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## MATERNAL ROLE CONFUSION: RELATIONS TO MATERNAL ATTACHMENT AND MOTHER–CHILD INTERACTION FROM INFANCY TO ADOLESCENCE

LAURIANE VULLIEZ-COADY, INGRID OBSUTH, MONICA TORREIRO-CASAL, LYDIA ELLERTSDOTTIR, and KARLEN LYONS-RUTH

Harvard Medical School

### Abstract

Self-reports of role confusion with the parent in childhood are associated with a variety of adverse outcomes. However, role-confusion has been studied primarily from the point of view of the child. The current study evaluated an instrument for assessing role confusion from maternal interviews rather than from child observations or self-reports in adulthood. Fifty-one mothers participating in a longitudinal study since their own child's infancy were administered the Experiences of Caregiving Interview (C. George & J. Solomon, 1996) when the child was age 20. Interviews were coded using the newly developed Parental Assessment of Role Confusion (PARC; L. Vulliez-Coady & K. Lyons-Ruth, 2009). Maternal PARC scores were related to observational measures of role-confusion in interaction with the child both in infancy and late adolescence. PARC scores also were related to mothers' hostile-helpless states of mind on the Adult Attachment Interview (C. George, N. Kaplan, & M. Main, 1984, 1985, 1986) and to the extent of Unresolved loss, but not Unresolved Trauma. PARC scores also were related to mothers' self-reports of helplessness experienced in the parenting role. Discriminant validity of the PARC was demonstrated in that role confusion on the PARC was not related to hostile or disoriented forms of parent–child interaction. Implications for clinical assessment of role confusion are discussed.

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Observers have long called attention to parent–child role confusion as one factor associated with psychopathology in the child (Boszormenyi-Nagy & Spark, 1973; Jurkovic, 1997; Minuchin, Montalvo, Guerney, Rosman, & Schumer, 1967). Parent–child role confusion refers to a dyadic process in which the parent fails to exercise appropriate parental functions and the child takes on functions usually assumed by the parent. This construct has been referred to in previous literature interchangeably as role confusion, parentification, and role reversal. In this article, we use *role confusion* rather than *role reversal* as the preferred term for this construct because *role reversal* implies a complete exchange of roles between parent and child while *role confusion* better communicates the likelihood that rather than being an all-or-nothing process, there are varying degrees to which the parent abdicates responsibility and the child assumes responsibility across dyads. Role confusion, or role reversal, has been discussed both in relation to instrumental role confusion, in which the child shoulders a level

of household management usually considered the responsibility of the parents (e.g., meals, childcare) or in relation to emotional role confusion, in which the child attends to the parent's needs by providing emotional support and guidance rather than expecting support and guidance from the parent (Bifulco, Brown, & Harris, 1994; Earley & Cushway, 2002; Jurkovic, Jessee, & Goglia, 1991).

However, the construct of role confusion in the parent-child relationship has been studied primarily from the point of view of the child. A number of clinically based studies have used retrospective self-report measures, in which the adult reports on the extent to which they took on parental functions in childhood (Bifulco et al., 1994; Jones & Wells, 1996; Mayseless, Bartholomew, Henderson, & Trinke, 2004; Mika, Bergner, & Baum, 1987; Wells, Glickauf-Hughes, & Jones, 1999; Wells & Jones, 2000). In addition, developmental researchers have created child-focused behavioral and representational measures of the extent to which the child directs and controls the parent, either during an observed interaction or in doll-play stories (Cassidy & Marvin, 1992; Macfie & Swan, 2009; Main & Cassidy, 1988; Moss, Cyr, & Dubois-Comtois, 2004; O'Connor, Bureau, McCartney, & Lyons-Ruth, 2011; Solomon, George, & DeJong, 1995). These child behavioral measures have assessed two forms of child controlling behavior. The first type, *controlling-caregiving behavior*, is marked by the child's organizing the interaction, supporting the parent, and prioritizing the parent's needs (e.g., child praises and encourages parent). This caregiving type appears similar to the emotional role confusion assessed in questionnaire studies. The second type of controlling behavior is *controlling-punitive behavior*, which is characterized by demanding the parent's compliance in a challenging, humiliating, or defying manner (e.g., child scolds mother). Child punitive behavior has not been included in retrospective self-report studies as part of the construct of role confusion. These child-focused studies have repeatedly confirmed that both types of controlling behavior as reported or acted out in doll play by the child are associated with higher levels of child behavior problems as well as with a variety of family risk factors (Macfie & Swan, 2009; Moss, Cyr, & Dubois-Comtois, 2004; O'Connor et al., 2011; Solomon et al., 1995).

In contrast to these child-focused studies, George and Solomon (1989, 1996, 2008; Solomon & George, 1996) called attention to the importance of assessing the organization of the *parent's* caregiving representations and behavior, to more fully understand the form of the parent's contribution to the process by which the child comes to take on functions that are usually undertaken by the parent. In comparison to studies focused on the child's role-confused behavior, relatively few studies have assessed role confusion in the behavior or representations of the parent.

## OBSERVATIONAL ASSESSMENTS OF PARENTAL ROLE CONFUSION

A few studies have focused on direct observational assessments of parental role-confused behavior toward the child and have examined both family contexts and child outcomes associated with such behavior. Sroufe and Ward (1980) examined a form of role confusion (or *boundary dissolution*), defined by seductive behavior of mothers toward their toddlers, and found that a subset of mothers displayed behavioral patterns of control achieved through using intimate physical contact or sensual manipulation in the context of concomitant hostile

interactions with their male toddlers. In a follow-up study of the same sample at age 13, Shaffer and Sroufe (2005) observed mother–adolescent interactions in a series of structured tasks and found that role confusion was exhibited differently toward male and female adolescents, with seductive or physically intimate interactions in mother–son dyads and peer-like interactions in mother–daughter dyads. This work suggested that role confusion may take on different forms in mother–daughter versus mother–son relationships.

Lyons-Ruth, Bronfman, and Parsons (1999) examined role confusion in parent–infant interactions during the Strange Situation Procedure, using the Atypical Maternal Behavior Instrument for Assessment and Classification (AMBIANCE; Bronfman, Parsons, & Lyons-Ruth, 1992). The AMBIANCE coding system was designed to identify five types of disrupted parent–infant interaction, including affective communication errors, role-boundary confusion, negative-intrusive behavior, disorientation, and withdrawal. Role-boundary confusion was defined as the extent to which the parent elicited affection from the infant or drew the infant’s attention to herself rather than following the infant’s directions (e.g., “Give mom a kiss.” “Do it for Mommy.”). Similar to the Sroufe and Ward (1980) observations during toddlerhood, maternal role-boundary confusion in infancy was strongly correlated with negative-intrusive behavior toward the infant, as defined by hostility or unnecessary intrusions into the infant’s ongoing activity. Both role confusion and negative intrusive behavior were further associated with disorganized attachment behavior on the part of the infant toward the parent (Lyons-Ruth et al., 1999).

Lyons-Ruth and colleagues also developed a coding system for adolescent–parent interaction called the Goal-Corrected Partnership in Adolescence Coding System (GPACS; Lyons-Ruth, Hennighausen, & Holmes, 2005) that includes assessment of adolescent–parent role confusion, including both punitive control and caregiving control toward the parent by the adolescent. Both punitive and caregiving control on the GPACS in late adolescence were shown to be related to overall adolescent psychopathology; caregiving control in particular was related to borderline personality features and suicidality (Lyons-Ruth, Brumariu, Bureau, Hennighausen, & Holmes, 2013; Obsuth, Hennighausen, Brumariu, & Lyons-Ruth, in press).

## REPRESENTATIONAL MEASURES OF PARENTAL ROLE CONFUSION

In groundbreaking work, Solomon et al. (1995) defined parenting helplessness as a construct central to parental role confusion. In a cohort of 32 dyads, Solomon and George (1996) found that at age 6 years, a parent’s attitude of helplessness toward her child on the Experiences of Caregiving Interview (ECI; George & Solomon, 1996) was significantly related to the child’s controlling behavior toward the parent during a 5-min unstructured interaction. The ECI is a semistructured interview that probes how parents represent a wide range of attachment-related experiences with their child over time. The authors defined parental helplessness on the ECI as viewing the child in unrealistically positive ways (i.e., “larger than life”) or in unrealistically negative ways, such as beyond their control. These findings were later replicated on another sample of 57 middle-class mother–child dyads (Solomon & George, 2006). Based on these findings using the ECI, the authors then developed a maternal self-report assessment of caregiving helplessness, the Caregiving

Helplessness Questionnaire (CHQ; George & Solomon, 2008), and found that the CHQ was associated with maternal helplessness coded from the ECI as well as with child controlling behavior toward the parent (George & Solomon, 2011).

A number of other researchers have developed semistructured interviews to assess the way the parent represents the relationship with her child. However, most of these coding systems for parental representations have been focused on assessing relationship constructs such as warmth, distance, monitoring, discipline, and understanding of the child and of the self (Aber, Slade, Berger, Bresgi, & Kaplan, 1985; Bretherton, Biringen, Ridgeway, Maslin, & Sherman, 1989; Button, Pianta, & Marvin, 2001; Mayseless & Scharf, 2006; Solomon et al., 1995; Zeanah & Benoit, 1995). Of these, only Mayseless and Scharf's (2006) coding system includes a scale for role confusion, but no findings have been reported specifically related to this scale.

