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Reconsidering Attachment in Context of Culture: Review of Attachment Studies in Japan

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Abstract

This paper revisits the attachment controversies, reexamining the debates regarding attachment phenomenon being universal or culture-specific, and reconsiders whether it is possible to conduct culturally sensitive attachment research in non-Western societies while incorporating systematic empirical designs to enable replications across cultures. The goal of this paper is to improve our understanding about the clash between the fields and achieve consensus regarding the value of attachment research while acknowledging the limitations of attachment research in certain cultural contexts. The cultural debate will focus on one non-Western culture – Japan – where the controversy began. Finally, this review proposes the way in which collaborative research can be potentially launched that will benefit researchers across disciplines.

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Introduction

This paper revisits the debates regarding the universality assumption that attachment theory imposes and the lack of cultural considerations that attachment theory has been criticized for. What exactly does the universality assumption mean specifically in the context of attachment? What aspect of attachment phenomenon is the universality assumption referring to? Why are attachment studies conducted in non-Western cultures sometimes considered culturally insensitive? Is it about how attachment researchers *conduct* a study? Or is it about how they *interpret* their research findings? Specific to the development of attachment, van IJzendoorn, Bakermans-Kranenburg, and Sagi-Schwartz (2006) claimed that intracultural differences appear to be greater than cross-cultural differences, which is consistent with the findings from the earlier meta-analysis of cross-cultural attachment patterns (see van IJzendoorn & Kroonenberg, 1988).

The goal of this paper is to present a platform for re-examining the decades-old debate to weigh in both perspectives with hope to improve our understanding about the conflict and achieve some consensus regarding the value of attachment research while acknowledging the limitations of attachment research in certain cultural contexts. Is it possible to conduct *truly* culturally sensitive attachment studies in non-Western societies while incorporating systematic and replicable empirical designs across cultures?

To reach a wider audience – one which may not be familiar with attachment theory and research, this review first presents a summary of (a) definition of attachment, (b) attachment measurements, and (c) attachment categories, before delving deeply into the controversies in the field of attachment. The focus of the cultural debate will be on one non-Western culture – Japan, as it is beyond the scope of this paper to evaluate and discuss each and every attachment study conducted in non-Western cultures. Rothbaum, Weisz, Pott, Miyake, and Morelli (2000) presented an eye-opening, bold challenge to attachment theory, selecting Japan to support their arguments, which sparked lively debates then (see Chao, 2001; Gjerde, 2001; Kondo-Ikumera, 2001; Posada & Jacobs, 2001; van IJzendoorn & Sagi, 2001) and today (e.g., LeVine, 2014; Morelli, 2015), marking this clash as a contemporary attachment controversy of the 21st century. Each core hypothesis of attachment theory that Rothbaum et al. (2000) challenged will be carefully re-examined for its theoretical validity, identifying both plausible and problematic aspects of the challenge with a synthesizing remark.

Next, each attachment measure utilized in Japan will be critically reviewed for the challenges in its application and necessary adjustments. Furthermore, aside from the cultural debates, the current state of the attachment field overall is briefly discussed for the strength of attachment research/researchers and the challenge that the attachment field currently faces. This review will conclude by proposing the way in which collaborative research can be potentially launched to benefit researchers across disciplines.

Definition of Attachment

What is Attachment?

Attachment is a theory, behavior, relationship, and more. Attachment theory is an eclectic theory, incorporating ethological, evolutionary, psychoanalytic, cognitive, and control system theoretical perspectives (Hinde, 2005). Attachment theory is also an evolving theory (Ainsworth, Blehar, Waters, & Wall, 1978), implying there is still room for change or improvement, even though it took Bowlby more than 30 years to formulate (Main, Hesse, & Kaplan, 2005). At the most fundamental level, attachment theory consists of *formation* that explains how and why attachment is necessary and *mechanisms* that describe how and when attachment systems are activated and deactivated.

Formation

According to Bowlby (1982), attachment is an innate, species-wide behavioral system that the young form toward their caregivers to maximize a chance of survival. Based on the evolutionary and ethological perspectives, attachment formation is considered a universal phenomenon in that, “all infants – when given any opportunity at all – become attached to one or more specific (parental or non-parental) caregivers, except perhaps in the most extreme cases of neurophysiological impairments, such as extreme mental retardation” (van IJzendoorn & Sagi-Schwartz, 2008, p. 881). Attachment is not present at birth, however, and two pre-attachment phases are identified prior to the phase when attachment intensifies (Bowlby, 1982). Nevertheless, all children are born equipped to form attachment similarly to, for example, the language structure that Chomsky (1980) claims, considering this capacity as species-specific (only in humans) that all children are born ready to acquire any languages in the world, even though they do not speak at birth.

Mechanism

Even after attachment formation is complete, attachment behaviors can be observable only when the attachment system is activated. The concept of the activation/de-activation of the attachment system was guided by the control system theory (Bowlby, 1982), explaining when the child senses a threat or the threshold of the distress level reaches a certain level, the attachment behavioral system will be activated, just like a thermostat controlling the temperature of the room, and de-activation of the attachment system will occur once the child is comforted by the caregiver, as in when the room reaches the set temperature. The activation of the attachment system can be recognized by the display of attachment behaviors, which include crying, calling, following, and smiling, which in turn is expected to evoke the caregiving behavioral system of the caregiver (George & Solomon, 2008).

Attachment Measurements

It was Ainsworth (1967) who made the first systematic observation of child-caregiver interactions during the first year of life in Uganda. The first empirical observation of attachment behaviors was thus conducted in East Africa, far from Western Europe and the

U.S. While Ainsworth was impressed by Bowlby's insight for witnessing the formation of attachment, and observing attachment behaviors as Bowlby claimed, she also identified individual differences among the children in the way they behaved toward their caregivers (Ainsworth, 1967). Importantly, Ainsworth also recognized that the differences in the children's attachment behaviors toward their caregivers were related to the way their caregivers responded to the child's needs (Ainsworth et al., 1978). It is to be noted that Bowlby also incorporated the cognitive perspective in forming attachment in humans – the concept of the Internal Working Model (IWM; Bowlby, 1980), based on only several months of interactive experiences with the caregiver. The child is expected to continue to be busy constructing IWMs – perhaps more actively with the arrival of language – in understanding how the caregiver, the child himself/herself, the caregiver and child together, and the world may be expected to behave (Bowlby, 1982). Different interactive experiences with the caregiver are likely then, to lead to different IWMs, resulting in diverse attachment behaviors toward the caregiver, forming differed qualities of the attachment relationship. Therefore, these IWMs are important because they 1) bias the child's evaluation and perception about who he/she is to become and 2) are expected to continue to guide the child throughout development unless environmental changes occur (Bowlby, 1982).

Measure of Attachment in Infancy

Strange Situation Procedure (SSP: Ainsworth et al., 1978)

When Ainsworth returned to North America, she hoped to replicate what she observed in Uganda among families in Baltimore. As stated above, in order to activate the attachment behavioral system, the child needs to experience some distress, which was less easily observable in the relatively safe environment of the middle class homes in Baltimore. Thus, Ainsworth recognized the need to create a situation in which the child would experience *mild* distress by devising a procedure that incorporated three natural clues to danger (a novel environment/strange place, a stranger, and separations) that Bowlby (1982) postulated. The laboratory procedure, now the widely known Strange Situation Procedure (SSP), devised by Ainsworth and colleagues (1978), is comprised of eight episodes, including two separations from, and two reunions with, the caregiver. Based on the infants' responses to the reunions with their caregivers following the separations, three distinct patterns of attachment behaviors were identified, according to the SSP classification system (Ainsworth et al., 1978).

Measures of Attachment Beyond Infancy

In 1985, Main, Kaplan, and Cassidy conducted a follow-up study of the infants who were observed in the SSP five years earlier. Because the SSP is no longer an adequate measure to assess attachment of 6-year-olds, Main et al. (1985) devised several new measures. The

significance of introducing these measures was the recognition that attachment of children beyond infancy could now be assessed not only behaviorally but also representationally. At this time, the now widely used Adult Attachment Interview (AAI; protocol: George, Kaplan, & Main, 1996; scoring and classification system: Main, Goldwyn, & Hesse, 2003) was also introduced, enabling the assessment of adults' states of mind with respect to attachment. Below, newly devised measures of 6-year-olds' and of adults' attachment from this Berkeley study (Main et al., 1985) and other representational measures that emerged later for verbal children are briefly described.

