The Storm

Within Us

And the Pathway to Peace

Jeffrey E. Hansen, Ph.D.

Center for Connected Living, LLC

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Endorsements

for *The Storm Within Us and the Pathway to Peace*

The Storm Within Us and the Pathway to Peace *by Clinical Psychologist, Dr. Jeffrey E. Hansen, Ph.D., is a transformative exploration into the human psyche's complexities, particularly focusing on the storm of trauma and its long-lasting impacts. Dr. Hansen's profound understanding of clinical psychology and trauma is palpable on every page, making this book not just an academic accomplishment but a lifeline for those seeking understanding and healing.*

The way Dr. Hansen intertwines cutting-edge theories like epigenetics with the foundational concepts of early attachment and polyvagal theory is nothing short of revolutionary. His chapters, such as 'This Crazy Thing Called Epigenetics' and 'The Marriage of Triune Brain Theory and Polyvagal Theory' offer deep insights into how our past and our biology are intertwined, shaping our present and future and the things we do.

Perhaps most compelling is Dr. Hansen's ability to translate these complex ideas into a 'Therapeutic Pathway to Peace,' a guide that promises not just to enlighten but to offer practical steps towards healing. Dr. Hansen masterfully integrates Polyvagal-Informed Therapy, HeartMath/Neuroradiology, and Internal Family Systems (IFS) Therapy into a brilliant and neuroscience-based treatment model - the first to be presented in the literature to my knowledge. His critique of current medication practices in 'Medication

Caution – Are We Being Misadvised and Mistreated?' challenges the status quo, urging both professionals and patients to think critically about the role of medication in therapy.

'Hari's Connected Living' and 'Trauma and Adverse Childhood Experience – The Great Destructors' are particularly poignant chapters that emphasize the necessity of understanding our deepest wounds to forge a path to true peace and connection.

This book is a must-read for anyone in the field of psychology, as well as for those personally touched by trauma. Dr. Hansen's compassionate voice and deep expertise make 'The Storm Within Us and the Pathway to Peace' a beacon of hope and a testament to the resilience of the human spirit."

Andrew P. Doan, MPH, MD, PhD
Adjunct Associate Professor of Surgery, Uniformed Services University
Ophthalmology and Aerospace Medicine

This book is lovingly dedicated to my twin brother, Gregg, who was my best friend in this world. He lived an amazing and inspirational life and celebrated the highs in my journey and held me through the lows, giving me hope and light when I could not see the way. Lending further testament to Gregg's grit and character was that he did all of this despite his episodic battles with profound depression. He fought this pain nobly and courageously until it finally overtook him. I lost a part of myself when Gregg moved on, and the empty space in my heart will forever lend witness to how profoundly he blessed me. And fear not dear brother, I will not allow your pain to be without meaning and will use your story to encourage others to seek healing for their wounds.

Gregg and Jeff doing together what we loved most.

To Leah, my soulmate -
You never faltered in your devotion to me,
always believing, always supporting,
always loving.
I am the luckiest man on earth and
my love for you endures forever.

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Introduction

There is a voice that doesn't use words. Listen.

- Rumi

Tornadoes ravage the land, hurricanes the sea – leaving paths of destruction wherever they go, but nothing compares to the tempest within, the one that tears at the soul and robs one of peace. This is a story of the pain of searing emotional dysregulation, one that does not respect age, gender, race, or station in life. It can start in infancy and if left unmanaged, has the potential to damage or even destroy your life and possibly even the lives of those around you. It almost destroyed mine, and I will risk sharing some of my story in hopes it might help you or the ones you care about and love.

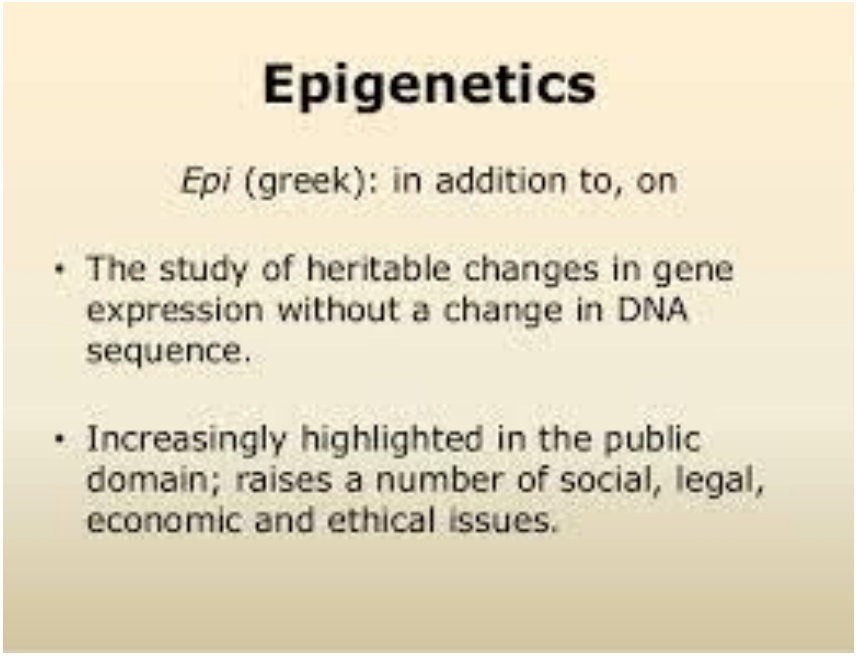
Many years ago, I went through a totally unexpected storm that clipped me on my knees. Happily, I emerged through the storm in better shape

than before, but not without much pain and suffering and a long journey of healing. After I was back in the swing of things, it became important to me to understand more fully what brought me to this breaking point in my life and what specifically I (and the many who supported me) did to navigate through it. This became a personal mission. First, because the experience was so awful, I never wanted to repeat it (I wanted to buy a psychological insurance policy), and second, I desired to help those who might possibly be facing their own similar struggles. So, let's walk this together.

