Introduction: understanding relationships – what we would need to know to conceptualize attachment as the cultural solution of a universal developmental task

Heidi Keller

The definition of attachment as a primary bond between infants and caregivers emerging at around 1 year of age as an evolved adaptation for ensuring survival and development was the seminal contribution of the British psychiatrist and psychoanalyst John Bowlby and his (later) Canadian-American counterpart Mary Ainsworth (Ainsworth, Blehar, Waters et al., 1978; Bowlby, 1969). Attachment theory has initiated a tremendous body of research over the last decades, particularly expanding its focus on neurophysiological regulations, and extending it to adulthood and clinical applications. Nevertheless, the theoretical and methodological foundations have remained amazingly unaffected, although the basis of knowledge concerning the infant’s socioemotional development has increased substantially since the publication of Bowlby’s well-known trilogy Attachment and Loss and Ainsworth and collaborators’ summary of their empirical research on the emergence of attachment during the first year of life (1978). The first encompassing proposal for the refinement of conceptual and methodological issues of attachment theory and research was published by Michael Lamb and collaborators in 1984 in the renowned journal Behavioral and Brain Sciences – though without any observable notice by other attachment researchers.

Attachment theory is grounded in evolutionary theory with its basic tenet that every human characteristic is shaped through selection processes and represents an adaptation to contextual demands. Bowlby stressed explicitly the contextual nature of attachment in his early writings. Yet Bowlby focused mainly on the social environment, especially the mother, since he did not include information about other caregivers and the family and their living conditions in his World Health Organization (WHO) report (Bowlby, 1969; for a more detailed discussion, see Vicedo, 2013).
Thus, an important piece of information is lacking – that is, the contextual embeddedness of the child in his social environment (see Bronfenbrenner, 1977; Keller, 2007; Keller and Kärntner, 2013; Super and Harkness, 1986). Acknowledgment of the differential nature of contexts would necessitate also different behavioral and psychological solutions representing adaptations. Instead the human condition that the offspring can survive and thrive only when attachment relationships serve a protective function has been taken as a universal in every respect. The repeated claims of cultural psychologists and anthropologists, as well as evolutionary biologists, for decades to recognize contextual/cultural variation and systematically introduce it into attachment theory have been largely ignored, so that Sarah Hrdy (1999, p. 174), among others, concluded that “the usefulness of such ill-defined and culturally de-contextualized terms . . . as . . . bonding, attachment” must be questioned. In a historical analysis, Marga Vicedo (2013) historicizes the various features, assumptions, and modes of expression of attachment as a product of Cold War America (see also the review of the book by Harris, 2013).

Van IJzendoorn and Sagi-Schwartz (2008), the experts in discussing “culture and attachment” from a point of view within attachment research, acknowledge contextual variations when reviewing attachment studies done with non-Western samples and attest to the need for a radical change from a dyadic perspective to a network approach (which would also have radical consequences for the definition and assessment of attachment) (p. 900; see Heinicke, 1995, for similar arguments), but, surprisingly, they conclude that, “in fact, taken as a whole, the studies are remarkably consistent with the theory” (p. 901). Yet, there is an impressive documentation (although by far insufficient with respect to cultural variability) of diverse realities and thus contexts in the anthropological and psychological literature, as documented in this volume. Moreover, there is recognition that attachment and its formation vary substantially with the contexts in which children grow and develop (e.g., Gottlieb, 2004, see also Gottlieb in this volume; Harwood, Miller, and Lucca Irizarry, 1995, see also Carlson and Harwood in this volume; Keller and Harwood, 2009; Lancy, 2008, see also Lancy in this volume; Rothbaum, Weisz, Pott et al., 2000; Weisner and Gallimore, 1977, see also Weisner in this volume). Unfortunately, this body of literature did not find its way into attachment theory and did not inform the further development of attachment theory and methodology. The argument being put forward here is that contextual variations need to be systematically incorporated into attachment theory to lead to a radical shift from the view of attachment as a universal human need that has the same shape and emerges the same way across cultures to the view of attachment as a universal human
need that looks differently and has different developmental trajectories across contexts. In line with evolutionary (e.g., Draper and Belsky, 1990, see also Johow and Voland in this volume) as well as cultural accounts (Keller and Kärtner, 2013; Whiting, 1977), these contexts need to be specified as psychological and material resources that afford particular strategies of adaptation. We have defined contexts as patterns of sociocultural parameters with level of formal education as an organizer of fertility patterns and conceptions of family (Keller, 2007, 2012; Whiting, 1977). People who live in similar sociodemographic contexts share the values and conceptions of behavior (Greenfield and Keller, 2004) that are the major constituents of cultural models. Therefore, different contexts represent different cultural models or cultural milieus at the same time.

