Interpersonal and Intrapersonal Processes in the Formation of Maternal Representations in Middle Childhood: Review, New Findings and Future Directions

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Abstract: Sidney J. Blatt's unique contribution to the study of internal representations of parental figures is delineated, and empirical research dealing with interpersonal and intrapersonal aspects of maternal representations in middle childhood is reviewed. Children's representations of mother and father, as well as of an unknown parent, provide evidence of the interconnected effects of actual interpersonal experiences and intrapersonal factors. In addition, new findings related to cultural differences affecting children's maternal representations suggest a broader and more complex perspective for the definition of interpersonal experiences. Taken together, these studies suggest an understanding of an individual's internal world of representations as dialectical transactions between his or her circumstances and rules of organization of interpersonal knowledge, on one hand, and the actual interpersonal experiences and cultural beliefs, on the other. The importance of the study of continuity and change for the understanding of the effects of interpersonal and intrapersonal factors in children's construction of parental representations is underscored.

The traditional interest of psychoanalysis in individuality and meaning is leading to the production of an accumulating body of empirical research. This research includes studies of unconscious processes, process and outcome studies of psychoanalytic treatments, investigation within developmental psychopathology, and the interface between psychoanalysis and biology, among other issues (see, e.g., 1–3). Sidney J. Blatt' s contribution to this body of research is paradigmatic in its commitment to empirical evidence in the exploration of basic psychoanalytic concepts; among these concepts is the study of mental representations of parents and significant others. The present article reviews one aspect of the empirical research of children's mental representations that has evolved within the framework of Blatt's approach: the interplay of interpersonal and intrapersonal processes in the development of parental representations.

Blatt and colleagues' empirical approach to the study of mental representations developed within the context of object relations theories (4). Within psychoanalytic theory, object relations approaches assume that children internalize basic aspects of early caretaking interactions by developing stable ways of representing these experiences (5–10). These internalized experiences of self with other serve as a basis for the construction of complex representational structures — object representations — including conscious and unconscious schemas of self and other that work as templates through which experiences that affect behavior, feelings, and cognition are filtered. The empirical study of object representations has led to the design of methods based on memories, dreams, self-report inventories, and responses to projective techniques, all of which are intended to assess mental representations (10–12). A crucial evolution in the conceptualization and the assessment of adults' mental representations followed the development of the Object Relations Inventory (ORI) by Blatt and colleagues (13).

The ORI is a narrative technique for the assessment of the qualitative and structural dimensions of object representations (13, 14). This assessment

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technique is based on open narratives about parents or significant others. In addition, complementary procedures were developed for the assessment of representations of self (15). The ORI narratives provide experience-near accounts of significant others that are subsequently analyzed and scored in relation to both their conscious contents and the organizational and regulatory principles involved. This scoring procedure is strongly anchored in cognitive and psychoanalytic conceptualizations of mental functioning and development (14, 16). An important feature of the ORI coding technique is the differentiation made between content and structural aspects of mental representations, a procedure that has also been followed by other researchers of child development (see 17). Content scores refer to the presence in the narrative of explicit expressions of affect (degree of parent's active display of affection), benevolence (reflects the parent's disposition to do good and positively influence others), warmth (degree to which parent's interpersonal style is unemotional or loving and warm), constructive involvement (extent of the parent's positive vs. negative interactions with others), punitiveness (degree to which the parent is described as inflicting punishment), criticism (degree to which the parent is described as critical and/or intolerant), nurturance (degree to which parent is described as giving care and attention), or ambitiousness (degree to which the parent aspires, drives, and exerts pressure on self or others in order to succeed), as well as the degree of integration of the caregiver's positive and negative aspects ranging from unipolar idealized or devaluated descriptions, through ambivalent descriptions, to well integrated descriptions. The conceptual level scores constitute a structural and developmental dimension. The conceptual level dimension is scored as belonging to one of five possible levels: 1. the *sensori-motor-preoperational level*, in which children experience the parent primarily in terms of their own activities, and the parent is recognized only in the context of need gratification; 2. the *perceptual-concrete level*, in which the parent is described as separated from the specific experiences of gratification and is recognized as a generalized entity with a variety of concrete and literal functions and actions; 3. the *external-iconic level*, in which the qualities and attributes of representations are based on specific,

concrete, and manifest properties, functions, and interests of the parent; 4. the *internal-iconic level*, in which the child's representations reflect mainly an appreciation of more abstract and internal properties, such as feelings and thoughts; and finally, 5. the *conceptual-representational level*, in which the parent is represented as fully separated and with enduring characteristics and continuity. Two additional structural aspects of the narratives are coded: the narrative's length (measured by number of words) and its complexity (measured by the number of content categories that appear in the narrative).

