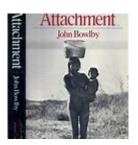
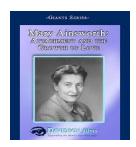
Jeffrey E. Hansen, Ph.D. Center for Connected Living, LLC



Attachment is a really big deal and has lifelong implications for all of us. Safe and secure attachment are absolutely necessary for developing healthy and secure relationships, emotional health, and the ability to regulate our emotions. Two early pioneers in this field, Dr. John Bowlby (1969) and Dr. Mary Ainsworth (1973) carved the way to our understanding of attachment and child development theory. They defined attachment as a deep and enduring emotional bond that leads to connections between us across time and space. This attachment is not always mutual and can travel in only one direction. For example, a child can attach to a parent, but the parent does not always attach to the child or vice versa (Kain & Terrell, 2018). Let me introduce these two of the pioneers in attachment theory:





By way of background on Dr. Bowlby, in an interview with Dr. Milton Stenn in 1977, Bowlby shared that his career started off in the medical direction. He noted that he was following in his surgeon father's footsteps. His father was a well-known surgeon in London and John explained that his father encouraged him to study medicine at Cambridge. He ended up following his father's suggestion but was not terribly interested in anatomy and natural sciences. However, during his time at Trinity College, he became particularly interested in developmental psychology which led him to give up medicine by his third year. When John left medicine, he accepted a teaching opportunity at a school called Priory Gates for six months where he worked with maladjusted children. John explained that one of the reasons why he went to work at Priory Gates was because of the influence of an "intelligent" staff member, John Alford. John explained that the experience at Priory Gates was very influential on him "It suited me very well because I found it interesting. And when I was there, I learned everything that I have known; it was the most valuable six months of my life, really. It was analytically oriented." He added that the experience at Priory Gates was extremely important to his career in research as he learned that the problems of today should be understood and dealt with at a developmental level (Kanter, 2007).

"The views expressed are those of the author and do not reflect the official policy of the Department of the Army, the Department of Defense, or the U.S. Government."

Bowlby was not the only act in town as he collaborated extensively with Dr. Mary Ainsworth. Mary was born in Glendale Ohio. When she was 15, she read William McDougall's book, *Character and the Conduct of Life*, which inspired her to pursue psychology. While she was teaching at John Hopkins, Mary began working on creating a means to measure attachments between mothers and their children. It was this that led her to develop her famous "Strange Situation" assessment, in which a researcher observes a child's reactions after a mother briefly leaves her child alone in an unfamiliar room. The child's reaction after the separation and upon the mother's return, revealed important information about attachment. Based on her observations and research, Mary determined that there were three main styles of attachment: secure, anxious-avoidant, and anxious-resistant. Since these initial findings, her work has spawned numerous studies into the nature of attachment and the different attachment styles that exist between children and their caregivers (VeryWellMind, 2019)

Rudolph Schaffer and Peggy Emerson (1964) analyzed the number of attachment relationships that infants form in a longitudinal study with 60 infants. In their study, infants were observed every four weeks during the first year of life, and then once again at 18 months. Schaffer and Emerson determined that four distinct phases of attachment emerged:

- 1. **"Pre-attachment stage:** From birth to three months, infants do not show any particular attachment to a specific caregiver. The infant's signals, such as crying and fussing, naturally attract the attention of the caregiver and the baby's positive responses encourage the caregiver to remain close" (Schaffer & Emerson, 1964).
- 2. **Indiscriminate attachment:** From around six weeks of age to seven months, infants begin to show preferences for primary and secondary caregivers. During this phase, infants begin to develop a feeling of trust that the caregiver will respond to their needs. While they will still accept care from other people, they become better at distinguishing between familiar and unfamiliar people as they approach seven months of age. They also respond more positively to the primary caregiver" (Schaffer & Emerson, 1964).
- 3. **Discriminate attachment:** At this point, from about seven to eleven months of age, infants show a strong attachment and preference for one specific individual. They will protest when separated from the primary attachment figure (<u>separation anxiety</u>), and begin to display anxiety around strangers (stranger anxiety)" (Schaffer & Emerson, 1964).
- 4. **Multiple attachments:** After approximately nine months of age, children begin to form strong emotional bonds with other caregivers beyond the primary attachment figure. This often includes the father, older siblings, and grandparents" (Schaffer & Emerson, 1964).