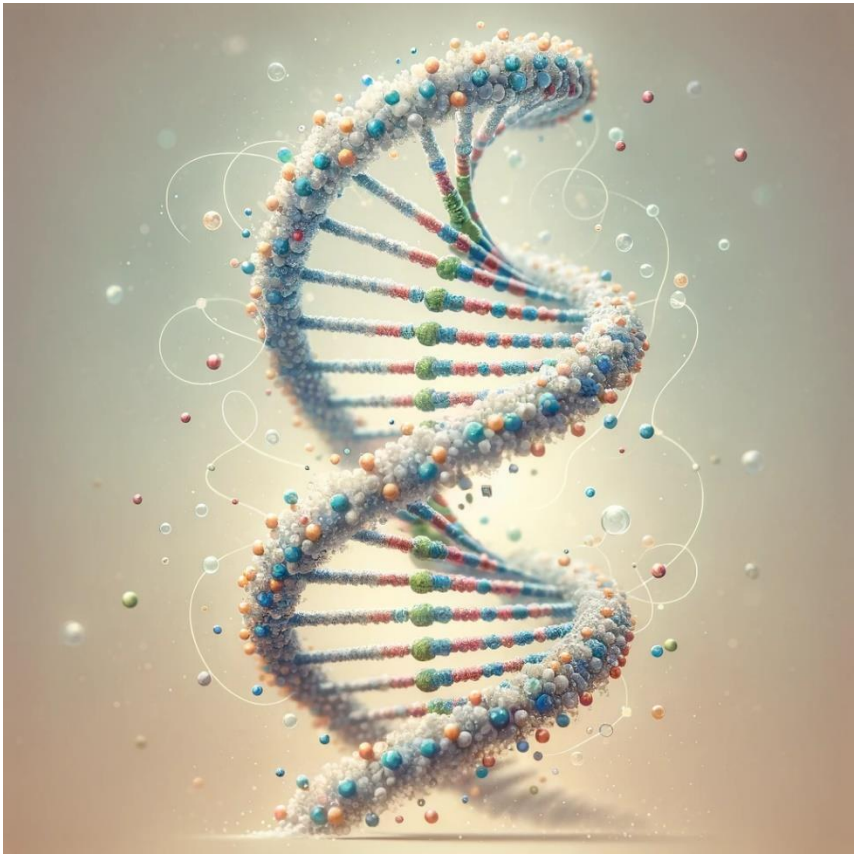
Emotional/mental health is a complex topic and can be looked at in many different ways. I believe that one of the fundamental principles of emotional well-being is a felt-sense of safety and that it is only in safety that we can thrive and be happy. When our safety is threatened, we retreat to various defense states, and if we stay in any of those states for too long, our emotional health and, eventually, our physical health become compromised. Good therapy helps recognize those unhealthy and frozen states of defense and facilitates moving us toward autonomic, psychological, and even spiritual safety. The mental health field, in my view, has relied too heavily on diagnostic labels and the disease model., When overused, such labels cause us to rely too heavily on the medical model to "treat us" with various medications and therapies that take away a sense of agency and ability to fully participate in and take responsibility for our healing. The aim of this book is to provide what happens in our bodies from a neuroscience model when we are exposed to excessive developmental trauma and/or overly stressful living situations, for, as the famous Bessel van der Kolk (2014) says, "The body keeps the score." We will then explore from a science perspective how to address the body-stored trauma from a bottom-up perspective and also the ensuing psychological defense state that attempts to help us deal with exiled emotional pain.

Our story begins in the womb, where millions of cells are replicating to make us who we are. Already, the story of our lives and who we might eventually become are in the process of being written. From early infancy, our brain is wiring in 40 thousand synaptic connections per second, and neurons in the brain will increase to eventually reach a population of 86 billion. The health of our mothers during pregnancy, the general health of both of our parents, as well as their parents, all impact the developing fetus and its biology changes epigenetically as a result. Many things go right, but unfortunately, some can also go wrong, leading us to a discussion of epigenetics.

This Crazy Thing Called Epigenetics



These are exciting times. New science enables us to better understand what external and internal factors alter us. Our physical health, our emotional well-being, and our longevity are not only impacted by the hard-wired genetic code we inherit, but our genome is also impacted by environmental influences to include the way we live.



Epigenetics literally means "above" or "on top of" genetics. It refers to external modifications to DNA that turn genes "on" or "off." These modifications do not change the DNA sequence but instead affect how cells "read" genes. A very exciting trend in epigenetic research involves investigating the process by which our genetic tendencies are altered or influenced in their expression by outside exposure or stimuli. These epigenetic changes can last through multiple cell divisions for the duration of the cell's life. However, what is particularly compelling is that these changes may persist for multiple generations within our family line (Kain & Terrell, 2018).

Early trauma, for example, is one of the factors that can cause epigenetic changes, which can be passed on to the next generation and beyond. Researchers have come to appreciate that the horrors of the **Holocaust** did not only impact those who suffered the terror of the concentration camps. As one would expect, the survivors of the Holocaust often suffered from PTSD, but this did not stop there. Their children were more likely to develop PTSD and other mood and anxiety disorders, whether or not they were exposed to traumatic events in their own lives (Yehunda et al. 1998).

Barbed Wire Clipart. The Holocaust ...clker.com. Wikipedia

Another sad example of the impact of trauma on subsequent generations is the **Dutch Famine in World War II**. In September 1944, trains in the Netherlands ground to a halt. Dutch railway workers were hoping that a strike could stop the transport of Nazi troops and help the advancing Allied forces. Sadly, the Allied campaign failed, and the Nazis punished the Netherlands by blocking food supplies, plunging much of the country into famine. By the time the Netherlands was liberated in May 1945, more than 20,000 people had died of starvation. Pregnant

women, it turns out, were uniquely vulnerable, and their children were influenced by the famine throughout their lives. When these children became adults, they ended up a few pounds heavier than average. In middle age, they had higher levels of triglycerides and LDL cholesterol, and they experienced higher rates of conditions such as obesity, diabetes, and schizophrenia. By the time they reached old age, those risks had taken an enormous toll, according to the research of L.H. Lumey, an epidemiologist at Columbia University. In 2013, he and his colleagues reviewed the death records of hundreds of thousands of Dutch people born in the mid-1940s and found that the people who had been in utero during the famine died at a higher rate by 10% at 68 years of age (New York Times, 2018).

Heijmans and his colleagues found that individuals prenatally exposed to famine during the Dutch Hunger Winter in 1944 to 1945 had, 6 decades later, less DNA methylation of the imprinted IGF2 gene than their unexposed, same-sex siblings. He wrote, “The association was specific for periconceptional exposure, reinforcing that very early mammalian development is a crucial period for establishing and maintaining epigenetic marks. These data are the first to contribute empirical support for the hypothesis that early-life environmental conditions can cause epigenetic changes in humans that persist throughout life” (Heijmans et al., 2008).

Food rations that were dropped into the Netherlands in 1945.
Credit...Dutch National Archive

For the science nerds among us: There are three primary mechanisms through which epigenetic changes in gene expression occur, which I will describe in a minute. But first, a biology refresher: DNA from humans is made up of approximately 3 billion nucleotide bases. There are four fundamental types of these bases that comprise DNA: Adenine, Cytosine, Guanine, and Thymine, commonly abbreviated to A, C, G, and T, respectively. The sequence, or the order, of the bases is what determines our life instructions. Interestingly, our DNA sequence is mostly similar to the DNA of a chimpanzee, and only a fraction of distinctively different sequences makes us human. There are about 20,000 genes in total. Genes are specific sequences of bases (parts of DNA) that provide unique and tailored instructions on how to make important proteins (What is Epigenetics, 2019). Proteins are large and very complex molecules that play many critical roles in the body and do most of the work in cells. Proteins are required for the structure,

function, and regulation of the body's tissues and organs and are made up of hundreds and thousands of smaller units called amino acids, which are attached to one another in long chains. There are 20 different types of amino acids, which combine to make various proteins. The sequence of amino acids determines each protein's unique 3-dimensional structure and specific function. Proteins can be described according to their very large range of bodily functions, including antibody, enzyme, messenger, and structural components (NIH, 2020).

With that brief biology refresher out of the way, we can explore the three most well-known and best understood of several mechanisms through which epigenetic changes in gene expression occur. As noted earlier, although a person's complement of genes—in other words, our genome—remains essentially the same from birth onward, except for the occurrence of mutations that can change the function of genes, different environmental exposures during development, diet, stress, emotional problems, etc., throughout a person's life chemically modify DNA and the proteins bound to it. In addition, an individual's histones, or the proteins around which DNA winds when it is compacted into chromosomes, carry different chemical tags, which are also influenced by environmental events. These tags are thought to alter the extent to which DNA is wrapped around the histones, thereby affecting the availability of genes for activation. (Suitable My Nature, 2014; Fraga et al., 2005).