Our factor analysis for the maternal representation among school-aged children (both PCA/EFA and CFA) yielded four distinct factors. The first factor — *Benevolence* — composed of five scales: affectionate, cold-warm, constructive involvement, nurturant, weak-strong, assess aspects related to the extent to which the maternal figure is experienced as benign and giving. These same scales were found to reliably converge into one factor defined as Benevolence in adult and adolescent samples (6, 14). The second factor — *Punitiveness* — composed of two scales (punitiveness and judgemental), which assess the degree to which the maternal figure is experienced as threatening and punitive. A similar factor was reliably found in adult samples (14). The third content factor — *Ambition* — composed of a single scale (ambition) depicted the degree of drive and pressure to succeed attributed to the maternal representation. The fourth factor — *Conceptual Level* — was composed of a single structural scale (Conceptual Level) reflecting the degree to which the maternal representation is conceptually developed.

This method of assessing representations of parents and significant others in adult populations has been found to be reliable (18, 19), and its construct validity is supported by research on psychopathology and psychodynamic treatment (20, 21). In addition, independent estimates of therapeutic change have been found to correlate with changes in the structural and qualitative dimensions of parental and self-representations (22, 23).

The ORI has been adapted for use with children aged 8–13 as the Child Object Relation Inventory (CORI; 24, 25). The CORI provides reliable scores for the qualitative and structural characteristics of maternal representations (26–28). The CORI's test-

retest associations over a ten-month period are significant and substantial (28). CORI's scores have been found to discriminate significantly among normal, Attention Deficit Hyperactivity Disorder (ADHD), and conduct disordered children (29), as well as between maltreated and nonmaltreated children from similar socioeconomic backgrounds (30), and between adopted and biological children (26). In addition, the CORI validly detects developmental changes of parental representations in middle childhood and preadolescence (24). Positive and more mature maternal representations have been found to significantly associate with better conflict resolution, less separation anxiety, and higher self-perception scores (24), as well as with multisource assessments of good adjustment and lower externalizing and internalizing symptomatology scores (24, 26, 28, 30).

Does Reality Matter?

A major open question in the research of mental representations relates to the interactions between wishes, needs, and active organizing rules vis-à-vis relationships, on one hand, and the individual's real interpersonal experiences with main caregivers, on the other. More than forty years ago, Sandler and Rosenblatt (8) hinted at this distinction when they characterized mental representations of significant others as including two main realms: (a) a phenomenal or experiential realm (i.e., the subjective, here-and-now representation of the self and the other), and (b) a nonexperiential schema (i.e., an organization of knowledge, or a set of rules).

The relative importance of actual experiences and of intrapersonal factors that affect the formation of internalized models of relationships has been considered a main point of divergence between attachment and object relations theories. While attachment theories underscored almost exclusively the role of children's real experiences with their primary caregiver, object relations perspectives emphasized aspects of individual differences in the perception and organization of patterns of interpersonal relationships. However, advances based on empirical research and clinical experience in these two areas — attachment and psychoanalytic theories — show an important convergence. Contemporary object relations theorists have developed perspectives that stress the importance of caregivers' characteristics and children's real experiences with them (5, 31). Alongside these developments, recent advances in attachment theory convey findings about the distortions or defenses that affect important aspects of internal working models of attachment (32). Moreover, research in the field of internal models of attachment has demonstrated the pervasive effects of already-existing representations on the formation of new ones, beyond real experiences (33). As can be seen, today's understanding of the internal world of representations reflects a complex picture of dialectical transactions between actual experiences and the individual's history and rules of organization of interpersonal knowledge.

In what follows, we present three different empirical approaches to the study of the roles played by real interpersonal experiences and organizational strategies of individuals, in children's construction of parental representations. In the first study (26), we analyzed children's construction of the representation of an unknown parent, mapping the work of intrapersonal processes where real interpersonal experiences were lacking. The second section (34) centers on studies of the continuity between representations of the maternal and another primary caregiver as an important structuring principle that is active in the organization of the internal world of mental representations. The third is a cross-cultural empirical perspective on the role of real interactions in the formation of parental representations; a new study is presented that tracks the traces of mother's cultural context in the formation of children's maternal representations. Finally, we suggest new directions for the study of the interplay of interpersonal and intrapersonal processes in the formation of parental representations.