In summary, most studies of parent-child role confusion have been child-focused, relying on the assessment of controlling forms of child behavior or on retrospective self-reports in adulthood. However, focusing on the child leaves a critical assessment gap in the field. It is clinically important to identify role-confused relationships early in development, yet child-focused observational measures can be used only starting in the preschool period, and child self-report measures have not been developed for children below school age (e.g., MacMahon & Luthar, 2007; Moss, Cyr, & Dubois-Comtois, 2004; Tompkins, 2007). In addition, video-coding methods are expensive, time-consuming, and not readily available in clinical settings. In contrast, parental representational measures of role confusion can be used very early in development to identify dyads at risk for the emergence of controlling behavior in childhood and the development of psychopathology in childhood and adolescence (Crawford & Benoit, 2009; Moss, Cyr, & Dubois-Comtois, 2004; O'Connor et al., 2011; Solomon et al., 1995).

## PARENTAL ROLE CONFUSION AND PARENTAL ATTACHMENT STATE OF MIND

A final important issue in the literature on parent-child role confusion is whether parental role confusion should be considered a form of disorganization or a form of preoccupation in the attachment relationship with the child. This issue has remained unclear in the attachment literature. On one hand, child controlling behavior is classified as a form of disorganization when it first appears during the preschool period (Cassidy & Marvin, 1992; Main, Kaplan, & Cassidy, 1985). Further, child controlling behavior is modestly predicted from infant disorganization (Main & Cassidy, 1988; National Institute of Child Health and Human Development Early Child Care Research Network, 2001; Wartner, Grossman, Fremmer-Bombik, & Suess, 1994) and has been related to maternal unresolved state of mind on the Adult Attachment Interview (George, Kaplan, & Main, 1984, 1985, 1996), which is considered part of the disorganized spectrum (George & Solomon, 1996; Greenberg, Speltz, DeKlyen, & Endriga, 1991; Spieker, Nelson, DeKlyen, Jolley, & Mennet, 2011).

In contrast, in the adult attachment literature, mild forms of maternal role confusion termed *involving behavior* have been viewed as a likely correlate of preoccupied states of mind

rather than of unresolved (disorganized) states of mind (Cassidy & Berlin, 1994; Main & Goldwyn, 1984). In an earlier and influential review, Cassidy and Berlin (1994) noted that mothers of ambivalent/resistant children tended to act in subtle ways to heighten the child's attention to the relationship with the mother, and in turn, ambivalent children heightened the intensity of their attachment behavior toward their mothers. However, in this article, Cassidy and Berlin only reviewed papers to 1994, before disorganized and controlling forms of attachment had been well-researched.

This ambiguity regarding whether parental role confusion should be considered an aspect of an organized, but preoccupied, parental state of mind or whether it is better conceived as a form of disorganization in the parent-child relationship needs to be explored further in the literature. However, one methodological issue that continues to hinder attempts to clarify this issue is the small proportion of mothers and children classified in the preoccupied/ambivalent group (van IJzendoorn, Schuengel, & Bakermans-Kranenburg, 1999).

## AIMS OF THE CURRENT STUDY

Due to the very few studies of role confusion in parental representations, a number of gaps remain in the literature. The groundbreaking studies of role confusion from the parental side (e.g., George & Solomon, 1989; Sroufe, Jacobvitz, Mangelsdorf, DeAngelo, & Ward, 1985) have tended to focus on specific and potentially distinct components of role confusion, such as parental helplessness or seductive behavior. To date, the field lacks a more comprehensive evaluation of the multiple components that have been identified across studies as contributing to the construct of parental role confusion, including the aforementioned constructs of parental helplessness and seductive behavior, the self-referential behavior described by Lyons-Ruth et al. (1999), the mother's need for emotional support from her child (e.g., Bifulco et al., 1994), the mother's expressions of vulnerability to her child, the mother's need for instrumental support from her child (e.g., Bifulco et al., 1994), and mother's peer-like behavior toward her child (e.g., Shaffer & Sroufe, 2005). Thus, a coding system that brings together these multiple facets of parental role confusion may provide a more comprehensive assessment of this complex construct. The first aim of the current work was to develop such a multifaceted assessment of maternal role confusion based on the mother's ECI. Toward this end, the ECI was administered to 51 mothers of late adolescents aged 18 to 22 years as part of the adolescent phase of a longitudinal study. A multidimensional coding system was then developed for the ECI based on the varied aspects of parental role confusion that have been identified in previous literature.

A second gap in the literature occurs because few studies other than those of George and Solomon (2011) have validated representational assessments of parent-child role confusion against observational or self-report measures of the same construct, leaving it unclear whether similar constructs are being evaluated across representational, self-report, and observational measures. Thus, the second aim of this work was to evaluate the newly developed representational measure of maternal role confusion in relation to both observational and self-report measures of role confusion, including observed role/boundary confusion in the mother's interaction with her 18-month-old infant, observed role-confused behavior in the mother's interaction with her adolescent at age 20, and the mother's self-

reported caregiving helplessness on the Caregiving Helplessness Questionnaire (CHQ; George & Solomon, 1996, 2008, 2011), assessed when her adolescent was age 20.

The third aim of the present study was to evaluate the relations between maternal role confusion and maternal disorganized attachment on the AAI. In the present study, we assess the relations between the severity of maternal role confusion on the ECI and two indicators of a disorganized maternal state of mind of the AAI: (a) unresolved state of mind in regard to loss or trauma, and (b) hostile-helpless representations of attachment relationships. Maternal AAIs were collected when the child was age 7 years.

## METHOD

### Participants

The sample consisted of 51 low-income mothers (range = 35–63 years,  $M = 45$ ,  $SD = 4.90$ ) who had been administered the ECI when their children were in late adolescence (range = 18–23 years,  $M = 19.9$ ,  $SD = 1.01$ ; 19 females, 32 males). The 51 families were part of an original cohort of 76 families who were participants in the Harvard Family Pathways study, a longitudinal study of the impact of social risk factors on child development from infancy to adulthood. For the late-adolescent follow-up study, 86% of families were relocated ( $n = 65$ ), and 74% ( $n = 56$ ) were seen [3% ( $n = 2$ ) lived overseas; 9% ( $n = 7$ ) refused to participate]. Of the 56 families participating in the late-adolescent study, 4 mothers did not complete the ECI interview, and 1 interview was not coded for technical reasons, yielding the sample of 51.

Compared to the 76 participants in the original infancy study, the 51 mothers in the current sample had higher family incomes in infancy,  $F(1, 74) = 4.17$ ,  $p = .05$ , mothers were more likely to have some education beyond high school,  $\chi^2(2, N = 76) = 6.82$ ,  $p = .03$ , and mothers were less likely to have been a single parent in infancy,  $\chi^2(1, N = 76) = 7.33$ ,  $p = .077$ . However, those followed up did not differ significantly from those not followed up on child gender, referral to clinical services in infancy, or on any of the infant/childhood outcome assessments, including the mother–infant interaction measure used in the present report (effects sizes ( $\phi$ ,  $\eta$ , or  $\tau$ ) =  $-.15$  to  $.16$ ).

For the 51 mothers in the current analyses, 61% ( $n = 31$ ) of family incomes were below 200% of the federal poverty level, 51% ( $n = 26$ ) were single-parent families, and 40% ( $n = 21$ ) of the mothers had not completed high school. In addition, half of the mothers, 49% ( $n = 25$ ), were referred in infancy by community service providers to clinical parent–infant home-visiting services due to concerns about the quality of their care for the infant; the other half were mothers from the community who were matched to referred mothers on education and income, but did not have problems in caregiving (for additional information, see Lyons-Ruth, Connell, Grunebaum, & Botein, 1990). Youth in the study were predominantly Caucasian (71%), with a minority representation of Latino (2%), African American (11%), and biracial (16%) youth.

## Measures

**The ECI**—This instrument was administered to the mother when her child was an older adolescent (aged 18–23 years). The ECI is a semistructured interview adapted by George and Solomon (1996) from the Parent Development Interview (Aber et al., 1985). It is designed to guide a parent to discuss the events and emotions associated with being a caregiver to a particular child. Parents are asked to describe themselves as parents; to describe the affective aspects of their experiences as parents of a particular child (e.g., joy, guilt, anger); to list, with supporting examples, five adjectives that capture their relationship with their child; and to describe their experiences coping with attachment-relevant situations (e.g., separation, beginning school). The questions are open-ended and followed by prompts for specific examples. The ECI was utilized in its original format along with two additional questions tapping mothers' caregiving experiences during their child's teenage years and their perceptions of changes that had occurred in the relationship as their child became a teenager.

