



HHS Public Access

Author manuscript

Dev Psychol. Author manuscript; available in PMC 2018 February 27.

Published in final edited form as:

Dev Psychol. 2008 May ; 44(3): 666–680. doi:10.1037/0012-1649.44.3.666.

Mother–Child Emotional Availability in Ecological Perspective: Three Countries, Two Regions, Two Genders

Marc H. Bornstein, Diane L. Putnick, Marianne Heslington, Motti Gini, Joan T. D. Suwalsky, Paola Venuti, Simona de Falco, Zeno Giusti, and Celia Zingman de Galperín

Child and Family Research, Eunice Kennedy Shriver National Institute of Child Health and Human Development, National Institutes of Health, Department of Health and Human Services, Bethesda, Maryland

Abstract

This study used a cross-national framework to examine country, region, and gender differences in emotional availability (EA), a prominent index of mutual socioemotional adaptation in the parent–child dyad. Altogether 220 Argentine, Italian, and U.S. mothers and their daughters and sons from both rural and metropolitan areas took part in home observations when the children were 20 months old. In terms of country, Italian mothers were more sensitive and optimally structuring, and Italian children were more responsive and involving, than Argentine and U.S. dyads. In terms of region, rural mothers were more intrusive than metropolitan mothers, and boys from metropolitan areas were more responsive than boys from rural areas. In terms of gender, mothers of girls were more sensitive and optimally structuring than mothers of boys, and daughters were more responsive and involving than sons. Understanding how country, region, and gender influence EA exposes forces that shape child development, parent–infant interaction, and family systems.

Keywords

emotional availability; culture; infancy; parenting

Emotional exchange is a primary modality for expression and reciprocation of parent–child affection and communication (Bornstein & Lamb, 2008). Maternal emotional displays to children self-disclose, engage and maintain affecting exchanges, extend social interaction, and mark important dyadic events (Martin, Clements, & Crnic, 2002). Reciprocally, children provide multiple cues that articulate their emotional states and needs to their parents (Barnard, 1976; Barnard et al., 1989). Emotional availability (EA; Emde, 1980, 2000; Emde & Easterbrooks, 1985), a concept used to refer to the quality of emotional exchanges between parents and their children, encompasses both emotional signaling and emotional understanding in each partner and the emotional accessibility of one to the other (Biringen & Robinson, 1991). Such positive emotional sharing appears to be indispensable to healthy

caregiving and wholesome parent–child functioning, at least in Western cultures (Aviezer, Sagi, Joels, & Ziv, 1999; Biringen & Robinson, 1991; Bretherton, 2000; Emde, 1980; Lovas, 2005). Theoretical work underscores the grounding of this construct in the attachment tradition (Bowlby, 1969) and its broad utility in clinical practice and in research (see Biringen & Robinson, 1991; Ammaniti, 2006).

Here, we studied four aspects of mothers' EA to their children and two aspects of children's EA to their mothers (Biringen, Robinson, & Emde, 1998). Maternal sensitivity assessed acceptance, flexibility, affect regulation, and variety and creativity of behavior displayed toward the child. Maternal structuring assessed appropriate facilitation, scaffolding, mediation, and organization of child activity, exploration, and routine by providing rules, regulations, and a supportive framework for interaction without compromising the child's interest in such activities. Maternal nonintrusiveness measured support for the child without interrupting the child by being overdirective, overstimulating, overprotecting, or interfering. Maternal nonhostility measured talking to or behaving with the child in a way that is patient, pleasant, and harmonious and not rejecting, abrasive, or antagonistic. Child responsiveness focused on age- and context-appropriate exploring and reacting to the mother's bids and enjoyment of the interaction. Child involving evaluated the child's ability, willingness, and success in engaging the mother in interaction.

On one hand, these features of the parent–child relationship are basic and presumably universal (e.g., Scherer & Wallbott, 1994; van IJzendoorn, Bakersman-Kranenburg, & Sagi-Schwartz, 2006); such emotional exchanges constitute parents' and children's "first language" and primary mode of emotional communication with one another. On the other hand, norms regarding emotion vary with culture, as do their elicitation, regulation, and manifestation (Eid & Diener, 2001; Kitayama & Markus, 1994), and culturally appropriate expressions of emotional exchange are requisite to the development of social competence (e.g., Eisenberg et al., 1997; Halberstadt, Denham, & Dunsmore, 2000; Saarni, 1999). The emergence, expression, and growth of EA in the dyad are likely determined by many sources, including evolutionary mandates, developmental tasks and demands, parents' and children's own psychological make-ups, and ecological context and culture.

Importance of Studying Ecological Context

Contemporary research has cast the ecological perspective as central to developmental study (Bronfenbrenner & Morris, 1998), and one vital ecology of development is culture (Bornstein, 1980, 1991, 2008a, 2008b; Rogoff, 1990). The mandate of cross-cultural research is to explore and explain cultural similarities and differences in human development (Bornstein, 1980; van de Vijver & Leung, 1997). Most developmental investigation is still monocultural (Tomlinson & Swartz, 2003), however, and critics have historically disparaged presumptively pan-cultural (universal) generalizations from such (limited) findings (e.g., Bornstein, 1980, 1991; Kennedy, Scheirer, & Rogers, 1984; Moghaddam, 1987; Russell, 1984; Sexton & Misiak, 1984; Triandis, 1980). Cross-cultural developmental science is acknowledged by empiricists and theoreticians alike as requisite to a fuller understanding of developmental processes and for testing the limits of generalization (e.g., Bornstein, 1991, 2002; Brislin, 1983; Nugent, Lester, & Brazelton, 1989; Piaget, 1966/1974; Whiting, 1981).

Specifically, insufficient research has systematically examined expressions of EA by country, or region within country, even though there have been calls for investigations of both cross-country and intracountry variation in EA (e.g., Emde, 2000). Accordingly, this study had as its first goal to explore the expression of dyadic variation in EA by ecological loci across countries and between regions within country. We discuss cross-country and (intracountry) between-region variation in these kinds of parent–child relationships and, afterward, take up another topic of this study—gender.

Mother and Child EA in Argentine, Italian, and U.S. Rural and Metropolitan Ecological Contexts

For this study, direct observations of child rearing and child development were pursued in a cross-cultural comparison. We evaluated and compared domains of EA in mothers and their children in six contrasting ecologies: three contexts were country (Argentina, Italy, and the United States) and two were region within each country (rural and metropolitan). Every ecological context has its own needs and has evolved its own developmental agenda, and so child-rearing attitudes and activities can be expected to be adapted (to some degree) to specific contexts (Bornstein, 1991, 2002; Bronfenbrenner, 1979, 1989; Okagaki & Divecha, 1993; Smetana, 1994; Valsiner, 1989). Moreover, cultural models of parenting are composed of interlocked cognitions and practices shared by members of a community; insofar as different countries, and regions within countries, have different requirements for parents and children (Weisner, 2005), we expected that dyads living in them would experience different conditions of development and so might express themselves differently in terms of their EA.

For several theoretical, practical, and design reasons, Argentina, Italy, and the United States compose an attractive comparative set in which to investigate culture-general as well as culture-specific aspects of mother–child mutual EA. On one hand, these three countries, as well as contrasting rural and metropolitan locales in each, are reasonably similar to one another in terms of predominant European heritage, levels of modernity, industrialization, and per capita income, ecological and climatic factors, education and literacy, and standard of living; all three also have low birth rates and small family size, prize childhood caregiving, and have families that are nuclear in organization and in which the mother is normally the primary caregiver. So, these countries and samples are roughly comparable in terms of general sociodemographics, and these shared forces led us to expect that mothers and children in rural and metropolitan areas, respectively, would show similarities in terms of different aspects of EA.

On the other hand, these countries contrast with one another in terms of history, cultural values, and parenting beliefs that may influence EA. Here, we briefly review the psychology and sociology of parenting and child development in Argentina, Italy, and the United States and in rural versus metropolitan contexts, as well as how the variation among them shaped our specific expectations that, despite some inclusive similarities, mothers' and children's EA in these different ecologies would vary. We want to emphasize that the following review refers to average group differences that obviously elide over individual variation that is present within any group.

Argentina

Latin American child-rearing values generally stress dependency, respect, and obedience and use rewards and punishments to achieve these goals (Durett, O'Bryant, & Pennebaker, 1975; Eichelbaum de Babini, 1965; Greenfield, Suzuki, & Rothstein-Fisch, 2006; Kagan & Ender, 1975; Minturn & Lambert, 1964; Pescatello, 1973; Ribas, in press). In Argentina, vertical relationships often have an authoritarian cast, and parents at home, teachers at school, and supervisors at work frequently appeal to autocratic and arbitrary modes in interpersonal situations (Aguinis, 1988; Fillol, 1961; Pascual, 1991). At school, Argentines tend to practice direct transmission of knowledge, for example, favoring demonstration (Pascual, 1991; Petty, 1986); the use of such strategies is thought to stem from a view of children as in need of instruction. In the family, to direct a child's action is to behave positively toward the child and to express care and love in preparing the child for development (Aguinis, 1988; Díaz Rossello, 1988; Fillol, 1961). Empirically, Spanish-speaking mothers rely more on attentionals (utterances designed to attract the child's attention) and high volume in their interactions with infants (Blount, 1990), and Argentine mothers specifically favor direct and controlling statements in speech to young children relative to, say, Japanese, French, and U.S. mothers (Bornstein et al., 1992).

Italy

Italian mothers promote child protection and warmth, and folding the child into the family is a principal parenting task (Carugati, Emiliani, & Molinari, 1990; Donati, 1985, 1993; Edwards, Gandini, & Giovaninni, 1996; Emiliani & Molinari, 1995). Italian parents reportedly give special importance to social style and to interactive and affective dyadic exchanges (Senese, Poderico, & Venuti, 2003). Studies of mothers' beliefs about the timing of children's development show Italian parents expect high levels of social maturity in their children (e.g., participating in the social group, greeting, and responding to others' requests; Edwards & Gandini, 1989; Gandini & Edwards, 2000). Cultivating *vivacità*, or liveliness, which is considered an index of health and loveliness, has been identified as an important cultural goal for Italian parents (Axia & Weisner, 2002). National authors refer to Italian mothers as generous and devoted to their children (Bravo, 1997); this picture is not a simple social stereotype but a broad archetype that infuses Italian culture from social structure to art. Empirically, Italian mothers of young infants engage more in social-affective behaviors and handling-holding, and they spend more time in synchronous dyadic social exchanges with their infants as compared with American mothers (Hsu & Lavelli, 2005). Italian mothers also stress the significance of social-oriented interactions with their infants (Bornstein, Cote, & Venuti, 2001).

United States

U.S. child rearing is highly individualistic as mothers prize effort in self-reliance, self-actualization, expressiveness, and autonomy in children and see optimal growth as a child achievement (Bellah, Madsen, Sullivan, Swindler, & Tipton, 1985; Bornstein, 1994; Harwood & Miller, 1991; Stevenson, 1992; Tamis-LeMonda & McFadden, in press; Triandis, 1995). U.S. mothers rate rules and respect for authority as important. They are competitive, want the best for their children, and feel that the best way to achieve this aim is

to prepare themselves to be good parents. U.S. mothers generally tend to be optimistic and positive when evaluating their parenting. Middle-class North American mothers also tend to favor authoritative parenting, regulating interactions with their children so as to foster physical and verbal individuality and assertiveness (Bellah et al., 1985; Markus & Kitayama, 1991; Whiting & Child, 1953). U.S. mothers engage in less social play and verbally praise their children less as compared with Argentine mothers (Bornstein, Haynes, Pascual, Painter, & Galperín, 1999). As compared with Italian mothers, U.S. mothers also look at and talk to their young infants less frequently (Richman, LeVine, et al., 1988; Richman, Miller, & Solomon, 1988), display lower levels of social-affective behaviors, and spend less time in synchronous dyadic social exchanges with their infants (Hsu & Lavelli, 2005).