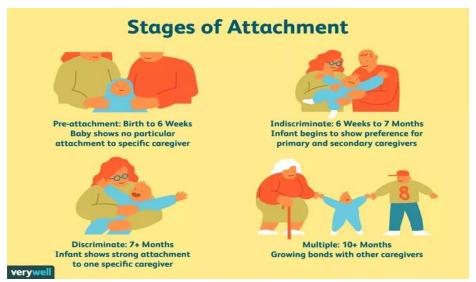


Illustration by JR Bee (VeryWellMind, 2019)

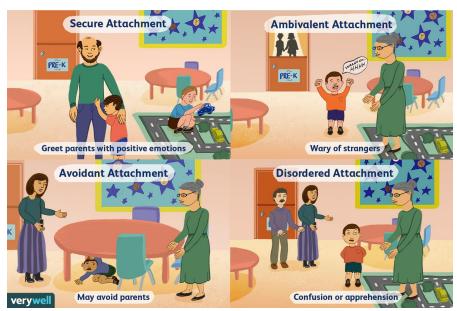
As nicely summarized by Lyons-Ruth (1996), the basic the attachment styles culminating from John Bowlby's and Mary Ainsworth's research and the fourth by Drs. Mary Main's and Judith Solomon's (Main & Solomon, 1986) work include:

Secure attachment: Secure attachment is marked by distress when separated from caregivers and joy when the caregiver returns. Remember, these children feel secure and are able to depend on their adult caregivers. When the adult leaves, the child may be upset but he or she feels assured that the parent or caregiver will return. When frightened, securely attached children will seek comfort from caregivers. These children know their parent or caregiver will provide comfort and reassurance, so they are comfortable seeking them out in times of need" (Lyons-Ruth, 1996).

Ambivalent attachment: Ambivalently attached children usually don't appear too distressed by the separation, and, upon reunion, actively avoid seeking contact with their parent, sometimes turning their attention to play objects on the laboratory floor. This attachment style is considered relatively uncommon, affecting an estimated 7 percent to 15 percent of U.S. children. Ambivalent attachment maybe a result of poor parental availability. These children cannot depend on their mother (or caregiver) to be there when the child is in need" (Lyons-Ruth, 1996).

Avoidant attachment: Children with an avoidant attachment tend to avoid parents or caregivers. When offered a choice, these children will show no preference between a caregiver and a complete stranger. Research has suggested that this attachment style might be a result of abusive or neglectful caregivers. Children who are punished for relying on a caregiver will learn to avoid seeking help in the future" (Lyons-Ruth, 1996).

Disorganized attachment: Children with a disorganized attachment often display a confusing mix of behavior and may seem disoriented, dazed, or confused. Children may both avoid or resist the parent. Some researchers believe that the lack of a clear attachment pattern is likely linked to inconsistent behavior from caregivers. In such cases, parents may serve as both a source of comfort and a source of fear, leading to disorganized behavior" (Lyons-Ruth, 1996).



VeryWellMind (2020) https://www.verywellmind.com/

Mary Ainsworth and her colleagues reported in 1978 that studies on the three initial attachment classifications revealed: 70 percent of American infants have been classified as secure, 20 percent as avoidant-insecure, and 10 percent as resistant-insecure (Ainsworth et al., 1978). Kain and Terrell (2018) warn that there are worrying declines in secure attachment and that in more recent research populations, the percentages of secure attachment have declined by 10 percent (Andreassen et al., 2007).