**Parental role confusion**—The Parental Assessment of Role Confusion Scale (PARC; Vulliez-Coady & Lyons-Ruth, 2009) was developed to assess role confusion based on how the parent talks about his or her relationship with his or her child on the ECI. From the literature related to role confusion reviewed earlier, nine dimensions of role confusion were identified: (a) parent's need for emotional support from her or his child, (b) indicators of sexualization in the relationship with the child, (c) equality or inversion of hierarchical position with the child, (d) helplessness in interactions with the child, (e) parent's instrumental and financial need for the child's help, (f) description of the child being worried about the parent or protective of her or him, (g) parent's explicit expressions of vulnerability to her or his child, (h) self-referential statements when asked to focus on the child, and (i) descriptions of punitive-hostile behaviors by the child toward the parent (for examples, see the Appendix). An initial coding manual describing the nine dimensions and giving examples of each was developed from 10 ECI interviews, randomly selected and reviewed naïve to all other data on the families. In the PARC coding system, the coders are first asked to identify all passages in which each of the nine dimensions appears, so that specific passages in the interview are tied to specific coding dimensions. This is done to ensure that coders attend closely to the text and have specific textual evidence for their subsequent ratings. A rating from 1 to 7 is then assigned for overall level of role confusion, following detailed descriptions of each level in the coding manual. Scale points of 1–4 are considered not role-confused, and scale points of 5–7 are considered role-confused. When 1 is rated, the parent is consistently in a parenting role, even if distressed. When 7 is rated, the parent is not able to keep a parental and protective role with the child. The frequency with which evidence for each of the nine dimensions appears in the text is only one aspect of the information that the coder uses to assign a rating for level of role confusion. The other important aspects are the severity of the textual examples noted and the pervasiveness of indicators over different domains of the parent–child relationship covered in the ECI. Two coders rated the PARC scale on 24% ( $n = 12$ ) of the interviews and established excellent interrater reliability,  $r_i = .90$ . The coders were naïve to all other study variables.

**Cumulative sociodemographic risk**—A cumulative sociodemographic risk variable (0–3) was computed by summing the presence of the following three variables: mother not a high-school graduate, mother a single parent, and family income of \$40,000/year or less.

**Disrupted maternal affective communication with the infant**—When infants were 18 months of age, mothers and infants were videotaped in the Strange Situation Procedure (Ainsworth, Blehar, Waters, & Wall, 1978). In this procedure, the infant is observed in a playroom during a series of eight 3-min episodes in which the mother leaves and rejoins the infant twice. Disrupted maternal communication with the infant was coded using the AMBIANCE (Lyons-Ruth et al., 1999) over all episodes of the Strange Situation Procedure. The AMBIANCE coding protocol yields individual frequencies for five types of disrupted communications, including affective communication errors, role confusion, negative-intrusive behavior, disorientation, and withdrawal (for details, see Lyons-Ruth et al., 1999). The validity of the AMBIANCE in relation to both infant disorganization and maternal attachment on the AAI has been well-established (see meta-analysis, Madigan et al., 2006). Coders were naïve to all other data from the study. Intraclass reliability correlations on 15 randomly selected tapes were as follows: affective communication errors,  $r_i = .75$ ; role confusion,  $r_i = .76$ ; negative-intrusive behavior,  $r_i = .84$ ; disorientation,  $r_i = .73$ ; and withdrawal,  $r_i = .73$ . Four mothers were missing AMBIANCE data at 18 months. The 4 mothers without AMBIANCE data did not differ from those with AMBIANCE data on child gender, mother's education, single parenthood, family income, or referral to infant services ( $\phi$  or  $\eta = .23$ – $.02$ , all n.s.); however, 75% (3 of 4) were from ethnic-minority groups compared to 23% (11 of 47) of those with AMBIANCE data, Fischer's Exact  $p = .06$ .

**Observed mother–adolescent role confusion**—Mothers and their late-adolescent children ( $M = 19.9$  years) were observed in a videotaped reunion and conflict discussion task. The mother and adolescent were apart for 1 hr for interviews and were then reunited for an initial 5-min unstructured reunion, followed by a 10-min discussion of a topic of disagreement in their relationship. Videotapes were coded using the GPACS (Lyons-Ruth, Bureau, Riley, & Atlas-Corbett, 2009; Lyons-Ruth, Yellin et al., 2005). The development of the GPACS drew on prior literature describing behavioral manifestations of security, insecurity, controlling behavior, and behavioral disorganization among younger children toward their parents in separation–reunion paradigms (Cassidy & Marvin, 1992; Main & Solomon, 1990).

The GPACS coding system includes the rating of each videotape on ten 5-point scales. One scale, the Collaborative Communication scale, focuses on the dyad and was included to provide a summary measure of the extent to which the interaction is cooperative, reciprocal, and balanced for the dyad as a whole. The other nine scales separately rate the behavior of the adolescent or the parent, including four scales that rate forms of adolescent controlling or disorganized behavior, four scales that rate corresponding aspects of parental behavior, and a final scale for parental validating behavior. Interrater reliabilities for two coders on 16 tapes were strong on all ratings ( $r_i = .75$ – $.96$ ). Coders were naïve to all other data.

Confirmatory factor analyses of the 10 GPACS scales were conducted on a larger adolescent study sample of 120 adolescent–mother dyads, which included the 51 longitudinally studied



participants reported on here as well as an additional cohort of low-income families recruited at age 20. The CFA confirmed a four-factor model of parent–adolescent interaction that included a first factor for collaborative interaction and three factors indexing aspects of disorganized interaction [CFI = .969; TLI = .942; RMSEA = .060, 90% CI (.065–.076; Obsuth et al., in press)]. The first factor, Collaboration, was indexed by scales for Collaborative communication and for the parent’s valuing of the adolescents’ point of view. The three factors for disorganization included a Caregiving/role-confusion factor, indexed by one scale for the parents’ role confusion and one scale for the adolescents’ caregiving behavior toward the parent; a Disorientation factor indexed by four scales for odd, out of context, or disoriented adolescent and parent behavior; and a Punitive factor indexed by two scales for adolescent or parent punitive controlling behavior. These GPACS factors have demonstrated validity in relation to disorganized attachment classification in infancy, to adolescent attachment classification on the AAI, and to quality of romantic relationships and psychopathology (Obsuth et al., in press).

**Caregiving helplessness with adolescent**—The CHQ (George & Solomon, 1996, 2008, 2011) is a self-report questionnaire assessing parents’ experience of caregiving helplessness in relation to their child. The CHQ consists of 45 statements (including seven filler items) rated by mothers on a Likert scale ranging from 1 (*not characteristic at all*) to 5 (*very characteristic*). When completing the CHQ, mothers are instructed to think about a specific child, the same child who was referenced during the ECI interview. Examples of CHQ items include: “I often feel that there is nothing I can do to discipline my child,” “I often depend on my child to teach me about the world,” and “I feel that my situation needs to be changed but I am helpless to do anything about it.” The CHQ has demonstrated good validity in relation to child externalizing behavior ratings (George & Solomon, 1996, 2011). One mother was missing CHQ data.

**Maternal adult attachment state of mind**—AAIs (George, Kaplan, & Main, 1984, 1985, 1996) had been administered to 34 mothers when the children were age 7 years. The AAI is a semistructured interview designed to elicit a participant’s current state of mind regarding attachment experiences with his or her parents and other significant caregivers during childhood. The interviewer asks about the quality of childhood experiences with parents, the participant’s responses to experiences of rejection, separation, loss, and trauma during childhood, and the participant’s evaluation of the effects of those childhood experiences on his or her current functioning. The 34 mothers who were administered the AAI at child age 7 years did not differ from those without AAI data on child gender, mother’s education, family income, single parenthood, minority status, or referral to infant services ( $\phi$  or  $\eta = .01$ –.25, all n.s.).

**Maternal lack of resolution of loss or trauma**—AAIs were coded using the standard Main and Goldwyn (1984) coding system by a coder from D. Jacobvitz’s lab, University of Texas at Austin, trained through the standard training procedures of Main and Hesse and certified as reliable (also see Lyons-Ruth, Yellin et al., 2005). The coder had previously coded over 500 AAI protocols. Interrater reliability between the primary coder and a second coder on 18 transcripts from the present study yielded a four-category  $K = .63$ , indicating

acceptable interrater reliability. Coders were blind to all other data from the study. States of mind classified as Autonomous, Dismissing, Preoccupied, Unresolved, and Cannot Classify were coded. Classification as “unresolved” with respect to loss or abuse refers to the lack of full integration into consciousness of a traumatic event that generates lapses in reasoning or discourse when interviewed on the AAI. Classification of participants as unresolved or not-unresolved with respect to loss or trauma was the primary variable utilized for the present analyses. The unresolved classification has extensive validity as a correlate of family risk and as a predictor of infant disorganized attachment (van IJzendoorn et al., 1999).

**Maternal hostile-helpless representations of attachment relationships**—The hostile-helpless coding system (HH; Lyons-Ruth, Hennighausen, & Holmes, 2005; Lyons-Ruth, Melnick, Patrick, & Hobson, 2007) was developed to assess pervasively unintegrated positive and negative evaluations of childhood attachment relationships on the AAI. Unlike Main and Goldwyn’s (1984) coding system for unresolved states of mind, which focuses on lapses of discourse or reasoning in discussing loss or abuse experiences, the HH focuses on how the participant discusses relationships with primary attachment figures across the interview. The level of HH state of mind is meant to reflect an overall lack of integration between more extreme forms of positive and negative evaluations in the individual’s consideration of childhood experiences. Theoretically, HH states of mind are thought to emerge from the very unbalanced, dominant–submissive relationship models characterizing controlling behavior in childhood, in which the child is either attempting to dominate the parent or is subjugating his or her own directions to guide and support the parent (Lyons-Ruth, Hennighausen, & Holmes, 2005). The HH is made up of a number of indicators that culminate in an overall 1 to 9 scaled score for the level of a hostile-helpless state of mind. Good interrater reliability ( $r_i = .83$ ) for the scale was established based on 15 randomly chosen interviews (Lyons-Ruth, Hennighausen, & Holmes, 2005). Coders were blind to all other aspects of the study. Protocols assigned a scaled score of 5 or higher were classified as reflecting a hostile-helpless state of mind ( $K = .83, n = 15$ ). This classification was used in the current analyses.