On the basis of these (admittedly broad) country contrasts, we developed first-order hypotheses that (a) because of high-demand practices, Argentine mothers would be (comparatively speaking) lower in sensitivity, less optimal in structuring, and higher in intrusiveness; (b) Italian mothers and children would show (comparatively speaking) the highest levels of all aspects of EA to one another because of strong expectations, if not demands, in Italian culture for mutual socioemotional expressiveness within the dyad; and (c) in line with their strong individualist orientation, mothers in the United States would show (comparatively speaking) lower levels of EA to their infants. That said, we expected all infants and mothers in these typically developing Western groups to be mutually available to one another.

The particular country comparison we designed directly contrasts cultural conditions of child rearing and disentangles them (to the degree possible; see below) from other usually confounding sociodemographic factors (see Jahoda, 1980; Munroe & Munroe, 1980). Furthermore, we contrasted two groups in each country (one rural and one metropolitan) and so availed ourselves of the possibility of creating a wider comparison than is typical of cross-cultural research (see Bornstein, 1991, 2002; Brislin, 1983; Piaget, 1966/1974; Whiting, 1981). To analyze EA comprehensively, it is both desirable and necessary to approach the dynamic from cross-cultural and intracultural perspectives.

Rural–Metropolitan

Just as parenting and child development may not be uniform across countries, they may also not be uniform across major ecological settings within a country. To explore this idea with respect to EA, our second aim was to compare EA in rural and metropolitan¹ settings within each country. The variation between rural and metropolitan is continuous rather than categorical, and people in these contrasting ecological contexts face many of the same modern-day challenges and share much of the same general cultural information (Thompson et al., 1996; Zayas, 1995); child development in the two contexts also, of course, traverses much the same normative course (Coleman, Ganong, Clark, & Madsen, 1989; Thompson et al., 1996; Zayas, 1995). Yet, the notion that rural life differs in systematic ways from

¹Contemporary research often (rightly or wrongly) reserves the term *urban* to mean the research is situated in low-income, inner-city contexts and is likely to have recruited racial or ethnic minority participants. In the present study, we did not recruit such a sample, and so we use the term *metropolitan* to mean families living in cities or in urbanized suburban areas surrounding cities that have higher education and socioeconomic status than their rural counterparts.

metropolitan life is a classic one in social science (see Hauser & Schnore, 1965; Redfield, 1947; Sjoberg, 1964; Tonnies, 1887/1963; Wirth, 1938). Rural areas typically differ from metropolitan areas structurally, that is, in terms of population characteristics, density of social organization, and level of technological development. Metropolitan communities tend to be large; normally subscribe to a wider range of ideas, experiences, and actions; foster liberal attitudes; and provide variegated experiences to smaller, more mobile nuclear families (Bettencourt, Lobo, Helbing, Kühnert, & West, 2007). By contrast, rural communities more often consist of mutually dependent populations that tend to foster intimate contact in which tradition, cohesiveness, homogeneity, and shared values typify interaction styles (Greenfield et al., 2006; Palacios & Moreno, 1996). Less populated rural communities are more conventional, and cultural change occurs there more slowly than in more populated communities, whereas metropolitan areas facilitate the optimized delivery of social services, such as education, health care, and efficient governance (Bettencourt et al., 2007; Coleman et al., 1989). Rural family members are significantly more traditional than metropolitan family members (Scanzoni & Arnett, 1987). Notably, for the first time in history the majority of humanity now live in cities (Crane & Kinzig, 2005; United Nations, 2004), and as Bettencourt et al. (2007) showed, even if cities are superficially quite different in form and location, they are in fact, on the average, scaled versions of one another on many social and economic indicators.

Rural and metropolitan environments are believed to engender different requirements and condition different adaptations within the family (Bradley, 2002; Lampard, Voigt, & Bornstein, 2000; Stott, 1940), and as a result the rural–metropolitan distinction is thought to infuse many facets of daily life (Hauser & Schnore, 1965). Parents from rural areas reportedly lack flexibility in child-rearing practices (Palacios & Moreno, 1996); they tend to be less permissive and more restrictive and punitive, preferring obedience and conformity (Kennedy, 1985; Mussen & Maldonado Beytagh, 1969; Peterson & Peters, 1985); and they tend to possess less realistic developmental expectations for their children than do parents from metropolitan areas (Lehr & Jeffery, 1996; Palacios & Moreno, 1996). In contrast, parents from metropolitan areas tend to believe they are influential in their child’s development, and they hold developmental expectations for their children that coincide more closely with the child’s actual stage of development. These parents tend to be better educated, more literate, and exposed to more and different mass media (Greenfield et al., 2006; Hill, Stycos, & Back, 1959); they place greater emphasis on personal decision making and independence; and they are more child centered and intent on fostering the development of independence and achievement in their children (Mussen & Maldonado Beytagh, 1969; Nsamenang & Lamb, 1995). Rural communities have fewer social resources available to families (Kates & Parris, 2003; Lichter & Jenson, 2002), and parents with fewer resources are less likely to parent effectively (Sampson & Laub, 1994; Simons, Johnson, Conger, & Lorenz, 1997) and more likely to experience impediments to sustaining or fostering their children’s development (Kaiser & Delaney, 1996). Thus, rural versus metropolitan settings relate to the psychology of caregivers and to their socialization attitudes and practices and are defined by contrasting beliefs and behaviors that may shape EA in the mother–child dyad.

The rural–metropolitan contexts we specifically contrasted in Argentina, Italy, and the United States were largely faithful to these regional distinctions (see Table 1). We expected that parents' being emotionally available to a child requires attentiveness, accessibility, patience, and other personal and emotional resources that typify metropolitan contexts and may be more difficult to marshal under circumstances of greater challenge. The child's EA to a parent also calls on alertness, attentiveness, and emotional investment that could be compromised in rural contexts and by scarcity of resources. On this basis, we developed first-order hypotheses that (a) mothers from metropolitan areas would display (relatively speaking) greater sensitivity and more optimal structuring and less intrusiveness and hostility to their children compared with mothers from rural areas and (b) children from metropolitan areas would show (relatively speaking) greater responsiveness and involvement of their mothers compared with children from rural areas.

Dyadic EA and Child Gender

Many researchers have pointed to meaningful gender differences in socioemotional function from early childhood, even if they are small in magnitude (e.g., Eagly, Beall, & Sternberg, 2004; Halpern, 2000; Kimura, 1999; Maccoby & Jacklin, 1974; Ruble, Martin, & Berenbaum, 2006). Girls and boys are typically socialized with respect to different goals, and so gender differences in emotional expression and experience are normally expectable (Brody & Hall, 2000; Chodorow, 1978), even across cultures (McCrae et al., 2004; McCrae, Terracciano, & 78 Members of the Personality Profiles of Cultures Project, 2005). Assessed gender differences are largely consistent with gender stereotypes, so those views appear to have a basis in the characteristics of individuals. Specifically, the literature in gender differences tends to support the general view that females display higher levels of social interest, are better at understanding emotional expressions, and are more invested in interpersonal strategies that maintain and repair social relationships than are males (Gilligan, 1982; Golombok & Fivush, 1994; Halpern, 2000; Lovas, 2005; Maccoby, 1990). Traditional gender role prescriptions also characterize women as more affiliative and interpersonally sensitive, and stereotypically feminine activities tend to emphasize collaborative behaviors and foster proximity (Caldera, Huston, & O'Brien, 1989; Leaper, 2002; Maccoby, 1988; Ruble, 1988); development in girls is usually associated with lower levels of autonomy and higher levels of emotional closeness to significant others (Chodorow, 1978; Clarke-Stewart & Hevey, 1981; Ley & Koepke, 1982; Olesker, 1984, 1990; Robinson & Biringen, 1995).

Perhaps more accurately reflective of fact than stereotype, the extant empirical literature on measures of EA and gender is mixed. On one hand, Robinson, Little, and Biringen (1993; see also Biringen, Robinson, & Emde, 1994; Easterbrooks, Lyons-Ruth, Biesecker, & Carper, 1996) reported that mothers of daughters were equally as sensitive as mothers of sons at 18 and 24 months. On the other hand, Lovas (2005) reported small but consistent effects of child gender: On average, mothers of daughters received higher EA scores than mothers of sons, and girls received higher scores than boys.

The samples we recruited were intentionally balanced with respect to child gender so that as our third goal, potential differences in EA between mothers and girls versus mothers and boys could be examined. We expected that larger cross-cultural and between-region samples

would help resolve contemporary discrepancies in the literature. We developed first-order hypotheses that (a) mothers would be comparatively more emotionally available to their daughters than to their sons and (b) daughters would be comparatively more emotionally available to their mothers than sons to their mothers.

Present Study

Despite the centrality of EA in enhancing our understanding of the parent–child relationship, a dearth of studies has systematically examined its country, region, and gender properties. Within the literature concerned with this dyadic construct, the following features therefore distinguish the present study: (a) Mothers and their daughters and sons in adequate sample sizes in two regional contexts in each of three countries were observed and assessed; (b) sociodemographic and social status characteristics that may also relate to mother and child EA were controlled; (c) a consistent and standard cross-culturally validated observational methodology was used; and (d) child age and birth order were held constant across groups. Cross-country and between-region assessments of EA not only fill gaps of needed information about EA, and do so in underresearched populations, but also augment the validity of extant country, region, and gender findings by assessing these issues more broadly.

Method

Participants

Demographics—A total of 220 mother–child dyads from two contrasting geographic regions within each of three countries were observed when the child was 20 months of age. Seventy dyads resided in Argentina: 30 in rural Córdoba Province and 40 in metropolitan Buenos Aires. Seventy dyads resided in Italy: 30 in rural Basilicata and 40 in metropolitan Padua. Eighty dyads resided in the United States: 40 in rural Berkeley County, West Virginia, and 40 in the Washington, DC, metropolitan area. Mothers were recruited from hospital birth notifications, patient lists of medical groups, newspaper birth announcements, and mass mailings, and they were selected to be primiparous with full-term, nonadopted, healthy infants. Demographic statistics of the rural and metropolitan families from each country are presented in Table 1. All mothers were of European heritage; their average age was 27.84 years ($SD = 5.33$) at the visit, $F(5, 213) = 13.21, p = .001$; their average educational level (measured on the 7-point Hollingshead, 1975, scale) was 4.24 ($SD = 1.57$), $F(5, 214) = 21.16, p = .001$; and their average hours of employment per week was 17.57 ($SD = 17.98$), $F(5, 211) = 2.25, p = .05$. Most mothers were married, and the child's father was living in the home in 93.64% of the families across all groups. The six samples represented a range from low to upper-middle socioeconomic status (SES) as measured by the Hollingshead (1975) Four-Factor Index of Social Status (see also Bornstein, Hahn, Suwalsky, & Haynes, 2003; Pascual, Galperín, & Bornstein, 1993), grand $M = 37.73$ ($SD = 14.48$), $F(5, 212) = 25.49, p = .001$.

