

Methodology in Conducting Bonding Studies in Child Custody Evaluations (CCE): An Integration with Neuroscience

The author recently had a chapter accepted for publication on Methodology for Conducting Bonding Studies in Child Custody Evaluations (CCE). This chapter was written in response to the requests of many psychologists over the years who wanted guidance in procedures for conducting bonding studies. Many psychologists conduct bonding studies with cursory observations of parent and child. There is no application of an objective scoring system or any methods that can be replicated by other CCE Evaluators. This is essential in science.

The proper study of Parent-Child Bonding in CCE requires a multi-factorial approach. This includes structured developmental Protocols for different age levels, bonding inventories administered to the parents, detailed data recording of verbal, non-verbal and sensory behaviors. Scoring of these behaviors needs to be conducted using developmentally anchored scoring systems. The Attachment History Inventory (AHI) can be utilized to yield a quantitative score on Secure Bond and to classify subjects into attachment categories – secure, insecure, avoidant, and disorganized. Measurement of the strength and quality of the bond is crucial in assessments of children who are the subjects of matters before Family and Dependency Courts. Early detection of bonding abnormalities is crucial as attachment disorders are precursors to personality disorders later in the lifespan.

Frequently, one sees the phenomenon of “he said – she said” in opposing parties in custody disputes or in termination of Parental Rights Proceedings. Proper assessment and evaluation of the parent-child bond is important information to be provided to the fact-finder to assist in case disposition.

An exciting and cutting edge development is the integration of bonding studies and neuroscience. The Adult Attachment Projective Picture System (AAP) picture stimuli depict attachment availability via drawing figures in dyads (dyadic pictures), individuals alone (alone pictures) and provision of characters depicting scenes from childhood to senescence (Ainsworth 1989; Bowlby, 1969/1982). AAP procedures involve eight line drawings as well as characters reflecting diverse culture, gender and age. The administrative protocol involves Projective Free Response and Semi-Structural Interview Protocols. There are neuroimaging correlates with the AAP. AAP Stimulus pictures activate attachment distress. Unresolved attachment is correlated with increased activation in the right-inferior frontal cortex and left occipital cortex, left caudate nucleus and bilateral medial temporal lobe areas. Individuals with unresolved attachment show more activation of limbic areas vs organized subjects. Measurement of neural patterns is replicated by placing subjects in a brain MRI machine, having them view AAP pictures through goggles, and enunciate responses to AAP Picture Stimulus. Their abstraction patterns (Bonding is neurobiological) are measured by neuroimaging.

A unique feature of the AAP is the development and use of Traumatic Markers. Buchhiem (2008a) demonstrated a hard pull of Selective Stimuli on the AAP e.g., anxiety evoked by pictures of individuals alone. This response was given by individuals with Borderline Personality Disorder (BPD). Patterns of Traumatic dysregulation were found in an inpatient psychiatric program. The “aliveness” in certain pictorial studies of the AAP triggers dysregulated attachment abstraction and dysregulation. This is reflective of the distress of an individual with BPD being alone. The themes of

egregious abuse, entrapment, and suicide reveal insights into better understanding of the bond between mother and child. These are captured by AAP pictorial stimuli. Current science enables neuroimaging of activation patterns in the brain.

Buchheim et al (2006) also conducted fMRI research to examine attachment-related brain abstraction patterns. Buchheim and George (2012) found that the orbitofrontal cortex is crucial for emotional regulation. Dysfunction in this area is related to impairment of planning, organizing mechanisms and impulse control.

Jemate et al (2006) found that in neurobiological research on attachment, that attachment security is related to reaction time difference between neutral and stressful conditions in a conceptual priming task. Benetts et al (2010) described Attachment style studies assessing neural patterns with real or imagined separation and loss of attachment figures. He also found a relationship between higher gray matter volume and loss-avoidance ratings to attachment figures. An interaction was found between Avoidant Attachment and less gray matter volume in the left cerebellum.

Research in neuroscience also discusses the labeling of mother's responses to their infants and maternal attachment. George and Solomon's research (2008) utilized a research paradigm in which mothers were presented with visual images (e.g., photographs, video chips) of their children in an MRI scanner. Mothering was found to be associated with specific hypothalamic – midbrain – limbic – paralimbic - cortical circuit activation patterns.

The AAI (George, Kaplan and Main, 1984, 1985, 1996) was administered during pregnancy. Subjects were classified into severe, dismissing and pre-occupied groups. Mothers judged secure showed greater activation of Brain Neural Systems (e.g., ventral striatum, oxytocin associated hypothalamus/ pituitary region). Oxytocin response level 7 months after physical contact with infants was significantly higher in secure vs insecure mothers and was positively correlated with brain stimulation patterns viewed in an MRI scanner.

Adult Attachment Studies by George and West (2012) demonstrated the correlation between neural correlates of finite emotional states, related to specific brain areas.

These studies conducted in "Real Time" in the MRI scanner point to the robust emergence of the neurobiological domain in Attachment Studies as a focus of Assessment for Psychologists. In these studies subjects are placed in scanners with goggles evaluating presentations of AAP Pictorial Studies. Brain Stimulation patterns are recorded. George and West (2012) presented research demonstrating that subjects can speak in a scanner (reverbitalize AAP Stories) and fMRI Brain Stimulation Patterns can be measured.

Bonding Studies are crucial pieces of data in Child Custody evaluations. All too often this area is inadequately assessed such as with a brief observation period of parent and child. There is no objective scoring or a structured interaction format. This is not a representative sample of Parent – Child Bonding and Interaction. This author argues for a robust, comprehensive Bonding Study in a Child Custody Evaluation. This is after all in the best interest of the child and provides significant, substantive data to assist the court in disposition.