Three basic epigenetic processes:

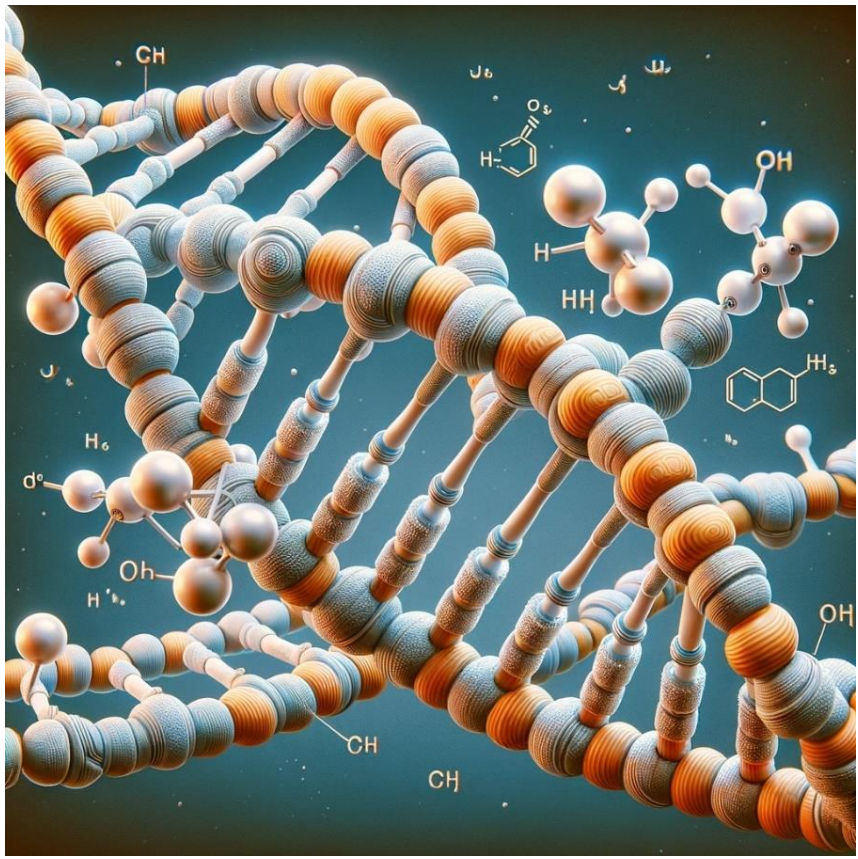
Epigenetics is like the software that tells your body's cells how to read the DNA code. It does not change the DNA itself but controls which parts of it are active or inactive or as some say, read or not read. There are three main ways this control happens:

1. **DNA Methylation**: This is like putting a block on a part of your DNA. When certain parts of the DNA get a tiny chemical tag called a methyl group, that part of the DNA is turned off. It is a bit like putting a piece of tape over a light switch so it cannot be turned on. This helps control when certain genes are used by the cell (Moore et al., 2013).

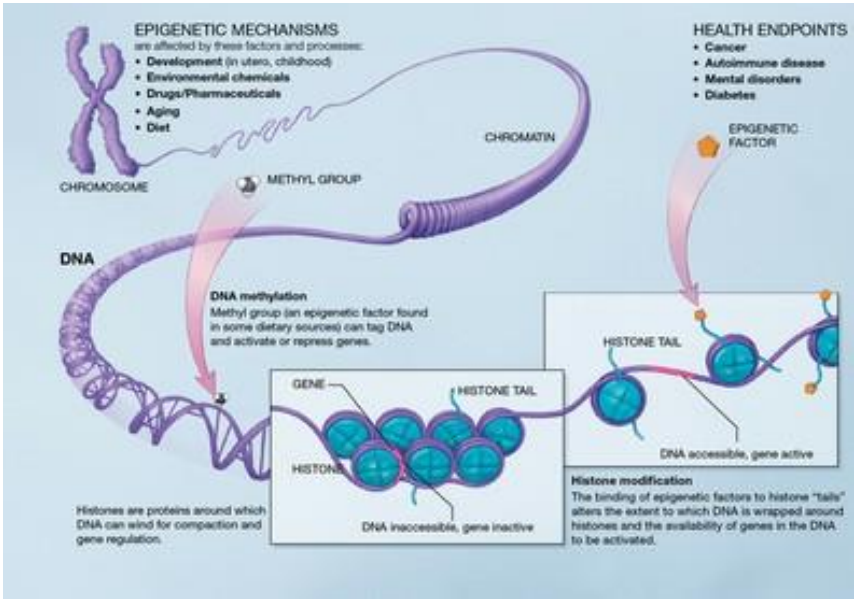
2. **Histone Modification**: Imagine your DNA is wrapped around spools called histones. By changing these spools slightly, the cell can control how tightly the DNA is wrapped. If the DNA is wrapped tightly, it cannot be used much. But if it is loose, the genes can be turned on or read more easily. Different chemical tags can be added to the histones to control this wrapping and unwrapping process (Jenuwein & Allis, 2001).

3. **RNA-associated Silencing**: This involves tiny RNA molecules that do not code for proteins but can control whether genes are turned on or off or read or not read. These RNAs can stick to the messenger RNAs (mRNAs) that carry the DNA's instructions to the rest of the cell. When they stick together, the mRNA cannot tell the cell to make a protein anymore. It is like when someone puts a note on your door with instructions, but then someone else covers it with another note saying, "Ignore this" (Filipowicz et al., 2008).

These processes are like the cell's way of reading the DNA instruction manual, deciding which instructions to follow and which to ignore, allowing it to react to what is needed at any given moment.



Representation of a DNA molecule that is methylated..



Wikipedia (2023)
https://en.wikipedia.org/wiki/Epigenetics

Takeaway: Knowing about epigenetics is both a little scary and amazing at the same time. It's terrifying in that we know that if we live poorly, paying little attention to how we live, i.e., the impact of poor diet, lack of exercise, living in stress, exposing ourselves to environmental toxins, overreliance on medications, etc., our genome will be altered, resulting in poor physical and/or emotional health, and this effect can be passed on to our progeny for generations to come. On the other hand, good choices bless us and our future generations. Bearing this in mind, we can appreciate more fully how discussions in the pages ahead about attachment, adverse childhood experiences, Polyvagal Theory, and disconnected living impact us in mind, body, soul, and genome.

Early Attachment is Where it Starts

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 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, 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 followed 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 his experience at Priory Gates had been 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).

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 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 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:

> **"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).

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).

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 (separation anxiety) and begin to display anxiety around strangers (stranger anxiety)" (Schaffer & Emerson, 1964).

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).

As nicely summarized by Lyons-Ruth (1996), the basic attachment styles culminating from John Bowlby and Mary Ainsworth's research and the fourth by Drs. Mary Main 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 do not 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 may be 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).

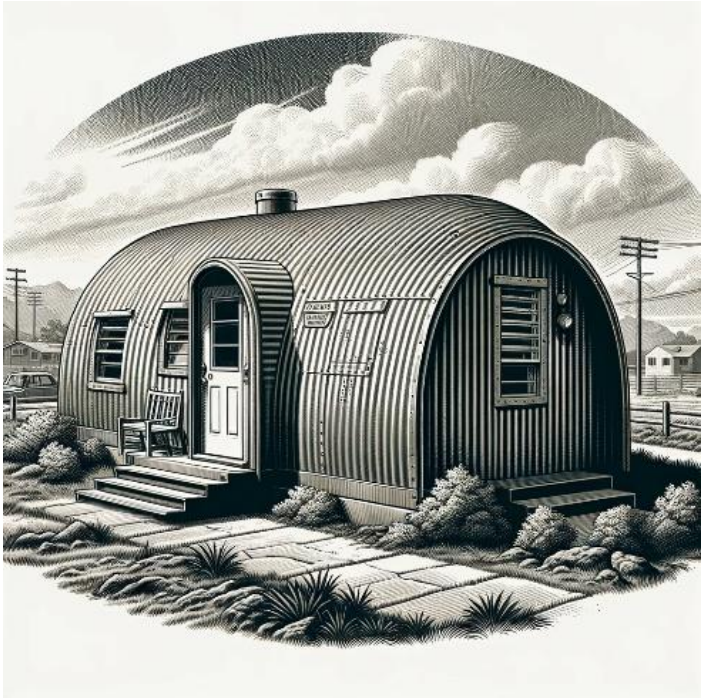
In 1978, Mary Ainsworth and her colleagues reported that studies on the three initial attachment classifications revealed: 70 percent of American infants have been classified as secure, 20 percent as avoidant-insecure, and 10 percent as resistant-insecure (Ainsworth et al., 1978). Kain and Terrell (2018) 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 the 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, those of us who are young parents should ensure that we spend 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 can have joy, fulfilling relationships, and emotional stability.