Studies reveal that Interactions during the first three years of life can affect cognitive development and will impact physical, emotional, and mental health of children as they age and develop (Colmer et al., 2011). Typically, a parent's emotional response will serve as a template for helping their child learn about emotion. As parents model appropriate emotion regulation through conversations or actions, children learn to control/regulate their emotions. On the other hand, insecurely attached children may learn to mask their emotional distress or exaggerate them in order to gain the parent's attention; therefore, making up for a parent who is not consistently responsive (Laible, 2010). This type of maladaptive behavior has devastating consequences resulting in poor social skills, emotional dysregulation, depression, anxiety, peer exclusion, social rejection, and/or low self-esteem (Lewis et al, 2015; Newman, 2017). So, it behooves any of us who are young parents to ensure that we are spending lots and lots of time with our infants and children in healthy, safe, and connected ways, particularly early in life to develop secure attachment so they will be able to have joy, fulfilling relationships, and emotional stability.

References

Ainsworth, M.D. S. (1973). "The Development of Infant-Mother Attachment." In *Review of Child Development Research*, edited by B. Cardwell and H. Ricciuti, 1-94. Chicago, IL: University of Chicago Press.

Ainsworth, M. D., et al. (1978). Patterns of Attachment A Psychological Study of Strange Situation. Hillsdale, NJ: Lawrence Erlbaum.

Andreassen, C., and Fletcher, P. (2007). Early Childhood Longitudinal Study, Birth Cohort (ECLS–B) Psychometric Report for the 2-Year Data Collection (NCES 2007–084). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Barta, M. (2018). *TINSA: Trauma Induced Sexual Addiction*. North Charleston, SC: CreateSpace Independent Publishing Platform.

Berman et Al., Interacting with Nature Improves Cognition and Affect for Individuals with Depression." *Journal of Affective Disorders* 140, no. 3 (Nov. 2012): 300 – 305.

Bowlby, J (1960). Attachment. Vol 1 of Attachment and Loss. New York: Basic Books.

Briere J, Rickards S. (2007). Self-awareness, affect regulation, and relatedness: differential sequels of childhood versus adult victimization experiences. *J Nerv Ment Dis.* 195(6):497–503. doi: 10.1097/NMD.0b013e31803044e2. [PubMed] [CrossRef] [Google Scholar]

Cacioppo, J. et al., "Day-to-Day Dynamics of Experience-Cortisol Associations in a Population-Based Sample," *PNAS* 103 no. 45 (October 2006): 17058-17063.

PubMed link: https://www.ncbi.nlm.nih.gov/pubmed/17075058
doi link: https://doi.org/10.1073/pnas.0605053103

Cacioppo, J. et al., (2008). *Loneliness: Human Nature and the Need for Social Connections*. New York, NY: W. W. Norton & Company.

Cacioppo, J. (2013). "The Lethality of Loneliness," Ted Talk 2013, https://www.youtube.com/watch?v=_0hxl03JoA0

Cacioppo, J. et al. (2014). "Perceived Social Isolation Makes Me Sad: 5-Year Cross-Lagged Analyses of Loneliness and Depressive Symptomatology in the Chicago Health, Aging, and Social Relations Study," *Psychology and Aging* 25, no.2, 453-463.

PubMed link: https://www.ncbi.nlm.nih.gov/pubmed/20545429

doi link: https://doi.org/10.1037/a0017216

Cacioppo, J. T., & Cacioppo, S. (2014). Social Relationships and Health: The toxic effects of perceived social isolation. *Social and Personality Psychological Compass*, 8(2), 58-72.

PubMed link: http://doi.org/10.1111/spc3.12087

Cohen S. et al., The McGill Quality of Life Questionnaire: a measure of quality of life appropriate for people with advanced disease. A preliminary study of validity and acceptability. *Palliative Medicine* 9, no. 3 (1995): 207–219.

PubMed link: https://www.ncbi.nlm.nih.gov/pubmed/7582177
doi link: https://doi.org/10.1177/026921639500900306

Dana, D. (2018). *The Polyvagal Theory in Therapy: Engaging the Rhythm of Regulation*. New York, NY: W.W. Horton & Company.

Dana, E. (2020). *Polyvagal Exercises for Safety and Connection*. New York, NY: W. W. Norton and Company.