### Analytic Approach

To assess the relations between the newly developed PARC and existing measures of role confusion (Aim 2), as well as measures of attachment state of mind (Aim 3), linear regression analyses were conducted using the flexible analytic framework of Mplus Version 6.11 (de Jong, 1999; Muthén & Muthén, 1998–2011). In each multiple regression analysis, role confusion on the PARC was regressed on the independent variable of interest, with cumulative sociodemographic risk included in the model as a control variable. Mplus allows for conducting regression analyses while adjusting parameter estimates to account for missing data using full information maximum likelihood, which is currently considered a state-of-the-art procedure for addressing missing data and increasing statistical power (Arbuckle, 1996; Enders, 2001; Raykov, 2005). Missing data on independent variables ranged from 2 to 30% (Table 1). This range is well within the recommended allowances for estimation of missing data, and estimation of missing data is now strongly recommended over analysis of the raw data alone (McCartney, Burchinal, & Bub, 2006).

## RESULTS

### Descriptive and Control Analyses

Descriptively, in this high-risk sample, 35.3% of the mothers ( $n = 18$ ) displayed a role-confusion rating on the PARC of 5 or greater. Table 1 presents the means and standard deviations for the study measures as well as a chronology of the ages of assessment. Table 2 presents the associations among all the measures included in the study. Pearson zero-order correlations revealed no significant relation between the PARC scale and child gender,  $r = .05$ ,  $p = n.s.$  However, the summary score for mother's cumulative sociodemographic risk was significantly correlated with the PARC ratings,  $r = .28$ ,  $p = .05$ . Therefore cumulative sociodemographic risk was included in all subsequent analyses as a control variable.

### Maternal Role Confusion and Mother–Infant Disrupted Communication

The first two aims of the study were (a) to develop a reliable measure of maternal role confusion for the ECI and (b) to assess its construct and discriminative validity in relation to observational and self-report measures. In linear regression analyses, role confusion on the PARC was regressed on the five dimensions of disrupted maternal affective communication with the infant, with cumulative sociodemographic risk included in the model as a control variable. The five AMBIANCE scores were entered together to control for the other four types of disturbance when assessing the effect of disturbance on a particular dimension. Consequently, the regression results differ from the individual zero-order correlations presented in Table 2. Maternal role-confused behavior and maternal withdrawal in relation to her infant significantly predicted maternal role confusion on the PARC in late adolescence (Table 3). Thus, there was significant longitudinal continuity in maternal role confusion from the child's infancy to age 20. Further, in support of divergent validity, the AMBIANCE dimensions of disorientation, affective communication errors, and negative-intrusive interaction with the infant did not significantly predict role confusion on the PARC.

### Maternal Role Confusion and Mother–Adolescent Interaction

Using the same regression format as discussed earlier, maternal role confusion also was assessed in a single model that included the four parent–adolescent interaction factors from the GPACS at age 20 and cumulative sociodemographic risk entered as a control variable. Role confusion as assessed by the PARC was significantly related to caregiving/role-confused interaction with the adolescent (Table 3). Maternal PARC scores were not significantly related to punitive, disoriented, or collaborative interaction with the adolescent (Table 3). This pattern of findings further supports the convergent and discriminant validity of the PARC.

### Maternal Role Confusion and Caregiving Helplessness With Her Adolescent

Using the same linear regression format as described earlier, maternal role confusion also was assessed in relation to the mother's report of her own experienced helplessness in caring for her child on the CHQ, controlling for sociodemographic risk. Role confusion on the

PARC was concurrently related to the mother's own evaluation of the degree to which she experienced helplessness in the caregiving role on the CHQ (Table 3).

### Maternal Role Confusion and Maternal Attachment State of Mind

**Unresolved state of mind regarding loss or trauma**—The third aim of the study was to assess the relations between maternal role confusion and measures of disorganized (unresolved and hostile-helpless) and preoccupied attachment states of mind on the AAI. The relation between maternal unresolved state of mind on the AAI and role confusion on the PARC was assessed using the same linear regression format as discussed earlier, with the PARC as the dependent variable, unresolved state of mind as the categorical independent variable, and cumulative sociodemographic risk included as a control variable.

Mothers' unresolved state of mind was not related to role confusion on the PARC (see Table 4; unresolved adjusted PARC  $m = 3.63$ ,  $SE = .54$ ,  $n = 12$ ; not unresolved adjusted PARC  $m = 3.12$ ,  $SE = .39$ ,  $n = 22$ ).<sup>1</sup> However, in light of prior findings that unresolved loss and trauma might have different correlates (Bailey, Moran, & Pederson, 2007), we also examined the relation between maternal role confusion on the PARC and the separate scaled scores for extent of unresolved loss and extent of unresolved trauma, with cumulative sociodemographic risk controlled. Greater role confusion on the PARC was significantly related to higher ratings for unresolved loss on the AAI, but was not related to the ratings for extent of unresolved trauma (see Table 4).<sup>1</sup>

**Hostile-helpless state of mind regarding attachment**—The relation between maternal hostile-helpless state of mind on the AAI and maternal role confusion on the PARC was assessed using the same regression format as was used earlier, with PARC as the dependent variable and cumulative sociodemographic risk as a covariate in the model. The relation between hostile-helpless state of mind and PARC role confusion was strong and significant (Table 4). The mean adjusted PARC score for mothers classified as hostile-helpless was 3.99,  $SE = .35$ ,  $n = 21$ ; the mean PARC score for mothers classified as not hostile-helpless was 2.18,  $SE = .45$ ,  $n = 13$ .<sup>1</sup>

**Preoccupied states of mind regarding attachment**—A final question of interest was whether maternal role-confusion scores were higher for those classified as preoccupied on the AAI compared to other groups. Given the small number of mothers classified in the dismissing and the preoccupied categories in this sample ( $ns = 2$  and  $5$ , respectively), inferential statistical analysis proved inappropriate. In examining the means for the four groups, however, there was no indication that role confusion as coded on the PARC was elevated among preoccupied mothers as compared to other groups. With cumulative sociodemographic risk controlled, PARC means for the four AAI attachment categories were as follows: Autonomous = 3.26,  $SE = .48$ ,  $n = 15$ ; Dismissing = 1.79,  $SE = 1.37$ ,  $n = 2$ ; Preoccupied = 3.19,  $SE = .83$ ,  $n = 5$ ; Unresolved/Cannot Classify = 3.63,  $SE = .54$ ,  $n = 12$ . Thus, role confusion as assessed on the PARC was more closely related to indices of

<sup>1</sup>Using only the raw  $N$  of 34 yields the same results; unresolved:  $\beta = .12$ , n.s.; extent of unresolved loss:  $\beta = .34$ ,  $p = .03$ ; extent of unresolved trauma  $\beta = -.03$ , n.s.; hostile-helpless state of mind:  $\beta = .45$ ,  $p = .01$ .

disorganization on the AAI, including both unresolved loss and hostile-helpless representations of attachment, than it was to preoccupation.

## DISCUSSION

Parent–child role confusion is a clinically important, but understudied, process. Role confusion refers to a dyadic process in which the parent fails to exercise appropriate parental functions and the child takes on functions usually assumed by the parent. Thus, this is a construct that focuses on the *structure* of the parent–child relationship rather than on the affective quality. Previous work has focused primarily on assessing role confusion through child assessments, either by coding observed child controlling behavior toward the parent or by eliciting retrospective self-reports of role reversal in childhood. Parental contributions to role confusion have been less consistently evaluated. To fill this gap, the first aim of the current study was to develop a broadly based measure of maternal role confusion.

The measure developed in the current study coded the 1-hr ECI for nine aspects of role confusion identified in previous literature (see the Appendix). The ECI asks the mother to list, with supporting examples, five adjectives that capture her relationship with her child, to describe the affective aspects of her experiences as parent of a particular child (e.g., joy, guilt, anger), and to describe her experiences coping with attachment-relevant situations (e.g., separation, beginning school). Thus, the interview yields a rich portrait of how a parent represents his or her relationship with the child. In the current work, the questions that inquired about specific, affectively heightened experiences with the child yielded particularly rich material relevant to the coding of role confusion. These included questions that asked for specific examples of a time “you really got along well with your child,” “a time you felt joy in being the child’s parent,” “a situation that was particularly painful or difficult with your child,” “a time you felt angry or irritated with your child,” and “a time that you felt particularly needy as a parent.” In relation to broader clinical application, future work might examine whether an abbreviated interview focusing on these questions in particular might yield equally robust results.

In addition, the PARC coding procedure requires the coder to first identify all textual examples that fit to one of the nine aspects of role confusion in the coding manual, so that frequency scores are generated for each of the nine dimensions. In making a final rating, however, the coder takes into account not only these frequencies but also the severity of the examples noted, the pervasiveness of the examples over different domains of the relationship, and mitigating evidence for effective parental functioning, as detailed in the coding manual. However, in the service of clinical efficiency and broader application, future work in larger samples might examine whether the nine frequency scores could be reduced to fewer latent dimensions, reducing coding load and facilitating clinical use.