Family Drawing (Kaplan & Main, 1986)

Six-year-olds were asked by the examiner to draw pictures and provided with a large drawing pad and a set of crayons. Following the initial warm-up drawing, during which the child was able to draw freely, he or she was asked to draw a picture of his or her family. Specific features (e.g., elements, size, position/stance of individual figures) and global impressions of the drawings are examined according to the Kaplan-Main Family Drawing system.

Kaplan's Separation Anxiety Test (SAT; Kaplan, 1987)

Main et al. (1985) interviewed 6-year-olds, presenting a set of vignettes of children who were going through hypothetical separations from their parents at different degrees of severity (i.e., from one-evening separation to two-week separation), and asked what a pictured child would feel and do during the separation. The test was a modification of the Separation Anxiety Test from Klagsbrun and Bowlby (1976) who adapted the original Hansburg's Separation Anxiety Test (HSAT, Hansburg, 1972). HSAT was designed for adolescents while the SAT by Klagsbrun and Bowlby adapted it for 4 to 7-year-olds. The child's overall emotional openness in the hypothetical separation situations and the child's ability to cope constructively with the imagined two-week separation from the parents were assessed based on verbatim interview transcripts, according to Kaplan's (1987) version of the SAT.

Main-Cassidy 6th-year system (Main & Cassidy, 1988)

Unlike measures above that assess child's attachment at the representational level, this measure assesses 6-year-olds' behaviors in response to reunion with their caregivers after one-hour separations. Even though 6-year-olds are unlikely distressed by a one-hour separation from their caregivers in a safe, friendly environment, it is believed that the previous tasks (e.g., Family Drawings, the SAT) have presumably activated the attachment system, thus, differences in their behavioral responses to the reunion with their caregivers are expected and examined, according to the Main-Cassidy 6th-year system (1988).

Adult Attachment Interview (AAI)

The AAI is a one-hour, semi-structured interview of 20 questions with a set of probes, mainly asking about the adult speakers' perception of childhood experiences with their parents. The AAI is known to "surprise the unconscious" (Hesse, 2008, p. 555) and assesses the current state of mind with respect to attachment. The speakers' narratives are painstakingly examined for the level of coherence, according to the scoring and classification system (Main et al., 2003).

Doll Play

Bretherton's Attachment Story Completion Task (ASCT; Bretherton, Ridgeway, & Cassidy, 1990) was originally developed to assess IWMs of attachment in 3-year-olds, inspired by a 1985 Berkeley study (Main et al., 1985). In the ASCT, five attachment-related story beginnings are introduced, and children are asked "what will happen next," using doll figures. Partly incorporating Kaplan's version of the SAT responses, the responses to four of the story stems (i.e., *Hurt knee*, *Monster in the bedroom*, *Departure*, *Reunion*) were analyzed to estimate attachment security. Since its inception, several different versions of the story-stem assessment methods have emerged (Attachment Doll Play Assessment [ADPA]; George & Solomon, 1990; Little Pig [LP]; Hodges, Steele, Hillman, & Henderson, 2003; MacArthur Story Stem Battery [MSSB]; Bretherton et al., 2003; the Manchester Child Attachment Story Task [MCAST]; Green, Stanley, Smith, & Goldwyn, 2000).

Attachment Categories

Each attachment measure presented above yields distinct attachment patterns or categories, originally recognized by Ainsworth et al. (1978), based on the child's behavioral response to attachment-provoking situations. Main et al. (1985) also identified distinct patterns of behaviors for 6-year-olds, corresponding to the SSP categories. Other representational measures such as Family Drawing (Kaplan & Main, 1986) and the SAT (Kaplan, 1987) also identified uniquely different patterns based on the drawing features or verbal responses to hypothetical separation situations, again corresponding to the SSP categories. For the AAI, the extensive linguistic analysis distinguishes separate discourse characteristics or strategies, identified as distinct states of mind, once again corresponding to the SSP categories. Doll play measures likewise identified four different patterns in children's predominant responses to attachment stories (e.g., Bretherton et al., 1990).

To note, this review is not exhaustive in introducing all attachment measures currently available to maintain focus on the goal of this paper – revisit cultural debates built primarily based on over- (or under-) representation of a particular attachment category in a particular cultural group. Thus, a well-validated, widely used behavioral measure of attachment employing a Q-sort technique, known as Attachment Q-sort (AQS; Water & Deanne, 1985) for children of age 1 to 5, is not discussed here even though this measure was successfully

employed in Japan (Kazui, Endo, Tanaka, & Sakagami, 2000). This is because the AQS uses a dimensional approach and not a categorical approach.

Attachment Categories of Infants

SSP categories

Ainsworth et al. (1978) identified three major, or *organized* (Main, 1990), patterns of infant response to the SSP and eight associated sub-patterns (not discussed here). Infants who actively sought contact with the mother upon her return, if distressed, but settled down quickly and resumed exploration, were judged *secure*. Infants who largely avoided the mother upon reunion and were often more focused on toys were judged *insecure-avoidant*. Infants who were preoccupied with their mother's whereabouts throughout the procedure and, upon reunion, failed to settle down, often clinging while also showing anger, were judged *insecure-ambivalent*. Infants who displayed brief bouts of disorganized, often incomprehensible, behaviors in the presence of the mother, were judged *disorganized* (Main & Solomon, 1990).

Attachment Categories Beyond Infancy

Family Drawing categories

Kaplan and Main (1986) identified four distinct patterns based on elements and features expressed in the children's drawings of their families. *Secure* drawings, for example, often depict the family in a welcoming stance (i.e., open-armed, ready to embrace), recognizing individual or unique features for each figure. *Insecure-avoidant* drawings appear to present an invulnerable, *happy* family, often without individuation, and a lack of arms or movement. *Insecure-ambivalent* drawings appear to present vulnerability or seemingly overwhelmed through descriptors of unusually large or small figures. *Disorganized* drawings often contain ominous, bizarre, or overly bright elements, sometimes with unfinished figures or floating body parts.

SAT categories

Based on verbatim transcripts, Kaplan's (1987) system utilizes two continuous scales (the emotional security scale and the solutions scale), which guide finalizing a category. Six-year-olds are classified *secure-resourceful* if they (a) openly express vulnerable feelings that the pictured child might be feeling such as sad, lonely, or angry, and (b) offer constructive solutions for what the pictured child would do while the parents are away, such as seeking contact with attachment figures or alternative caregivers such as grandparents, or suggest social activities with peers or multiple independent activities such as fantasy play, art projects, physical activity. Children are classified *insecure-inactive* if they (a) express vulnerable feelings that the pictured child might be feeling such as sad or lonely, but (b) offer no constructive solution such as repeating "I don't know," "nothing," or provide passive response such as "go to sleep." Children are classified *insecure-ambivalent* if they (a) provide reasonable answers to how the pictured child might feel, but (b) offer incompatible

or passive-aggressive solutions. Finally, children are classified *insecure-fearful/disorganized* if they or the pictured child appear to be inexplicably fearful, indicated by an inability to speak, prolonged silence, or in pervasive whispering, evidence of disorientation or disorganization, and/or presentation of catastrophic fantasies (e.g., parents are killed in plane crash or the family house burns down).

Six-year-old reunion categories

As with representational 6-year measures above, Main and Cassidy (1988) have identified three major *organized* attachment classifications for 6-year-olds based on their behavioral response. Six-year-olds are classified as *secure* when (a) they show no nervous changes in affect or behavior immediately upon reunion; (b) engage in fluid conversation and sometimes invite the parent to join in their play; and/or (c) subtly move closer to the parent. Children are classified as *avoidant* when (a) they stiffen upon the parent's entrance; (b) are extremely brief ("yes," "no") in their response to the parent's questions or conversational initiations; and/or (c) subtly attempt to exclude the parent from their current play/activities. Children are classified as *ambivalent/preoccupied* when they show immature behaviors, perhaps hugging or clinging to the mother, and also show bouts of anger by suddenly hitting her while hugging her. At age six, studies have shown that children who as infants were judged as *disorganized* become organized during the sixth-year reunion, termed *D-Controlling*, with two forms: (a) *controlling-caregiving*, when the child seemingly tries to show caregiving behaviors to the parent (e.g., offering a pretend tea or coffee); and (b) *controlling-punitive*, as seen in controlling, dominating, or even humiliating behaviors toward the parent.

AAI categories

Speakers who discussed their childhood experiences with their parents openly and coherently while demonstrating that they clearly value attachment relationships are judged *secure-autonomous*. Speakers who often claimed that they could not recall much from childhood, or attempted to portray positive pictures of experiences with their parents without any supportive evidence, thus idealizing, are judged *insecure-dismissing*. Speakers, who discussed their childhood experiences and/or current relationships with the parent(s) angrily, often in run-on sentences, are judged *insecure-preoccupied*. Speakers who showed a lapse in monitoring their speech or thoughts in discussing their deceased, or abusive, attachment figures are judged *unresolved*.