Psychiatrist and Internal Family Systems (IFS) leader Dr. Frank Anderson presents a refreshingly new view on attachment as it relates to IFS therapy, which will be explained later in this book in the *Therapeutic Pathway to Peace* chapter. Anderson (2021) notes that he does not necessarily believe in attachment styles per se, nor does he believe that they get established in the first few years of life. Rather, he posits that different parts of children attach to different parts of caregivers throughout their lives. He contends that most attachment styles, when seen through an IFS lens, are actually wounds or protective parts that develop as a result of difficult or challenging interactions. They have a tremendous influence on our lives as adults, especially when they are not adequately addressed or healed. Dr. Anderson adds that we each have different parts that relate to different parts of other people. Finally, he posits that we each have experiences with each of these "styles" or "different parts," which connect to the various parts of people with whom we are in connection (Anderson, 2021).

Personal note from Jeff: *Overall, my attachment was relatively secure, so good job, Mom. However, there were a few things worth mentioning. Up until the age of four, my father was in veterinary school at Colorado State University in Fort Collins, Colorado. My father was a very driven and competitive man, who worked harder than almost any of his peers to become the number-one-ranked graduate in his class. As such, he was often extremely stressed, at times angry, and at times dismissive of my mother. This led Mom to "go it alone" as the parent of my two-year-older brother, Ken, and my twin brother, Gregg (yes, double trouble). We were, like most graduate-level college families, dirt poor and lived in what is called a Quonset Hut, which was basically a tin can cut in half (the roofs of some of them were known to sometimes get torn off in the intense storms that Colorado offers).*



In this physical and emotional climate, my mother was, understandably, extremely stressed. Our ability to fully, securely, and individually connect and attach was appreciably challenged to no fault of my mother, as she did the very best she could. On the other hand, prior to my birth, my older brother enjoyed the first two years of his life living in the secure and safe context of grandparents and our favorite uncle, as my parents were living and working on the family ranch prior to my father's entrance into graduate school. As such, his attachment was better, which offered him some advantage that served him well when he later endured the physical and emotional abuse that followed.

Trauma and Adverse Childhood

Experience – The Great Destructors

Trauma exposure, particularly child maltreatment (e.g., neglect, emotional, physical and sexual abuse), has been established as one of the main determinants of emotional dysregulation and well-being and is also a known risk factor for psychiatric disorders, especially depression and PTSD (McLaughlin et al.,2012; McLaughlin et al., 2013). Moreover, several prior studies have shown that trauma exposure is clearly associated with profound deficits in emotional regulation across the entire lifespan, including during preschool (Langevin, Hebert, Allard-Dansereau; Bernard-Bonnin, 2016), adolescence (Shields & Cicchetti, 1997; Vettese, Dyer, Li, & Wekerle, 2011) and even adulthood (Briere & Rickards, 2007; Thompson, Hannan, & Miron, 2014; Dunn et al., 2018).

Trauma occurs when we are faced with an experience that overwhelms our ability to process incoming information, both at the time of that experience and in future situations (Barta, 2018). Dr. Michael Barta suffered from trauma himself as a child, which led him to addictions that ultimately landed him in jail and almost destroyed his life. In his book, *TINSA*, he wrote that trauma occurs when our natural defenses are

unable to keep us safe from physical, emotional, or mental threats or harm (Barta, 2018).

In the mid-1980's, Dr. Vincent Felitti noticed a puzzling and paradoxical trend in the obesity clinic he was heading. Specifically, many of his participants who had the most success in losing weight dropped out only to gain the weight back. He interviewed nearly 300 participants and discovered a surprising pattern: almost all the dropouts had suffered some form of childhood trauma (Kain & Terrell, 2018). This initial study grew into a major public health study with Dr. Felitti teaming up with Dr. Anda at the Centers for Disease Control (CDC) that continues to this day, involving more than 17,000 individuals. This research came to be known as the **Adverse Childhood Experiences (ACE)** Study (Felitti et al., 2014). In this study, people were asked about ten different types of traumatic events that happened to them when they were children, including physical and sexual abuse, family problems, and neglect.

The ten reference categories experienced during childhood or adolescence are as below, with their prevalence in parentheses (Felitti and Anda, 2009):

Abuse

- Emotional – recurrent threats, humiliation (11%)
- Physical - beating, not spanking (28%)
- Contact sexual abuse (28% women, 16% men, 22% overall)

Household dysfunction

- Mother treated violently (13%)
- Household member was alcoholic or drug user (27%)
- Household member was imprisoned (6%)
- Household member was chronically depressed, suicidal, mentally ill, or in psychiatric hospital (17%)
- Not raised by both biological parents (23%)

Neglect

- Physical (10%)
- Emotional (15%)

Somewhat surprising in the Felitti studies was that emotional abuse was more likely to cause depression than any other kind of trauma – even sexual abuse. This suggests that the kind of treatment children receive from parents is a tremendously powerful predictor of positive outcome, and when that trust is broken, devastation surely ensues.

Dr. Michael Barta (2018) defines ACEs a little differently as summarized below:

- Sexual assault or abuse
- Physical assault or abuse
- Psychological or emotional trauma
- Serious accidents, medical procedures, or illnesses
- Manmade or natural disasters
- Witnessing violence, including domestic abuse
- School violence, including bullying
- Traumatic grief or unwanted separation
- Terrorism or war
- Betrayal by others, including relational trauma

The experts in the field divide trauma into two categories:

Big T trauma: Traumas associated with horrific single events such as natural disasters, terrorism, and war.

Little t trauma: Trauma smaller in nature such as bullying, neglect, and betrayal.

