometimes articulated to this approach (Ainsworth, 1990). In recent formulations efforts have been

made to clarify that emotional security is properly inferred according to this approach by multi-method and multi-response assessments (Cummings & Davies, 1996; Davies & Forman, 2001). Accordingly, an individual may report that they feel secure in a stressful context, but their overt emotional, behavioral, or physiological responses may belie this representation, meriting an assessment of insecure responding (Davies & Forman, 2001; El-Sheik, Cummings, & Goetsch, 1989). Given that the operation of possibly unconscious processes (i.e., defensive processes) must be based on some assessment of responding, this approach in this sense does not differ from other approaches to attachment assessment in this regard (Ainsworth, 1990). That is, defensive processes, whether inferred from interviews, observation, or multi-response assessments, must always be based on some assessment of indicators. While the term "felt-security" was advanced to avoid the certain vagueness and implication of untestability implied by the term "emotional security", perhaps the latter term, in the final analysis is more appropriate.

Additional objections to this theoretical basis for attachment assessments are claims that proximity seeking is better viewed as the set-goal of attachment and that emotions do not serve a motivational function in directing behavior. In these instances it may be stated that we are proposing further evolution of emphases in attachment theory, in the interest of promoting further advances in the application and utility of core notions of that theory. Emotional security can be readily seen as a set-goal for an individual's functioning in stressful contexts, especially beyond infancy and in family-wide contexts, such as children's emotional security about interparental relationships. For example, when faced with high marital conflict children evidence distress and children from families in which marital conflict poses particular threat to their sense of emotional security may seek to reduce emotional insecurity by leaving the room to avoid stressful exposure to marital discord (i.e., avoidance) or seeking to intervene in interparental conflicts to effect a resolution of differences (Davies & Cummings, 1994). Moreover, one can see how multi-method and multi-response assessments can be applied to the assessment of emotional security as a set-goal of an individual's functioning in multiple everyday family and extra-familial contexts of functioning (e.g., Davies & Cummings, 1998; Davies, Forman, Rasi, & Stevens, in press). Such an approach can also be extended to categorical assessment. For example, Davies and Forman (2001) have used observational and inter-

view methods to identify three profiles with regard to strategies children use to preserve their emotional security about the interparental relationship: secure, insecure-preoccupied and insecure-dismissing. The notion of emotional security as a set-goal expands the range of contexts and ages in which attachments can be assessed, while still including traditional notions of proximity-seeking and the availability of attachment figures as elements of assessment.

With regard to the role of emotions, Bowlby placed considerable emphasis on emotionality in the experience of attachment relationships (Ainsworth, 1990). In recent years the operation of emotional systems has been extended to include a motivational function (Bretherton, Fritz, Zahn-Waxler, & Ridgeway, 1986; Sroufe & Waters, 1977), consistent with a functionalist perspective on emotions that ascribes a motivational component to emotions in children's responding to everyday events (Saarni, Mumme, & Campos, 1998). Moreover, various directions in theory and research further advance the notion of emotions as serving a central motivational and organizational function in children's responses to everyday family stressors (Crockenberg & Langrock, 2001; Davies & Cummings, 1995; Stein & Liwag, 1997).

#### Improving Assessment in the Future

Thus, in answer to Fraley's and Spieker's question about new behavioral indicators for attachment and attachment-related processes, the suggestion is that additional behavioral indicators consistent with the proximity-seeking but also the emotional security provision of attachment be sought. These indicators may result in small but significant improvements in the assessment of attachment organizations in the strange situation in infancy. As these authors note, room for further advance in that context is limited given the efficacy of Ainsworth et al.'s original scales. A more pertinent application in terms of making a difference for future assessment strategies is to develop effective strategies to score attachments on a continuum in other contexts than the strange situation, based on an organizational analysis of behavioral indicators, with emotional security suggested as the basis for this continuum, consistent with historical and ongoing trends in this discipline. This direction is likely to be even more pertinent for developing continua for assessing attachment in the preschool years and beyond than in infancy, which is a period of development that is especially amendable to the assessment of attachment in the context of the strange situation (Cicchetti, Cummings, Greenberg, & Marvin, 1990).

Consistent with the authors' position, in the final analysis the use of both categorical and continuous scoring for attachment and attachment-related processes can be seen as worthwhile goals for assessment. Clearly, the success of attachment categories in advancing understanding of early socio-emotional developing speaks for itself and will remain the primary direction for assessment of attachment patterns. Nonetheless, as this report indicates, improvements may be provided by scoring on continua. The evidence presented by Fraley and Spieker that individual differences in indicators of attachment are distributed in this way adds strength to the argument for this approach to assessment. Moreover, continua and categories provide two different levels of analysis of organizations of individual differences, with different strengths and weaknesses for advancing understanding, so that it seems likely that such a direction for future efforts for the development of coding systems can only add to contribution of attachment research. The suite of techniques developed by Meehl and colleagues may indeed continue to prove useful in future research for uncovering the latent structure of attachment indicators and rigorously testing taxonic conjectures. Nonetheless, the recommendation for future research must *not* be to attempt to choose between them. A debate limited to this question does not seem likely to be especially productive.

Rather, the goal should be to proceed to advance the cogency and value of both categorical and continuous levels of analysis, ideally used together in assessment when appropriate, that is, given that the evidence supports the adequate validity and applicability of the procedures, since each approach to assessment offers its own potential for significant advances in understanding and hypothesis testing.

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