Construction of the Representation of an Unknown Parent: Adoptees' Maternal Representations

The study of adoptees under closed adoption (i.e., neither the child nor the adoptive parents knows who the biological parents are) provides a privileged perspective for the exploration of the characteristics of a representation formed *without* a real interactive

anchor (i.e., the representation of the adoptee's biological mother). A study by Priel, Besser and Kantor (26) centered on the relations between representations of adoptive and birth mothers in the context of the adjustment of adopted children. It was assumed that the knowledge of being an adopted child might affect all object representations: not only adoptees' representations of their birth mothers, but the representations of adoptive mothers as well. To explore this question, adoptive and biological mother representations among adoptees were compared to non-adopted children's maternal representations.

Both adoptees' representations of their adoptive mothers and non-adopted children's representations of their mothers are constructed on the basis of daily, reiterated, actual interactions, but within two very different mental contexts: the knowledge of being adopted in one case, and the knowledge of being a biological offspring in the other (35). Both attachment and object relations theorists assume that the representations of parents are modulated by the child's actual interactions with them (31, 36). Representations of the unknown birth-parent, however, lack the possibility of being moderated by experience and, consequently, may present extreme characteristics of goodness or badness. Clinical reports of adopted adults in treatment provide examples of extremely bad (37), as well as ideal, representations of biological parents (38). These findings, even though seemingly contradictory, suggest that representations of an unknown parent might have a characteristically exaggerated quality. This implies that, in the total absence of real interactions, adopted children's representations of their biological mothers might be expected to present more extreme characteristics than the children's representations of those who actually raise them; that is, the adoptees' adoptive mothers and the biological mothers of the non-adopted children.

In order to investigate the effects of adoption on maternal representations, Priel et al. (26) compared adoptees' representations of their adoptive mothers with maternal representations of non-adopted children, as well as the representations of the adoptive and the biological mother among adopted children. This study also explored the effects of the degree of discrepancy between representations of adopted children's adoptive and biological mothers' on these children's adjustment. Participants were 52 adopted children (21 girls and 31 boys, mean age 9.88, SD=1.58). The comparison group consisted of 52 biological children (27 girls and 25 boys, mean age=9.71, SD=1.40). Analyses comparing adoptees and non-adopted children in relation to sex, age and IQ indicated that these groups are not significantly different. Children's representations of their biological and adoptive (where relevant) mothers, as well as assessments of children's externalizing and internalizing symptoms and adaptive behavior (39) were gathered.

Analyses of the adoptees' maternal representations revealed that both their representations of biological and adoptive mothers had a significantly lower conceptual level and were less benevolent and more punitive than non-adopted children's maternal representations. Moreover, adoptees' maternal representations, especially those of their biological mothers, were found to be rather concrete and centered on physical characteristics only (26). Upon further exploration, it became clear that adoptees' physical descriptions of the biological mother take the self as a point of reference. The representations of an unknown parent thus reverse the usual developmental process: the representations of an adoptee's biological mother apparently originate in the child's self-image. This finding sheds light on some of the complexities of the relations between lived experience and mental representation.

The comparison between the representations of adoptive and biological mothers within the sample of adopted children revealed that, although the two had similar conceptual levels, biological mother's representations were significantly less benevolent than the representations of the adoptive mothers (26). The consistency of conceptual levels across representations parallels previous findings about this dimension as reflecting the individual's level of personality organization (14, 24). The degree of incongruence between the benevolence of the two maternal representations in the adoptee sample was found to significantly associate with the level of the children's externalizing symptoms (e.g., delinquent, aggressive and hyperactive behavior): larger differences were associated with significantly more externalizing symptoms. The study of adoptees underscored the importance of the integration among

different representations of caregivers for child adjustment.

Moreover, the study of adopted children revealed the important role played by children's knowledge of being adopted in their construction of each of the two maternal representations, plausibly beyond real interactions in the case of the adoptive mother. The differences found between the adoptees' two maternal representations, however, may alternatively be attributed to a lack of real interactions with the biological mother. It might be argued that since such interactions are lacking, and only because of this lack, internal organizational principles are activated. In order to further the study of the roles of intrapersonal and interpersonal factors in the formation of parental representations we approached the study of different real caregivers. Two studies were conducted centering on children's representations of two real caregivers with whom the child interacts: mother and father.