Examples of small t traumas as noted by Barta (2015):

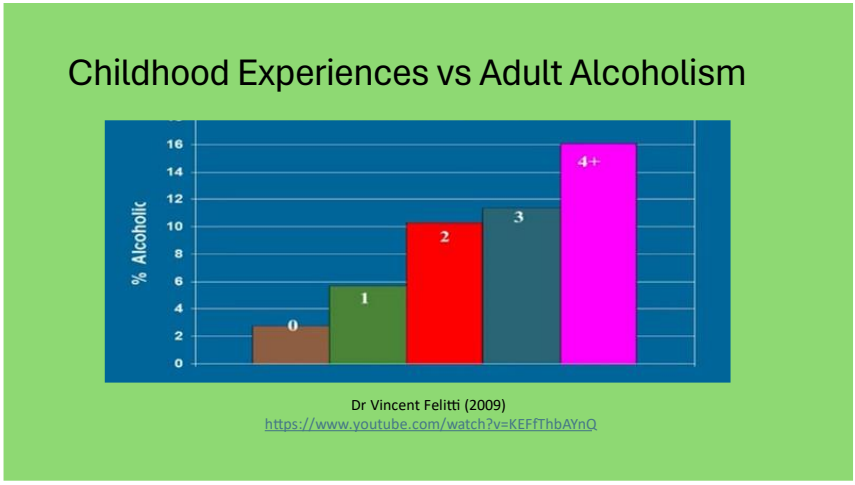
- They were not attuned to by their caregiver
- They were invalidated for the child they were
- They were not recognized emotionally
- They were rejected
- They were subjected to parental separation or divorce
- They were made to feel inadequate
- They were made to feel responsible for making the family feel good
- They were sexually abused
- They were punished for being authentic
- They were controlled by a parent's anger
- They were made to feel responsible for regulating the feelings and emotions of others
- They were not taught how to deal with their own emotions and/or were punished when trying to do so
- They were made to feel unsafe
- They were inappropriately disciplined/punished – kicked, slapped, or violently shaken
- They experienced the loss of a pet, young love, or friendship

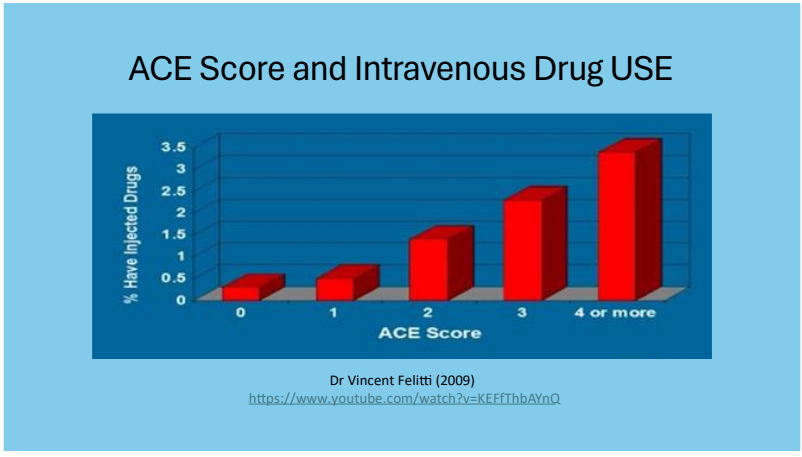
In my work as a pediatric psychologist, far more of my patients have been subjected to “little t” traumas, and I agree with Barta that these experiences have a tremendous impact on how children view themselves, their relationships, and their place in the world. Moreover, the long-term consequences of these traumas are tremendous and often lead to a total inability or impaired ability to access appropriate responses to threatening events and can lead to chronic hyperarousal, intense anxiety, panic, mood instability, poor emotional/behavioral regulation, feelings of powerlessness, helplessness, shame, and even immobility. Of all traumas, relational (or loss of connection) trauma is particularly devastating.

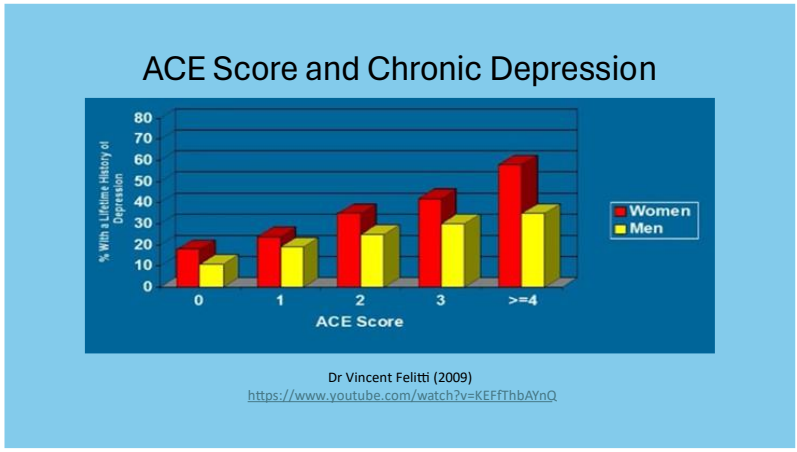
The implications here are enormous. Specifically, in order to promote safe and healthy emotional regulation, we must be able to pinpoint where in the lifespan people hurt us physically, emotionally, mentally, or spiritually, whether intentionally or accidentally. If we can resolve our developmental wounds, we can move on and experience a more fulfilling life.

As Dr. Felitti, in an outstanding 2009 lecture, points out, studies reveal many shocking long-term horrible outcomes when we are exposed to ACEs, and this rises exponentially according to how many of them we have been exposed to. The results indicate that for every category of traumatic experience we have had as a child, we are dramatically more likely to be depressed as an adult. If we have ACE scores of four or higher, we are 260% more likely to have chronic obstructive pulmonary disease than someone with a score of 0, 240% more likely to contract hepatitis, 460% more likely to experience depression, and 1,220% more likely to attempt suicide. If we have had six categories of traumatic events as a child, we are five times more likely to become depressed as an adult, and if we have had seven categories, we are a terrifying 3,100 percent more likely to attempt suicide as an adult (Felitti et al., 2014;

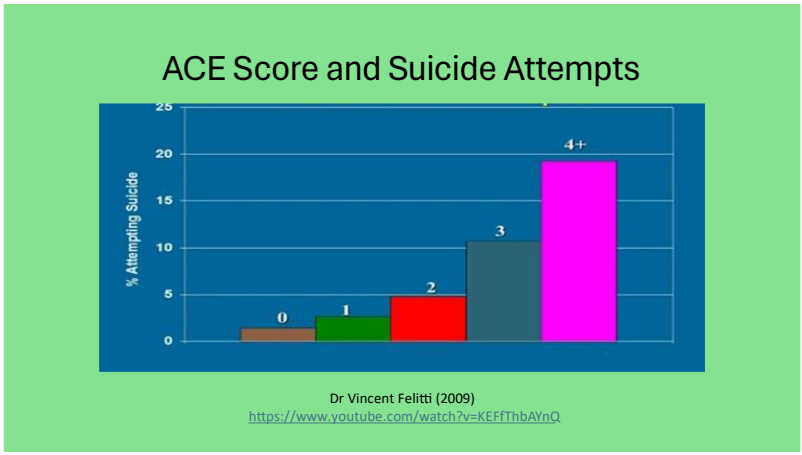
Felitti 2004; Felitti and Anda, 2009; Felitti et al., 1998). In the 2009 lecture, Dr. Felitti offered the following graphs, which nicely detail the dramatic impact that ACEs have on our society:







Dr Vincent Felitti (2009)
https://www.youtube.com/watch?v=KEFfThbAYnQ



Dr Vincent Felitti (2009)
https://www.youtube.com/watch?v=KEFfThbAYnQ

My own clinical experience suggests that the most common forms of trauma are due to a lack of attunement or connection with parental or adult figures while growing up. As Barta (2015) writes, "These deficiencies are not about bad parenting but about a parent's inability or diminished ability to respond to the child's emotional needs. Most parents are doing the best they can with the tools they have, but whether deliberately or inadvertently, the traumas of our childhood can have tremendous impact on our lives" (Barta, 2018, p. 17).

As trauma expert Dr. Peter Levine notes in his book, *Healing Trauma*, "Trauma is much about loss of connection – to ourselves, to our bodies,

to our families, to others, and to the world around us. This loss of connection is often hard to recognize because it does not happen all at once. It can happen slowly over time, and we adapt to these subtle changes sometimes without even noticing them. These are the hidden effects of trauma, the ones most of us keep to ourselves…Our choices become limited as we avoid certain feelings, people, and situations. The result of a gradual constriction of freedom is the loss of vitality and potential for the fulfilment of our dreams" (Levine, 2008, p. 9).