Anthropologists and cultural psychologists have claimed that attachment research (like much of psychology in general) does not recognize the fundamental differences in cultural conceptions of the self and the implications for normal and deviant developmental pathways. Therefore, obvious behavioral differences have been underestimated and interpreted from the prevailing Western conception of the self, so that LeVine and Norman (2001) conclude that attachment theory is more a Western philosophy of child rearing than a scientific theory (see also LeVine in this volume and Vicedo (2013) for the historical imprint of attachment). It is therefore argued here that, in order to understand children's development of relationships on a global scale, the conceptualization of attachment as a biologically based – but culturally shaped – construct is necessary. This aim necessitates comparative studies, including nonhuman primates in order to demonstrate contextual variation in them as well (Bard, Myowa-Yamakoshi, Tomonaga et al., 2005). Moreover, the study of indigenous views of attachment (see especially Part II in this volume) is crucial. In order to assess the development of attachment(s) in different cultural contexts from different disciplinary perspectives (evolutionary theory, cultural/cross-cultural psychology, linguistics, anthropology, and neuropsychology), a multimethod approach that integrates qualitative and quantitative methods, as represented in this volume, is a necessary condition. Such a fresh look at attachment does imply the substantial revision of the following two important claims.

First, the evolutionary/ethological foundation does not justify the assumption that attachment has the same shape, emerges the same way, and has the same consequences across cultures (assumptions of equivalence, normativity, and competence; see Rothbaum et al., 2000).

Second, cultural studies of the caregiving context in which attachment develops have underestimated apparent differences and overestimated
Heidi Keller

the functional similarity of different behaviors (e.g., Kermoian and Leiderman, 1986; True, Pisani, and Oumar, 2001). The conception of maternal sensitivity, as well as later embodiments of “optimal parenting” (e.g., mind-mindedness), rests on an assumption of Western, middle-class psychology that does not apply to much of the world. Mainstream psychology in general has recently been described as WEIRD (white, educated, industrialized, rich, democratic) psychology because of its apparent cultural bias for Western, middle-class samples and contexts (Henrich, Heine, and Norenzayan, 2010).

Both conclusions imply a radical shift from the prevailing view and necessitate the reconceptualization of attachment as an evolved universal developmental task that has to be performed context/culture sensitively in order to have adaptive value. In this introduction we suggest a reconceptualization that necessitates a systematically empirical research program including nonhuman primates as well as various non-Western cultural communities and normal as well as deviant developmental trajectories within these different cultural communities. The chapters in this volume substantiate these claims from different disciplinary backgrounds.

In the following six sections, the rationale for this claim will be summarized in six issues that are relevant to the development of attachment theory as a culturally sensitive tool. Each section ends with a statement of what is needed in order to reach the goal of a culturally sensitive attachment theory.