Continuity Between the Maternal and Another Primary Caregiver Representations: Maternal and Paternal Representations

The study of representations of mother and father is a long-standing method in the investigation of the differential effects of interpersonal experiences and temperamental characteristics in child development. Nurture-oriented perspectives have assumed lower concordance between representations of mother and father because of the assumed inherent differences in their relationships with the child (see e.g., 40). In contrast, nature-oriented perspectives have predicted extensive concordance between representations of mother and father (38).

Research on internal working models of attachment to mother and father in the context of attachment theory shows extensive concordance as well as important dissimilarities or nonconcordance between these representations (41–44). Evidence in the developmental literature indicates that greater discrepancies between representations of parents associate with child maladjustment (e.g., 45). Moreover, Suess, Grossmann and Sroufe (34) found that, among preschoolers, the combined information about attachment to both mother and father is the best predictor of play competence, conflict resolution and behavior problems (34).

Using the CORI method previously described, analyses of preschool (n=80) and school-aged (n=96) children's representations of mother and father revealed a close concordance between representations of father and mother in all the representational dimensions scored (45). While correlations between mother and father representations on qualitative dimensions (e.g., Benevolence, Punitiveness) were between .30 and .40, correlations between mother and father on structural dimensions (conceptual level, length, etc.) were between .70 and .75. We also found indications of more differentiated representations of the parent of the opposite sex among school-aged children: The Conceptual Level scores of maternal representations among boys and of paternal representations among girls were significantly higher than the Conceptual Level scores of mother representations among girls and father representations among boys. This pattern of findings suggests that structural aspects of mother and father representations might reflect basic rules of organization, while their qualitative dimensions seem to be more affected by the child's experiences with the caregiver.

As part of a larger project, these differences between maternal and paternal representations were replicated (46) in a new sample of 115 children aged 8 to 12 years. Using (2)×(4) within-subjects repeated measures MANOVA (parental description)×(CORI dimensions), we analyzed the children's representations to reveal possible effects of each parent. A significant interaction was obtained between the CORI dimensions and the parent described [F(3,342)=4.21; p<0.005]. Specifically, results indicated significant interactions for parent by Benevolence and for parent by Punitiveness; children tended to describe their mothers as more benevolent and their fathers as more punitive. No significant interactions were found for the structural dimensions. In this sample, maternal and paternal representations were also found to differ in their association with children's symptomatic behavior as reported by their teachers (37). While qualitative aspects of the maternal representation were found to significantly associate with levels of symptomatology, no significant associations were found between children's pa-

ternal descriptions and symptomatic behavior. This finding is in line with attachment studies showing a greater predictive power from children's maternal attachment style to consecutive outcome measures as compared to their paternal attachment style (40).

Taken together, findings of studies comparing maternal and paternal representations strengthen the understanding of the CORI qualitative factors' scores as more strongly affected by children's real experiences with caretakers, while the CORI's structural factors' scores appear to detect basic organizational patterns.

The Background of Real Interactions: Maternal Representations in Two Cultures

Contemporary approaches to human development view the developmental environment as structured according to cultural configurations based on customs, values, interpersonal interactions, and beliefs about people and the world (e.g., 39). This environment systematically affects personality development through the provision of ample redundancy of situations where expectations and systems of meaning are transmitted, as well as through the application of particular child-rearing practices. Consequently, culture might be considered to affect children's basic interpersonal experiences (47, 48) and the development of mental representations of caregivers.

The dimension of individualism-collectivism is a main axis along which cultures have been characterized (49). Kagitcibasi (50) distinguished between collectivist and individualist social groups, describing them as "the cultures of relatedness and separateness" (p. 42). The culture of *relatedness* involves family and interpersonal relational patterns characterized by dependent-interdependent relations; personal boundaries may overlap. Contrariwise, the culture of *separateness* involves patterns of independent interpersonal relations, with separated and well-defined personal boundaries (50). Collectivist cultures are characterized by a special concern with relationships and their maintenance. In collectivist cultures, people are interdependent within their in-group, which consists mainly of their family. They enjoy doing what their in-group expects from them, and characteristically prefer methods of conflict res-

olution that do not destroy relationships. In collectivistic societies, child-rearing practices stress security, conformity and reliability. In contrast, in individualistic societies child-rearing emphasizes independence, exploration and creativity (49). In such societies, people's main concern is their own autonomy. They are independent from their in-groups, want to "get ahead" of others, and look for justice in conflict situations.