Most important to normal development is **"social engagement,"** which is the ability to know, understand, regulate, and express emotions in the present moment. Even though everyone is born with a social engagement system (i.e., a neurological system that promotes human connection), we know that early trauma can disrupt normal development. Anda et al. (2018) note, "Early adverse experiences may disrupt the ability to form long-term attachments in adulthood. The unsuccessful search for attachment may lead to sexual relations with multiple partners with resultant promiscuity and other issues related to sexuality." As a result of adverse developmental trauma, the ensuing loss of connection with our inner self, our bodies, others, and the world around us, we are predisposed to engage in maladaptive and/or addictive behaviors to relieve the emotional dysregulation that torments us.

You might want to take a moment and take the ACE quiz yourself to see where you fall.

The ACEs Quiz

For each "yes" answer, add 1. The total number at the end is your cumulative number of ACEs.
Before your 18th birthday:

1. Did a parent or other adult in the household often or very often… Swear at you, insult you, put you down, or humiliate you? or Act in a way that made you afraid that you might be physically hurt?

2. Did a parent or other adult in the household often or very often… Push, grab, slap, or throw something at you? or Ever hit you so hard that you had marks or were injured?
3. Did an adult or person at least 5 years older than you ever… Touch or fondle you or have you touch their body in a sexual way? or Attempt or actually have oral, anal, or vaginal intercourse with you?

4. Did you often or very often feel that … No one in your family loved you or thought you were important or special? or Your

family did not look out for each other, feel close to each other, or support each other?

5. Did you often or very often feel that … You did not have enough to eat, had to wear dirty clothes, and had no one to protect you? or Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?

6. Were your parents ever separated or divorced?

7. Was your mother or stepmother: Often or very often pushed, grabbed, slapped, or had something thrown at her? or Sometimes, often, or very often kicked, bitten, hit with a fist, or hit with something hard? or Ever repeatedly hit over at least a few minutes or threatened with a gun or knife?

8. Did you live with anyone who was a problem drinker or alcoholic, or who used street drugs?

9. Was a household member depressed or mentally ill, or did a household member attempt suicide

10. Did a household member go to prison?

Total ACE score: _____

Source: NPR, ACEsTooHigh.com. This ACEs Quiz is a variation on the questions asked in the original ACEs study conducted by CDC researchers. (cited in Shonkoff, 2015).

Personal note from Jeff: *My ACE score comes to a five, and I also dealt with developmental trauma not fully captured by the ACE quiz to include my father's repeated and failed marriages, his occasional invalidation of my feelings and emotions (sometimes punishing me for what he perceived as unnecessary sadness), his abuse against my older brother, and his intermittent expressions to others of anger and at times, rage (e.g., fist fights when in a jealous rage, threatening to kill a bouncer who threw him out of a bar when he was intoxicated, chasing a man with a hand gun of whom he felt jealous, reckless driving when intoxicated, and road rage resulting in serious car accident of another). My father was at heart a good man but, sadly, was terribly abused by his own father, who was previously even more savagely abused by his father. Although less abusive than the men before him, my father carried the generational curse. He made admirable efforts to eventually tame his internal demons and that I greatly respect, but they could not be quelled completely. He was an accomplished veterinarian and was an extraordinarily successful entrepreneur, but the magnitude of his pain tarnished his private life and*

impacted greatly on our family. Although I followed my father's wonderful example of a hard work ethic and his dedication to the service of others, the price of his instability left its mark on me. While I could quell the outward rage and abuse that plagued my father, I instead absorbed an internal terror that was problematic throughout my childhood, even though at surface level, I appeared to be highly functional and successful, earning top grades, enjoying great social relationships, and eventually earning advanced degrees. I was, nonetheless, internally very insecure, and anxious, and at times, periodically depressed in my childhood and early adult years. This came to a head when midway through life, I was hit with a series of stressors that my weakened emotional constitution could not handle due to early trauma. My wife had just recovered from cancer, my daughter was being evaluated for what was thought to be lymphoma, my Marine son was dodging IEDs in Iraq, a client of mine was making threats to destroy my career (normally, I would have shrugged this off, as my clinical performance in this case was in good standards of practice), and the financial crisis of 2008 hit. Holding considerable real estate properties, which plummeted in worth, we were brought to the brink of bankruptcy. After weeks with little to no sleep, I came to a point of complete emotional collapse with intrusive and unwanted ideation that there was no hope, no way out, and suicide became alarmingly attractive. Never one to take the "check out option," I asked my three business partners and colleagues to have me psychiatrically admitted where I stayed for

three days. This is where my journey to healing began. More on this later.

Take Away: Most of us will have a least one ACE in our developmental years, and if not extreme, this will not necessarily harm us. However, if any one ACE is extreme or if there are too many, we can be marked for problems in life. It is essential that we do not sweep our traumas under the rug but rather deal with them before they deal with us. I admit that I minimized my ACEs and naively prided myself on my ability to manage them. In hindsight, I would now have chosen to seek good therapy earlier in my life from a trauma-informed therapist. This would have improved my capacity to deal with the stressors that eventually unhinged me.

I respectfully and lovingly urge any of us raising children to be ever so mindful of the impact of excessive adversity on our children. We parents should not assume that even though our children appear to be doing well, they are necessarily internally well if they have been exposed to excessive ACEs. We do our children right by getting help to heal the dysfunction in our lives, in our marriages, and/or in our family dynamics and, in so doing, freeing our children from having to pay the price in their own lives and their progeny for possibly generations to come.

The Marriage of Triune Brain Theory And Polyvagal Theory

The greatest thing then, in all education, is to make our nervous system our ally as opposed to our enemy

- William James

In the last ten years, new and exciting neuroscience has emerged that helps us map out our physical, emotional, and cognitive responses to the world around us and provide us a way through the ensuing tempest within ourselves. Dr. Barta (2018) proposes a model that demonstrates how the brain and the nervous system work together to fuel emotional dysregulation. In his model, which he calls TINSA (Trauma Induced Sexual Addiction), he pairs some of the greatest minds in neurology and psychology, including Dr. Stephen Porges' **Polyvagal Theory** and Dr. Paul Maclean's **Triune Brain Theory**.

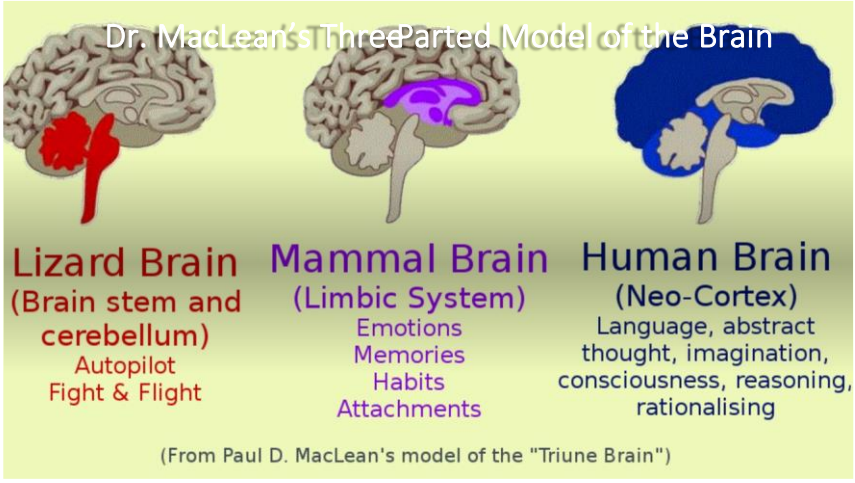
In order to understand more fully what is going on within us that begins to drive us to addiction, we must dig a little deeper and learn some neuroscience. We will again look to Barta (2018) for guidance.