In relation to social context, maternal role confusion as assessed on the PARC was related to overall socioeconomic risk, consistent with results using retrospective child-report measures (Jurkovic, 1997; McMahon & Luthar, 2007). In the present sample, 35.3% of mothers were rated at 5 or above on the PARC. Given the relation to socioeconomic status, it is likely that this percentage is higher than would be found in more advantaged samples. Future work

evaluating the prevalence of serious role confusion in normative samples is needed. We did not find that the extent of maternal role confusion was related to child gender; therefore, both boys and girls appear to be equally exposed to pressures to take on undue responsibility for parental functioning. Based on Shaffer and Sroufe (2005), however, there may be qualitative variations in the types of maternal role confusion shown in relation to males and females, with mothers of males more likely to become involved in seductive behavior and mothers of girls more likely to assume a peer-like role. Future work in larger samples might explore the possibility of gender-related subtypes of maternal role confusion.

The second aim of the study was to evaluate the validity of the PARC in relation to observational and self-report measures of maternal role confusion. Results of the study were supportive of the construct and discriminant validity of role confusion as assessed on the PARC. First, the parent's role/boundary confusion in interaction with the infant at 18 months predicted the extent of parental role confusion at age 20. Role/boundary confusion in infancy was characterized predominantly by maternal self-referential behavior in interaction with the infant (e.g., "Give me a kiss." "Did you miss Mommy?"). Importantly, the infancy assessment occurred 18 years before the maternal interview. Thus, the significant relation to maternal role confusion at age 20 on the PARC also suggests substantial stability in role-confused behavior over time.

An important additional finding from infancy was that mothers who were high in role confusion on the PARC also had been significantly more withdrawing from interaction with their infants at 18 months. More withdrawal by role-confused mothers is consistent with theoretical formulations that have emphasized the role-confused mother's need to increase the intensity of the child's attachment behavior, and hence involvement with her, by being inconsistently responsive to the child's attachment signals (Cassidy & Berlin, 1994). Maternal withdrawal in infancy also has been found to predict substance abuse, borderline personality disorder traits, and antisocial personality disorder traits at age 20 (Lyons-Ruth et al., 2013; Pechtel, Woodman, & Lyons-Ruth, 2012; Shi, Bureau, Easterbrooks, Zhao, & Lyons-Ruth, 2011), so this additional aspect of early maternal behavior associated with later role confusion on the PARC may have important implications for the child's later adjustment.

Notably, maternal role confusion on the PARC was *not* associated with disoriented behavior, negative-intrusive behavior, or contradictory affective communications in infancy. Thus, role confusion on the PARC was associated with specific forms of disturbed parenting, but not others, supporting the discriminant as well as construct validity of the assessment.

Maternal role confusion on the PARC also was related to concurrent caregiving/role-confused interactions between mother and child in late adolescence in a conflict discussion task. These interactions were characterized by the adolescent's trying to read, manage, and/or validate the state of the parent while the parent remained self-focused, with limited curiosity or ability to understand or explore the adolescent's point of view. Further, role confusion on the PARC was significantly related only to the caregiving/role-confused factor on the GPACS and was not related to the other three GPACS factors, further confirming the

discriminant validity of the PARC in relation to profiles of punitive parent–adolescent interaction or of disoriented parent–adolescent interaction. The lack of a *negative* relation between the PARC and the factor for collaborative interaction is likely due to the pseudo-collaborative appearance of caregiving/role-confused parent–child interaction that can occur when the adolescent is shouldering the burden of guiding the discussion and managing signs of conflict in the interaction, making it difficult to give very low ratings for collaboration.

Finally, maternal role confusion as assessed by the PARC was significantly related to the mother’s sense of helplessness in parenting her child, as self-reported on the CHQ. This finding validates the PARC in relation to a third theoretically similar, but methodologically distinct, measure. In addition, this finding extends the validity of the CHQ self-report measure into late adolescence, further underscoring the importance of the construct of parental helplessness across a wide range of child ages (George & Solomon, 2011). This convergence between the PARC and the CHQ also is important because the PARC coding includes dimensions of role confusion not emphasized by the CHQ, including the mother’s need for emotional support from her child, mother’s self-referential statements when asked to focus on the child, indicators of sexualization in the relationship with the child, mother’s explicit expressions of vulnerability to her child, and mother’s expressed instrumental and financial need for the child’s help.

However, while maternal caregiving helplessness has been conceptualized as a contributor to both child punitive and child caregiving behavior (George & Solomon, 2011), the pattern of results here suggests that maternal role confusion as assessed here is not associated with hostility in parent–infant interaction or with hostile-punitive behavior in parent–adolescent interaction. Thus, it is likely that the caregiving helplessness indexed by the CHQ is a complex construct that can be further decomposed into components giving rise to the caregiving/role-confused parent–child adaptations associated with the PARC as well as to the more hostile forms of interaction captured by child punitive controlling behavior.

While our sample was too small for statistical analysis of such potential subgroups in the PARC coding, descriptively we did see potentially distinct patterns of role confusion that could be followed up in future studies, including an emotionally needy pattern (50%,  $n = 9$ ) and a helpless/abdicating pattern (39%,  $n = 7$ ). Two additional transcripts contained aspects of both patterns (11%). The emotionally needy profile was indexed primarily by the mother’s need for emotional support from her child and by self-referential statements in the transcript when asked to focus on the child. The helpless/abdicating profile was indexed by helplessness in interaction with the child, punitive-hostile behavior of the child toward the mother, and equality or inversion of hierarchical position. Other aspects of role confusion listed in the Appendix were seen in both profiles. Further work with larger samples is needed to assess whether emotionally needy versus helpless/abdicating maternal profiles can be reliably assessed and associated with different patterns of adaptation in the child, such as punitive or caregiving child behavior.

The third aim of the study was to assess the relation of maternal role confusion to disorganized and preoccupied attachment states of mind on the AAI. Disorganized states of mind on the AAI were assessed both in relation to hostile-helpless evaluations of attachment

figures and to indicators of unresolved loss or trauma. A clear relation emerged between contradictory, hostile-helpless evaluations of attachment figures and maternal role confusion on the PARC. Specifically, a mother's role confusion in her representation of relations with her own child was related to her hostile-helpless representation of her own attachment experiences. Theoretically, the pervasive contradictions in the individual's hostile-helpless evaluations of their attachment relationships are thought to stem from the very imbalanced dominant-submissive nature of the parent-child relationships being represented, including relationships in which the mother suppressed her needs as a child to become an anxious caregiver to her own parent or relationships in which the mother was involved in ongoing challenging and provocative behavior as the only way to engage with the parent. Because maternal hostile-helpless attachment representations have been related further to infant disorganization (Lyons-Ruth, Yellin et al., 2005; Melnick, Finger, Hans, Patrick, & Lyons-Ruth, 2008), this relation with hostile-helpless states of mind on the AAI ties maternal role confusion to the disorganized spectrum of attachment patterns.

In addition, a significant relation was found here between maternal role confusion on the PARC and unresolved loss on the AAI, but not unresolved trauma. This broadens our understanding of the correlates of parental role confusion by indicating that role-confused mothers have particular difficulty integrating losses. This difficulty in coping with loss may be an outcome of childhood exposure to a parent who responded to stressful events with helplessness and role confusion, resulting in the intergenerational transmission of patterns of helplessness, lack of resolution of loss, and role confusion in parenting.

Furthermore, the association between role confusion and unresolved loss suggests that the occurrence of losses in the mother's life may contribute to the mother's need for support from her child. For example, Moss, Cyr, and Dubois-Comtois (2004) found that maternal losses during the child's lifetime were related to the child's caregiving behavior toward the mother at age 4 years, but were not related to child punitive or disorganized behavior. Thus, maternal loss, among role-confused mothers in particular, may draw the child into taking a caregiving position.

This relation between unresolved loss and maternal role confusion on the PARC also is important because it broadens our understanding of how mothers with unresolved loss in particular may represent their relations with their children and contribute to the child's disorganized attachment behavior. As indexed by the PARC, we find that parental lack of resolution of loss is accompanied by broad indicators of the parent's helplessness, need for the child's support, and inability to envision the child's own vulnerability and need for a parental presence.

It was unexpected that unresolved trauma was not also related to maternal role confusion. However, this finding converges with the other correlates of role confusion found in this study in indicating that role confusion as captured on the PARC is not associated with intergenerational patterns of hostility and abuse. Instead, a different constellation of risks and outcomes were associated with the PARC, including pervasively contradictory, hostile-helpless assessments of childhood attachment relationships, difficulty coping with losses, experienced maternal helplessness in the caregiving role, maternal self-referential behavior



and withdrawal from the child's attachment needs in infancy, and caregiving/role-confused dyadic patterns of interaction in adolescence.

In summary, the present study found a coherent underlying construct of parent-child role confusion emerging from assessments that varied widely across developmental periods and across measurement strategies. In particular, the results provide evidence that role confusion as assessed by maternal interview is related in important ways to directly observed interaction both in infancy and young adulthood. Equally important, the PARC shows discriminant validity in relation to other profiles of parent-infant and parent-adolescent interaction that are not role-confused, including punitive and disoriented profiles.