Defining attachment: the role of culture

Attachment has been defined by Bowlby and his followers as the emotional bond between an infant and his or her caregiver(s) that is expressed in attachment behaviors like crying, clinging, and following with the aim of establishing and maintaining proximity, particularly in stressful situations (e.g., Bretherton 1992). Although Bowlby believed that “instinctive behaviour [attachment] is not stereotyped movement but an idiosyncratic performance by a particular individual in a particular environment” (Bowlby, 1982, p. 39), the emotional bond has not been qualified with reference to contextual variation by his students and followers (Hrdy, 1999). However, anthropological and cultural psychological accounts leave doubt that relationships can be defined as emotional bonds – that is, in mentalistic terms in all cultural environments (e.g., Everett, 2009; Ochs, 1993; see also Everett in this volume). Moreover, the few empirical approaches to assessing the meaning of attachment (behaviors) across cultures do not reflect the underlying conception of culture. For
example, Posada, Goa, Wu et al. (1995) compared experts and mothers from China, Colombia, Germany, Israel, Japan, and the USA in their definitions of security of attachment based on the attachment Q-sort descriptions (Vaughn and Waters, 1990). The results revealed that across “cultures” mothers’ and experts’ conceptions of secure attachment converged. Culture is put here in quotation marks because it was defined as country, but country cannot be equated with culture (see below). It can be assumed that the childcare specialists surveyed had undergone Western oriented training, which would explain why their views converged with attachment theory. The mothers belonged to samples with similar sociodemographic profiles with an average of 31 years of age, 12.5 mean years of formal education, and an average of 1.9 children. This sociodemographic profile exactly represents middle-class groups, who hold similar child-rearing goals and values across countries (Keller, 2007, 2012). Nevertheless, there were variations between the samples and variations in the results that led the authors to conclude “that it becomes relevant to identify the ecologies in which such clusters [homogeneous groups] emerge” (Posada et al., 1995, p. 45). Yet, this conclusion has not found its way into the contextual study of attachment relationships. This and other studies suggest that context and culture are, if at all, mentioned in the discussion sections of publications, where differences in data are interpreted post hoc as cultural when no other explanation seems to hold. However, there is no coherent conception of culture that guides these studies. As argued before, we propose to define culture as values, norms, and beliefs (ideational part of culture) and as actions and behaviors (behavioral part of culture) (Greenfield and Keller, 2004) that are shared by people who live in the same ecosocial context consisting of the level of formal education, age at first birth, number of children, and household composition. These dimensions are to be understood not as independent variables that should be statistically controlled for; rather, they should be seen as constituting social milieus with particular norms, values, and behavioral conventions (cultural models) that define children’s learning environments (Keller, Bork, Lamm et al., 2011; LeVine, 1977; Whiting, 1977). Countries can thus – and obviously do – contain multiple cultural milieus. What is therefore needed is not the accumulation of further studies, because “the cross-cultural database is . . . absurdly small” (van IJzendoorn and Sagi-Schwartz, 2008, p. 901), but, rather, the selection of cultural contexts that show systematic variation in cultural beliefs and practices in order to understand indigenous conceptions of what attachment is and how it develops in its adaptive and nonadaptive forms.
One attachment or many

One central issue of attachment research is its definition of attachment as the result of a monotropic, dyadically organized relationship despite the acknowledgment of the existence of different care systems involving different caregivers that hold different responsibilities. And again, amazingly, attachment researchers conclude, after stating these differences, that, “in general, Bowlby and Ainsworth’s original ideas [the primacy of the mother–child relationship] held up well” (Cassidy, 2008, p. 17). This view of monotropy as an evolved tendency of human infants and their mothers is based on the primate model of rhesus macaques, with the particular role of the mother in the upbringing of the offspring, that is used as the evolutionary basis (Suomi, 2008). There are, however, other primate models with different care arrangements such as those of cotton-top tamarins, who rely more on distributed caregiving (Blum, 2002), and capuchin monkeys, whose activities with their mothers are not different from those with siblings or unrelated adults. As Suomi (2008, p. 177) concludes, “One wonders how Bowlby’s attachment theory would have looked if Hinde [the ethologist on whose work Bowlby heavily relied] had been studying capuchin rather than rhesus monkeys.” Parenting in over 300 primate species can vary greatly (Fairbanks, 2003) in terms of social systems and parenting strategies; moreover, it varies contextually (Bard et al., 2005), so that the assumption of one natural model cannot be maintained.

The monotropic understanding of relationships and its formation has also been questioned for many decades by sociobiological (e.g., Hrdy, 1999), anthropological (e.g., Lancy, 2008; Weisner and Gallimore, 1977), and psychological (e.g., Tronick, Winn, and Morelli, 1985) accounts. It is, however, the question not only of whether a child can form more than one meaningful relationship but also of how these relationships are defined and organized. Van IJzendoorn and Sagi-Schwartz (2008) stress the absence of a network perspective as compared to dyadic views, a claim that had been already made by Heinicke, who stated “that the study of attachment needs to be expanded . . . to include multiple relationships” (Heinicke, 1995, p. 307). Nevertheless, this is exactly what is still lacking, a new conceptual as well as methodological approach capturing a network perspective of relationships. Moreover, it is important to reconsider the evolutionary basis of attachment in studying different primate groups. Therefore, what is needed is the empirical analysis of relationship formation in different primate species, as well as in cultural contexts that differ systematically with respect to infant-care systems and arrangements – the cultural contexts should be based on indigenous
Introduction: understanding relationships

assessments, which means developed out of the culture and not imposed from outside.