Delahooke, M. (2019). Beyond Behaviors: Using Brain Science and Compassion to Understand and Solve Children's Behavioral Challenges. Eau Claire, SI: PESI Publishing>

Dispenza, G. & Braden, G. (2019). Brain and Heart Gratitude. https://www.youtube.com/watch?v=znOZ-peRiY0 (Accessed June 6, 2020).

Doan, A. (2012). Hooked on Games. Coralville, IA: F.E.P. International, Inc.

Dunn E., Nishimi K, Gomez S., Powers A., & Bradley B. (2018). Developmental timing of trauma exposure and emotion dysregulation in adulthood: Are there sensitive periods when trauma is most harmful? *J Affect Disord*. Feb;227:869-877. doi: 10.1016/j.jad.2017.10.045. Epub 2017 Oct 28.

Felitti, V. and Anda, R. (2009). "The Hidden Epidemic: The Impact of Early Life Trauma on Health and Disease." https://www.theannainstitute.org/LV%20FINAL%202-7-09.pdf (accessed 3 August 2019).

Felitti, V. et al., (2014) "Chadwick's Child Maltreatment: Sexual Abuse and Psychological Maltreatment," Volume 2 of 3, Fourth Edition.

Felitti, V.J., Anda, R.F., Nordenberg, D, Williamson, D.F., Spitz A.M., Edwards, V.K., Koss, M.P., and Marks, J.S., (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventative Medicine*, vol 14 (4), 245-258.

Felitti, V. "Adverse Childhood Experiences and the Risk of Depressive Disorder in Childhood," *Journal of Affective Disorders* 82 (November 2004): 217-225.

PubMed link: https://www.ncbi.nlm.nih.gov/pubmed/

doi link: http://doi.org/

Fraga, M. F., et al. (2005). Epigenetic differences arise during the lifetime of monozygotic twins. Proceedings of the National Academy of Sciences 102, 10604–10609.

Jeffrey E. Hansen, Ph.D.

GoodTherapy https://www.goodtherapy.org/blog/psychpedia/ace-questionnaire. (accessed May 5, 2020)

Hanson, R. & Richard M. (2009). *Buddha's Brain: the practical neuroscience of happiness, love & wisdom*. Oakland, CA: New Harbinger Publications.

Hari, J. (2015) "Everything You Think You Know about Addiction Is Wrong." TED Global London, 14:42. June 2015.

https://www.ted.com/talks/johann hari everything you think know about addiciton is wrong?lang uage=en

Hari, J. (2018). Lost Connections: Uncovering the Real Causes of Depression – And the Unexpected Solutions. Berryville, VA: Berryville Graphics, Inc.

Heijmans, B. T., Tobi, E. W., Putter, A., Blauw,G. J., Susser, E. S. Slagboom, P. E., Lumeye, L. J. (2008). Proc Natl Acad Sci U S A. 2008 Nov 4; 105(44): 17046–17049. Published online 2008 Oct 27. doi: 10.1073/pnas.0806560105 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2579375/

HeartMath Institute 2020 https://www.heartmath.org/about-us/ (Accessed June 6. 2020).

Jefferies, A. L. Canadian Paediatric Society, Fetus and Newborn Committee. Kangaroo care for the preterm infant and family. *Paediatrics & Child Health*, 17(3), 141-6.

PubMed link: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3287094/ (Accessed June 3, 2020).

Kain, K.L. & Terrell, S.J. *Nurturing Resilience: Helping Clients Move Forward from Developmental Trauma.* Berkeley, CA: North Atlantic Press.

Kanter, J. (2007). John Bowlby, Interview with Dr. Milton Senn. Beyond the Couch: The Online Journal of the American Association for Psychoanalysis in Clinical Social Work, Issue 2. Retrieved from: http://www.beyondthecouch.org/1207/bowlby_int.htm

Kasser, T. (2003). The High Price of Materialism. Cambridge: MIT Press.

Koenig H. et al., "Attendance at religious services, interleukin-6, and other biological parameters of immune function in older adults," *International Journal of Psychiatry Medicine*, no. 27 (1997): 233–250.