All children were full term, and all but 2 weighed more than 2,500 g at birth (2 children from Buenos Aires weighed 2,360 g and 2,450 g, respectively, but neither emerged as a univariate or multivariate outlier, so both were retained). Children averaged 20.22 months of

age at the visit ($SD = 0.35$ months), $F(5, 214) = 8.63, p = .001$. Approximately equal numbers of girls and boys were recruited in each group, $\chi^2(5, N = 220) = 1.52, ns$.

The statistical differences in mothers' age, education, and hours employed; family SES; and child age may not be practicably meaningful, but as a precaution these variables, with the exception of child age in which the range of country means was 2 weeks, were examined as covariates (see below).

Procedures

Each mother–child dyad was visited at home and videorecorded for 10 min of free play by a single female filmer who was a native of the country. Observations were scheduled at times that were optimal for the child and when only the mother and child would be at home. The mother was instructed that the filmer was interested in observing her and her child in their usual activities and to disregard the filmer insofar as possible. After a conventional period of acclimation to the camera and the presence of the filmer (McCune-Nicolich & Fenson, 1984; Stevenson, Leavitt, Roach, Chapman, & Miller, 1986), recording commenced. The filmer resisted talking to the mother and making eye contact with, interacting with, or otherwise reacting to the child during the filming.

Assessments

EA—EA in the mother–infant dyad was evaluated using the Emotional Availability Scales: Infancy to Early Childhood Version (EAS, 3rd ed.; Biringen et al., 1998). The EAS were specifically designed to assess EA through observations and ratings of parent–child interaction and were constructed to reflect age-appropriate behaviors in parent–child interactive cycles. Each of the six individual EAS focuses on the behavior of one partner; however, all EA dimensions are viewed as relationship variables because each takes the other partner's behavior into account. Thus, the EAS assess specific behaviors of individuals but at the same time constitute global ratings of dyads that capture joint interactional style. Maternal Sensitivity ranges from 1 (*highly insensitive*) to 9 (*highly sensitive*); maternal Structuring ranges from 1 (*nonoptimal*) to 5 (*optimal*); maternal Nonintrusiveness ranges from 1 (*intrusive*) to 5 (*nonintrusive*); and maternal Nonhostility ranges from 1 (*markedly hostile*) to 5 (*nonhostile*). Child Responsiveness ranges from 1 (*nonoptimal*) to 7 (*optimal*); and child Involvement of Mother ranges from 1 (*nonoptimal*) to 7 (*optimal*). All scales were coded in half-points. The EAS have been used with children of different ages (e.g., Biringen et al., 2000; Easterbrooks, Biesecker, & Lyons-Ruth, 2000), from low and high social-risk populations (e.g., Oyen, Landy, & Hilburn-Cobb, 2000; Swanson, Beckwith, & Howard, 2000), and in dyads from a wide variety of different nations, such as Australia, Belgium, Canada, Finland, Germany, Israel, Latvia, the Netherlands, Portugal, Sweden, and Turkey (Z. Biringen, personal communication, November 17, 2005; Oyen et al., 2000; Ziv, Aviezer, Gini, Sagi, & Koren-Karie, 2000; Sagi, Koren-Karie, Gini, Ziv, & Joels, 2002). Although the EAS were developed within a European American research tradition, operationalizations of the EAS attest that they are applicable to parenting and child development in many different cultures.

Construct (convergent) validity of the EAS has been examined against concurrent and longitudinal measures of attachment in several studies (see Easterbrooks & Biringen, 2000, 2005). For example, the construct of sensitivity more generally was developed by Ainsworth (1967) in Uganda, but it has proven to be a robust predictor of secure attachment in children in a wide variety of different societies (van IJzendoorn et al., 2006). In addition, sensitivity is associated with mothers' detailed, coherent, and child-focused descriptions demonstrating an understanding of their infant's perspective in Israel (Koren-Karie, Oppenheim, Dolev, Sher, & Etzion-Carasso, 2002); with reflective function, "the clarity of the individual's representation of the mental states of others as well as the representation of his own mental state" in England (Fonagy et al., 1995, p. 250); with the symbolic play of children with Down syndrome in Italy (Venuti, de Falco, Giusti, & Bornstein, in press); and with an appreciation of infant psychological state, encouragement of play, contingent responsiveness to infants, and secure attachment in the United States (Ainsworth, Bell, & Stayton, 1971; Feldman & Reznick, 1996; Reznick, 1999). As an informal test of the cross-cultural construct validity of the EAS in our data, we assessed the relation between maternal sensitivity and mothers' parenting knowledge (MacPhee, 1981). Maternal sensitivity was significantly related to parenting knowledge in the full sample, $r(194) = .26, p < .001$, and in each country: in Argentina, $r(55) = .32, p < .05$; in Italy, $r(63) = .28, p < .05$; and in the United States, $r(72) = .27, p < .05$. A more complete description of the EAS can be found in Biringen and Robinson (1991), Easterbrooks and Biringen (2000), Biringen (2000), and a special issue of the *Infant Mental Health Journal* (Ammaniti, 2006).

EA was coded from the video records. A standard set of toys was brought to the home; the child's own toys were not used in order to control for variations in the quality and quantity of toys 20-month-old children in different contexts might have available. The findings of previous studies using 10- to 15-min observations lend credence to the validity of the temporal parameters in measuring EA (see Easterbrooks et al., 2000; Swanson et al., 2000; Ziv et al., 2000; although longer observations are recommended for the prediction of insecure attachment in Biringen et al., 2005, p. 307, and the results of previous studies show that context of interaction [e.g., home vs. laboratory] is less important to the expression of EA than individual differences; Bornstein et al., 2006).

All coders were first trained on the EAS in English to obtain satisfactory interrater reliability with one of the authors of the EAS and with one another (achieving interlaboratory and within-study reliability, respectively; Biringen, 2005). Then, two English-Spanish bilingual U.S. natives coded the Argentine interactions, two English-Italian bilingual Italian natives coded the Italian interactions, and the U.S. interactions were split among the four bilingual coders. Interrater reliability was assessed using average absolute agreement intraclass correlation coefficients (ICC) in a two-way random effects model (McGraw & Wong, 1996). Each coder scored approximately the same number of interactions. Coders were unaware of the hypotheses and purposes of the study and of additional information about the dyads. Coder reliabilities were computed for the four main bilingual coders on 20% of the U.S. interactions ($n = 16$), and ICCs ranged from .81 to .95. On these grounds, we concluded that coders from different countries had adequate reliability when coding the same interactions. As a further test, within-country reliability was also computed for the two English-Spanish bilingual coders of the Argentine tapes on 16 Argentine interactions and the two English-

Italian bilingual coders on 16 Italian interactions. Argentine reliability ranged from .59 to .87, and Italian reliability ranged from .90 to .97. The lowest reliability for the Argentine sample was for Nonhostility and was the result of reduced scale variance. Coders agreed on their ratings (within 0.5 point) for 75% of the sample. Any residual differences between coders were resolved by discussion, and consensus ratings were used for subsequent analyses ($n = 7$, representing 3.18% of all EA ratings).

Evaluations of the visits—As a check against threats to validity, at the conclusion of the visit the mother and the filmer independently evaluated the observation session by marking a series of 8-point (range = 0 to 7) graphic rating scales, randomly ordered with respect to valence but recoded in ascending order. Mothers reported that their children's behavior ($M = 5.08$, $SD = 1.77$) and their own behavior ($M = 5.46$, $SD = 1.73$) during each visit were characteristic of their normal routine. According to the filmers' evaluations, mothers were somewhat relaxed ($M = 5.42$, $SD = 1.52$) and children were not fussy ($M = 1.49$, $SD = 1.71$). One country difference emerged on these measures, however: Filmers rated Italian children as more fussy than Argentine and U.S. children. As a result, mothers' and filmers' evaluations were examined as potential covariates.

Results

Preliminary Analyses

Before data analysis, univariate and multivariate distributions of the EAS and potential covariates were examined for normalcy, homogeneity of variance, outliers, and influential cases (Fox, 1997). Transformations were applied to resolve problems of non-normalcy, and residuals were examined for influential points. The distance of each case to the centroid was evaluated to screen for multidimensional outliers (see Bollen, 1987; Tabachnick & Fidell, 1996). Maternal nonintrusiveness and nonhostility were skewed (all p s < .05), and no transformation would normalize them; they were therefore analyzed with nonparametric statistics that do not assume that variables are normal. The skewed distributions of the Nonintrusiveness and Nonhostility scales are not surprising. These two scales were designed to capture specific types of negative behaviors that are uncommon in low-risk samples. The other four EAS were reexpressed using second-power transformations to approximate normalcy. Analyses were conducted on the transformed data; for clarity, descriptive statistics are presented using untransformed variables.

Covariates

As shown in Table 1, a number of demographic variables distinguished the countries, but these were natural variations that are representative of the countries and regions under study. We only wanted to control for variables that were related to variations in mother and child EA. Because maternal education was highly correlated with paternal education and family SES in the full sample, $r(215) = .81$, $p < .001$, and $r(218) = .80$, $p < .001$, respectively (see Schwartz & Mare, 2005), and because mothers were observed interacting with their children, we examined maternal education as the proxy for family education and SES. Maternal age, maternal hours of employment, child birth weight, and mother and filmer evaluations of the visits were also examined as potential covariates. Maternal education and

age were related to the four continuously distributed EAS ($r_s = .22-.34$, $p_s < .001$). The typicality of the child's behavior was also related to sensitivity, structuring, and involving ($r_s = .14-.17$, $p_s < .05$). No other potential covariates were related to the EAS. Therefore, we included only maternal education and age and the typicality of the child's behavior as covariates in the analyses that follow. Maternal education and age were significantly correlated, $r(218) = .52$, $p < .001$, but not so highly that they could not both be controlled in the same analysis.

Analytic Plan

First, descriptive statistics are presented separately for country, region, and child gender. Next, four $3 \times 2 \times 2$ (Country \times Region \times Child Gender) analyses of covariance were conducted to assess main effects and possible interaction effects on maternal sensitivity and structuring and child responsiveness and involving. For sensitivity, structuring, and involving, we controlled maternal education and age and the typicality of the child's play in the session. For responsiveness, we controlled only maternal education and age. Although we had no specific hypotheses about interaction effects, all possible interactions were explored. Maternal nonintrusiveness and nonhostility were evaluated separately with nonparametric statistics.

A post hoc power analysis was computed before data analysis to determine whether the sample size of 220 provided sufficient power to detect a medium-sized effect in a $3 \times 2 \times 2$ analysis of variance design. With an effect size of .25 (Faul & Erdfelder, 1992), an alpha of .05, and a sample size of 220, the power estimates ranged from .92 to .96, indicating adequate power to detect a medium or large effect.

Descriptive Statistics

Tables 2, 3, and 4 present means and standard deviations for the EAS across country, region, and child gender, respectively. The EAS shared variance (range = 10%–79%), and the amount of shared variance was similar across countries, regions, and genders. Separate analyses were conducted for these scales because each scale has independent theoretical standing in the literature, and we were interested in exploring patterns of country, region, and gender on each.

Mother–Child EA by Country, Region, and Gender

Separate analyses of covariance were performed on maternal sensitivity, maternal structuring, child responsiveness, and child involving, controlling for maternal age, maternal education, and the typicality of the child's play.