### Limitations and Future Directions

The PARC is a newly developed scale, and our sample size was modest, so these findings need replication. In addition, this was an at-risk sample, so replication is particularly needed in lower risk samples where stability in role confusion over time may be reduced by protective factors. However, our sample size compares favorably to sample sizes in other studies that have validated coding systems for interview measures (e.g., Lyons Ruth, Yellin et al., 2005; Main & Goldwin, 1984; George & West, 2001;  $ns = 44-75$ ). In addition, in this sample, the mother's role confusion on the PARC was associated with her adolescent's caregiving, but not punitive interaction. Because child punitive behavior also has been conceptualized as developing in a context of parent helplessness, it will be important to disaggregate the trajectories of child caregiving versus child punitive behavior in relation to specific aspects of parental helplessness or role confusion. Finally, we did not explore role confusion among fathers. Nevertheless, fathers' role maintenance should be an important area for further study (Bretherton, Lambert, & Golby, 2006).

### Implications for Research, Policy, and Practice

As early as age 3 years, child role-confused or controlling behaviors are related to both internalizing and externalizing behavior problems (Moss, Bureau, Cyr, Mongeau, & St-Laurent, 2004; O'Connor et al., 2011). By late adolescence, role-confused parent-adolescent interaction has been associated with borderline features and suicidality (Lyons-Ruth et al., 2013). In addition, Fuligni et al. (2009) reported a relation between extent of "family assistance" by the child and increased inflammatory responses. However, this relation was observed only when the child did not feel proud that he or she was helping the family by taking on household responsibilities. Finally, among adults with and without borderline personality disorder, those who perceived their parents as more helpless in the parental role had elevated cortisol responses during interaction with the parent during a conflict discussion task (Lyons-Ruth, Choi-Kain et al., 2011). This body of research underscores the potentially serious consequences of parental role confusion for the child's self-regulation and adaptive behavior over time. Thus, role-confused patterns of family interaction and their developmental implications need more systematic attention from both researchers and clinicians.

Although in the current work the ECI was administered to parents of late adolescents, the interview and coding scale used here would be appropriate for use with parents over a wide

range of child ages, with only minor modifications. The ECI was initially developed for mothers of 6-year-olds, but also has been used with 11-year-olds, and in the current work is extended to mothers of 20-year-olds. The interview was used as developed by George and Solomon (1996) and required only minor changes for late adolescence. Because mothers are asked to talk about the overall relationship with their child, they often cite supporting examples from across the child's development in the interview. In further support of the likely relevance of the PARC scale to mothers of younger children, Crawford and Benoit (2009) applied a coding system for disrupted parenting representations, including coding for role confusion, to a similar interview, the Working Model of the Child Interview, administered before the birth of the child. They found that disrupted parenting representations *assessed prenatally* predicted important attachment-related outcomes at 1 year, including infant disorganization, maternal unresolved state of mind on the AAI, and mother's disrupted interaction with her infant. While they did not explore predictions from role confusion alone, their work nevertheless indicates the viability of using such interviews to identify parents and infants at risk prior to the infant's birth. Identifying children at risk for the development of controlling, role-confused interaction patterns should facilitate intervention to change pathways toward both internalizing and externalizing behavior problems in childhood as well as pathways associated with impulsive, self-damaging behavior and suicidality in late adolescence.

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## References

- Aber, J.; Slade, A.; Berger, B.; Bresgi, I.; Kaplan, M. Unpublished protocol. City University of New York; 1985. The parent development interview.
- Ainsworth, MDS.; Blehar, MC.; Waters, E.; Wall, S. Patterns of attachment: A psychological study of the strange situation. Hillsdale, NJ: Erlbaum; 1978.
- Arbuckle, JL. Full information estimation in the presence of incomplete data. In: Marcoulides, GA.; Schumacker, RE., editors. Advanced structural equation modeling: Issues and techniques. Mahwah, NJ: Erlbaum; 1996. p. 243-277.
- Bailey HN, Moran G, Pederson DR. Childhood maltreatment, complex trauma symptoms, and unresolved attachment in an at-risk sample of adolescent mothers. *Attachment & Human Development*. 2007; 9(2):139–161. [PubMed: 17508314]
- Bifulco A, Brown GW, Harris TO. Childhood Experience of Care and Abuse (CECA): A retrospective interview measure. *Journal of Child Psychology and Psychiatry*. 1994; 35(8):1419–1435. [PubMed: 7868637]
- Boszormenyi-Nagy, I.; Spark, GM. *Invisible loyalties: Reciprocity in intergenerational family therapy*. New York: Harper & Row; 1973.
- Bretherton I, Biringen Z, Ridgeway D, Maslin C, Sherman M. Attachment: The parental perspective. *Infant Mental Health Journal*. 1989; 10(3):203–221.
- Bretherton, I.; Lambert, JD.; Golby, B. Modeling and reworking childhood experiences: Involved fathers' representations of being parented and of parenting a preschool child. In: Mayseless, O., editor. *Parenting representations: Theory, research, and clinical implications*. New York: Cambridge University Press; 2006. p. 177-207.

- Bronfman, E.; Parsons, E.; Lyons-Ruth, K. Atypical Maternal Behavior Instrument for Assessment and Classification (AMBIANCE): Manual for coding disrupted affective communication. Cambridge, MA: Unpublished manuscript, Department of Psychiatry, Harvard Medical School; 1992.
- Button S, Pianta R, Marvin R. Mothers' representations of relationships with their children: Relations with parenting behavior, mother characteristics, and child disability status. *Social Development*. 2001; 10(4):455–472.
- Cassidy J, Berlin LJ. The insecure/ambivalent pattern of attachment: Theory and research. *Child Development*. 1994; 65(4):971–991. [PubMed: 7956474]
- Cassidy, J.; Marvin, RS. the McArthur Working Group on Attachment. Unpublished coding manual. University of Virginia; Charlottesville: 1992. Attachment organization in 2 to 4 year olds: Coding manual.
- Crawford A, Benoit D. Caregivers' disrupted representations of the unborn child predict later infant–caregiver disorganized attachment and disrupted interactions. *Infant Mental Health Journal*. 2009; 30:124–144.
- de Jong PF. Hierarchical regression analysis in structural equation modeling. *Structural Equation Modeling*. 1999; 6(2):198–211.
- Earley L, Cushway D. The parentified child. *Clinical Child Psychology and Psychiatry*. 2002; 7(2): 163–178.
- Enders CK. The impact of nonnormality on full-information maximum likelihood estimation for structural equation models with missing data. *Psychological Methods*. 2001; 6:352–370. [PubMed: 11778677]
- Fulgini A, Telzer E, Bower J, Irwin M, Kiang L, Cole S. Daily family assistance and inflammation among adolescents from Latin American and European backgrounds. *Brain, Behavior, and Immunity*. 2009; 23(6):803–809.
- George, C.; Kaplan, N.; Main, M. Adult Attachment Interview. University of California at Berkeley; Berkeley: 1984, 1985, 1996. Unpublished manuscript
- George C, Solomon J. Internal working models of caregiving and security of attachment at age six. *Infant Mental Health Journal*. 1989; 10(3):222–237.
- George C, Solomon J. Representational models of relationships: Links between caregiving and attachment. *Infant Mental Health Journal*. 1996; 17(3):198–216.
- George, C.; Solomon, J. Caregiving helplessness: The development of a screening measure for maternal caregiving disorganization. In: Solomon, J.; George, C., editors. *Disorganized attachment and care-giving*. New York: Guilford Press; 2011. p. 133-166.
- George, C.; Solomon, J. The caregiving system: A behavioral systems approach to parenting. In: Cassidy, JA.; Shaver, PR., editors. *Handbook of attachment: Theory, research, and clinical applications*. 2. New York: Guilford Press; 2008. p. 833-856.
- George C, West M. The development and preliminary validation of a new measure of adult attachment: The Adult Attachment Projective. *Attachment and Human Development*. 2001; 3:30–61. [PubMed: 11708383]
- Greenberg MT, Speltz ML, DeKlyen M, Endriga MC. Attachment security in preschoolers with and without externalizing problems: A replication. *Development and Psychopathology*. 1991; 3:413–430.
- Jones R, Wells M. An empirical study of parentification and personality. *American Journal of Family Therapy*. 1996; 24:145–152.
- Jurkovic, GJ. *Lost childhoods: The plight of the parentified child*. New York: Brunner/Mazel; 1997.
- Jurkovic GJ, Jessee EH, Goglia LR. Treatment of parental children and their families: Conceptual and technical issues. *American Journal of Family Therapy*. 1991; 19:302–314.
- Lyons-Ruth, K.; Bronfman, E.; Parsons, E. Maternal frightened, frightening, and atypical behavior and disorganized infant attachment strategies. In: Vondra, J.; Barnett, D., editors. *Atypical attachment in infancy and early childhood among children at developmental risk*. 1999. p. 67-96. *Monographs of the Society for Research in Child Development*, 64/3, Serial No. 258
- Lyons-Ruth K, Brumariu L, Bureau JF, Hennighausen K, Holmes B. Observed quality of young adult–parent interaction among individuals with borderline traits or suicidality/self-injury. 2013 Manuscript submitted for publication.