Doll play categories

Based on verbatim transcripts, children are classified as *secure* if they can show coping behaviors such as immediately playing with the grandmother doll upon separation from parents. Children are classified as *avoidant* if they avoid responding or request another story, saying "I don't know." Children are classified as *ambivalent* if they show inconsistent patterns in their responses, some showing anger or vulnerability. Children are classified as *disorganized* if they show or engage in odd or frightening behaviors such as throwing the doll on the floor.

Attachment Controversies

Historical Controversy

Attachment studies conducted in two different cultures sparked controversy, questioning the validity of the SSP measure to be used in different cultural contexts. A study conducted in Bielefeld, in northern Germany, found more *avoidant* babies than secure babies, which some argue was a result of distal parenting practices that emphasize independence, representing the German culture (Grossmann, Grossmann, Huber, & Wartner, 1981). But another study conducted in Regensburg, in southern Germany (Sagi & Lewkowicz, 1987), reported a distribution that did not differ from the global distribution. The controversy regarding attachment research in Germany thus has subsided, understanding that the differences were more likely attributed to general interactive style differences between northern and southern Germans rather than cultural differences per se.

However, a more intense response was voiced against one Japanese SSP study conducted in Sapporo, first as an interim report by Miyake, Chen, and Campos (1985) and Takahashi (1986), who later reported a full sample with a distribution that significantly deviated from the global norm. In the Sapporo study, no *avoidant* children were found in the insecure group, although a majority of children were found *secure* as in the global norm. Even though another SSP was previously conducted in Tokyo, Japan (Durrett, Otaki, & Richards, 1984), in which the attachment distribution did not significantly deviate from the global norm, the Sapporo study alone stirred the field. That is perhaps because, unlike Germany, which is a part of Western cultures, developmental studies in Asia, and specifically Japan, were far fewer at that time (and are still scarce today), questioning the applicability of the experimental measure devised in the U.S. in such a diverse cultural context. Beginning with the classic Japan study after WWII, reporting stark differences in socialization as well as parenting practices (e.g., Caudill & Weinstein, 1969), prominent anthropologists, sociologists, or cross-cultural researchers dominated the research in Japan. These scholars identified and emphasized the uniqueness of the Japanese people in terms of their discourse styles, interactive manners, parenting practices, indigenous beliefs, and associated various customs and rituals (e.g., DeVos, 1996; Vogel, 1996; White, 1996; Yamada, 1992). In Japan, most women do not work once they get married, especially when they have a baby, particularly around the mid 80's when the SSP studies were conducted. Japanese infants would rarely be separated from their mothers during the child's early years, and limited daycare services were reserved only for those who work full-time due to economic necessities. Babysitting services in Japan were unheard of in those days. Thus, it is argued that the SSP may be too stressful for Japanese infants who are inexperienced in separating from their mothers especially in an unfamiliar environment. The SSP therefore would bring about *severe* stress instead of *mild* stress that Ainsworth et al. (1978) intended to induce. This is the reason that all insecure children in Sapporo were unable to settle down, thus unable to explore, and were judged as insecure-resistant.

Separately, the concept of *amae* – the indigenous Japanese concept of relatedness – has fascinated Westerners since Doi (1973) introduced this concept as being uniquely

Japanese and not translatable or exactly definable, thus remaining as a myth. *Amae* has since served sometimes as a *convenient* term that scholars across disciplines have referred to when no adequate explanations were found to explain Japanese people's behaviors that were unfamiliar to Westerners. Japanese scholars too sometimes claim that certain, uniquely Japanese concepts such as *amae* can only be understood by Japanese (Doi, 1993), reflecting the theoretical phenomenon, known as *Nihonjinron* (theory about Japanese; see Befu, 2001). The confusion between *amae* and attachment re-surfaced later as discussed below.

Contemporary Controversy

No SSP studies in Japan have since appeared in print. One and a half decades later, however, as stated in the beginning, Rothbaum et al. (2000) revived the controversy by voicing their concern that attachment theory would not accurately explain parent-child relationships in non-Western cultures, specifically Japan. Here their challenge to each of their selected core hypotheses of attachment is re-examined below.

The Sensitivity Hypothesis

As Ainsworth et al. (1978) claim, in the attachment theoretical framework, caregivers' sensitive responsiveness to children's needs is believed to promote attachment security because the children's experiences of having their needs reliably met help them develop trust and confidence in their caregivers, which allow them to explore the environment, another important skill for survival. The association between parental sensitivity and attachment security has been empirically demonstrated in numerous studies (e.g., Atkinson et al., 2000; de Wolff & van IJzendoorn, 1997) following Ainsworth et al.'s (1978) original study, even though the strength of the associations as well as the exact definition of sensitivity vary.

Rothbaum et al.'s challenge. According to Rothbaum et al. (2000), U.S. caregivers' sensitive responsiveness involves meeting children's need to acknowledge their individual desires, encouraging open expressions of emotions, and thus respecting their autonomous strives to have their wishes met. However, Japanese caregivers' sensitive responsiveness entails their attempts to foster emotional closeness or dependency and help their children regulate their emotions by preemptively attending to the needs *before* the needs are openly expressed. Such parenting behaviors, keeping their children physically close, promoting dependency, and discouraging open expressions of emotions, are considered insensitive in the U.S., thus likely to promote insecure attachment, specifically insecure-ambivalent.

Plausible viewpoints. The U.S.-Japan parenting literature from the 80's and early 90's (e.g., Azuma, Kashiwagi, & Hess, 1981; Bornstein, Azuma, Tamis-LeMonda, & Ogino, 1990; Bornstein, Toda, Azuma, Tamis-LeMonda & Ogino, 1990; Shand & Kosawa, 1985) indeed depict such contrast in maternal behaviors. As stated earlier, the majority of Japanese mothers are stay home mothers, enabling them, at least physically, to fully devote themselves to child-rearing and also engaging in commonly observed cultural practices such as co-sleeping (and co-bathing), which does promote physical (and emotional) closeness.

Japanese young children are thus likely to experience separation from their mothers in their early days much less frequently compared to Western counterparts, possibly inducing more distress than what was originally intended. Otto would even regard such brief separations as “really cruel” for the children in the Nso villages in Cameroon who never experience being left alone (2014, p. 223). Therefore, at a first glance, the parallel Rothbaum et al. (2000) drew between typical Japanese mothers’ parenting behaviors and insensitive, overbearing American mothers’ interactive behaviors, makes sense, questioning the hypothesis that sensitive caregiving promotes secure attachment across cultures. To date, there is no empirical evidence based on the concurrent observation of attachment and sensitivity in Japan to support this hypothesis, thus, it is plausible to question the sensitivity hypothesis in Japan.

Questionable viewpoints. The lack of empirical evidence is also the weakness of Rothbaum et al.’s (2000) challenge to the sensitivity hypothesis. Kondo-Ikemura (2001) and Posada and Jacobs (2001) indeed pointed out that Rothbaum et al. (2000) not only failed to show the evidence for their claim but also overlooked empirical evidence that did show the conceptual link between attachment security and sensitivity constructs in Japan based on maternal report (Vereijken, Riksen-Walraven, & Van Lieshout, 1997). Instead, Rothbaum et al. (2000) based their claims solely on the theoretical sources. To validate their claim, Japanese mothers’ sensitivity needs to be assessed, showing that Japanese mothers score low in the sensitivity scale assessed by the sensitivity measures developed in the U.S. Japanese children’s attachment security also needs to be assessed to explore its link to their mothers’ sensitivity. Further, this is certainly not unique to Rothbaum et al. (2000), as cultural psychologists and anthropologists often tend to regard that all people in a particular culture think, behave, relate, or experience in the same way without considering individual differences within culture. Just as attachment researchers may be guilty of giving insufficient considerations to cultural differences, cultural psychologists may also be guilty of giving insufficient considerations for individual differences within culture?

Synthesis. It is clear that before the sensitivity hypothesis can be validated or invalidated, attachment researchers must provide empirical evidence. Future attachment studies in Japan must include assessments of parental sensitivity with a clear definition of what constitutes sensitivity because variations of the definition of sensitivity as well as differing measure of sensitivity has been frequently noted (e.g., de Wolff & van IJzendoorn, 1997). In addition, as more globalization and Western influences are observed in contemporary Japan, simple replication studies of Japan-U.S. parenting behaviors or mother-child interactive behaviors from the 80’s and 90’s (e.g., Bornstein, Azuma, et al., 1990; Shand & Kosawa, 1985), not necessarily attachment studies, should be encouraged because the findings can be informative to learn any changes, if any, of general maternal behaviors.

