

Good-by Jim



James W. Prescott, PhD, was orphaned as a child, which marked his lifepath and passion for sensory deprivation during the most formative stages of a child's life. Jim and I met thirty years ago, in 1995, when Howard Bloom published an essay from his new book 'The Lucifer Principle,' that described Jim's fifteen years at National Institute of Child Health Human Development. A few days ago, Jim called and whispered three brief messages. "I've been in the hospital. Don't know how long I've got. Thank you, Michael, for all you have done and for our long and courageous friendship." I called back. There was no answer. A few days later Jim's daughter reached out. "Dad is peaceful at home. His end of life transitions has begun."

"If we encode the developing brain through the body, and this is how it is encoded. If we have pleasurable sensory stimuli the brain's templates will be pleasurable. If they are painful, the brain's images will be of pain. And pain evokes violent responses. But there is something else that evokes violent responses. And that is the absence of pleasure. And that is really different than the sensory experience of pain. And most people don't appreciate that distinction. And, in fact, more damage occurs with the sensory deprivation of pleasure than the actual experience of physical pain and trauma, which, in fact, can be handled quite well in individuals brought up with a great deal of affectionate bonding and pleasure, which carries with it emotional trust and security. So, we really have to look at the trauma of sensory deprivation of physical pleasure. And that translated into the separation experiences, the isolation experiences of the infant from the mother. That is the beginning. *jp*

Sensory deprivation during the earliest years of a child's development permanently alters the way that brain interacts with everything. During pregnancy, birth and beyond, if not interfered with, nature locks the mother and baby's biorhythms, heart frequencies, hormonal balances, sleep patterns and a thousand other living systems into reciprocal bonded patterns. The baby provides the precise stimulus for mother to open and develop new capacities, and mother does the same for her baby. Their language is non-verbal; sensation and feeling. Nature assumes this bond will develop and places baby close to the mother's body and breast for just this reason, and for an extended period of time. Interfering with this close, intimate, skin-to-skin contact prevents a vital exchange of sensory experiences, nutrients and information required for normal and healthy brain development.

Today the mirrored-reciprocal relationship we call bonding is threatened. Mothers are not valued, nurtured or supported by the culture. Drugs and technological birth practices routinely separate mothers and babies during the most sensitive bonding period. Single parent families, a euphemism for single moms, without the support, mentoring, and nurturing of extended families and communities, routinely place the majority of infants and young children in institutional childcare for extended periods of time, shortly after birth. Babies are put in cribs to cry themselves to sleep. Then strollers, and strapped in straight-jacket car seats. Mom is preoccupied, often speaking on her phone. Lack of initial bonding, institutional childcare, and social pressures, such as work schedules and welfare reform prevent most mothers from bonding with and breast-feeding their babies.

Maria Montessori claimed that humankind abandoned in this early formative period becomes the worst threat to its own survival. To betray this essential need for nurturing which means loving, pleasurable touch and body contact, especially in males, who are biologically most vulnerable early in life, results in

increasing numbers of juvenile and adult males who batter, abuse and rape females, the true source of the nurturing they need. And this cycle of violence spreads throughout society and the world.

My military service was between 1957-1959--the post Korean War interval--where the military wanted to know the effects of brainwashing and how soldiers could best defend themselves against physical and psychological assaults (sensory deprivation as a form of torture). This became a starting point for me examining the effect of sensory deprivation upon human development and performance.

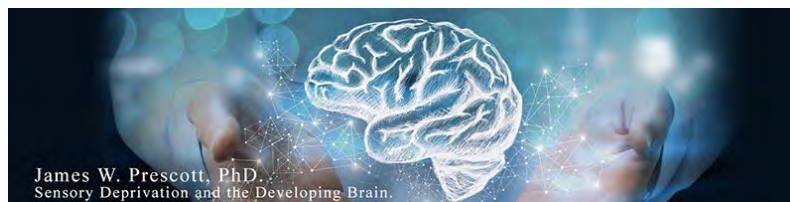
Harry Harlow (1958) presented his research on the separation studies with isolation reared monkeys, which influenced my education at McGill University on the profound effects the early environment has upon biobehavioral development. So, all this came to coalesce and focus on the early environment as being extremely important for the developing brain and behavior.