PubMed link: https://www.ncbi.nlm.nih.gov/pubmed/9656726
doi link: https://doi.org/10.2190/40NF-Q9Y2-0GG7-4WH6

Laible, D. (2011). "Does it matter if preschool children and mothers discuss positive versus negative events during reminiscing? Links with mother reported attachment, family, emotional climate, and socioemotional development." *Social development*, 20(2), 394-411.

Jeffrey E. Hansen, Ph.D.

Langevin R, Hebert M, Allard-Dansereau C, & Bernard-Bonnin AC (2016). Emotion Regulation in Sexually Abused Preschoolers: The Contribution of Parental Factors. *J Trauma Stress*. 29(2):180–184. doi: 10.1002/jts.22082. [PubMed] [CrossRef] [Google Scholar]

Laura, B. (2008) Epigenomics: The new tool in studying complex diseases. *Nature Education* 1(1):178 https://www.nature.com/scitable/topicpage/epigenomics-the-new-tool-in-studying-complex-694/ (accessed June 11, 2020).

Levine, P. (2008). *Healing Trauma*. Boulder, CO: Sounds True, Inc.

Lewis-Morrarty, E., Degnan, K.A., Chronis-Tuscano, A., Henderson, H.A., Pine, P.S., & Fox, N.A. (2015). Infant attachment security and early childhood behavioral inhibition interact to predict adolescent social anxiety symptoms. *Child development*, 86(2), 598-613.

Louv, R. (2005). Last Child in the Woods. New York: Workman Publishing.

Lyons-Ruth K. (1996). Attachment relationships among children with aggressive behavior problems: the role of disorganized early attachment patterns. *J Consult Clin Psychol*. 64(1):64-73. doi: https:10.1037/0022-006X.64.1.64

MacLean, P. (1990). The Brain in Evolution. New York, NY: Plenum Press.

Main, M., & Solomon, J. (1986). Discovery of an insecure-disorganized/disoriented attachment pattern. In T. B. Brazelton & M. W. Yogman (Eds.), *Affective development in infancy* (p. 95–124). Ablex Publishing.

Marmot et al. (2002). "When reciprocity fails: effort-reward imbalance in relation to coronary heart disease and health functioning within the Whitehall II study," *Occupational and Environmental Medicine*, 59

McLaughlin KA, Koenen KC, Hill ED, Petukhova M, Sampson NA, Zaslavsky AM, Kessler RC (2013). Trauma exposure and posttraumatic stress disorder in a national sample of adolescents. *J Am Acad Child Adolesc Psychiatry*. 2013;52(8):815–830 e814. doi: 10.1016/j.jaac.2013.05.011. [PMC free article] [PubMed] [CrossRef] [Google Scholar]

McLaughlin KA, Kubzansky LD, Dunn EC, Waldinger R, Vaillant G, Koenen KC (2010). Childhood social environment, emotional reactivity to stress, and mood and anxiety disorders across the life course. *Depression and Anxiety*. 2010;27(12):1087–1094. [PMC free article] [PubMed] [Google Scholar]

Merck Manual.

https://www.merckmanuals.com/home/brain,-spinal-cord,-and-nerve-disorders/autonomic-nervous-system-disorders/overview-of-the-autonomic-nervous-system (accessed August 20, 2019).

Monbiot, G. (2014). "The Age of Loneliness is Killing Us," *Guardian*, October 14, 2014. https://www.theguardian.com/commentisfree/2014/oct/14/age-of-loneliness-killing-us (accessed September 8, 2019).

NIH (2020). https://ghr.nlm.nih.gov/primer/howgeneswork/protein. (accessed June 10, 2020).

Jeffrey E. Hansen, Ph.D.

New York Times (2018). https://www.nytimes.com/2018/01/31/science/dutch-famine-genes.html (accessed 9 June 2020).

Newman, Ashiko E. (2017). "Poor Attachment and the Socioemotional Effects During Early Childhood." Electronic Theses, Projects, and Dissertations. 554. https://scholarworks.lib.csusb.edu/etd/554

Porges, S. W. (2017). <u>The Pocket Guide to Polyvagal Theory: The Transformative Power of Feeling Safe</u>. New York. NW: W. W. Norton & Company Ltd.