Interestingly, Rothbaum, Nagaoka, and Ponte (2006) compared Japanese and U.S. preschool teachers’ views of caregiver sensitivity, examining their preference when responding to children’s needs. Rothbaum et al. (2006) found that Japanese teachers prefer to anticipate the child’s needs whereas U.S. teachers prefer to respond when the child expressed the needs, a finding which echoes the claims Rothbaum and colleagues

previously made regarding a contrast in Japanese/American maternal behaviors (Rothbaum et al., 2000; Rothbaum & Morelli, 2005). Although this study did not include an assessment of attachment, such a study demonstrates how caregiver sensitivity, which has been exclusively examined in the parent-child context, can be extended to another context and to be generally informative in cross-cultural research.

More recently, Mesman et al. (2016) investigated mothers' views of the ideal mother and the sensitive mother, comparing 26 cultural groups from 15 countries, including Japan. Mesman et al. (2016) found a strong convergence between the ideal mother and the sensitive mother across cultures, showing that contemporary Japanese mothers appear to share similar views across cultures with regard to what is the ideal mother. This study, however, did not include an assessment of child attachment, warranting the need for attachment-sensitivity studies in Japan.

The Competence Hypothesis

Competence in children in any domain, such as physical, cognitive, emotional, or social, is generally regarded as an indicator of health and known to predict optimal development (Harter & Pike, 1984). Thus, to raise a competent child to ultimately become a competent adult should be a goal for parents, although how you define a competent individual in a particular society is likely to differ. In the attachment theoretical framework, attachment security is believed to lead to competence, characterized by exploration, autonomy, positive affect, well-regulated emotions, and good peer relationships (e.g., Weinfield, Sroufe, Egeland, & Carlson, 2008). Based on the longitudinal study of a large poverty sample in Minnesota (Sroufe, Egeland, Carlson, & Collins, 2005), children who were judged *secure* in infancy showed more competence across different domains (Weinfield et al., 2008), and were less likely to develop psychopathology later on (Carlson, 1998).

Rothbaum et al.'s challenge. According to Rothbaum et al. (2000), attachment's emphasis on individuation, autonomy, or self-reliance as characteristics of attachment security necessarily indicates devaluing dependency on others. However, in Japan, relying on others is favored, and the ability to depend on others to meet one's needs as well as to coordinate with others' needs is highly valued and regarded as the essential quality to achieve social harmony (e.g., Markus & Kitayama, 1991; Weisz, Rothbaum, & Blackburn, 1984). Thus, attachment security will *not* lead to competence that is valued in Japan.

Plausible viewpoints. Rothbaum et al.'s (2000) argument certainly fits the traditionally held dichotomous view of self-definition. Japan has often been chosen to represent the East, contrasting with the West (the U.S. or Western European countries) for their concepts of self-construal. Markus and Kitayama (1991) presented a ground-breaking approach to depict two distinct concepts of self-construal, Japan representing the interdependent sense of self, and the U.S. or other Western countries representing the independent sense of self. Again, in theory, it appears reasonable to question whether attachment security, which is partly characterized by autonomy and independence, can expect the similarly effective competence in Japan where dependence and interdependence are valued. Further, like the sensitivity hypothesis above, very few follow-up studies of attachment in Japan (Takahashi, 1990) were conducted to fully validate the

competence hypothesis. Rothbaum et al. (2005) later provided another example of the cross-cultural difference of competence, in the Japanese concept, *sunao*: open mindedness, nonresistance, or obedience (White & LeVine, 1986). Rothbaum et al. (2005) drew an intriguing conceptual link between *sunao* and *proper demeanor*, which Puerto Rican mothers view as social competence their child should acquire. This belief contrasted with Anglo-American mothers' views that emphasized their child's self-maximization and independence (Harwood, Miller, & Irizarry, 1995).

Questionable viewpoints. Once again, Rothbaum et al.'s (2000) challenge to the competence hypothesis lacks empirical evidence. Japanese children with known attachment security status need to be later examined for their competence to test the authors' claim, thus it is inconclusive. Posada and Jacobs (2001) pointed out that Rothbaum et al. (2000) failed to mention that Takahashi (1990) did find that Japanese children who were judged secure showed more competence in compliance, exploration, and socialization one year later, although this finding was not supported by the two-year follow-up study. Grossmann, Grossmann, and Keppler (2005) also asserted that secure Japanese infants were more competent in exploration during the SSP than were their German counterparts. Dennis, Cole, Zahn-Waxler, and Mizuta (2002) reported the co-existence of relatedness and autonomy based on conversation analyses of U.S.-Japanese mother-preschooler dyads. Therefore, although maintaining social harmony is certainly still encouraged in Japan (as elsewhere in the world), autonomy in children appears to also be valued in Japan today.

Rothbaum et al.'s (2005) reference to *sunao* does not cover an alternate translation as *compliant*. Kochanska et al. (2010), in their large longitudinal U.S. study, showed that attachment security, measured by the SSP, was significantly associated with a child's compliance to both mothers and fathers, which questions Rothbaum et al.'s (2005) theoretical link. Thus, a reliance on polysemous, specific non-English word as a way to demonstrate a conceptual link can lead to confusions.

Synthesis. As with the sensitivity hypothesis, to validate or invalidate the competence hypothesis for a Japanese sample, empirical data are necessary with a follow-up study, or a study that concurrently examines attachment and competence. Sroufe, Fox, and Pancake (1983) argued that effective dependence would later lead to effective independence, implying that a child's ability to effectively communicate attachment needs will become autonomous and competent. The Minnesota longitudinal study has indeed empirically supported Sroufe's claims (see Sroufe et al., 2005). A longitudinal or a follow up study of attachment in Japan is desperately needed to confirm or disconfirm the hypothesis that attachment security predicts competence in Japanese children. Gathering basic competence data in various domains should be relatively feasible without necessitating an elaborate laboratory setup because they can be obtained from teachers, parents, or peers mostly in questionnaire forms. Therefore, future studies should incorporate follow-up features of such information in the initial study design.

The Secure Base Hypothesis

Ainsworth (1963) defined the secure base as a person (attachment figure) to whom children can go when in need or distress and from whom they can explore. Bowlby (1988),

recognizing the importance of Ainsworth's concept of secure base, dedicated his *book A Secure Base: Parent-Child Attachment and Healthy Human Development* to Ainsworth, who introduced this concept as an indispensable aspect of the attachment construct. Attachment security represents a balance between ability to exhibit attachment, when the attachment system is activated by natural clues to danger, and to explore, when the attachment is deactivated by feeling safe. Both skills are considered important for survival (Bowlby, 1982) and for optimal development.

Rothbaum et al.'s challenge. According to Rothbaum et al. (2000), the secure base hypothesis primarily focuses on a link between attachment and exploration. Because exploration promotes a sense of autonomy and individuation, which are less valued in Japan, and also some studies from the 80's and early 90's found Japanese babies explored less than American babies, the ability to show both behaviors of attachment and exploration, or more specifically, the ability to show masterful exploratory behaviors is less meaningful or valued in Japan. Instead, the authors claimed that the child's ability to show attachment and dependent behaviors is more appropriate and valued in Japan, exhibiting the child's "social fitness" (p. 1099). They brought in the concept of *amae* for a theoretical similarity to attachment. Because *amae* is the indigenous Japanese concept of relatedness and the prototypical *amae* is observed in the mother-child interaction as Doi (1973) claimed, the *amae* relationship should override attachment and more accurately describe the mother-child relationship in Japan.

Plausible viewpoints. The concept of *amae* has mystified social scientists for decades and has often misled non-Japanese scholars to equate *amae* with dependence, understandably given the first translation of Doi's (1973) book of *amae* with the title *Anatomy of Dependence*. Autonomy and dependence may be considered mutually exclusive for its polarizing behavioral characteristics, indicating autonomous children do explore whereas dependent children do not. Indeed, classic studies of U.S.-Japan mother-child relationships from the 80's and 90's have shown that Japanese babies explored less (e.g., Bornstein, Azuma et al., 1990; Shand & Kosawa, 1985). Thus, through the eyes of Western observers, it is reasonable to assume that Japanese children who engage in *amae* do not explore, thus are less competent, and do not utilize the secure base in the same way competent U.S. children do. However, through the eyes of Japanese observers, children who do *amae* are normative and desirable. At the time of Rothbaum et al.'s (2000) writing, the literature on *amae* was extremely limited, and thus the conceptual myth and vagueness of *amae* remained in line with their claim.