In 1962, the National Institute of Child Health Human Development (NICHD), NIH was created by Congress through the initiatives of President John F. Kennedy. NICHD was looking for a Health Scientist Administrator in the field of Physiological Psychology. I applied for that position and created the Developmental Behavioral Biology program where the Harlow studies became even more important. So, I raised the question, what are the effects upon the brain of maternal-infant social separation?

Harlow thought it would be more efficient rearing the animals in single cages by themselves. John Bowlby visited his laboratory and he said, "look, you've got a lot of abnormal monkeys." It was then that Harlow conducted a variety of behavioral studies on the consequences of maternal-infant separation. My job was to identify which sensory systems were responsible for the pathological violence and self-mutilation that manifested in all of Harlow's mother deprive monkeys. *jp*

It is difficult to summarize the influence Jim had on leading brain and behavior scientists and for decades. The best tribute I can make is to honor and share his lifelong passion to awaken a new and deep insight into the role of pleasure in the full and integrative development of the human brain. Jim, Joseph Chilton Pearce and I collaborated on a brief paper that holds this intention, which follows.

I encourage you to explore the depth and importance of Jim's rare insights.



<https://ttfuture.org/sensory-deprivation-and-the-developing-brain>

Good-By Jim. Thirty years is a long time. The true meaning of one's life is defined by the people and friendships that change us at our core. Ours was just that kind of friendship.

m

Pleasure Bonds: The "Glue" That Attaches & Bonds Human Relationships

James W. Prescott, PhD, Joseph Chilton Pearce, Michael Mendizza

For most "bonding" and "attachment" describe intimate, nurturing relationships between children and adults. Enduring human relationships, the capacity to experience empathy, to respond to the needs of others, to touch and be touched by nature in all its varied forms, originate from the pleasure first experienced between mother and infant. Pleasure and happiness, or their absence, encodes the developing heart and brain for a lifetime of similar experiences.

Research reveals that our body-brain-mind and the environment represent two sides of a vast complex reciprocal-dynamic. Our biology and our world co-create each other. Our world-experience alters our brain's structure, chemistry, and genetic expression throughout life, and in turn, our brain

reflects and determines the world we experience. The question is no longer one of nature or nurture. It is the interaction between these two that sculpts life from beginning to end.

Intelligence is the capacity to respond to the environment in ways that expand learning and promote well-being. The interaction between our body and the world shapes how this intelligence unfolds. Recent discoveries in the field of neuro-cardiology show that the electromagnetic fields generated by the heart play a surprising role in defining this interaction. Guided by the heart, human development rests squarely on the sensations represented by the ancient sensory-motor “hind brain,” our “survival system.”

Over millennium, nature evolved an even more complex brain through which we make qualitative evaluations of the sensations generated by our sensory-motor brain. This new emotional-relational brain, inherent within all mammals, draws us toward experiences that are pleasurable and impels us to avoid those that are painful. Pain warns us of danger—avoiding what is harmful. Pleasure attracts us to what is nurturing—seeking what is good. The developing brain must experience pleasure and happiness if the integration of sensations involved in learning and social adaptation is to take place. A child denied pleasure and happiness develops a brain that is neuro-dissociative, one that fragments rather than integrates experience.

This integrative nature of pleasure and the dissociative effect of pain were demonstrated years ago when newborn monkeys were separated from their mothers and raised in isolation. The pain and pleasure systems of these mother deprived monkeys were impaired causing maturing juveniles and adults to compensate for their early sensory loss with super-sensory stimulation, i.e., chronic touch, stereotypical rocking, hyperactivity, attention deficits, touch aversion (hyper-reactivity) and self-mutilation (impaired pain perception), all behaviors with strong parallels in many of today’s children and adults.