We will explore this neuroscience in three parts:

Part 1: Triune Brain Theory

Part 2: Polyvagal Theory
Part 3: Merging Triune Brain Theory and Polyvagal Theory

Part 1: Triune Brain Theory



MacLean (2009) proposed three distinct formations in our brain, which are used in different situations for everyday survival purposes. These specific structures are developed sequentially on top of each other at different times during the evolution of the brain for the purpose of giving the organism the ability to survive during that period of time. Even though the brain has become more advanced and adaptive, the older, more primitive structures of the brain still play a very important role in thought, process, and behavior.

Note: For my Christian friends who might worry about this model contradicting sensitivities about creationism – not to worry. As explained by Dr. Andy Doan, M.D. Ph.D., Christian ophthalmology surgeon, aerospace medicine, and neuroscience researcher, and paraphrased by me, "God is very efficient, and He included in our more developed brain substructures that He already designed for lower life

forms/animals. No need to re-do what was already excellent and efficient".

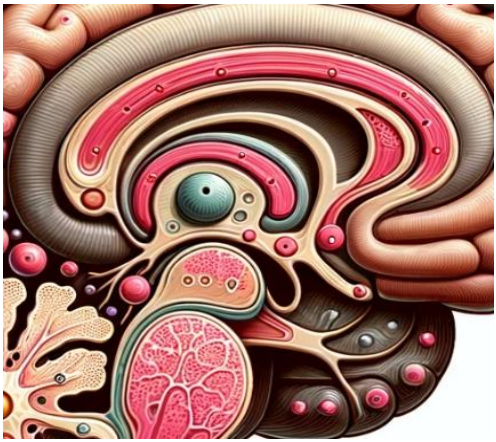
As described by Barta (2018), the three brain regions are:

The Reptilian Brain (or Reptilian Complex):

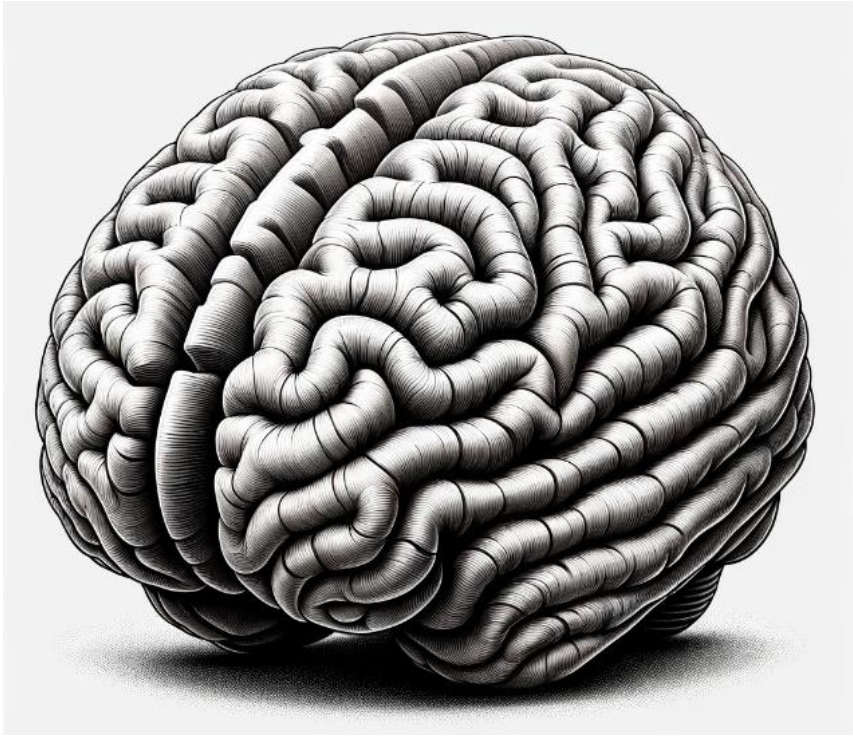
As the name suggests, this is the most primitive brain that developed about 500 million years ago in fish and, later, reptiles. Its roles include sensation, instinctual reaction, breathing and temperature regulation. TINSA hypothesizes that the reptilian complex also promotes certain survival functions, most specifically, immobilization or freeze. We often see lizards, for example, freeze in the face of danger, such as a lunch-starved predator in an instinctive reaction that can be lifesaving (sadly for the lizard, it doesn't always work, and he sometimes ends up being a snack anyway). We also see this in humans in the face of terrifying situations. Like our lizard friends, it sometimes works, and other times gets us killed.

The Mammalian Brain (or Limbic System):

Later, about 150 million years ago, the limbic system first appeared in small animals. This system developed so critters could move more freely about as they were now equipped with extremities. As such, it often became necessary to either fight off or flee from would-be predators. In addition, the capacity to have memory and emotions developed. This enabled the animal to control the body's response to danger and remember that danger, as well as the ability to be vigilant and scan the surrounding environment for potential dangers. Like critters, we often revert to this neurological system when we act instinctively.

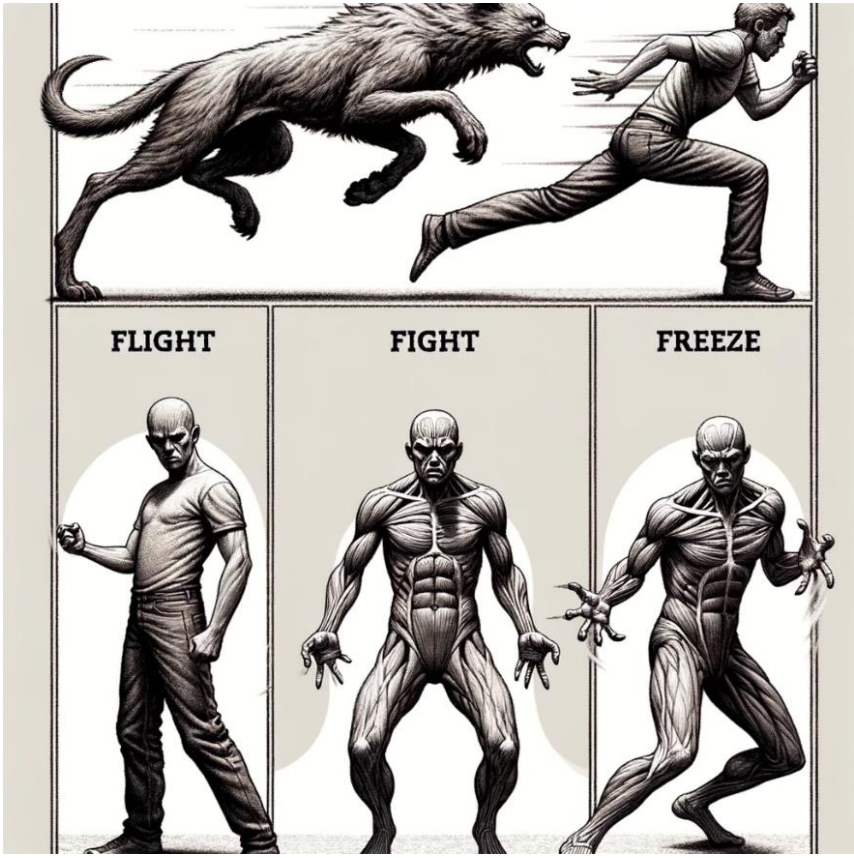


The Frontal Lobe (or Neocortex):



According to Maclean (1990), the frontal lobes came on board only about two or three million years ago. As in the reptilian brain and the limbic system, the purpose of this brain formation is to react to and protect us from danger. But unlike our more primitive neighbors, this system reacts **consciously**. Very importantly, there was a need to develop a system that made possible more "civilized" responses to threats and, at the same time, one that offered the possibility to *connect* to others for safety. Therefore, the frontal lobe allows us to access a new way of surviving based on **socialization**. This makes it possible to use analysis, logic, and decision-making, specifically separating us from other lower-ordered animals that rely on instincts alone for survival.