**Measuring attachment quality: emotional regulation and emotional expressiveness**

Attachment involves psychological well-being and the experience of security in a caregiving environment. Although Bowlby had already distinguished between secure and insecure attachment, the development of the tripartite classification system is mainly attributed to Ainsworth and her collaborators (Ainsworth and Bell, 1970). Secure attachment as the trust in the caregiver (mainly the mother) is expressed as seeking bodily proximity after experiencing strain and stress. The second qualification of secure attachment is the activation of exploration when there is no distress and the attachment system is not activated (attachment/exploration balance; see below). Insecure attachment is defined in two modes. The first mode, insecure resistant attachment (also ambivalent attachment), is expressed in ambivalence between approaching and avoiding behaviors following the separation stress. The second mode, insecure avoidant attachment, is expressed in seemingly content behavior in situations of stress, but there are neurophysiological indicators, especially cortisol changes, that reveal stress responses. Later, Main and Solomon (1986) added a fourth classification – disorganized attachment, which is defined as a mix of behaviors, including avoidance or resistance; here children are described as displaying dazed behavior, sometimes seeming either confused or apprehensive in the presence of a caregiver. These attachment qualities are assumed to be universal strategies, with cultural differences only in their (numerical) distribution. The “standard distribution” is based on Ainsworth's Baltimore study and replicated in meta-analysis with about 60–70% of secure, 20–25% of avoidant, and 10–15% of ambivalent attachment (van IJzendoorn and Kroonenberg, 1988). Recently, about 15% of disorganized attachment strategies have been described, with an especially high amount (up to 30–40%) found in sub-Saharan samples (van IJzendoorn, Schuengel, and Bakermans-Kranenburg, 1999). This distribution has been regarded as normative, although there are notable exceptions, especially in studies from Germany, Israel, and Japan. Moreover, here culture is introduced *ex post facto* as an explanatory principle, with sometimes highly speculative claims (e.g., Grossmann, Grossmann, and Kindler, 2005).

From an evolutionary perspective, it seems highly unlikely that only one strategy – secure attachment – should be the best predictor of well-being in the existing environmental diversity. Rates of secure attachments
Heidi Keller

in meta-analyses of between 50% (van IJzendoorn, Goldberg, Kroonenberg et al., 1992) and 67% (van IJzendoorn and Kroonenberg, 1988) leave a percentage of at-risk developments that would be too high to represent evolutionary adaptation. In the same vein, Belsky, Steinberg, and Draper (1991) argued that insecure attachment should also be regarded as an adaptation when reproductive success is taken as the outcome measure. They have proposed two different life strategies that are modulated by secure and insecure attachment quality respectively. The secure strategy is adaptive in resource-rich environments, where parental investment is high and few offspring lead to optimal reproductive success. The insecure strategy is adaptive in unpredictable and low-resources environments, where more effort is devoted to mating than to parental investment and many offspring result in optimal reproductive success.

Attachment quality is mainly assessed by the “strange situation” procedure (Ainsworth and Wittig, 1969) and the attachment Q-sort technique (van IJzendoorn, Vereijken, Bakermans-Kranenburg et al., 2004), preferably with 1-year-old children. The strange situation procedure can be regarded as the major cultural adaptation in attachment research. Ainsworth developed this laboratory situation in Baltimore as a consequence of being unable to reproduce her observations of infants’ distress among the Ganda people in Uganda following maternal separation in the home environment. The strange situation procedure consists of a series of short episodes of mother-child social situations, stranger confrontations, and separations from the mother in a laboratory setting in order to increase the stress level of the child. Although an adaptation to the Euro-American context, this standard procedure has since then been exported to study qualities of attachment security in cultural contexts from African or South Sea villagers to Western and non-Western capital populations without question of its validity in those diverse contexts.

The central question for the assessment of attachment quality is how the infant emotionally regulates and enacts stressful experiences. Open expression of distress and successful comforting by the attachment figure – that is, the mother – are considered to be universal indicators of a secure relationship. Moreover, the formulation of the Q-sort items centrally focuses on the evaluation of emotional regulation and its expression. Emotional expressiveness, however, varies substantially across cultures due to different display rules and social conventions (Matsumoto, Olide, and Willingham, 2009) as part of different “selfways” (Markus and Kitayama, 1991). In many traditional communities, the display of emotions is not supported and not allowed, especially during interactions between children and adults. Although the confrontation with a
stranger can be regarded as a crucial situation to elicit attachment behaviors (Kondo-Ikemura and Waters, 1995), the majority of a sample of Cameroonian Nso farmer children did not show any emotional expression when faced by a stranger. These children, moreover, displayed decreases in cortisol concentration over the course of an interactional episode with the stranger (Keller and Otto, 2011, see also Chapter 8 by Otto in this volume). Similarly, Gottlieb has observed in the Beng people of the Ivory Coast that children are trained from early on to welcome strangers (Gottlieb, 2004; see also Chapter 7 by Gottlieb in this volume). These results indicate that attachment relationships may be differently regulated across cultural environments.