Robert G. Heath, former Chairman of the Department of Psychiatry and Neurology, Tulane University Medical School, documented brain pathologies these violent, mother deprived adult monkeys. Heath also documented that direct electrical and chemical stimulation of pleasure centers in violent adult humans arrest pathological depression, anger, and rage—where all prior psychiatric treatments had failed. Heath’s research further documented the reciprocal inhibitory relationship between pain and pleasure, where body-brain pleasure inhibits depression and violence and physical and psychological pain inhibit pleasure with its implicit neural integration

The necessity to experience and share pleasure and happiness lifelong begins with mother and her infant. The mother’s body is the “world” of the newborn and the newborn becomes the focus of the mother’s world, as emphasized by Sarah Blaffer Hrdy in *Mother Nature*. Infant and mother mirror each other’s emotional state - each eliciting from the other those responses that bring about and sustain the pleasure and joy they share. These shared sensations produce morphine-like hormones, oxytocin, prolactin, and other brain neurotransmitters, serotonin, dopamine and phenylethylamine (PEA—the “molecule of love”). Essential amino acids in mother’s breastmilk are critical in the formation of these brain neurotransmitters, which in turn facilitate the experience of pleasure. Many of these essential amino acids are deficient or completely absent in infant formula.

Nature expects the infant to be wrapped in the safe and pleasurable haven of the mother’s body. Affectional touch, movement, breastfeeding and playful communication provide a rich assortment of interweaving sensations that stimulate brain integration. Soon the interface between child’s body and its world expands to embrace larger universes: father, siblings, extended family, society, and that vast mystery we call nature. With each expansion new realms of sensation and shared meaning unfold. Each new order of relationship transcends the limitations of the former, transforming at each step what it means to be human.

Eliminate safety and touch with its pleasure and joy, and this expansive exploration is curtailed, impeded, as the infant-child-adult dissociates from their isolation and pain, retreating into self-defense. The biological imperative that this affectional bond be established at birth and nurtured throughout life is, however, largely crippled by culture.

Culture is a learned and acquired “body of survival strategies.” We are conditioned from birth to employ these strategies and must employ them if we are to survive culture itself. The cultural imperative is that this complex set of predictable-controllable behaviors must be learned by every infant-child. These are behaviors that all parents induce in their children for fear of their own cultural censure.

Pain-punishment and pleasure-reward are used to enculturate these predictable-controllable behaviors. We promise our children and young people pleasure if they behave according to our cultural imperatives, and pain if they don’t. But one inhibits the other. The fear of pain and pain itself distorts our ability to experience pleasure, even if available. All relationships, social, personal, interpersonal, and all learning, spontaneous or sought after, are adversely affected by this negative inhibition.

In violation of millions of years of bio-cultural evolution, the integrative nature of joy and pleasure (rewards) and the dissociative effect of pain (punishment) have been incorporated into belief systems that, in turn, are used to control and modify behavior. These belief systems often deny and prevent the neural integration of joy and pleasure on behalf of behavioral control through pain and fear. This betrayal of true intimacy creates sharp gender inequalities that place male and female in violent conflict further distorting the basic dynamic upon which family life depends.

Religious dogma plays a major role in the development of these belief systems where pain and suffering become virtues, physical-emotional pleasures become sins and gender inequality becomes the norm. From this brooding accusation that religion levies against us, the transcendent human spirit is diminished to the point of extinction, while the pathology of guilt, sin and “salvation” becomes the veritable foundation of our conscious mind. Even though we may reject religious beliefs, these precepts form the backbone of cultural imperatives used to control us from infancy. These precepts are ultimately and intimately woven into the very fabric of our self-image, thought and consciousness.

Affectional bonding and attachment, far from romantic sentiment, provide the foundation for all human development. Understanding the way pain fragments the brain, (often beginning with ritual circumcision, shown to alter normal pain-pleasure perceptions later in life), the integrative role of pleasure; and how these different experiences shape the developing brain and its behaviors is critical in understanding the true nature and importance of attachment and affectional bonding.