Sensitivity—No significant interactions, or main effect of region, emerged for maternal sensitivity. However, main effects for country, $F(2, 190) = 3.97$, $p = .05$, $\eta^2 = .04$, and gender, $F(1, 190) = 10.08$, $p = .01$, $\eta^2 = .05$, were found. Simple contrasts indicated that Italian mothers were more sensitive than Argentine and U.S. mothers (mean difference = 5.47, $SE = 2.39$, $p = .05$, and mean difference = 6.68, $SE = 2.55$, $p = .01$, respectively), but Argentine and U.S. mothers did not differ (mean difference = 1.21, $SE = 2.36$, *ns*). Finally, mothers were more sensitive with their daughters than with their sons.

Structuring—No significant interactions, or main effect of region, emerged for maternal structuring. Main effects of country, $F(2, 190) = 4.04, p = .05, \eta^2 = .04$, and child gender, $F(1, 190) = 8.46, p = .01, \eta^2 = .04$, were found. Simple contrasts indicated that Italian mothers were more optimally structuring than Argentine and U.S. mothers (mean difference = 2.08, $SE = 0.87, p = .05$, and mean difference = 2.41, $SE = 0.93, p = .01$, respectively), but Argentine and U.S. mothers did not differ (mean difference = 0.33, $SE = 0.86, ns$). Mothers were more optimally structuring with daughters than with sons.

Responsiveness—The interaction between region and gender was significant for child responsiveness, $F(1, 206) = 4.00, p = .05, \eta^2 = .02$. The main effects of country, $F(2, 206) = 13.77, p = .001, \eta^2 = .12$, and child gender, $F(1, 206) = 15.28, p = .001, \eta^2 = .07$, were also significant. We explored the Region \times Gender interaction by examining region effects within girls and boys separately and gender effects within rural and metropolitan regions separately. Boys from metropolitan areas were more responsive than boys from rural areas, $F(1, 107) = 6.23, p = .05, \eta^2 = .06$, but girls from metropolitan and rural areas did not differ, $F(1, 105) = 2.39, ns, \eta^2 = .02$. Girls from rural areas were more responsive than boys from rural areas, $F(1, 92) = 16.52, p = .001, \eta^2 = .15$, but boys and girls from metropolitan areas did not differ, $F(1, 112) = 1.66, ns, \eta^2 = .02$. See Figure 1. Simple contrasts for country indicated that Italian children were more responsive than Argentine and U.S. children (mean difference = 7.97, $SE = 1.56, p = .001$, and mean difference = 6.17, $SE = 1.63, p = .001$, respectively), and Argentine and U.S. children did not differ (mean difference = 1.80, $SE = 1.50, ns$).

Involving—No significant interactions or main effect of region emerged for child involving. The main effects of country, $F(2, 190) = 7.59, p = .001, \eta^2 = .07$, and child gender, $F(1, 190) = 9.58, p = .01, \eta^2 = .05$, were significant. Simple contrasts for country indicated that Italian children were more involving than Argentine and U.S. children (mean difference = 5.50, $SE = 1.55, p = .001$, and mean difference = 5.43, $SE = 1.65, p = .001$, respectively), and Argentine and U.S. children did not differ (mean difference = 0.07, $SE = 1.53, ns$). Girls were more involving of their mothers than boys.

Maternal nonintrusiveness and nonhostility—Because of the skewed distributions of maternal nonintrusiveness and nonhostility, we performed nonparametric tests on these two scales to determine whether they were different across countries, regions, and genders. For tests of country effects, we used the Kruskal-Wallis test. For tests of region and gender effects, we used Mann-Whitney U tests. Because no covariates could be used, and interactions are not possible using nonparametric tests, these findings should be interpreted with caution.

Mothers were not different in their nonintrusiveness across countries, $\chi^2(2, N = 220) = 4.31, ns$, nor with their daughters and sons ($z = 1.12, ns$, respectively). However, nonintrusiveness was higher in metropolitan than rural regions (i.e., rural mothers were more intrusive; $z = 3.99, p = .01$).

Mothers were not different in their nonhostility across countries, $\chi^2(2, N = 220) = 1.53, ns$, regions ($z = 1.02, ns$); or genders ($z = 1.45, ns$), respectively.

Discussion

EA refers to the overall affective quality of the parent–child relationship, “the degree to which each partner expresses emotions and is responsive to the emotions of the other” (Emde & Easterbrooks, 1985, p. 80). This cross-cultural study of mother and child EA had several interconnected goals, namely, to explore the construct of EA from the perspectives of country, region, and gender. In general, with respect to country, we found that Italian mothers and children scored higher than Argentine and U.S. mothers and children on sensitivity, structuring, responsiveness, and involving. With respect to region, we found that mothers from rural areas were more intrusive than mothers from metropolitan areas and boys from metropolitan areas were more responsive than boys from rural areas. Finally, with respect to gender, we found that mothers were more sensitive and optimally structuring with their daughters than with their sons, and girls were more involving of their mothers than were boys.

Before discussing these findings, we need to consider a balance of limitations and strengths in this study. In terms of representativeness, the children who participated were all typically developing firstborns of a specific age; moreover, we only studied children and their mothers. These restrictions aided the comparisons we undertook; however, they also have implications for the generalizability of the findings in the sense that examinations of children of different ages or birth order or with special needs; single, separated, or divorced mothers; or fathers or childcare providers might result in different patterns of parent and child EA. Although we studied three countries on three continents and two regions within each country, it is also possible that EA functions differently in still other countries and regions. These factors (and others, no doubt) constrain the generalizability of our findings. Robinson et al. (1993) have pointed out possible methodological limitations based on stereotypes in raters’ coding EA. However, trained, reliable, independent coders contributed to the data here. In interpreting group findings (country, region, or child gender), it is also important to keep in mind that “average” differences can mislead because there is almost always considerable overlap between comparison groups. Although the EAS were originally developed in a U.S. setting, the consistency and face validity of the pattern of findings resulting from their cross-cultural application give evidence of the validity and generalizability of these scales in culturally contrasting settings. For this study, we recruited mothers and children in roughly comparable South American, European, and North American societies. The study therefore contributes information about EA in two relatively underresearched populations (Argentina and Italy) and compares it with a more comprehensively researched one (the United States). The findings also highlight intracultural variation in the context of cross-cultural study.

Country and Region

With these considerations in mind, we first review and comment on mother–child EA in terms of country and region and then discuss the role of gender in EA. Methodologically, just as different attachment behaviors may be specific to sociocultural context (contrast proximal and distal strategies children use to seek proximity in the Strange Situation) and the distributions of attachment patterns may differ from one culture to another, but

attachment can still be described in similar ways across cultures, patterns of EA may be differently distributed in different cultures but still mark mother–child interactions universally. We found that we could apply the EAS at least in rural and metropolitan settings in three different (admittedly Western and industrialized) countries. Substantively, just as secure attachments represent the majority and the norm across cultures (van IJzendoorn et al., 2006), so mothers and infants proved mutually emotionally available across the cultures we studied. In all three countries, on average, dyads were emotionally available—in spite of significant mean differences among them. This shows that EA at adaptive levels is widespread and provides support for the importance of EA as a psychological construct.

On a construal of the relevance of context to the expression of EA and the interpretation of behavior, we expected both country and regional differences in mother–child EA. EA is assessed across a range of everyday interactions, and it results from constitutional needs and organismic development on one hand embedded in situation-specific experiences and contexts on the other. That is, EA arises from necessary and desirable demands. A necessary demand is that parents and children communicate emotionally with one another. In this regard, dimensions of EA may be “universal” aspects of parent–child relationships (Papoušek & Papoušek, 2002; van IJzendoorn et al., 2006). A desirable demand is that parents and children communicate in certain ways that are meaningful in their context. Country and regional studies of EA tell us about parents’ and children’s mutual adjustment in terms of contextually desirable demands. One influential paradigm to assess the general association between culture and development suggests that cultural prescriptions shape parental cognitions that in turn translate into the practices parents use to achieve their child-rearing goals (e.g., Bateson & Mead, 1942; Benedict, 1938; Gauvain, 1998; Greenfield et al., 2006; Whiting & Child, 1953); hence, the significance of the associations we obtained between sensitivity and parenting knowledge. The present findings suggest that this model, at least in part, describes cultural forces that shape maternal and child EA.

We found, as predicted, that Italian dyads tend to be high functioning on the EAS. Italian mothers were more sensitive and optimally structuring, and Italian children were more responsive and involving. This difference accords with other cultural findings of a special valuation and cultural demand characteristic to Italian mothers and children with respect to displays of EA. Positive affective exchanges hallmark Italian mother–infant interactions (e.g., Richman, LeVine, et al., 1988; Richman, Miller, & Solomon, 1988), and the representation of roles for Italian women gives more importance to family-related interests and needs compared with personal achievement (De Sandre, 1993). Within the family, both Italian parents principally concentrate their energies on affective relationships with their child, and Italian mothers stress the importance of the relationship they have with the child —“a relationship that is to satisfy the affective needs of the mother and of the child” (Bimbi, 1991, p. 150). Moreover, Italian mothers’ social representations of caregiving practices—for example, breast feeding—are predominantly characterized by affective and “warm” elements compared with objective ones (Molinari & Speltini, 1998). These findings also accord with Italian-speaking children’s saying more social words (i.e., names for people and social routines) than, say, English-speaking children (Caselli et al., 1995, 1999). Axia and Weisner (2002) proposed that Italian parents show a preference for socially active and affectively responsive *vivaci* infants, and Hsu and Lavelli (2005) found that, compared with

U.S. American mothers, Italian mothers display high levels of social–affective and handling–holding behaviors toward their very young infants and spend more time in synchronous dyadic social exchanges with their infants. Italian dyads were also more likely to openly express affection to each other than were American dyads during the first 3 months, and Italian mothers' self-efficacy ratings covaried systematically with measures of dyadic attunement. All these differences reflect Italians' central cultural estimation of socioemotional interactions.

Rural mothers appear more intrusive than metropolitan mothers; however, the rural–metropolitan regional contrast resulted in few differences when maternal age and education were controlled. Perhaps maternal intrusiveness parallels a more demanding and challenging environment for children in their future dealings with life circumstances. These findings also comport with contrasting child-rearing orientations associated with metropolitan versus rural family life. Research comparing metropolitan and rural Italian mothers' language to their children (Camaioni, Longobardi, Venuti, & Bornstein, 1998), for example, has shown that rural mothers' speech is more controlling (e.g., directing children to act in a certain way). Controlling through speech is a good equivalent to behavioral intrusiveness. What cultural aspect might it serve? Are these mothers preparing their children to cope with a life that imposes more restrictions on them in the sense that they have less control (or are controlled to a larger degree by environmental dictates) more generally as compared with dyads in metropolitan settings? Do children who are accustomed to a more directive environment cope better in a more restrictive culture? Finally, from a methodological standpoint intracountry and intraculture variation serves to remind cross-culturalists that it is important to consider including different regional cultures (e.g., dyads of both rural and metropolitan rearing environments) when recruiting representative samples and to caution against too ready country- or culturewide generalizations.

Gender

We found that mothers were more sensitive and optimally structuring with their daughters than with their sons, girls were more involving of their mothers than were boys, and rural girls were more responsive than rural boys. Lovas (2005) reported similar small but consistent effects of child gender: On average, mothers of daughters received higher scores for 19-month Structuring and 24-month Sensitivity than mothers of sons, and daughters received higher scores for Responsiveness and Involving than sons. Satisfactory explanations of such gender differences in EA will most probably involve interactions at biological, psychological, and social levels of analysis. Our discussion broadly follows a systemic orientation to gender outlined originally by Maccoby (1966).