- Lyons-Ruth K, Bureau JF, Riley C, Atlas-Corbett AF. Socially indiscriminate attachment behavior in the Strange Situation: Convergent and discriminant validity in relation to caregiving risk, later behavior problems, and attachment insecurity. *Development and Psychopathology*. 2009; 21(2): 355–372. [PubMed: 19338688]
- Lyons-Ruth K, Choi-Kain L, Pechtel P, Bertha E, Gunderson J. Perceived parental protection and cortisol responses among young females with borderline personality disorder and controls. *Psychiatry Research*. 2011; 189:426–432. [PubMed: 21872341]
- Lyons-Ruth K, Connell D, Grunebaum H, Botein D. Infants at social risk: Maternal depression and family support services as mediators of infant development and security of attachment. *Child Development*. 1990; 61:85–98. Abstracted in *Pediatrics Digest*, 8, 26–27. [PubMed: 2307048]
- Lyons-Ruth, K.; Hennighausen, K.; Holmes, B. Goal-corrected partnership in adolescence coding system (GPACS): Coding manual, Version 2. Department of Psychiatry, Harvard Medical School; Cambridge, MA: 2005. Unpublished document
- Lyons-Ruth K, Melnick S, Patrick M, Hobson R. A controlled study of hostile-helpless states of mind among borderline and dysthymic women. *Attachment & Human Development*. 2007; 9(1):1. [PubMed: 17364479]
- Lyons-Ruth K, Yellin C, Melnick S, Atwood G. Expanding the concept of unresolved mental states: Hostile/helpless states of mind on the Adult Attachment Interview are associated with disrupted mother–infant communication and infant disorganization. *Development and Psychopathology*. 2005; 17(1):1–23. [PubMed: 15971757]
- Macfie J, Swan SA. Representations of the caregiver–child relationship and of the self, and emotion regulation in the narratives of young children whose mothers have borderline personality disorder. *Development and Psychopathology*. 2009; 21(3):993–1011. [PubMed: 19583894]
- Madigan S, Bakermans-Kranenburg M, van IJzendoorn M, Moran G, Peterson D, Benoit D. Unresolved states of mind, anomalous parental behavior, and disorganized attachment: A review and meta-analysis of a transmission gap. *Attachment & Human Development*. 2006; 8:89–111. [PubMed: 16818417]
- Main M, Cassidy J. Categories of response to reunion with parent at age 6: Predictable from infant attachment classifications and stable over a 1-month period. *Developmental Psychology*. 1988; 23(3):415–426.
- Main, M.; Goldwyn, R. Adult attachment scoring and classification system, Version 6.3. University of California; Berkeley: 1984. Unpublished manuscript
- Main M, Kaplan N, Cassidy J. Security in infancy, childhood, and adulthood: A move to the level of representation. *Monographs of the Society for Research in Child Development*. 1985; 64(3):66–104. Serial No. 258.
- Main, M.; Solomon, J. Procedures for identifying infants as disorganized/disoriented during the Ainsworth Strange Situation. In: Greenberg, MT.; Cicchetti, D.; Cummings, EM., editors. *Attachment in the preschool years: Theory, research, and intervention*. Chicago: University of Chicago Press; 1990. p. 121-160.
- Mayselless O, Bartholomew K, Henderson A, Trinke S. “I was more her mom than she was mine.” Role reversal in a community sample. *Family Relations*. 2004; 53:78–86.
- Mayselless, O.; Scharf, M. Maternal representations of parenting in adolescence and psychosocial functioning of mothers and adolescents. In: Mayselless, O., editor. *Parenting representations. Theory, research, and clinical implications*. New York: Cambridge University Press; 2006. p. 208-238.
- McCartney K, Burchinal M, Bub K. Best practices in quantitative methods for developmentalists. *Monographs of the Society for Research in Child Development*. 2006; 71(3) Serial No. 285–150.
- McMahon TJ, Luthar SS. Defining characteristics and potential consequences of caretaking burden among children living in urban poverty. *American Journal of Orthopsychiatry*. 2007; 77(2):267. [PubMed: 17535125]
- Melnick, PM.; Finger, S.; Hans, B.; Patrick, S.; Lyons-Ruth, K. Clinical applications of the Adult Attachment Interview. Guilford Press; Guilford: 2008. Hostile-helpless states of mind in the AAI: A proposed additional AAI Category with implications for identifying disorganized infant attachment in high-risk samples; p. 399-423.

- Mika P, Bergner R, Baum M. The development of a scale for the assessment of parentification. *Family Therapy*. 1987; 14(3):229–235.
- Minuchin, S.; Montalvo, B.; Guerney, B.; Rosman, B.; Schumer, F. *Families of the slums*. New York: Basic Books; 1967.
- Moss E, Bureau JF, Cyr C, Mongeau C, St-Laurent D. Correlates of attachment at age 3: Construct validity of the preschool attachment classification system. *Developmental Psychology*. 2004; 40:323–334. [PubMed: 15122960]
- Moss E, Cyr C, Dubois-Comtois K. Attachment at early school age and developmental risk: Examining family contexts and behavior problems of controlling-caregiving, controlling-punitive, and behaviorally disorganized children. *Developmental Psychology*. 2004; 40:519–532. [PubMed: 15238040]
- Muthén, L.K.; Muthén, B.O. *Mplus User's Guide*. 6. Los Angeles: Author; 1998–2011.
- National Institute of Child Health and Human Development Early Child Care Research Network. Child-care and family predictors of preschool attachment and stability from infancy. *Developmental Psychology*. 2001; 37:847–862. [PubMed: 11699758]
- Obsuth I, Hennighausen K, Brumariu L, Lyons-Ruth K. Disorganized behavior in adolescent–parent interactions: Relations to attachment state of mind, partner abuse, and psychopathology. *Child Development*. in press.
- O'Connor E, Bureau JF, McCartney K, Lyons-Ruth K. Risks and outcomes associated with disorganized/controlling patterns of attachment at age three in the NICHD Study of Early Care and Youth Development. *Infant Mental Health Journal*. 2011; 32(4):450–472. [PubMed: 21799549]
- Pechtel, P.; Woodman, A.; Lyons-Ruth, K. *International Journal of Cognitive Therapy: Vol. 5, Special Section: Cognitive Vulnerability, Stress, and Symptom Specificity in Children and Adolescents*. 2012. Early maternal withdrawal and non-verbal childhood IQ as precursors for substance abuse diagnosis in young adulthood: Results of a 20-year prospective study; p. 316-329.
- Raykov T. Analysis of longitudinal studies with missing data using covariance structure modeling with full-information maximum likelihood. *Structural Equation Modeling*. 2005; 12(3):493–505.
- Shaffer A, Sroufe L. The developmental and adaptational implications of generational boundary dissolution: Findings from a prospective, longitudinal study. *Journal of Emotional Abuse*. 2005; 5(2–3):67–84.
- Shi Z, Bureau JF, Easterbrooks MA, Zhao X, Lyons-Ruth K. Childhood maltreatment and prospectively observed quality of early care as predictors of antisocial personality disorder. *Infant Mental Health Journal*. 2011; 33:1–14.
- Solomon J, George C. Defining the caregiving system: Toward a theory of caregiving. *Infant Mental Health Journal*. 1996; 17(3):183–197.
- Solomon, J.; George, C. Intergenerational transmission of dys-regulated maternal caregiving: Mothers describe their upbringing and childrearing. In: Mayseless, O., editor. *Parenting representations: Theory, research, and clinical implications*. New York: Cambridge University Press; 2006. p. 265-295.
- Solomon J, George C, De Jong A. Children classified as controlling at age six: Evidence of disorganized representational strategies and aggression at home and at school. *Development and Psychopathology*. 1995; 7:447–463.
- Spieker, S.; Nelson, E.; DeKlyen, M.; Jolley, S.; Mennet, L. Continuity and change in unresolved classifications of Adult Attachment Interviews with low-income mothers. In: Solomon, J.; George, C., editors. *Disorganized attachment and caregiving*. New York: Guilford Press; 2011. p. 80-109.
- Sroufe LA, Jacobvitz D, Mangelsdorf S, DeAngelo E, Ward JJ. Generational boundary dissolution between mothers and their preschool children: A relationship systems approach. *Child Development*. 1985; 56:317–332. [PubMed: 3987410]
- Sroufe LA, Ward MJ. Seductive behavior of mothers of toddlers: Occurrence, correlates, and family origins. *Child Development*. 1980; 51:1222–1229.
- Tompkins TL. Parentification and maternal HIV infection: Beneficial role or pathological burden? *Journal of Child and Family Studies*. 2007; 16(1):108–118.

- van IJzendoorn MH, Schuengel C, Bakermans-Kranenburg MJ. Disorganized attachment in early childhood: Meta-analysis of precursors, concomitants, and sequelae. *Development and Psychopathology*. 1999; 11:225–249. [PubMed: 16506532]
- Vulliez-Coady, L.; Lyons-Ruth, K. Parental Assessment of Role-Confusion Scale: Coding Manual. 2009. Unpublished manual. Available from K. Lyons-Ruth at klruth@hms.harvard.edu
- Wartner UG, Grossman K, Fremmer-Bombik E, Suess G. Attachment patterns at age six in South Germany: Predictability from infancy and implications for preschool behavior. *Child Development*. 1994; 65:1014–1027.
- Wells M, Glickauf-Hughes C, Jones R. Codependency: A grass roots construct's relationship to shame-proneness, low self-esteem, and childhood parentification. *American Journal of Family Therapy*. 1999; 27(1):63–71.
- Wells M, Jones R. Childhood parentification and shame-proneness: A preliminary study. *American Journal of Family Therapy*. 2000; 28(1):19–27.
- Zeanah C, Benoit D. Clinical applications of a parent perception interview in infant mental health. *Infant Psychiatry*. 1995; 4:539–554.