The essential role of pleasure in human development cannot be over stated. Pleasure and joy are not only moral, but are morally necessary to develop a moral person, a non-violent society, and truly intelligent culture. Belief systems that deny this biological imperative must be recognized as immoral, destructive, and obsolete, for these systems prevent the awakening and expression of our authentic human spirit which is striving continually to transcend the limitations imposed on us by culture.

References

Crenshaw, Theresa L. (1996). *The Alchemy of Love and Lust. How Our Sex Hormones Influence Our Relationships*. Pocket Books. Simon & Schuster, New York

De Wall, Frans De and Lanting, Frans (1997). *BONOBOS. The Forgotten Ape*. University of California Press. Berkeley, Los Angeles, London.

Heath, Robert G., Ed (1964). Pleasure response of human subjects to direct stimulation of the brain: Physiological and psychodynamic considerations. In, *The Role of Pleasure In Behavior*. Hoeber Medical Division. Harper & Row. New York.

Heath, Robert G. (1972). Pleasure and brain activity in man: Deep and surface electroencephalo-grams during orgasm. *J. Nerv Ment Dis* 154-3_18.

Heath, R. G. (1975): Maternal-social deprivation and abnormal brain development: Disorders of emotional and social behavior. In *Brain Function and Malnutrition: Neuropsychological Methods of Assessment* (Prescott, J.W., Read, M.S., & Coursin, D.B., Eds). John Wiley New York.
<http://www.violence.de/heath/bfm/article.html>

Heath, Robert G. (1996). *Exploring the Mind-Brain Relationship*. Moran Printing. Baton Rouge.

Heche, Anne (2001). *Call Me Crazy*. Scribner. Washington Square Press. Simon and Schuster. New York.

Hrdy, Sarah Blaffer (1999). *Mother Nature: A History of Mothers, Infants, and Natural Selection* Pantheon Books. New York. <http://www.violence.de/prescott/reviews/hrdy.html>

Mendizza, Michael and Joseph Chilton Pearce (2002). *Magical Parent—Magical Child.: The Optimal Learning Relationship*. In-Joy Press, Nevada City, CA

Pearce, Joseph Chilton (1992). *Evolution's End: Claiming the Potential of Our Intelligence*. Harper . San Francisco.

Pearce, Joseph Chilton (2002). *The Biology of Transcendence*. Harper. San Francisco ???

Prescott, James W. (1975). Prescott, J.W. (1975) Body Pleasure and the Origins of Violence. *The Futurist* April. Reprinted: *The Bulletin Of The Atomic Scientists* (1975) November. <http://www.violence.de/prescott/bulletin/article.html>

Prescott, J.W. (1996). The Origins of Human Love and Violence. *Pre- and Perinatal Psychology Journal*. 10(3):143-188. Spring. <http://www.violence.de/prescott/pppj/article.html>

Prescott, J.W. (1997). Breastfeeding: brain nutrients in brain development for human love and peace. *Touch the Future Newsletter*, Spring 1997. <http://www.violence.de/prescott/ttf/article.html>

Prescott, J.W. (2001) *America's Lost Dream —'Life, Liberty and the Pursuit of Happiness' : Current Research and Historical Background On the Origins of Love & Violence* . 10th International Congress. Association for Prenatal and Perinatal Psychology and Health.
http://www.tffuture.org/pdf/download/Prescott_ALD.PDF

Prescott, James. W. (2002). How Culture Shapes the Developing Brain & the Future of Humanity. *Touch the Future Newsletter*. Spring <http://touchthefuture.org/services/bonding/02SpringNLJWP.pdf>

Taddio, A., Katz, J., Ilersich, AL, Koren, G. (1997). Effect of neonatal circumcision on pain response during subsequent routine vaccination. *Lancet*. 349:599-603.

Taddio, A., Goldbach, M., Ipp, M., Sgevens, B ., Koren, G. (1995). Effect of neonatal circumcision on pain response during vaccination in boys. *Lancet*. 345:291-292.