It could be that biological and maturational differences favoring girls manifest in EA. Girls mature faster than boys (Bornstein, Hahn, & Haynes, 2004; Waber, 1976), and therefore, we might expect girls to develop some self-regulatory and communicative abilities related to EA earlier than boys. Gender also influences the ways in which adults perceive and relate to a child. Prevailing stereotypes about boys and girls can affect adult perceptions. For example, gender-typed differences in play are already evident by the end of the 1st year of life, and they tend to remain stable thereafter. Miller (1986) emphasized this closeness dimension

when proposing that daughters are socialized from early infancy to experience the self as a “self-in-relation” to others, whereas sons experience the self as increasingly autonomous, and Hinde and Stevenson-Hinde (1987) proposed that gender differences are magnified in relationship contexts vis-à-vis situations that emphasize individual performance. All of these forces might contribute to girls’ developing preferences for, and more advanced, affiliative skills; and in following gender pathways, girls are also more apt to experience interactions that emphasize EA.

Perhaps, alternatively or complementarily, girls’ early EA emphasis is because they spend more sheer time with their mothers. Toddler girls stay closer to their mothers and are more positively involved with them (Clarke-Stewart, 1973). Daughters of sensitive mothers are more likely to respond to maternal affect by matching affective expressions (e.g., smiling in response to maternal smiling). Moreover, higher rates of affect matching of daughters at 18 months contributes to their mothers being more sensitive at 24 months, controlling for mothers’ initially observed sensitivity (Robinson et al., 1993). Girls could be more emotionally available, therefore, because children tend to model themselves primarily on the same-sex parent (Carlsmith, 1964). Because mothers are more emotionally available than fathers (Lovas, 2005), modeling the same-sex parent would (presumably) produce differentiated patterns of EA in girls and boys. Mothers do not necessarily have to be more globally sensitive with daughters than with sons, but some specific behaviors in the repertoire of emotionally available mothers might differ for daughters and sons, thus accounting for the gender differences in EA we observed (Biringen et al., 1994).

Clearly, more still needs to be learned about gender differences in EA and their sources. Biological, psychological, and social variables are inextricably entwined and mutually influential. It is not possible to assess the effects of any one of these factors without implicating the others. Overall, however, it is important to emphasize that the gender differences we observed reinforce the conceptualization of EA as both sensitive to culture and guided by biological development.

Some Future Directions

According to attachment theory (Bowlby, 1969), infants who experience positive emotional relationships with caregivers should be better able to regulate their own emotions and hold an accessible and empathic stance toward others (Biringen & Robinson, 1991). EA in infancy thus helps to set the stage for organized socioemotional regulation in childhood. One question for future investigation might ask which domains of parenting and child development do individual differences in EA predict (theory of mind, e.g.)? Another might engage us in scrutinizing those mothers and children who score especially low in EA. Relative to individual shortcomings in EA, very small interventions are known to enhance mother–infant adjustment (van den Boom, 1995), as supported by a growing body of evidence-based interventions (e.g., Juffer, Bakermans-Kranenburg, van IJzendoorn, 2008; Robinson & Emde, 2004). Intervention might prove beneficial in efforts to increase parental EA and to obviate or offset dysfunctional emotional exchanges in parent–child dyads. In support of this argument, home-visiting interventions in infancy and toddlerhood to improve

EA, especially among mothers at the higher end of the risk spectrum (i.e., mothers with low psychological resources; Olds et al., 2002, 2004), have proved useful.

Conclusions

EA enhances our understanding of critical aspects of child development, parenting, and the family system. If we desire to improve parent–child mutual EA, it is necessary to know more about how it varies. EA normatively differs (somewhat) across country, region, and gender even early in childhood. As effects that explain small amounts of variance in initial states can account for large final outcomes when those states recur (Abelson, 1985), an implication in the developmental realm suggests that children may follow divergent ontogenetic paths if their interactive environments—those to which they are exposed repeatedly—differ even slightly. On this argument, the eventual developmental consequences of variation in EA clearly merit further study. Moreover, a growing body of evidence using the EAS shows that both parent and child components of EA relate to quality of attachment (Easterbrooks & Biringen, 2000) and to other dimensions of the parent–child relationship (for reviews, see Biringen, 2000; Pipp-Siegel & Biringen, 1998), indicating that the EA framework might be used profitably in “a global way to describe the overall quality of the affective relationship” between parent and child (Biringen, 2000, p. 112) and to account for cultural, regional, and gender differences in social–emotional growth and child development.

Acknowledgments

This research was supported by the Intramural Research Program of the National Institutes of Health, Eunice Kennedy Shriver National Institute of Child Health and Human Development.

References

- Abelson R. A variance explanation paradox: When a little is a lot. *Psychological Bulletin*. 1985; 97:129–133.
- Aguinis, M. *Un pais de novela [A fantastic country]*. Buenos Aires, Argentina: Editorial Planeta; 1988.
- Ainsworth, M. *Infancy in Uganda*. Baltimore: Johns Hopkins University Press; 1967.
- Ainsworth, MDS., Bell, SM., Stayton, DJ. Individual differences in Strange Situation behavior of one year olds. In: Schaffer, HR., editor. *The origins of human social relations*. New York: Academic Press; 1971. p. 17-58.
- Ammaniti M. Early preventive intervention and home visiting [Special issue]. *Infant Mental Health Journal*. 2006; 27(1)
- Aviezer O, Sagi A, Joels T, Ziv Y. Emotional availability and attachment representations in kibbutz infants and their mothers. *Developmental Psychology*. 1999; 35:811–821. [PubMed: 10380871]
- Axia VD, Weisner TS. Infant stress reactivity and home cultural ecology and Italian infants and families. *Infant Behavior and Development*. 2002; 25:255–268.
- Barnard, KE. *NCAST II learner’s resource manual*. Seattle, WA: NCAST; 1976.
- Barnard, KE., Hammond, MA., Booth, CL., Bee, HL., Mitchell, SK., Spieker, SJ. Measurement and meaning of parent-child interaction. In: Morrison, FJ.Lord, C., Keating, DP., editors. *Applied developmental psychology*. Vol. 3. New York: Academic Press; 1989. p. 40-80.
- Bateson, G., Mead, M. *Balinese character: A photographic analysis*. New York: New York Academy of Sciences; 1942.
- Bellah, RN., Madsen, R., Sullivan, WM., Swindler, A., Tipton, SM. *Habits of the heart: Individualism and commitment in American life*. New York: Harper & Row; 1985.
- Benedict R. Continuities and discontinuities in cultural conditioning. *Psychiatry*. 1938; 1:161–167.

- Bettencourt LMA, Lobo J, Helbing D, Kühnert C, West GB. Growth, innovation, scaling, and the pace of life in cities. *Proceedings of the National Academy of Sciences of the United States of America*. 2007; 104:7301–7306. [PubMed: 17438298]
- Bimbi, F. Parenthood in Italy: Asymmetric relationships and family affection. In: Björnberg, U., editor. *European parents in the 1990s: Contradictions and comparisons*. New Brunswick, NJ: Transaction; 1991. p. 141-154.
- Biringen Z. Emotional availability: Conceptualization and research findings. *American Journal of Orthopsychiatry*. 2000; 70:104–114. [PubMed: 10702855]
- Biringen Z. Training and reliability issues with the Emotional Availability Scales. *Infant Mental Health Journal*. 2005; 26:404–405.
- Biringen Z, Brown D, Donaldson L, Green S, Krcmarik S, Lovas G. Adult Attachment Interview: Linkages with dimensions of emotional availability for mothers and their pre-kindergarteners. *Attachment & Human Development*. 2000; 2:188–202. [PubMed: 11707910]
- Biringen Z, Damon J, Grigg W, Mone J, Pipp-Siegel S, Skillern S, Stratton J. Emotional availability: Differential predictions to infant attachment and kindergarten adjustment based on observation time and context. *Infant Mental Health Journal*. 2005; 26:295–308. [PubMed: 28682448]
- Biringen Z, Robinson J. Emotional availability in mother-child interactions: A reconceptualization for research. *American Journal of Orthopsychiatry*. 1991; 61:258–271. [PubMed: 2048641]
- Biringen Z, Robinson JL, Emde RN. Maternal sensitivity in the second year: Gender-based relations in the dyadic balance of control. *American Journal of Orthopsychiatry*. 1994; 64:78–90. [PubMed: 8147430]
- Biringen, Z., Robinson, JL., Emde, RN. Unpublished manual. 3rd. Colorado State University; Fort Collins: 1998. Emotional Availability Scales. Department on Human Development and Family Studies
- Blount BG. Parental speech and language acquisition: An anthropological perspective. *Pre- and Perinatal Psychology*. 1990; 4:319–337.
- Bollen KA. Outliers and improper solutions. *Sociological Methods and Research*. 1987; 15:375–384.
- Bornstein, MH. Cross-cultural developmental psychology. In: Bornstein, MH., editor. *Comparative methods in psychology*. Hillsdale, NJ: Erlbaum; 1980. p. 231-281.
- Bornstein, MH. Approaches to parenting in culture. In: Bornstein, MH., editor. *Cultural approaches to parenting*. Hillsdale, NJ: Erlbaum; 1991. p. 3-19.
- Bornstein, MH. Cross-cultural perspectives on parenting. In: d'Ydewalle, G.Eelen, P., Bertelson, P., editors. *Current advances in psychological science: An international perspective; State of the art lectures presented at the 25th International Congress of Psychology; Brussels*. 1992; Hove, England: Erlbaum; 1994. p. 359-369.
- Bornstein MH. Toward a multiculture multiage multimethod science. *Human Development*. 2002; 45:257–263.
- Bornstein, MH., editor. *The handbook of cross cultural developmental science: Vol. 2. Development in different places on earth*. Mahwah, NJ: Erlbaum; 2008a.
- Bornstein, MH., editor. *The handbook of cross cultural developmental science: Vol. 1. Domains of development across cultures*. Mahwah, NJ: Erlbaum; 2008b.
- Bornstein MH, Cote LR, Venuti P. Parenting beliefs and behaviors in northern and southern groups of Italian mothers of young infants. *Journal of Family Psychology*. 2001; 15:663–675. [PubMed: 11770473]
- Bornstein MH, Gini M, Putnick DL, Haynes OM, Painter KM, Suwalsky JTD. Short-term reliability and continuity of emotional availability in infant-mother dyads across contexts of observation. *Infancy*. 2006; 10:1–16.
- Bornstein MH, Hahn CS, Haynes OM. Specific and general language performance across early childhood: Stability and gender considerations. *First Language*. 2004; 24:267–304.
- Bornstein, MH., Hahn, CS., Suwalsky, JTD., Haynes, OM. Socioeconomic status, parenting, and child development: The Hollingshead Four-Factor Index of Social Status and the Socioeconomic Index of Occupations. In: Bornstein, MH., Bradley, RH., editors. *Socioeconomic status, parenting, and child development*. Mahwah, NJ: Erlbaum; 2003. p. 29-82.