## APPENDIX

### Dimensions Contributing to the Parental Assessment of Role-Confusion Scale

#### 1. Parent's need for emotional support from her/his child

**Ex:** The most joy of being (child's) parent? I am happy when she is reliable, when she talks to me, when she gives me gifts . . .

**Ex:** I felt that at his age he should have been able to recognize that I was a good mother, that I—I had brought on a lot of heartache, made a lot of sacrifices, but he didn't see that.

**Ex:** I'm thinking of what his sister put me through, I really must be a terrible parent. He said, fine if you were, don't you think I would be the same way? He always—he made me feel good about myself.

#### 2. Indicators of sexualization/spousification in the relationship with the child

**Ex:** We were horsing around on his bed, we were definitely clicked within the last week, kind of like rolling on his bed . . .

**Ex:** He's like the parent that I don't have with my, my partner. He's the other one who has the relationship with the kids.

#### 3. Equality or inversion of hierarchical position with the child

**Ex:** I know he's got his own life and he works hard, but he still does things that he's supposed to do like come food shopping with me because sometimes I have a hard time, I put two of the same things on there if its on sale and he'll take one out. I have a very hard time at the supermarket. He helps me get through it.

**Ex:** It's just the attitudes sometimes, it feels like I don't know very much at all, like he's putting me down because I know they're all smart . . .

**Ex:** If you got something to say, say it straight out. Don't worry about hurting my feelings, because you already have.

#### 4. Helplessness in interaction with the child

**Ex:** When he loses his control, I don't like it. . . . Banging walls and punching things, that's not, that makes me very angry.

**Okay so how, how do you handle your angry feelings?** No, I don't. I go into my room and close the door. I stay in my room.

**Ex:** I kinda stay out, I think he's got to make his own decisions . . . I mean, what can I do? I, I stay out of it. We all have to learn, you know?

**Ex:** I mean they (her children) pay their bills but they can do whatever they want, nobody else can control them, and they sort of control the house more than I do. So I just, that's why we all hide in that room upstairs.

#### 5. Parent's explicit expressions of vulnerability to her/his child

**Ex:** I told him not too long ago: "What you don't understand is I am a clinically depressed person. And I am trying to pay attention to what's going on, but I don't always see and hear everything that's put right in front of me. My mind is honestly somewhere else. You know if I am missing something, please let me know."

**Ex:** They're not allowed to tell me. Because then I jump up and go crazy. Start screaming and yelling.

#### 6. Parent's instrumental and financial need for the child's help

**Ex:** An example of him being a good kid: all the times he used to go get my prescriptions at the drugstore.

#### 7. Description of child being worried about the parent or protective of her/him.

**Ex:** When (child sees me become timid, it bothers him, and I see he tends to get on me more often when I'm timid. If I'm more boisterous and bold, he's more smiley, because I think that's where he concerns himself with how am I going to take care of myself? You know, so he worries about me.

#### 8. Self-referential statements when asked to focus on the child

**Ex:** Example of him being a good kid: I'd have to play with him all the time because there was nobody for him to play with. And then when we decided to put him in pre-kindergarten, I used to cry and I used to chase the bus up the street. Laughs. I used to cry. I used to play all the time.

**Ex:** He's always been pretty independent. Um, I can tell you that I don't like it.

#### 9. Descriptions of punitive-hostile behaviors by the child toward the parent

**Ex:** She blames a lot, everything I did for her was not good.

TABLE 1

Age of Administration, Means, and Standard Deviations of Study Measures

	<i>N</i>	Child Age	<i>M</i>	<i>SD</i>
Parental role confusion (PARC)	51	20 years	3.50	2.00
Cumulative sociodemographic risk	51	20 years	1.67	1.03
Disrupted affective communication with infant (AMBIANCE)	47	18 months		
Role/boundary confusion			4.83	6.89
Withdrawal			3.43	3.40
Negative-Intrusion			2.98	5.04
Communication Errors			5.60	4.61
Disorientation			3.09	3.46
Observed mother–adolescent role confusion (GPACS)	45	20 years		
Collaboration			4.01	1.24
Caregiving/Role Confusion			3.19	1.48
Punitive Behavior			2.99	1.08
Disorientation			4.52	1.78
Caregiving helplessness with adolescent (CHQ)	50	20 years	86.53	14.83
Maternal hostile-helpless representations of attachment relationships (AAI) <sup>a</sup>	34	7 years		
Maternal lack of resolution (AAI) <sup>b</sup>	34	7 years		
Extent of unresolved loss (0–9)			1.84	1.97
Extent of unresolved trauma (0–9)			0.91	1.58

PARC = Parental Assessment of Role Confusion; AMBIANCE = Atypical Maternal Behavior Instrument for Assessment and Classification; GPACS = Goal-Corrected Partnership in Adolescence Coding System; CHQ = Caregiving Helplessness Questionnaire; AAI = Adult Attachment Interview.

<sup>a</sup>Categorical variable: hostile-helpless classification = 61.8%.

<sup>b</sup>Categorical variable: Unresolved classification = 35.3%.



TABLE 2

Pearson Correlations Among Continuous Dependent and Independent Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Maternal role confusion (PARC)													
2. Sociodemographic risk	.28*												
Disrupted affective communication with infant (AMBIANCE):													
3. Role/boundary confusion	.29*	.16											
4. Withdrawal	.09	-.25	-.29*										
5. Negative/intrusion	.16	.02	.55**	-.01									
6. Communication errors	-.02	-.25	.15	.55**	.44**								
7. Disorientation	.23	-.02	.33*	.19	.40*	.25							
Observed mother-adolescent role confusion (GPACS):													
8. Collaboration	-.10	-.27†	-.12	.15	-.25	-.01	.06						
9. Caregiving/Role confusion	.27†	.20	-.17	.06	-.09	-.13	-.04	-.51**					
10. Punitive behavior	.04	-.07	-.09	.03	.12	-.05	-.30*	-.50**	.25				
11. Disorientation	-.07	.19	.14	-.15	.39*	.08	.06	-.45**	.25	.34*			
12. Caregiving helplessness with adolescent (CHQ)	.31*	.16	-.06	.35*	-.04	.11	.14	-.11	.27†	.02	.14		
Maternal lack of resolution (AAI):													
13. Extent of unresolved loss	.39*	.13	.29	.20	.32*	.10	.11	-.06	.19	.13	.18	.23	
14. Extent of unresolved trauma	-.20	-.40*	-.09	.16	.21	.37*	.20	-.01	.00	.09	.14	.00	-.07

Note. N = 51. PARC = Parental Assessment of Role Confusion; AMBIANCE = Atypical Maternal Behavior Instrument for Assessment and Classification; GPACS = Goal-Corrected Partnership in Adolescence Coding System; CHQ = Caregiving Helplessness Questionnaire; AAI = Adult Attachment Interview.

† p < .10.

\* p < .05.

\*\* p < .01.

**TABLE 3**

Parental Assessment of Role Confusion Scores Regressed on Validation Measures, Controlling for Sociodemographic Risk

	<i>R</i> <sup>2</sup>	<i>β</i>
Model 1. Disrupted affective communication with infant (AMBIANCE)	.34	
Sociodemographic risk		.24*
Role/boundary confusion		.31*
Withdrawal		.34**
Negative-intrusive behavior		.04
Affective communication errors		-.23 <sup>†</sup>
Disorientation		.09
Model 2. Observed mother-adolescent role confusion (GPACS)	.21	
Sociodemographic risk		.28*
Collaboration		.08
Caregiving/role confusion		.27*
Punitive behavior		.09
Disorientation		-.19
Model 3. Caregiving helplessness with adolescent (CHQ)	.14	
Sociodemographic risk		.24 <sup>†</sup>
Maternal caregiving helplessness		.28*

Note. *N* = 51. AMBIANCE = Atypical Maternal Behavior Instrument for Assessment and Classification; GPACS = Goal-Corrected Partnership in Adolescence Coding System; CHQ = Caregiving Helplessness Questionnaire.

<sup>†</sup> *p* < .10.

\* *p* < .05.

\*\* *p* < .01.

TABLE 4

Parental Assessment of Role Confusion Regressed on Aspects of Attachment State of Mind on the AAI, Controlling for Sociodemographic Risk

	<i>R</i> <sup>2</sup>	<i>β</i>
Model 1. Maternal hostile-helpless representations of attachment relationships (AAI)	.34	
Sociodemographic risk		.35**
Hostile-helpless		.45***
Model 2. Maternal lack of resolution (AAI)	.18	
Sociodemographic risk		.25 <sup>†</sup>
Unresolved		.12
Model 3. Extent of unresolved loss (AAI)	.23	
Sociodemographic risk		.27*
Extent of unresolved loss		.40**
Model 4. Extent of unresolved trauma (AAI)	.06	
Sociodemographic risk		.25
Extent of unresolved trauma		-.22

Note. *N* = 51. AAI = Adult Attachment Interview.

<sup>†</sup>  
*p* < .10.

\*  
*p* < .05.

\*\*  
*p* < .01.