Porges, S. W., & Furman, S. A. (2011). The Early Development of the Autonomic Nervous System Provides a Neural Platform for Social Behavior: A Polyvagal Perspective. *Infant and Child Development* 20(1):106 - 118 · DOI: 10.1002/icd.688

Rothschild, B. (2017). Autonomic Nervous System: Precision Regulation Chart. (I highly recommend for purchase).

https://www.amazon.com/Autonomic-Nervous-System-Table-Laminated/dp/039371280X/ref=sr 1 15?dchild=1&keywords=deb+dana&qid=1590326813&s=books&sr =1-15

Sapolsky, R. (2002). A Primate's Memoir. London: Vintage.

Schaffer H.R, Emerson P.E. (1964). "The Development of Social Attachments in Infancy." Monogr Soc Res Child Dev. 29:1-77. doi:10.2307/1165727

Shields A, & Cicchetti D. (1997). Emotion regulation among school-age children: The development and validation of a new criterion Q-sort scale. *Developmental Psychology*. 1997;33(6):906–916. doi: 10.1037/0012-1649.33.6.906. [PubMed] [CrossRef] [Google Scholar]

Shonkoff, J.P. (2015). https://developingchild.harvard.edu/media-coverage/take-the-ace-quiz-and-learn-what-it-does-and-doesnt-mean/ (Accessed May 6, 2020).

Strawbridge, W. et al., Frequent attendance at religious services and mortality over 28 years. *American Journal of Public Health*, No. 87 (1997): 957–961.

PubMed link: https://www.ncbi.nlm.nih.gov/pubmed/9224176

Strahl, B., Allis, C. (2000). The language of covalent histone modifications. Nature 403, 41–45 (2000). https://doi.org/10.1038/47412

Suitable my Nature (2014).

https://www.nature.com/scitable/topicpage/epigenomics-the-new-tool-in-studying-complex-694/(accessed July 11, 2020).

Thompson KL, & Hannan SM, Miron LR. (2014). Fight, flight, and freeze: Threat sensitivity and emotion dysregulation in survivors of chronic childhood maltreatment. Personality and Individual Differences. 69:28–32. doi: 10.1016/j.paid.2014.05.005. [CrossRef] [Google Scholar]

University of Lancaster

Jeffrey E. Hansen, Ph.D.

https://www2.le.ac.uk/projects/vgec/highereducation/epigenetics_ethics/Introduction (Accessed June 9, 2020).

VeryWellMind (2019). https://www.verywellmind.com/what-is-attachment-theory-2795337#citation-8 (accessed May 2, 2020).

VeryWellMind (2019). https://www.verywellmind.com/mary-ainsworth-biography-2795501 (accessed May 2, 2020).

VeryWellMind (2020). https://www.verywellmind.com/ (accessed May 3, 2020).

Vettese LC, Dyer CE, Li WL, Wekerle C. (2011). Does self-compassion mitigate the association between childhood maltreatment and later emotion regulation difficulties? A preliminary investigation. *International Journal of Mental Health and Addiction*. 9(5):480–491. doi: 10.1007/s11469-011-9340-7. [CrossRef] [Google Scholar]

What is Epigenetics (2019). https://www.whatisepigenetics.com/what-is-epigenetics/ (accessed June 10, 2020).

Vincent, V. (2009). https://www.youtube.com/watch?v=KEFfThbAYnQ (accessed February 17, 2020).

Wikipedia (2020a). Epigenetics https://en.wikipedia.org/wiki/Epigenetics

Wikipedia (2020b). https://en.wikipedia.org/wiki/Emotional self-regulation. (accessed April 29, 2020).

Yehuda, R. et al. (1998). "Vulnerability to Posttraumatic Stress Disorder in Adult Offspring of Holocaust Survivors," *American Journal of Psychiatry* 155(9) (September): 1163-71. doi: 10.1176/ajp.155.9.1163.

Edited 12 August 2020