- Bornstein MH, Haynes OM, Pascual L, Painter KM, Galperín C. Play in two societies: Pervasiveness of process, specificity of structure. *Child Development*. 1999; 70:317–331. [PubMed: 10218257]
- Bornstein, MH., Lamb, ME. *Development in infancy: An introduction (5e)*. Mahwah, NJ: Erlbaum; 2008.
- Bornstein MH, Tal J, Rahn C, Galperín CZ, Pêcheux MG, Lamour M, et al. Functional analysis of the contents of maternal speech to infants of 5 and 13 months in four cultures: Argentina, France, Japan, and the United States. *Developmental Psychology*. 1992; 28:593–603.
- Bowlby, J. *Attachment and loss*. New York: Basic Books; 1969.
- Bradley, RH. Environment and parenting. In: Bornstein, MH., editor. *Handbook of parenting; Vol. 2. Biology and ecology of parenting*. 2nd. Mahwah, NJ: Erlbaum; 2002. p. 281-314.
- Bravo, A. La nuova Italia: Madri tra oppressione ed emancipazione [The new Italy: Mothers between oppression and emancipation]. In: D'Amelia, M., editor. *Storia della maternità*. Roma-Bari: Laterza; 1997. p. 138-183.
- Bretherton I. Emotional availability: An attachment perspective. *Attachment & Human Development*. 2000; 2:233–241. [PubMed: 11707913]
- Brislin RW. Cross-cultural research in psychology. *Annual Review of Psychology*. 1983; 34:363–400.
- Brody, LR., Hall, JA. Gender, emotion, and expression. In: Lewis, M., Haviland-Jones, JM., editors. *Handbook of emotions*. 2nd. New York: Guilford Press; 2000. p. 338-349.
- Bronfenbrenner, U. *The ecology of human development*. Cambridge, MA: Harvard University Press; 1979.
- Bronfenbrenner U. Ecological systems theory. *Annals of Child Development*. 1989; 6:187–249.
- Bronfenbrenner, U., Morris, PA. The ecology of developmental processes. In: Lerner, RM., editor. *Handbook of child psychology: Vol. 1. Theoretical models of human development*. 5th. New York: Wiley; 1998. p. 993-1028. W. Damon (Series Ed.)
- Caldera YM, Huston AC, O'Brien M. Social interactions and play patterns of parents and toddlers with feminine, masculine, and neutral toys. *Child Development*. 1989; 60:70–76. [PubMed: 2702876]
- Camaioni L, Longobardi E, Venuti P, Bornstein MH. Maternal speech to 1-year-old children in two Italian cultural contexts. *Early Development and Parenting*. 1998; 7:9–17.
- Carlsmith L. Effect of early father absence on scholastic aptitude. *Harvard Educational Review*. 1964; 34:3–21.
- Carugati R, Emiliani F, Molinari L. Being a mother is not enough: Theories and images in the social representations of childhood. *Revue Internationale de Psychologie Sociale*. 1990; 3:289–306.
- Caselli MC, Bates E, Casadio P, Fenson J, Fenson L, Sanderl L, Weir J. A cross-linguistic study of early lexical development. *Cognitive Development*. 1995; 10:159–199.
- Caselli C, Casadio P, Bates E. A comparison of the transition from first words to grammar in English and Italian. *Journal of Child Language*. 1999; 26:69–111. [PubMed: 10217890]
- Chodorow, N. *The reproduction of mothering: Psychoanalysis and the sociology of gender*. Berkeley: University of California Press; 1978.
- Clarke-Stewart KA. Interactions between mothers and their young children: Characteristics and consequences. *Monographs of the Society for Research in Child Development*. 1973; 38Serial No. 153
- Clarke-Stewart KA, Hevey CM. Longitudinal relations in repeated observations of mother-child interaction from 1 to 2½ years. *Developmental Psychology*. 1981; 17:127–145.
- Coleman M, Ganong LH, Clark JM, Madsen R. Parenting perceptions in rural and urban families: Is there a difference? *Journal of Marriage and the Family*. 1989; 51:329–335.
- Crane P, Kinzig A. Nature in the metropolis. *Science*. 2005 May 27.308:1225. [PubMed: 15919957]
- De Sandre, I. La famiglia come rappresentazione e come azione [The family as representation and action]. In: Cusinato, M., Tessarolo, M., editors. *Ruoli e vissuti familiari*. Florence, Italy: Giunti; 1993.
- Díaz Rossello, JL. La relación madre-hijo en el periodo inicial [The mother-son relation in the initial period]. In: Cusminsky, M. Moreno, E., Suarez Ojeda, E., editors. *Crecimiento y desarrollo*. Buenos Aires, Argentina: Organización Panamericana de la Salud; 1988. p. 149-163. Publicación Científica No. 510

- Donati, P. *Famiglia e politiche sociali* [Families and social politics]. Milan, Italy: Franco Angeli; 1985.
- Donati, P., editor. *Terzo rapporto sulla famiglia in Italia* [Third report on the family in Italy]. Milano: San Paolo; 1993.
- Durrett ME, O'Bryant S, Pennebaker JW. Child-rearing reports of White, Black, and Mexican-American families. *Developmental Psychology*. 1975; 11:871.
- Eagly, AH, Beall, AE., Sternberg, RJ., editors. *The psychology of gender*. New York: Guilford Press; 2004.
- Easterbrooks MA, Biesecker G, Lyons-Ruth K. Infancy predictors of emotional availability in middle childhood: The roles of attachment security and maternal depressive symptomatology. *Attachment and Human Development*. 2000; 2:170–187. [PubMed: 11707909]
- Easterbrooks MA, Biringen Z. Guest editors' introduction to the special issue: Mapping the terrain of emotional availability and attachment. *Attachment and Human Development*. 2000; 2:123–129. [PubMed: 11707906]
- Easterbrooks MA, Biringen Z. The Emotional Availability Scales: Methodological refinements of the construct and clinical implications related to gender and at-risk interactions. *Infant Mental Health Journal*. 2005; 26:291–294. [PubMed: 28682467]
- Easterbrooks, MA., Lyons-Ruth, K., Biesecker, G., Carper, A. Infancy predictors of emotional availability in middle childhood: The role of attachment and maternal depression; Paper presented at the meeting of the International Conference on Infant Studies; Providence, RI. 1996 Apr.
- Edwards CP, Gandini L. Teachers' expectations about the timing of developmental skills: A cross-cultural study. *Young Children*. 1989; 44:15–19.
- Edwards, CP., Gandini, L., Giovaninni, D. The contrasting developmental timetables of parents and preschool teachers in two cultural communities. In: Harkness, S., Super, CM., editors. *Parents' cultural belief systems: Their origins, expressions, and consequences*. New York: Guilford Press; 1996. p. 270-288.
- Eichelbaum de Babini, AM. *Educación familiar y status socio-económico* [Socialization within the family and socioeconomic status]. Buenos Aires, Argentina: Instituto de Sociología; 1965.
- Eid M, Diener E. Norms for experiencing emotions in different cultures: Inter- and intranational differences. *Journal of Personality and Social Psychology*. 2001; 81:869–885. [PubMed: 11708563]
- Eisenberg N, Fabes RA, Shepard SA, Murphy BC, Guthrie IK, Jones S, et al. Contemporaneous and longitudinal prediction of children's social functioning from regulation and emotionality. *Child Development*. 1997; 68:642–664. [PubMed: 9306644]
- Emde, RN. Emotional availability: A reciprocal reward system for infants and parents with implications for prevention of psychosocial disorders. In: Taylor, PM., editor. *Parent-infant relationships*. Orlando, FL: Grune & Stratton; 1980. p. 87-115.
- Emde RN. Next steps in emotional availability research. *Attachment & Human Development*. 2000; 2:242–248. [PubMed: 11707914]
- Emde, RN., Easterbrooks, MA. Assessing emotional availability in early development. In: Frankenberg, DK, Emde, RN., Sullivan, JW., editors. *Early identification of children at risk: An international perspective*. New York: Plenum Press; 1985. p. 79-101.
- Emiliani, F., Molinari, L. *Rappresentazioni ed affetti, carattere ed interazione nello sviluppo dei bambini* [Representation and emotion, character and interaction in child development]. Milan, Italy: Raffaello Cortina Editore; 1995.
- Faul, F., Erdfelder, E. *GPOWER: A priori, post-hoc, and compromise power analyses for MS-DOS* [Computer program]. Bonn, West Germany: Bonn University, Department of Psychology; 1992.
- Feldman R, Reznick JS. Maternal perception of infant intentionality at 4 and 8 months. *Infant Behavior and Development*. 1996; 19:483–496.
- Fillol, TR. *Social factors in economic development: The Argentine case*. Westport, CT: Greenwood Press; 1961.
- Fonagy, P., Steele, M., Steele, H., Leigh, T., Kennedy, R., Mattoon, G., Target, M. Attachment, the reflective self, and borderline states: The predictive specificity of the Adult Attachment Interview and pathological emotional development. In: Goldberg, S, Muir, R., Kerr, J., editors. *Attachment*

- theory: Social, developmental, and clinical perspectives. Hillsdale, NJ: Analytic Press; 1995. p. 233-272.
- Fox, J. Applied regression analysis, linear models and related methods. Thousand Oaks, CA: Sage; 1997.
- Gandini, L., Edwards, CP. *Bambini: The Italian approach to infant-toddler care*. New York: Teachers College Press; 2000.
- Gauvain M. Culture, development, and theory of mind: Comment on Lillard (1998). *Psychological Bulletin*. 1998; 123:37–42. [PubMed: 9461852]
- Gilligan, C. *In a different voice: Psychological theory and women's development*. Cambridge, MA: Harvard University Press; 1982.
- Golombok, S., Fivush, R. *Gender development*. New York: Cambridge University Press; 1994.
- Greenfield, PM., Suzuki, LK., Rothstein-Fisch, C. Cultural pathways through human development. In: Renninger, KA, Sigel, IE., Damon, W., editors. *Handbook of child psychology: Vol. 4. Child psychology in practice*. 6th. Hoboken, NJ: Wiley; 2006. p. 655-699. Series Ed.
- Halberstadt AG, Denham S, Dunsmore JC. Affective social competence. *Social Development*. 2000; 10:79–119.
- Halpern, DF. *Sex differences in cognitive abilities*. Mahwah, NJ: Erlbaum; 2000.
- Harwood R, Miller J. Perceptions of attachment behavior: A comparison of Anglo and Puerto Rican mothers. *Merrill-Palmer Quarterly*. 1991; 37:583–599.
- Hauser, PM., Schnore, LF. *The study of urbanization*. New York: Wiley; 1965.
- Hill, R., Stycos, JM., Back, K. *The family and population control*. Chapel Hill: University of North Carolina Press; 1959.
- Hinde R, Stevenson-Hinde J. Implications of a relationships approach for the study of gender differences. *Infant Mental Health Journal*. 1987; 8:221–236.
- Hollingshead AB. Four factor index of social status. 1975 (Available from P. O. Box 1965, Yale Station, New Haven, CT 06520).
- Hsu HC, Lavelli M. Perceived and observed parenting behavior in American and Italian first-time mothers across the first 3 months. *Infant Behavior & Development*. 2005; 28:503–518.
- Jahoda, G. Cross-cultural comparisons. In: Bornstein, MH., editor. *Comparative methods in psychology*. Hillsdale, NJ: Erlbaum; 1980. p. 105-148.
- Juffer, F, Bakermans-Kranenburg, MJ., van IJzendoorn, MH., editors. *Promoting positive parenting: An attachment-based intervention*. Mahwah, NJ: Erlbaum; 2008.
- Kagan S, Ender PB. Maternal response to success and failure of Anglo-American, Mexican-American, and Mexican children. *Child Development*. 1975; 46:452–458.
- Kaiser AP, Delaney EM. The effects of poverty on parenting young children. *Peabody Journal of Education*. 1996; 71:66–85.
- Kates RW, Parris TM. Science and technology for sustainable development special feature: Long-term trends and a sustainability transition. *Proceedings of the National Academy of Sciences of the United States of America*. 2003; 100:8062–8067. [PubMed: 12829798]
- Kennedy JH. Childrearing attitudes in Appalachia today: A preliminary look. *Psychological Reports*. 1985; 56:677–678.
- Kennedy S, Scheirer J, Rogers A. The price of success: Our monocultural science. *American Psychologist*. 1984; 39:996–997.
- Kimura, D. *Sex and cognition*. Cambridge, MA: MIT Press; 1999.
- Kitayama, S., Markus, HR. *Emotion and culture: Empirical studies of mutual influence*. Washington, DC: American Psychological Association; 1994.
- Koren-Karie N, Oppenheim D, Dolev S, Sher E, Etzion-Carasso A. Mothers' insightfulness regarding their infants' internal experience: Relations with maternal sensitivity and infant attachment. *Developmental Psychology*. 2002; 38:534–542. [PubMed: 12090483]
- Lampard, JE., Voigt, M., Bornstein, MH. Urban and rural parenting. In: Balter, L., editor. *Parenthood in America: An encyclopedia*. Santa Barbara, CA: ABC-CLIO Press; 2000. p. 442-444.
- Leeper, C. Parenting girls and boys. In: Bornstein, MH., editor. *Handbook of parenting: Vol. 1. Children and parenting*. 2nd. Mahwah, NJ: Erlbaum; 2002. p. 189-225.