Problematic viewpoints. It was not until 2004 when Behrens presented a comprehensive, multi-faceted view of *amae*, discussing the complex roles and functions of *amae* and how the quality or characteristic of *amae* differ greatly depending on the context in which *amae* was exhibited throughout the developmental phases. Therefore, Behrens (2004) concluded that *amae* is not limited to be observed in one type of relationship between the mother and child, and not all Japanese mothers automatically would welcome their child's *amae*. In addition, Behrens (2004) presented clear theoretical and functional differences between attachment and *amae*, while acknowledging the behavioral similarities between them. One study, which was available at the time of their writing, that compared

attachment, dependency, and *amae* (Vereijken et al., 1997) was, however, omitted from Rothbaum et al.'s (2000) review (although briefly noted in a footnote). This study directly asked Japanese mothers for their view on attachment security, dependency, and *amae*, who clearly expressed their preference for attachment security over *amae*, or dependence in their children. Although this study was limited in a sense, Vereijken et al. (1997) utilized the AQS (Waters & Deane, 1985) to show child's behavioral descriptors, thus possibly not capturing certain unique *amae* behaviors; the findings did clearly show that Japanese mothers do not prefer child's dependent behaviors nor *amae* behaviors. In fact, Japanese mothers consider attachment security to be most desirable whereas *amae* was the least desirable. These studies show theoretical and empirical evidence that Rothbaum et al.'s (2000) claim would not be warranted.

Furthermore, Posada et al. (2013) recently examined secure base phenomenon across nine cultures, including Japan. They had experts observe young children's secure base behaviors at home. Posada et al. (2013) found children across cultures use their mother as a secure base, and the experts' descriptions of the ideal child also greatly overlapped across cultures, highlighting more similarities than differences regarding the secure base hypothesis.

Synthesis. A few more *amae* papers have been recently published to further refine or expand Behrens (2004) theorization of *amae* (Behrens, 2010; Umemura & Traphagan, 2015), or to present *amae*'s empirical association with the mother's attachment status (Behrens & Kondo-Ikemura, 2011). However, very few observational studies of *amae* and attachment have been reported such as the one conducted with a Japanese family living in the U.S. (Mizuta, Zahn-Waxler, Cole, & Hiruma, 1996). Rothbaum, Kakinuma, Nagaoka, and Azuma (2007) interviewed Japanese and U.S. mothers regarding their ideas about a desirable/undesirable child, secure/insecure behaviors (adapted from Harwood et al., 1995), and whether perception of security/insecurity are related to desirable/undesirable behaviors. They provided hypothetical separation scenarios and hypothetical *amae* scenarios and examined mothers' responses. They found that ideas about security and insecurity, maternal responsiveness, and the link between security and desirable child are similar across cultures. But they also found that U.S. mothers associate security with more exploration, whereas Japanese mothers associate security with more accommodating behaviors, as expected. While such a cross-cultural study, conducted concurrently in two countries, is extremely important and informative, total reliance on maternal reporting without experts' observations of the mother-child interactions makes the validity of the findings questionable; Rothbaum et al. (2007) recognized these limitations. Their contributions to the field would have been immense had they collaborated with attachment researchers to include home visits to collect observational attachment data. Separately, Japanese researchers must conduct empirical *amae* studies, especially comparing attachment to validate Vereijken et al.'s (1997) findings as well as Behrens (2004) conceptual claims. To do so, however, a comprehensive *amae* measure needs to be developed such as an *amae* q-sort as was previously suggested (Behrens & Kondo-Ikemura, 2011). Only then can a systematic investigation of the correlates among attachment, dependency, and *amae* in Japan be conducted and the attachment-exploration or attachment-dependent hypothesis be tested.

Attachment Measures Used in Japan

The Strange Situation Procedure (SSP)

As already discussed above, two SSP studies were conducted in Japan in the mid 80's (Durrett et al., 1984; Takahashi, 1986) and no other SSP study has been since published. Again, as stated earlier, Durrett et al.'s (1984) Tokyo study promoted very little discussion, having reported the SSP distribution similar to the global norm. However, Takahashi's (1986) Sapporo study with no avoidant children led others to re-investigate the SSP sample and the procedure. For example, Grossmann and Grossmann (1989) later re-coded the entire sample and found that separation episodes were much longer than what was recommended when the baby experienced extreme distress. Thus, they identified a group of children who were simply unable to recover from the extreme distress, even though these children otherwise displayed secure behaviors.

Challenge

Main (1990) emphasized that children's attachment security is assessed based on their interactive behaviors with their caregivers during reunions following brief separations, which are supposed to provoke mild stress. Thus, as soon as the child shows distress, the episode can be curtailed, to as little as 10 seconds, in order to see how effectively, or ineffectively, the child can use the caregiver to gain comfort to settle and return to exploration. Main (1990) was critical, however, of Ainsworth, who did not provide specific instructions as to what exact second or minute to end, when necessary, a particular episode. Japanese researchers who follow the instruction literally may have a difficult time to insert their intuitive sense to determine when is the appropriate time to end a particular episode for a fear of making procedural errors.

Cultural adjustments

Future SSP studies in Japan must be conducted by researchers who have been extensively trained in the SSP workshop to recognize the adequateness of the situation or the infant's stress level to confidently determine when exactly to curtail episodes. Because normative Japanese infants today are still less likely to have regular separation experiences from their mothers compared to their U.S. counterparts, it may be better to target slightly older infants within the allowable age limit, such as 16- to 18-month-olds rather than 12-month-olds to minimize a risk to create extreme distress due to the unfamiliar experience that Rothbaum et al. (2000) and others (e.g. Morelli, 2015) argued.

Family Drawings

Behrens and Kaplan (2011) conducted the first Family Drawing study in Japan with Japanese 6-year-olds, applying the Kaplan-Main (1986) coding system as well as Fury, Carlson, and Sroufe's (1997) scale system, to evaluate the drawings.

Challenge

Main et al.'s (1985) influential work included children's drawings of their family for which Kaplan and Main developed the coding system (1986) with distinct attachment categories, which were found strongly associated with the children's SSP patterns. However, this work alone was never published. Fury et al. (1997), who used the Kaplan-Main (1986) system, also found strong correlates with the children's SSP categories and also developed their own scale system which has been more widely used (e.g., Madigan, Ladd, & Goldberg, 2003). When the Kaplan-Main (1986) system was used in the Japanese sample (Behrens & Kaplan, 2011), a number of features were remarkably similar across cultures (see Figure 1 for the similarities in the drawings judged as secure in the Japanese sample and the American sample). However, they also found features or drawing characteristics that were never seen in the U.S. drawings. For example, Behrens and Kaplan (2011) noted that a number of drawings included faces alone, sometimes a series of line-up faces (see Figure 2). Due to a lack of previous studies, they applied the system to the best of their ability, interpreting, for example, that missing arms from the faces-alone drawings can be indicative of a non-welcoming stance (i.e., cannot hug a person without arms), one of the features of insecure-avoidant. The overall match between the children's attachment security based on their drawing and their mothers' attachment security based on their AAI appears to indicate that the Kaplan-Main system is overall applicable to the Japanese sample. However, it is premature to assume this system is validated without replications. Behrens and Kaplan (2011) also cautioned the reader that despite the user-friendliness of this measure, the family drawing system alone should not be considered as a validated attachment measure, thus it should accompany other validated attachment measures to report the data as attachment findings.

Cultural adjustments

Before conducting family drawings studies with school age children in Japan, researchers should seek collaborations with teachers to gain general knowledge about drawing tasks given at school, inquiring, for example, whether it is customary for children to draw a portrait of a face alone. Based on general knowledge specific to drawings produced by Japanese children, the coding system needs to be revised, perhaps by adding certain new features as normative representations of family or people according to the teachers' observation or evaluations of such drawings.

The Separation Anxiety Test (SAT)

Kaplan's (1987) version of the SAT was administered to Japanese 6-year-olds, following extensive training by Nancy Kaplan. Children are shown six vignettes that depict a child going through separation from his or her parents at differing degrees of severity of separation and are asked (a) how the child would feel and (b) what the child would do to cope with these hypothetical separations. Japanese children's responses were transcribed verbatim and were translated into English to be presented to Nancy Kaplan for assessment.



Figure 1. Similar features in the drawings judged as secure (e.g., individuated, grounded, a natural proximity among family members) in the drawing by a Japanese child (top) and the drawing by an American child (bottom).