Investigations of the effects of individualistic and collectivistic societies have revealed differences in self-concept and interpersonal relationships, as well as in emotional and cognitive development (51–53). Cultural differences have also been detected in studies of infant attachment styles (54, 55).

Recent research on cultural differences, however, shows that the classification of cultures into individualistic and collectivistic need not be dichotomist. Kagitcibasi (50) proposed a third model according to which some contemporaneous individualistic cultures also include the basic interdependence within the family that is characteristic of collectivistic cultures. That is, collectivism and individualism may be independent rather than dichotomous variables, and cultures may be similar on one of these dimensions but differ on the others. Research comparing Israeli and American cultural environments corroborates this argument. Both Israel and the United States are mainly Western cultures, similar in their individualistic general orientation; however, these two cultural environments have been found to differ significantly in terms of their emphasis on collectivistic ideals (53) and family values (56). Israelis have been found to have relatively high collectivistic values with regard to the family group. In addition, Israeli society manifests in-group interdependence and relationship maintenance. These collectivistic values have been linked to rooted Jewish familial values (58), as well as to a long historical background of external danger and the consequent strong need for reliance on the in-group (57).

Since differences regarding collectivistic values are assumed to affect basic caregiving practices and children's parental representations are construed on the basis of caretaking experiences, we designed a cross-cultural study intended to explore the differences and similarities between Israeli and American school-age children's maternal representations. We

assumed that Israelis' higher communitarian values would be reflected in less differentiated and more benevolent or gratifying maternal representations, whereas the more exclusive emphasis on individualistic values among American children would produce more differentiated and ambitious maternal representations.

Participants were 179 elementary-school-aged children, 82 Israelis and 97 Americans (*M* age=11.54, *SD*=0.44, and *M*=12.13, *SD*=0.67 for Israelis and Americans, respectively) matched for gender distribution, as well as for parents' levels of formal education and socio-economic status. Open-ended written descriptions of mother were collected and coded according to the CORI procedure, as detailed in the introduction section. Results indicated significant group differences for the levels of the Benevolence factor of maternal representations, with higher levels of Benevolence among the Israeli children. Accordingly, Israeli children's maternal representations included more affection, nurturance, benevolence, and warmth than the maternal representations of the American children (see Table 1).

Moreover, explicit expressions of maternal affect appeared in 60% of the Israeli children's representations but in only 20% of the American children's representations (*p*<.0001). These findings corroborate the characterization of Israel culture as more familistic, emphasizing values of relatedness and interdependence. This characterization is strengthened by our findings on the integration dimension. The degree of integration of positive and negative aspects of maternal representations was found to significantly differentiate the two groups: American children's descriptions were significantly more ambivalent than those in the Israeli group (see Table 1). The characterization of maternal representations among Israeli children as more benevolent and without negative aspects in most cases might be functional for the preservation of positive relationships within the family group (58).

Contrary to our expectations, group differences on the dimension of Ambition were nonsignificant; this finding strengthens the assumption of Oyserman et al. (53) that these two societies have rather similar evaluations of achievement. This conclusion must be qualified, however, because, at this age level, references to maternal ambition are relatively scarce (see Table 1), probably because the salience of achievement issues may be just emerging at the age level studied (59). Specifically, 30% of the American children described their mother in terms of ambition and achievement, whereas only 20% of their Israeli counterparts did so (*p*<.06). Thus, even though achievement motivation might be similar in these two cultures, these frequencies may suggest an earlier awareness of achievement values among American children.

Table 1. *Israeli and American Children's Maternal Representations: CORI Means, Standard Deviations and ANOVA Fs*

	Israeli Children		American Children		Statistics
	M	SD	M	SD	
CORI					F(1,177)
Conceptual Level	3.6	1.4	4.72	1.39	28.67**
Integration	1.84	.91	2.05	.86	2.70*
Complexity	6.72	1.75	6.18	1.5	5.02*
Length	53.9	26.1	45.05	21.96	6.07*
Benevolence Factor	5.56	.70	5.32	.61	6.01*
Ambition Factor	4.37	.54	4.41	.54	.18 *Ns.*
Punitiveness Factor	3.45	.69	3.46	.63	.02 *Ns.*

Note: N = 82 Israelis and 97 Americans.