- Lehr R, Jeffery G. Career support needs of youth: A qualitative analysis of the rural perspective. *Canadian Journal of Counseling*. 1996; 30:240–253.
- Ley RG, Koepke JE. Attachment behavior outdoors: Naturalistic observations of sex and age differences in the separation behavior of young children. *Infant Behavior and Development*. 1982; 5:195–201.
- Lichter, DT., Jenson, L. Rural America in transition: Poverty and welfare at the turn of the twenty-first century. In: Weber, BA, Duncan, GJ., Whitener, LE., editors. *Rural dimensions of welfare reform*. Kalamazoo, MI: UpJohn Institute; 2002. p. 77-110.
- Lovas GS. Gender and patterns of emotional availability in mother-toddler and father-toddler dyads. *Infant Mental Health Journal*. 2005; 26:327–353. [PubMed: 28682464]
- Maccoby, EE., editor. *The development of sex differences*. Palo Alto, CA: Stanford University Press; 1966.
- Maccoby EE. Gender as a social category. *Developmental Psychology*. 1988; 24:755–765.
- Maccoby EE. Gender and relationships: A developmental account. *American Psychologist*. 1990; 45:513–520. [PubMed: 2186679]
- Maccoby EE, Jacklin CN. Myth, reality and shades of grey: What we know and don't know about sex differences. *Psychology Today*. 1974; 8:109–112.
- MacPhee, D. Unpublished manuscript. University of North Carolina; 1981. Manual: Knowledge of infant development inventory.
- Markus HR, Kitayama S. Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*. 1991; 98:224–253.
- Martin SE, Clements ML, Crnic KA. Maternal emotions during mother-toddler interaction: Parenting in affective context. *Parenting: Science and Practice*. 2002; 2:105–126.
- McCrae RR, Costa PT Jr, Martin TA, Oryol VE, Rukavishnikov AA, Senin IG. Consensual validation of personality traits across cultures. *Journal of Research in Personality*. 2004; 38:179–201.
- McCrae RR, Terracciano A, 78 Members of the Personality Profiles of Cultures Project. Universal features of personality traits from the observer's perspective: Data from 50 cultures. *Journal of Personality and Social Psychology*. 2005; 88:547–561. [PubMed: 15740445]
- McCune-Nicolich, L., Fenson, L. Methodological issues in studying early pretend play. In: Yawkey, TD., Pelligrini, AD., editors. *Child's play: Developmental and applied*. Hillsdale, NJ: Erlbaum; 1984. p. 81-124.
- McGraw KO, Wong SP. Forming inferences about some intraclass correlation coefficients. *Psychological Methods*. 1996; 1:30–46.
- Miller, JB. *Toward a new psychology of women*. Cambridge, MA: Beacon Press; 1986.
- Minturn, L., Lambert, WW. *Mothers of six cultures: Antecedents of childrearing*. New York: Wiley; 1964.
- Moghaddam FM. Psychology in three worlds. *American Psychologist*. 1987; 42:912–920.
- Molinari L, Speltini G. Breast feeding, practices and values: A study of social representation. *Swiss Journal of Psychology–Zeitschrift für Psychologie–Revue Suisse de Psychologie*. 1998; 57:235–247.
- Munroe, RL., Munroe, RH. Perspectives suggested by anthropological data. In: Triandis, HC., Lambert, WW., editors. *Handbook of cross-cultural psychology: Perspectives*. Vol. 1. Boston: Allyn & Bacon; 1980. p. 253-317.
- Mussen P, Maldonado Beytagh LA. Industrialization, child-rearing practices, and children's personality. *Journal of Genetic Psychology*. 1969; 115:195–216. [PubMed: 4903087]
- Nsamenang AB, Lamb ME. The force of beliefs: How the parental values of the Nso of northwest Cameroon shape children's progress toward adult models. *Journal of Applied Developmental Psychology*. 1995; 16:613–627.
- Nugent, JK, Lester, B., Brazelton, TB., editors. *The cultural context of infancy*. Vol. 1. Norwood, NJ: Ablex; 1989.
- Okagaki, L., Divecha, DJ. Development of parental beliefs. In: Luster, T., Okagaki, L., editors. *Parenting: An ecological perspective*. Hillsdale, NJ: Erlbaum; 1993. p. 35-67.

- Olds D, Robinson J, O'Brien R, Luckey D, Pettitt L, Ng R, et al. Comparison of pregnancy and infancy home visitation by nurses versus paraprofessionals: A randomized controlled trial. *Pediatrics*. 2002; 110:486–496. [PubMed: 12205249]
- Olds D, Robinson J, Pettitt L, Luckey D, Holmberg J, Ng R, et al. Effects of home visits by paraprofessionals and by nurses: Age-four follow-up of a randomized trial. *Pediatrics*. 2004; 114:1560–1568. [PubMed: 15574615]
- Olesker W. Sex differences in 2- and 3-year-olds: Mother-child relations, peer relations, and peer play. *Psychoanalytic Psychology*. 1984; 1:269–288.
- Olesker W. Sex differences during the early separation-individuation process: Implications for gender identity formation. *Journal of the American Psychoanalytic Association*. 1990; 38:325–346. [PubMed: 2362070]
- Oyen AS, Landy S, Hilburn-Cobb C. Maternal attachment and sensitivity in an at-risk sample. *Attachment & Human Development*. 2000; 2:203–217. [PubMed: 11707911]
- Palacios, J., Moreno, MC. Parents' and adolescents' ideas on children: Origins and transmission of intracultural diversity. In: Harkness, S., Super, CM., editors. *Parents' cultural belief systems: Their origins, expressions, and consequences*. New York: Guilford Press; 1996. p. 254-269.
- Papoušek, H., Papoušek, M. Intuitive parenting. In: Bornstein, MH., editor. *Handbook of parenting*. Vol. 2: Biology and ecology of parenting. 2nd. Mahwah, NJ: Erlbaum; 2002. p. 183-203.
- Pascual, L. Democracy and educational reforms in Argentina: Possibilities and limitations; Paper presented at the Annual Conference of the Comparative and International Education Society; Pittsburgh, PA. 1991.
- Pascual L, Galperín CZ, Bornstein MH. La medición del nivel socioeconómico y la psicología evolutiva: El caso Argentino [Measurement of socioeconomic status and developmental psychology: The Argentine case]. *Revista Interamericana de Psicología/Interamerican Journal of Psychology*. 1993; 27:59–74.
- Pescatello, A., editor. *Female and male in Latin America: Essays*. Pittsburgh: University of Pittsburgh Press; 1973.
- Peterson GW, Peters DF. The socialization values of low-income Appalachian White and rural Black mothers: A comparative study. *Journal of Comparative Family Studies*. 1985; 16:75–91.
- Petty, M. Autoritarismo y participación [Authoritarianism and participation]. Buenos Aires, Argentina: Congreso Pedagógico; 1986.
- Piaget, J. Need and significance of cross-cultural studies in genetic psychology. In: Dasen, C., translator; Berry, JW., Dasen, PR., editors. *Culture and cognition*. London: Methuen; 1974. p. 299-309. (Original work published 1966)
- Pipp-Siegel S, Biringen Z. Assessing the quality of relationships between parents and children: The emotional availability scales. *Volta Review*. 1998; 100:237–249.
- Redfield R. The folk society. *American Journal of Sociology*. 1947; 92:293–308.
- Reznick, JS. Influences on maternal attribution of infant intentionality. In: Zelazo, PD, Astington, JW., Olson, DR., editors. *Developing theories of intention*. Mahwah, NJ: Erlbaum; 1999. p. 243-267.
- Ribas, R. Central and South America. In: Bornstein, MH., editor. *The handbook of cross cultural developmental science*. Vol. 2: Development in different places on earth. Mahwah, NJ: Erlbaum; (in press)
- Richman AL, LeVine RA, New RS, Howrigan GA, Welles-Nystrom B, LeVine SE. Maternal behavior to infants in five cultures. *New Directions for Child Development*. 1988; 40:81–97.
- Richman, AL., Miller, PM., Solomon, MJ. The socialization of infants in suburban Boston. In: LeVine, RA., West, PM., editors. *Parental behavior in diverse societies*. San Francisco: Jossey-Bass; 1988. p. 65-73.
- Robinson JL, Biringen Z. Gender and emerging autonomy in development. *Psychoanalytic Inquiry*. 1995; 15:60–74.
- Robinson JL, Emde RN. Mental health moderators of early head start on parenting and child development: Maternal depression and relationship attitudes. *Parenting: Science and Practice*. 2004; 4:73–97.
- Robinson JL, Little C, Biringen Z. Emotional communication in mother-toddler relationships: Evidence for early gender differentiation. *Merrill-Palmer Quarterly*. 1993; 39:496–517.