Figure 2. Face alone drawings that only appeared in Japanese drawings.

Challenge

Kaplan's SAT has been successfully utilized in several European countries (Easterbrooks & Abeles, 2000; Granqvist, Ljungdahl, & Dickie, 2007; Jacobsen, Edelstein, & Hofmann, 1994; Jacobsen & Hofmann, 1997; Ziegenhain & Jacobsen, 1999), but not in Asia. A diverse language such as Japanese presented an array of problems when translating children's responses. While some children are excellent communicators, some 6-year-olds' discourse is unclear and incoherent in any language due to their immaturity in communicative skills. Verbatim transcripts cannot be edited to make them more coherent when translating them. That meant a number of grossly incoherent verbal responses in Japanese were translated into English, carefully considering how American 6-year-olds would speak, maintaining some age appropriate incoherence, which was extremely challenging.

In addition to such general language-related challenges, problems specific to Japanese include a particular word "feel" or "*omou*" in Japanese. While the word "feel" is most commonly, and naturally, translated into Japanese as "*omou*," "*omou*" in Japanese can also be translated as "think." In English, "feel" and "think" are entirely different verbs, involving different aspects of developmental functioning. Given that the SAT question "What does this child *feel* when separating from his/her parents?" is one of the key questions to estimate the child's representation of the relationship with his/her parents, this confusion might have been detrimental in not effectively capturing the intent of the narrative-based measure – Kaplan's version of the SAT – to Japanese children. Furthermore, personal pronouns (e.g., I, me, you, he, she) are commonly omitted in writing or conversations in Japanese. Most 6-year-olds in this sample thus did not use pronouns during the SAT procedure. Nevertheless, it was often necessary to include pronouns to formulate sentences in English to make it sound as natural as possible as American 6-year-olds would speak, thus in the translated transcripts, it was provided based on the translator's best estimation of who the speaker was referring to, some of which, of course, could be an erroneous estimation.

Nancy Kaplan, the developer of Kaplan's SAT, found 14 (29%) out of 49 original Japanese cases non-codable, due to the multitude of problems mainly associated with translation and discourse style differences as discussed above. Therefore, a language-based measure in such a diverse language as Japanese poses a series of challenges especially when administered to children, whether it is an attachment measure or not. This example illustrates why such standardized measures need careful cultural adaptations.

Cultural adjustments

The failed attempt, however, can lead to successful administration once the problems discussed above are resolved. For example, the child's solid understanding of the definition of a key word, such as "feel" or "*omou*" in interview questions should be established first. When unclear as to whom the child is referring to without pronoun usage, the interviewer/examiner should confirm with the child. Most importantly, however, the SAT assessment needs to be done based on Japanese transcripts without involving translations. This is echoed in the practice that emphatically stressed that the AAI, which requires

meticulous, painstaking linguistic analyses, should never be coded based on translated transcripts.

Six-Year-Old Reunion

Behrens, Hesse, and Main (2007) conducted the first attachment study of 6-year-olds in Japan, utilizing the Main-Cassidy 6th-year-system. Japanese 6-year-olds' reunion behaviors with their mothers after one-hour separation were observed. According to Main and Cassidy's (1988) 6th-year system, the quality of the child's attachment to the mother was estimated based on the child's behavioral responses to reunion. However, some verbal responses were also considered, thus verbatim transcription and translation of the child's speech were provided to assist behavioral assessment.

Challenge

The 6th-year system has been successfully utilized in Germany (Wartner, Grossmann, Fremmer-Bombik, & Suess, 1994) and Italy (Ammaniti, Spertanza, & Candelori, 1996), but not in Asia. Because this is a behavioral measure of attachment, diverse language differences, in theory, should not interfere with the assessment process. However, some difficulties were noted by the non-Japanese coders of the data for not being able to detect the *tone* of verbal response or comments during the reunion. In particular, determining D-controlling category, which consists of the characteristic of control-caregiving or control-punitive, could have been possibly affected by this disadvantage of not understanding the spoken words, even with translated transcripts. For example, the same words/phrase can be considered (a) control-caregiving or being polite or (b) control-punitive or being bossy teasingly, depending on the tone or *how* the child made such comments (see Behrens et al., 2007). This could partly explain the unusually high proportion of D-category in this sample.

Cultural adjustments

As with the SAT stated above, with any measures of attachment that involve a language or spoken words, even partly, it is critical that assessment should be done by a native speaker of the language in the investigation who is well-trained in both theory and measures. To establish reliability, a team of researchers, which should include an expert in the particular measure (the native or non-native of the country in the investigation), is also needed to embark on such an endeavor.

The Adult Attachment Interview (AAI)

Kazui et al. (2000) administered the first AAI to Japanese mothers in Japan. Behrens et al. (2007) administered the second AAI to Japanese mothers. Both AAI datasets were coded by native Japanese speakers who were extensively trained in the AAI and passed the reliability with Mary Main and Erik Hesse, the developers of the AAI. The AAI's were transcribed verbatim and coded according to the AAI scoring and classification manual (Main et al., 2003).

Challenge

As of 2009, 10,000 AAIs have been administered worldwide to both clinical and non-clinical samples (Bakermans-Kranenburg & van IJzendoorn, 2009). Japanese AAIs have also been administered with the translated (and back-translated) interview protocol, coded by the trained researchers and were able to establish inter-rater reliability among certified Japanese AAI coders. However, coding Japanese AAI transcripts would face a number of challenges. This is because Japanese differs from English far greater than most European languages in which the AAI has previously been administered. For example, present tense usage regarding deceased persons, which is one of the indices of *unresolved* (U) state of mind, could create challenge in scoring the "loss" section within some Japanese AAI texts. It is in fact a common, culturally expected practice in Japan to refer to deceased persons in the present tense in certain occasions. Children are socialized to talk as if a deceased person is alive (e.g., at a Buddhist altar for a deceased grandparent) as an act of respect to exercise ancestral worship.

Another challenge in coding Japanese AAIs concerns "passivity of discourse," one of the indices for passive, incoherent state of mind, but with a distinct discourse strategy. To maintain social harmony as Rothbaum et al. (2000) claimed, Japanese speakers may attempt to avoid conflicts by being inconclusive at the end of sentences. This open ended or incomplete sentence form is rather a conventional, socially desired approach to discourse among Japanese. Japanese linguists (e.g., Maynard, 1997; Yamada, 1992) specifically discuss this deliberate strategy to avoid potential disagreement and hence offence of the conversational partner.

In addition, a challenge to administering the AAI to Japanese speakers as well as coding involve a different way to claim lack of memory to block discourse. According to the AAI protocol, interviewers are generally expected to probe a few times when the interviewees claim they do not remember. However, some Japanese mothers who claimed that they could not remember would apologize with a bow, leaving the interviewer unable to probe further because such a subtle non-verbal behavior communicates the end of the particular question. Thus, a polite gesture such as an apology with a deep bow, unique to Japanese, can powerfully influence the flow of the interview process.

Cultural adjustments

Coding any AAIs is an enormous task in terms of time and commitment as described below. The Japanese AAI coder, however, needs to acquire additional skills to detect certain elements and features in Japanese discourse as the elements identified in the coding manual in English. In other words, while reading a Japanese transcript, the Japanese AAI coder must be able to instantly apply all the indices learned in English to determine the theoretical and functional equivalence of discourse strategies in such diverse language forms.

As for specific coding challenges described above, careful examinations of contexts in which present tense was used can ultimately distinguish normative and non-normative forms of present tense usage regarding the deceased. For example, Japanese people use the past tense when informing as the fact or the event regarding deceased persons to a third

party. But using the present tense in such context would likely be considered as potential unresolved indices to be marked for consideration. Similarly, the trained Japanese AAI coder should be able to distinguish normative or commonly observed open/unfinished Japanese sentence endings as exemplified above from passivity scales described in the manual, after careful examination. Likewise, although it may not be obvious, being disguised under politeness, the speaker's strategy to use an apology with a bow for not remembering can be a strong instance of insisting "I don't remember" with a rather successful attempt to block the discourse (see Behrens et al., 2007).

In sum, as for the AAI in Japan, extreme care must be taken, requiring extra steps in assessment. Japanese AAI coding can be possible only by native Japanese speakers who not only know the Japanese language but also the culture, and those who are extensively trained in the measure with excellent command of English.

Doll Play

George and Solomon's (1990) Attachment Doll Play Assessment (ADPA) was administered to 56 Japanese 6-year-olds to examine the applicability of the ADPA procedure and classification system in Japan (Yamakawa, 2006). Japanese children are shown the dollhouse and the doll characters, and are told three attachment stories: 1) hurt knees 2) monster in the bedroom, and 3) separation and reunion.