*To insure that the overall chance of making a Type I error is still less than .05 a full Bonferroni Correction for multiple comparisons was implied, *p<.05, **p<.001

Interestingly, the most extensive differences between the two groups were related to the structural dimensions of maternal representations. The Conceptual Level of the mother representations was found to be significantly higher among the American participants, while the Complexity and the Length scores were significantly higher among the Israeli children (see Table 1). The differences on the Conceptual Level scores of maternal representations suggest that American children develop a differentiated and independent representation of mother earlier than their Israeli counterparts. This assumption is corroborated by the distribution of Conceptual Level scores in the two groups: 33% of the Israeli children represented their mother on the sensorimotor level, while only 10% of the American children did so ($p<.0002$). Among the higher conceptual levels, this picture reverses itself: more than 50% of the American children conveyed representations at the external-iconic level, while only 18% of the Israeli children reached this level ($p<.0001$).

An additional structural difference between the two groups relates to the length and complexity of the representations. The Israeli participants' narratives were significantly longer and more complex (i.e., included more coded categories), as can be seen in Table 1. These two aspects of the representation, length and complexity, reflect greater richness, nuance, and detail in the Israeli children's representations. Since the Conceptual Level of these representations is relatively low (mainly sensorimotor or perceptual), however, these children's greater elaboration is limited to the need-fulfilling functions of the mother or her external appearance. Accordingly, the complexity of maternal representations in the Israeli sample seems to reflect mostly these children's greater closeness and dependency needs.

To sum up, maternal representations in the American group were more differentiated, including some ambivalence and an earlier awareness of achievement characteristics. Maternal representations in the Israeli group were less differentiated; they were mostly gratifying and ideal. The pattern of similarities and differences between American and Israeli children's maternal representations reflects the more exclusive emphasis on differentiation and autonomy of the American individualistic culture,

on one hand, and the stronger familistic and communitary tendencies that prevail in Israeli society, on the other.

Our findings reinforce perspectives on mother-child interactions as embedded in a web of cultural values and expectations that affect maternal behavior and children's experiences as well as children's parental representations. From these findings we learn that the study of how aspects of reality intervene in the formation of maternal representations needs to be expanded beyond observation and interview techniques to include the cultural dimensions of behavior.

Conclusions

The study of the development of maternal representations in normal and special populations belongs to the thriving field of empirical investigations of basic psychoanalytic concepts. The empirical investigation of children's maternal representations suggests complex transactions between real interpersonal experiences and the intrapersonal processes that organize and structure these experiences. These studies show that maternal representations might not only reflect reality, but might also play a pivotal role in the construction of reality, conveying the individual's particular interpretation of experiences undergone and messages received. Moreover, these studies underscore important associations between aspects of parental representations and children's mental health: scores of maternal Benevolence and Conceptual Level in the assessment of representations consistently associate with evaluations of adjustment and mental health during middle childhood. In addition, the concept of interpersonal "real" experiences has been shown to include a much more ample and varied range of meanings than the ones the protagonists or a naïve observer are aware of.

The study of mental representations in middle childhood underscores the complexity of the processes that interact in the construction of basic interpersonal patterns of relationships and that are effective in the maintenance of their continuity over time. The first study reviewed here indicated the importance of the circumstances surrounding the formation of representations: adoption, for instance, might significantly affect parenting practices, chil-

dren's interpretations of their relationships with mother, or both. In addition, we found that basic characteristics of representations might be significantly affected by other co-existing representations, plausibly beyond the effects of children's actual interpersonal experience. Cross-cultural research has considerably widened our understanding of the factors affecting interpersonal experiences and the formation of parental representations.

This pattern of findings strengthens a perspective on parental representations as affected by both interpersonal and intrapsychic processes: on the one hand the child's real interpersonal experiences with the caregiver and his/her specific circumstances, and on the other hand the child's already internalized representational schemas and particular modes of organizing new experiences. Cultural values and expectations, a child's history of relationships and his/her capacity to organize them, as well as real interpersonal meanings and circumstances, have all been shown to intervene as significant aspects of children's parental representations.

The present article presents only a very partial list of plausible factors affecting children's representations. Studies of the pathology of parenting (e.g., neglect) are necessary to better define the limits of the effects of caretaking experiences on children's representations. Moreover, in order to further the understanding of the roles of interpersonal and intrapersonal factors in the formation of mental representations, systematic studies of continuity and change of mental representations are badly needed. Further research needs to involve contexts in which interpersonal and/or intrapersonal changes are facilitated in order to delineate the mechanisms that allow for growth and transformation in the internal world of representations.

Acknowledgements

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