- Rogoff, B. *Apprenticeship in thinking: Cognitive development in social context*. New York: Oxford University Press; 1990.
- Ruble, DN. Sex-role development. In: Bornstein, MH., Lamb, ME., editors. *Developmental psychology: An advanced textbook*. 2nd. Hillsdale, NJ: Erlbaum; 1988. p. 411-460.
- Ruble, DN., Martin, CL., Berenbaum, SA. Gender development. In: Kuhn, D.Siegler, RS., Damon, W., editors. *Handbook of child psychology: Vol. 2. Cognition, perception, and language*. 6th. Hoboken, NJ: Wiley; 2006. p. 858-932. Series Ed.
- Russell R. Psychology in its world context. *American Psychologist*. 1984; 39:1017–1025.
- Saarni, C. *The development of emotional competence*. New York: Guilford Press; 1999.
- Sagi A, Koren-Karie N, Gini M, Ziv Y, Joels T. Shedding further light on the effects of various types and quality of early child care on infant-mother attachment relationship: The Haifa Study of Early Child Care. *Child Development*. 2002; 73:1166–1186. [PubMed: 12146741]
- Sampson RJ, Laub JH. Urban poverty and the family context of delinquency: A new look at structure and process in a classic study. *Child Development*. 1994; 65:523–540. [PubMed: 8013238]
- Scanzoni J, Arnett C. Policy implications derived from a study of rural and urban marriages. *Family Relations*. 1987; 36:430–436.
- Scherer KR, Wallbott HG. Evidence of universality and cultural variation of differential emotion response patterning. *Journal of Personality and Social Psychology*. 1994; 66:310–328. [PubMed: 8195988]
- Schwartz CR, Mare RD. Trends in educational assortative marriage from 1940 to 2003. *Demography*. 2005; 42:621–646. [PubMed: 16463914]
- Senese, P., Poderico, C., Venuti, P. Credenze parentali sulla relazione genitori-figli: Confronto tra diversi gruppi etnici [Parental beliefs about parent–child relationships: A comparison among different ethnic groups]. In: Poderico, C. Venuti, P., Marcone, R., editors. *Diverse culture Bambini diversi?*. Rome: Unicopli; 2003. p. 57-70.
- Sexton VS, Misiak H. American psychologist and psychology abroad. *American Psychologist*. 1984; 39:1026–1031.
- Simons RL, Johnson C, Conger RD, Lorenz FO. Linking community context to quality of parenting: A study of rural families. *Rural Sociology*. 1997; 62:207–230.
- Sjoberg, G. The rural-urban dimension in preindustrial, transitional, and industrial societies. In: Faris, REL., editor. *Handbook of modern sociology*. Chicago: Rand McNally; 1964. p. 127-159.
- Smetana, JG., editor. *Beliefs about parenting: Origins and developmental implications*. San Francisco: Jossey-Bass; 1994.
- Stevenson H. Learning from Asian schools. *Scientific American*. 1992 Dec.:70–76.
- Stevenson MB, Leavitt LA, Roach MA, Chapman RS, Miller JF. Mothers' speech to their 1-year-old infants in home and laboratory settings. *Journal of Psycholinguistic Research*. 1986; 15:451–461. [PubMed: 3772834]
- Stott LH. Parental attitudes of farm, town, and city parents in relation to certain personality adjustments in their children. *Journal of Social Psychology*. 1940; 11:325–339.
- Swanson K, Beckwith L, Howard J. Intrusive caregiving and quality of attachment in prenatally drug-exposed toddlers and their primary caregivers. *Attachment and Human Development*. 2000; 2:130–148. [PubMed: 11707907]
- Tabachnick, BG., Fidell, LS. *Using multivariate statistics*. New York: HarperCollins; 1996.
- Tamis-LeMonda, CT., McFadden, KE. The United States of America. In: Bornstein, MH., editor. *The handbook of cross cultural developmental science*. Vol. 2: Development in different places on earth. Mahwah, NJ: Erlbaum; (in press)
- Thompson MJJ, Stevenson J, Sonuga-Barke E, Nott P, Price ZBA, Hudswell M. Mental health of preschool children and their mothers in a mixed urban/rural population. *British Journal of Psychiatry*. 1996; 168:16–20. [PubMed: 8770422]
- Tomlinson M, Swartz L. Imbalances in the knowledge about infancy: The divide between rich and poor countries. *Infant Mental Health Journal*. 2003; 24:547–556.
- Tonnies, F. *Community and society*. New York: Harper & Row; 1963. (Original work published 1887)
- Triandis, HC. *Handbook of cross-cultural psychology*. Boston: Allyn & Bacon; 1980.

- Triandis, HC. Individualism and collectivism. Boulder, CO: Westview Press; 1995.
- United Nations. World urbanization prospects: The 2003 revision. New York: Author; 2004.
- Valsiner, J. Human development and culture. Cambridge, MA: Lexington Books; 1989.
- van den Boom DC. Do first-year intervention effects endure? Follow-up during toddlerhood of a sample of Dutch irritable infants. *Child Development*. 1995; 66:1798–1816. [PubMed: 8556900]
- van de Vijver, FJR., Leung, K. Methods and data analysis for cross-cultural research. Thousand Oaks, CA: Sage; 1997.
- van IJzendoorn, MH., Bakersman-Kranenburg, MJ., Sagi-Schwartz, A. Attachments across diverse sociocultural contexts: The limits of universality. In: Rubin, KH., Chung, OB., editors. Parenting beliefs, behaviors, and parent-child relations: A cross-cultural perspective. New York: Psychology Press; 2006. p. 107-142.
- Venuti P, de Falco F, Giusti Z, Bornstein MH. Play and emotional availability in young children with Down syndrome. *Infant Mental Health Journal*. (in press).
- Waber DP. Sex differences in cognition: A function of maturation rate? *Science*. 1976 May 7.192:572–574. [PubMed: 1257795]
- Weisner, T. Culture & context: The most important influence in human development; Paper presented at the biennial meetings of the Society for Research in Child Development; Atlanta, GA. 2005 Apr.
- Whiting, JW. Environmental constraints on infant care practices. In: Munroe, RH. Munroe, RL., Whiting, BB., editors. Handbook of cross-cultural human development. New York: Garland STPM Press; 1981. p. 155-179.
- Whiting, JWM., Child, IL. Child training and personality: A cross-cultural study. New Haven, CT: Yale University Press; 1953.
- Wirth L. Urbanism as a way of life. *American Journal of Sociology*. 1938; 44:1–24.
- Zayas LH. Family functioning and child rearing in an urban environment. *Journal of Developmental & Behavioral Pediatrics*. 1995; 16:S21–S24. [PubMed: 7560128]
- Ziv Y, Aviezer O, Gini M, Sagi A, Koren-Karie N. Emotional availability in the mother-infant dyad as related to the quality of infant-mother attachment relationship. *Attachment and Human Development*. 2000; 2:149–169. [PubMed: 11707908]

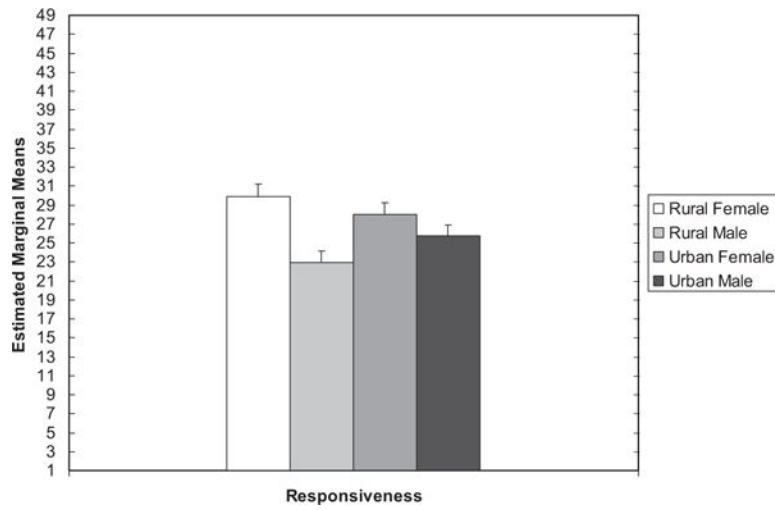


Figure 1. Estimated marginal means of child responsiveness by region and child gender, controlling for maternal age and education. The error bars are standard errors of the means.

Table 1
Demographic Statistics and Tests of Group Differences for Rural and Metropolitan Families in Argentina, Italy, and the United States

Variable	Argentina		Italy		United States		F(2, 97)
	M	SD	M	SD	M	SD	
<i>n</i>	30		30		40		
Mother age at child's birth	21.88	3.53	24.61	4.86	24.04	5.38	2.82
Mother education	3.47 _a	1.28	2.53 _b	1.07	4.35 _c	1.19	20.25 ^{***}
Mother employment (% employed)	46.67		33.33		60.00		
Mother hours of employment	27.29 _a	12.31	35.00 _a	14.12	35.96 _a	6.49	3.35 [*]
Father age at child's birth	25.20	3.68	27.31	4.65	27.81	5.59	2.45 _a
Father education	3.21 _a	1.26	2.47 _b	1.04	4.26 _c	0.85	25.76 ^{***} b
Family socioeconomic status	25.12 _a	16.31	22.13 _a	8.22	35.58 _b	7.80	14.34 ^{***}
Marital status (% married)	73.33		100		72.50		
Child birth weight (grams)	3,323.33 _a	323.27	3,176.67 _a	369.70	3,570.83 _b	503.32	8.05 ^{***}
Child gender (% female)	53.33		46.67		50.00		
Child age at visit (in months)	20.22	0.32	20.16	0.27	20.09	0.23	2.08
	Metropolitan						
<i>n</i>	40		40		40		
Mother age at child's birth	27.19	5.38	29.27	3.18	28.42	5.21	1.98
Mother education	4.40 _a	1.43	4.53 _a	1.34	5.55 _b	1.40	8.26 ^{***}
Mother employment (% employed)	57.50		57.50		67.50		
Mother hours of employment	26.48	13.10	29.65	9.71	34.30	12.97	2.66
Father age at child's birth	29.10 _a	5.62	32.90 _b	4.01	31.64 _{ab}	6.05	5.34 ^{**}
Father education	4.35 _a	1.37	4.47 _a	1.24	5.45 _b	1.41	8.05 ^{***}
Family socioeconomic status	41.84	13.70	44.09	10.15	48.24	13.90	2.62
Marital status (% married)	77.50		100		92.50		
Child birth weight (grams)	3,356.88	475.47	3,342.25	403.82	3,535.05	459.64	2.30
Child gender (% female)	47.50		40.00		50.00		

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

Variable	Argentina		Italy		United States		F(2, 97)
	M	SD	M	SD	M	SD	
Child age at visit (in months)	20.65	.44	19.36	4.44	20.14	.22	2.57

Note. Means with different subscripts differed significantly at $p < .05$ in Tukey's honestly significant difference post hoc comparisons. Mother and father education data were collected at a 5-month visit and are rated on the 7-point Hollingshead (1975) education scale. Family socioeconomic status was measured by the Hollingshead (1975) Four-Factor Index of Social Status.

^aDegrees of freedom are (2, 91) because of missing data.

^bDegrees of freedom are (2, 94) because of missing data.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Table 2

Descriptive Statistics of the Emotional Availability Scales by Country

Scale	Argentina (<i>n</i> = 70)		Italy (<i>n</i> = 70)		United States (<i>n</i> = 80)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Mother						
Sensitivity	5.96	1.28	6.39	1.14	6.24	1.10
Structuring	3.64	0.84	3.91	0.58	3.83	0.66
Nonintrusiveness	4.20	0.82	4.15	0.84	4.40	0.72
Nonhostility	4.81	0.34	4.71	0.51	4.74	0.43
Child						
Responsiveness	4.66	1.13	5.42	0.84	5.10	0.81
Involving	4.74	1.14	5.34	0.81	5.11	0.80

Table 3

Descriptive Statistics of the Emotional Availability Scales by Region

Scale	Rural (<i>n</i> = 100)		Metropolitan (<i>n</i> = 120)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Mother				
Sensitivity	5.89	1.06	6.45	1.22
Structuring	3.58	0.67	3.97	0.69
Nonintrusiveness	4.02	0.86	4.45	0.68
Nonhosity	4.73	0.45	4.78	0.41
Child				
Responsiveness	4.90	0.90	5.20	1.02
Involving	4.90	0.82	5.20	1.03

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

Table 4

Descriptive Statistics of the Emotional Availability Scales by Child Gender

Scale	Mother–daughter (<i>n</i> = 105)		Mother–son (<i>n</i> = 115)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Mother				
Sensitivity	6.37	1.21	6.04	1.14
Structuring	3.90	0.69	3.69	0.71
Nonintrusiveness	4.36	0.65	4.16	0.90
Nonhostility	4.79	0.39	4.72	0.46
Child				
Responsiveness	5.24	1.02	4.90	0.91
Involving	5.21	0.97	4.92	0.92