Challenge

In Yamakawa's (2006) study, the translation of *monster* was carefully debated because in Japanese language, *monster* could be translated into a number of different words with varying meanings, which can be both evil and scary or benign and friendly. Rather than *kaijuu*, which can be also translated as dragon, or *yuurei*, which can be also translated as ghost, *obake* was ultimately chosen as the closest to *monster*, as the Doll Play measure developer intended. However, clear differences in considering the way to exterminate monster, or *obake*, were observed in the Japanese sample. Unlike the U.S. sample when a secure child's parent would come in and kill the monster as a permanent and immediate solution, Japanese children did not consider physically harming *obake*. Instead, many discussed how their parents would sweep *obake* out or turn the lights on so that *obake* would leave. Some children even discussed how they would become friends with *obake* and play together or go out together. This is because Japanese children are familiar with a popular animation character, named *obake* the Q-taro. According to the Doll Play coding manual, these cases would be judged as not a secure type because the coders would view that parents have not done enough to comfort or settle the child, leading to over-coding attachment type C (insecure-ambivalent attachment).

Another caution in considering cultural differences in this measure relates to a *babysitter*, which is assumed in a story of parents' departure. Because in Japan, babysitting services are still relatively rare, and the majority of children are watched by their relatives when needed, most frequently by their grandmothers. But a grandmother can be another attachment figure, which would be unlikely to activate the child's attachment system.

Cultural adjustments

For future Doll Play study, it may be necessary to adjust the coding criteria to assess the effectiveness of parents' action regarding the extermination of *obake*, or monster, for the Japanese sample. However, because there are three stories, the final classification overall should be less affected by the response to a single story. As for a babysitter, it was emphasized that a person who watches the child during parents' absence is someone who is not related or familiar to the child.

Beyond Japan: Concluding Remarks and Future Research

During the early phase of attachment research, beyond cultural debates, temperament theorists presented a now classic challenge to attachment research, claiming that individual differences observed during the SSP simply reflect inborn temperamental differences (Kagan, 1984). However, a series of studies has shown evidence to counter the argument. For example, children with disabilities were found to be able to form secure attachment with their caregivers no differently from normative samples (e.g., Kim & Kim, 2009), despite the fact that these children would necessarily be *difficult* to care for. Twin studies reported that the non-shared environment predicted children's attachment security stronger than the genetics (Bokhorst et al., 2003; Fearon et al., 2006). Nevertheless, as the nature-nurture debate has become obsolete, the attachment-temperament debate has subsided because most attachment researchers today incorporate some temperamental or biological assessment of children, recognizing the potential biological contribution in forming relationships. Attachment as a field continues to grow and expand, integrating different disciplines such as genetics (e.g., Raby, Cicchetti, Carlson, Egeland, & Collins, 2013; Raby, Roisman, & Booth-LaForce, 2015) and neuroscience (e.g., Behrens, Gribneau Bahm, Li, & O'Boyle, 2011; Gander & Buchheim, 2015). For a measure, the AAI in particular continues to attract clinicians for its usefulness to either guide a treatment plan or to assess the effectiveness of the treatment/therapy by measuring states of mind before and after the treatment/therapy.

At the same time, cross-cultural attachment research is still premature. Despite the large number of attachment studies conducted to date, attachment studies with validated attachment measures are notably few. Cultural researchers who study close inter-personal or family relationships have argued that attachment phenomena in a particular cultural context should be studied only from within, rather than with a theory and tools *imported* from elsewhere. For example, with a provocative title for the chapter, "Is it time to detach from attachment theory?" Gottlieb (2014) argues attachment theory does not apply to children of the Beng people of the Ivory Coast because they may form attachment to multiple people, including unrelated strangers because they are socialized not to fear strangers. In this cultural context, *stranger* equals *guest* and visits from strangers are believed to "house benevolent spirits" (Gottlieb, 2014, p. 190), and thus are valued. In the majority of Western societies today, it is unfortunately true that adults are more cautious, particularly about their child approaching or talking to a stranger for a list of potential threat, thus adaptive to avoid

strangers even when most would actually pose no harm. But it is unclear what specific aspects of such culturally unique phenomenon (i.e., lack of stranger anxiety) would prevent or interfere with attachment formation as Bowlby's (1982) claim of attachment formation is linked to survival, readily acknowledged by Rothbaum and Morelli (2005). If *stranger* will not induce fear in the child, there must be something else that the Ivory Coast child fears. Indeed, the adequacy of selecting a mild stressor can be known only by collaborators from the particular culture.

Keller (2003) demonstrated culture-specific parenting strategies, comparing German and Nso of Cameroon. Keller (2003), however, did not challenge attachment theory per se in the particular report, but rather discussed the co-existence of the shared value and beliefs about good parenting and the individually performed intuitive parenting that would necessarily lead to variable developmental outcomes. Otto (2014), however, argued that attachment theoretical construct may not be compatible with some cultural context like the Nso. For example, Otto (2014) discussed how Nso mothers prefer a calm child who is basically expressionless, and thus open expression of emotions, which is expected in the normative attachment relationship, is discouraged. Also, training infants early on to avoid direct eye contact with their mothers while nursing appears to be the exact opposite from what Western mothers would do to establish close emotional bonds. In fact, gaze aversion is considered one of the indices of insecurity, specifically insecure-avoidant. Therefore, such claims contradict the concept of attachment security. Again, is it possible to form collaborations between attachment researchers and cultural psychologists or anthropologists to embark on a successful attachment study in non-Western cultures? Below, the training of attachment researchers is first discussed to propose what attachment researchers can contribute and then what attachment researchers may lack and can greatly benefit from cultural experts is discussed. The paper will conclude, urging the need for multidisciplinary collaboration.

What Attachment Researchers Can Contribute and Challenges They Face

Rigidity

Most attachment researchers are well trained in theory and measures before embarking on a study. To conduct a successful attachment study, researchers are expected to go through formal training for measurements that are validated. The primary reasons for this requirement is that attachment researchers assess *quality* of relationship, rather than *quantity*, as in, for example, a frequency or a duration of particular behaviors, which can be done much more objectively and relatively easily to achieve an inter-rater agreement. In contrast, assessing the *quality* of relationship in observation will be much more difficult to achieve an agreement between observers because of an inevitable risk of making subjective interpretations of certain expressions or behaviors, necessitating such rigorous training. The SSP and the AAI in particular are considered the gold standard measures of attachment, and both require extensive training.

The two-week SSP workshop is held annually at the Institute of Human Development at the University of Minnesota, where researchers from around the globe receive extensive

training. Attachment researchers must pass a reliability test (80% or better) based on 35 SSP cases, following the practice cases, before being allowed to code their own data while still requiring to establish inter-rater reliability with other reliable coders (to be publishable). The two-week AAI institute is also held annually at currently several locations¹ in the U.S. and Europe. After completing the AAI training and 20 plus practice cases, it takes a minimum 18 months, if successful (80% or better), to become reliable because only 10 plus reliability cases are assigned at one time every six months for three rounds of testing. Coding each AAI takes an average of several hours to complete, thus becoming a reliable AAI coder requires a solid commitment to a substantial amount of time and resources. Such uncompromised, thorough training helps produce quality work, and this is perhaps the strength of these attachment measures and attachment researchers who are trained. Like clinicians require a license to practice, attachment researchers who use the gold standard measures require a certification for assessment. Attachment researchers who have gone through such training will never seek recognitions for the efforts because such qualifications are assumed, but only those who have gone through the same training can truly appreciate the enormity of such commitment. A detailed description of the training process is not intended to imply that researchers who study families without using traditional attachment measures are less trained or their work is less rigorous. In fact, devising a new measure and new coding schemes are an endeavor in their own right.

Challenge

While it is critical to maintain the rigorousness of the SSP and AAI training, such extensive training can also discourage developmental scientists because of the often unfeasible requirements. The principle developers and trainers of these measures have been accused of being exclusive to their *own* group, unwilling to share the instruments more publically so that many more researchers can access them. However, a risk of the instruments being utilized inaccurately, without training, for such an exceptionally complex coding system was judged a much greater risk than the risk of losing or discouraging potential researchers who might be interested in these measures.