The assumption of the universal validity of the attachment–exploration balance has also been challenged from a cross-cultural point of view (e.g., Rothbaum et al., 2000; see also Miller and Harwood, 2001). Like attachment, exploration can certainly be assumed to be an evolved behavioral predisposition; nevertheless, it is enacted very differently in different cultural environments, ranging from very supportive attitudes to restraining to a large degree, if not completely suppressing, exploratory activities (e.g., Power, 2000). Moreover, exploration in the attachment literature is very broadly defined (e.g., in the strange situation procedure, as any playing with toys). It has long been claimed that exploration needs to be distinguished from play since different regulations of arousal are implied (exploration is assumed to increase arousal, whereas play is linked with decrease; Keller, Schölmerich, Miranda et al., 1987). What is therefore needed is to define qualities of attachment by indigenous conceptions of how security and insecurity are embodied behaviorally and neurophysiologically, and to ascertain what is regarded as an appropriate context to assess relational qualities.

The origins: sensitivity, mind-mindedness and physical availability

The rationale for the understanding of the development of attachment is based on Mary Ainsworth’s field studies with indigenous families in Uganda and Euro-American families in Baltimore. From extensive home observations, different scales of maternal caregiving qualities have been developed, of which the sensitivity scale has become most common. In fact, Ainsworth et al. (1978) defined sensitivity as the essence of good parenting during the first year of life and the major precursor of attachment security. Parenting is understood and evaluated as an exclusively dyadic activity – that is, one caregiver directs undivided attention to the infant and responds immediately, adequately, and consistently to even the most
subtle signals of the baby. Empirical analyses, however, have proved only a limited significance (i.e., correlations of around .30 (Pearson correlation coefficient) between earlier assessments of sensitivity and later attachment security; van IJzendoorn, 1995) not different from other dyadic measures. Recently, it has been proposed that mind-mindedness (Meins, 1997) or reflective functioning (Fonagy, Target, and Steele, 1998) – that is, narrative conversational discourses (Oppenheim and Waters, 1995) characterized by the (verbal) reflection of infants’ inner states and feelings – might be a more powerful precursor of attachment security. These conceptions are also based on exclusive dyadic attention between caregiver and child. Both conceptions, sensitivity and mind-mindedness, rest on the picture of the baby as an independent agent with its own will and the right to express its own preferences and wishes, and the expectation of their fulfillment based on children’s rights (for example, compare descriptions in the Ainsworth sensitivity and cooperation scales with the interference scale). This interactional style is typical of Western, middle-class families with a high degree of formal education, affluent life circumstances, and a reproductive style of late parenthood and few children. This style is not prevalent and not valued in other, diverse cultural contexts with early parenthood and many children such as those of traditionally living farmers (like the Nso; Demuth, 2008; see also Chapter 8 by Otto in this volume), pastoral groups (like the Fulani; Yovsi, 2003), or foraging groups (like the Pirahã; Everett, 2009; see also Chapter 6 by Everett and Chapter 4 by Meehan and Hawks in this volume). Anthropological analyses have claimed that the “opacity doctrine” distinguishes the human psyche as a “private place” (Duranti, 2008, p. 485) that includes indifference to others’ mental states (Ochs, 1988; see also Mead, 1934) and focus on the immediacy of experiences (Everett, 2009). According to these cultural models, physical availability and closeness (body contact and body stimulation) without verbal elaboration and mentalization are regarded as central to good infant care (Keller, 2007; Lancy, 2008) and a sign of love (Otto, 2008). Cross-cultural analyses of early caregiver–infant interactions have revealed two different strategies that are associated with different sociocultural milieus: the distal socialization strategy, which is characterized by exclusive attention, high amounts of face-to-face contact, contingent responsiveness to distal signals, verbal elaborateness and object stimulation, and little body contact and body stimulation, is typical of Western, middle-class families and is in line with the conceptions of sensitivity and mind-mindedness. Another strategy consists mainly of childcare as a co-occurring activity with extensive body contact and body stimulation, little face-to-face interaction, little verbal monitoring, and little object stimulation. The child is never alone, but also never the