Ironically, however, training for a number of other attachment measures is not too visible. Especially training in measures of attachment for middle childhood are not easily accessible, thus able researchers who can utilize these measures remain within a limited network of attachment researchers. This is an urgent problem that needs to be addressed regardless of their particular culture or sample of investigation. Current attachment researchers need to figure out a way in which some form of systematic training for all attachment measures as well as information about the training be available and accessible to all researchers who are interested in the training for a particular measure that they hope to employ. Those attachment measures which do not provide training opportunities are no longer sustainable even if they previously yielded meaningful results.

¹ Japan is the newest location to hold the AAI Institute in summer of 2017.

Alternative methods of assessing attachment

Cross-cultural researchers who study families primarily in non-Western societies have argued that a concept of attachment – more specifically, a secure or healthy caregiver-child relationship – must be created within a particular culture of investigation (e.g., Keller & Otto, 2014; Rothbaum et al., 2007; Rothbaum et al., 2000b). For example, Keller and Otto (2014) summarize the state of attachment research in non-Western cultural contexts as, “What is needed now are systematic research programs to study intra- and intercultural variation in order to predict children’s future developmental achievements” (p. 311). This is precisely what is needed for attachment research overall and perhaps attachment research in non-Western cultures in particular.

Keller and Otto (2014) proposed to conduct a future attachment study, being truly sensitive to cultural variations in their view through three phrases. First, they proposed to reconstruct attachment theory from an indigenous perspective using data gathered through focus-group discussions and semi-structured interviews. The proposal leaves unclear who will be recruited and why these people are most qualified. As stated earlier, it took Bowlby more than 30 years to formulate attachment theory, incorporating multiple theoretical perspectives, thus collaborating with experts in various disciplines such as, for example, a well-regarded ethologist, Robert Hinde, or James Robertson, a social worker who Bowlby claimed to have played “a leading part” (1988, p. 22). Nevertheless, the theory has gone through some modifications for certain aspects of attachment theoretical constructs (e.g., recognition of multiple caregiving practices in some societies, thus an acknowledgement of multiple attachment). Chao (2001) responded to Rothbaum et al.’s (2000) similar claim, arguing,

“If psychologists develop a theory of attachment specific to each of the indefinitely numerous and diverse cultures in the world ... psychologists find one culture after another to investigate, and unmanageably numerous theories amount to no theory” (p. 823).

Rothbaum et al.’s (2000) claim that the Japanese indigenous concept of relatedness – *amae* – should better describe Japanese mother-child relationship than attachment was not supported theoretically or empirically (e.g., Behrens, 2004; Behrens, 2010; Behrens & Kondo-Ikemura, 2011). However, whether we call it attachment theory or something else, if a consensus can be achieved as to what sort of caregiver-child relationship, child behavior, and caregiver behavior are most valued in the specific culture then that indigenous concept should guide the research.

Keller and Otto’s (2014) second proposal for incorporating home observation of family interactions during the first year of the child’s life as Ainsworth et al. (1978) did is of critical importance. In fact, Ainsworth lamented in her interview with Marvin (Ainsworth & Marvin, 1995) that the important component of fieldwork in attachment research has been basically lost and stated her clear disappointment: “... so many attachment researchers have gone on to do research with the Strange Situation rather than looking at what happens in the home or in other natural settings” (p. 12). Ainsworth partly blamed this phenomenon on the “publish

or perish” sentiment of academia because repeated observational work would certainly take an enormous amount of time and would delay the fundability. Keller and Otto’s (2014) third proposal – to incorporate neurophysiological measures in addition to behavioral observation at age one – certainly concurs with the future direction of any developmental science, including attachment research, and is thus highly plausible. However, to carry out a study in the remote villages of Nso or the Ivory Coast, for example, to demonstrate different faces of attachment, as Keller and Otto (2014) attempted with collections of fascinating work in their book, this third proposal to incorporate neurophysiological measures in such areas seems challenging. How exactly such devices, for example, measuring heart rate can be attached to Nso’s 1-year-olds in what context? Assessment of cortisol may be also challenging as it requires attentive collaboration from the caregivers in order to measure it multiple times to obtain the accurate reading such as a baseline, throughout the day, and a certain period of time following the presumably stressful experience such as separation. Nevertheless, portable devices are now available or will be available soon (e.g., wireless heart rate monitors that can be placed in the pocket of a vest that the child can wear). Researchers can also be creative by bringing, for example, a portable container to temporarily store saliva assays. Cross-cultural field studies with physiological measures will be timely and extremely valuable; they will contribute greatly to the field across multiple disciplines. Keller and Otto’s reminder for the need of collaboration across disciplines is indeed critical and elaborated below as the conclusion of this review.

Collaborations Across Disciplines

For cultures such as Japan – the focus of this review – there is a limited number of well-educated, well-trained, bi-lingual, and bi-cultural researchers of attachment. Still, those researchers who are trained, and are native and live in Japan and those who are native and live in the U.S. can significantly differ in terms of the roles and functions that they can most effectively serve in successfully conducting attachment research. For example, Japanese researchers who live in Japan can help set up the laboratory facilities and also arrange recruitment, which can be extremely complex, involving political connections and networking. Japanese researchers who live in the U.S. can certainly participate in data collection, data coding, and should play a key role in the eventual dissemination of the data because of their familiarity with numerous English-language journals to select for the outlet of the work. In other words, Japanese researchers on the both sides of the Pacific Ocean can complement each other to proceed with more attachment research in the near future.

In many non-industrialized societies, understandably, the laboratory setup may not be feasible, thus the applicability of certain attachment measures such as the SSP can be questioned. However, Grossmann et al. (2005) conducted the SSP in the Trobriand Islands in Papua New Guinea, using the public meeting house in the village. Grossmann et al. (2005) made some cultural adjustments – such as play objects that were unique to the children in the region – guided by the native informant, and they were able to observe attachment behaviors in all participating children, while also identifying individual differences. Grossmann et al. (2005) were thus able to employ the standard Ainsworth

attachment classification system. Some researchers were able to take advantage of other mildly stressful situations that mother-child dyads experience, such as a standardized well-baby examination, the Weigh-In, as True, Pisani, and Oumar (2001) did in the Dogon of Mali. Observing a child's reaction to the stressful situation and how the child behaves toward the mother can be meaningful, especially compared to day-to-day interactions in non-stressful situations. What may be conceptualized as secure-base behaviors can possibly be observed in the alternate stressful situation from separations during the SSP. Such information as what will be a non-traumatizing, naturally occurring stressful situation for infants in a particular cultural context, and when it typically occurs, can be obtainable only from the *inside*, or from those who are thoroughly familiar with the culture.

Most attachment researchers and developmental psychologists are not trained to live in other cultures for long periods of time. However, cultural experts like anthropologists and cultural psychologists are likely to incorporate particular cultural contexts into their research agendas. Tremendous collaborative opportunities exist. For example, cultural experts who study families systematically can capture caregiver-child interactions with video, and such data can be shared with researchers in other disciplines. Valuable data otherwise unattainable can be analyzed from different viewpoints for subtle behaviors that, while less meaningful or interesting to anthropologists, can be quite informative to traditional attachment researchers. Providing such discovery can also add to the already rich anthropological data regarding the population of the investigation. Thus, sharing a part of the data can possibly achieve multiple research goals and benefit both psychologists and anthropologists. Such endeavors have already begun, demonstrated by Mesman's (2015) recent work analyzing part of the data provided by anthropologists who follow babies in African continents, observing caregivers' (including siblings or peer) sensitive responsiveness in infant caregiving.

Another collaborative work can be possible if attachment were to be assessed, employing traditional attachment measures *and* the indigenous measure of attachment devised from within the culture (e.g., Gottlieb, 2014; Otto, 2014; Rothbaum et al., 2000b). With collaborations – perhaps via data sharing or measures converging – attachment researchers and anthropologists or cultural psychologists could conduct culturally sensitive attachment studies, utilizing attachment researchers' training in assessment and analyses and anthropologists/cultural psychologists' expertise in culture. In other words, attachment researchers could focus on individual differences and etiology and cross-cultural psychologists could identify and cherish cultural differences. Should we not merge?

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Discussion Questions

1. Why is Japan often chosen when scholars attempt to contrast behaviors, beliefs, customs, or religions, with those in the West?
2. How can culture affect attachment behaviors?
3. What has to happen or what evidence is needed to reject the universality assumption?
4. How do different attachment behaviors of infants look compared to attachment behaviors of older children?
5. Why do different patterns/types of attachment matter?
6. How do temperamental differences possibly affect attachment behaviors?
7. If a toddler approaches a total stranger in the public place with a bright smile, leaving the mother behind, would it be a concern? Why or why not?
8. If a child was born in one culture but was adopted by parents in another culture within the first year of life, would this situation affect the child's attachment? How so?

About the Author

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