To bring it home, on topside, we have the cortical brain, which consists of the frontal lobe, the most recently developed portion of the brain, i.e., **the conscious, thinking brain**. At the bottom, we have our subcortical, unconscious brain, made up of the **reptilian and limbic complexes** and is largely directed by raw instinct and emotions, which often results in immediate knee-jerk reactions that happen in a split second. Barta (2018) informs us that, in the best of worlds, we try to lead with our frontal lobe and remain socially engaged if something threatening confronts us and/or stay calm to think our way out of it. But in times of intense stress or in situations that remind us of past trauma, this survival mechanism is quickly overrun by earlier, more primitive survival strategies of our mammalian/limbic brain and our reptilian brain structures. As such, when our neocortex fails us, the limbic system takes command, and we are then rapidly sent into our fight-or-flight response. If this does not work and we cannot run away or fight our way out of it, the most primitive line of defense is deployed, and we simply freeze, become immobilized, or completely collapse. This hijacking process can occur whether the threat is real or merely perceived (Barta, 2018).



According to Barta (2018), addicts, including pornography addicts, live much more in their unconscious, emotional, and instinctual brains than in their frontal lobe or social engagement system. As such, when the limbic and reptilian brain take charge, the conscious brain switches off and the higher order brain is essentially hijacked, and we end up not thinking and instead just reacting. As a result, the consequences are not weighed very heavily, if at all.

As a postscript to this discussion on Triune Brain Theory, Perry and Pollard (1997) have suggested that people who have experienced trauma, both in utero and shortly after that, develop fewer dopamine receptors early in life, which can predispose them to addiction. With a

deficit in dopamine receptors, that person is set up to search for something to make them feel good, and often, that is sexual stimuli. What better avenue is there to accomplish that than with addiction? This floods the **nucleus accumbens** with too much dopamine. Moreover, the first solution we find to this problem of lack of dopamine, Barta (2018) asserts, is usually the one that we return to time and time again. No wonder I have had kids of trauma in therapy tell me they first started addictions, such as looking at porn as young as five years of age – an age when most kids are learning their ABCs and how to read their first words.

Part 2: Polyvagal Theory

In order to move forward in our understanding of what is happening to us when we are subjected to excessive stress or trauma, we must understand Steven Porges' Polyvagal Theory and then integrate this knowledge with Triune Brain Theory. So, first, a little anatomy. The Autonomic Nervous System is a control system that acts largely unconsciously and regulates bodily functions, such as heart rate, digestion, respiratory rate, pupillary response, urination, and even sexual arousal. It has two main subdivisions: Sympathetic and Parasympathetic.

- **Sympathetic Division:** Prepares the body for stressful or emergency situations – fight or flight. Thus, the sympathetic division increases heart rate and the force of heart contractions and widens (dilates) the airways to make breathing easier. It causes the body to release stored energy. Muscular strength is increased. This division also causes palms to sweat, pupils to dilate, and hair to stand on end. It slows body processes that are less important in emergencies, such as digestion and urination (Merck Manual).

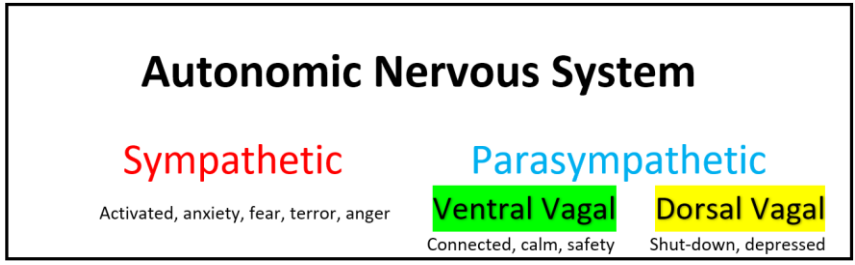
- **Parasympathetic Division:** Generally, the parasympathetic division conserves and restores calm/homeostasis. It slows the heart rate and decreases blood pressure. It stimulates the digestive tract to process food and eliminate waste. Energy from the processed food is used to restore and build tissues (Merck Manual).

Steven Porges discovered that the parasympathetic division of the Autonomic Nervous System consists of two branches that lead to two different responses. The main nerve in the parasympathetic nervous system is the 10th cranial nerve, aka the **vagus nerve,** the largest of the 12 cranial nerves and has huge implications for our well-being and health. The vagus nerve has two very distinct branches**: Dorsal vagal nerve** and the **ventral vagal nerve**.

Dorsal Vagal Nerve: Barta (2018) notes that the most primitive form of defense occurs when the dorsal vagal nerve is activated. When activated, the dorsal vagal nerve promotes shutdown, freeze, and collapse. An example of this shutdown is when a gazelle, for example, is being stalked by a lion and when trapped with no possible way to flee, drops down and appears to be deader than a doornail. This is not a conscious process but is rather a very primitive and unconscious one.

Ventral Vagal Nerve: Barta (2018) writes that the second response of our parasympathetic nervous system (the first being freeze and collapse, as noted above) is responsible for our ability to engage socially and handle social relationships. According to Barta, the social engagement system is controlled by our ventral vagus nerve, a very smart nerve with a rapid response time. As such, it allows us to "know" if we are safe enough so we can calm our defenses through a process of "neuroception," roughly translated as the brain's ability to sense safety. This serves not only bonding needs but allows us to shift out of

sympathetic arousal and move into parasympathetic calm or downshift from activation to calm.



Part 3: Merging Triune Brain Theory with Polyvagal Theory

Through the marriage of MacLean's Triune Brain Theory with Porges' Polyvagal Theory, we can explain how each part of the triune brain correlates with the three responses of the autonomic nervous system (Barta, 2018).

The key concepts of the merge of MacLean's Triune Brain Theory and Porges' Polyvagal are summarized below:

Triune Brain and Polyvagal Theories Merged

Sympathetic
Limbic System (Mammalian Brain)
Developed 500 million years ago
Fight or Flight
Unconscious
Social Engagement (Parasympathetic– Ventral Vagal)
Frontal Lobe (Neocortex)
Developed 2 to 3 million years ago
Ventral Vagal
Present/Safe/Aware
Conscious
Parasympathetic (Dorsal Vagal)
Reptilian Brain (Reptilian Complex)
Developed 150 million years ago
Freeze
Unconscious

Sympathetic
Limbic System (Mammalian Brain)
Developed 150 million years ago

Fight or Flight
Unconscious

Social Engagement
(Parasympathetic – Ventral Vagal)
Frontal Lobe (Neocortex)
Developed 2 to 3 million years ago
Ventral Vagal
Present/Safe/Aware
Conscious

Parasympathetic (Dorsal Vagal)
Reptilian Brain (Reptilian Complex)
Developed 500 million years ago
Freeze
Unconscious

As previously noted, our autonomic nervous system, serving as our **personal surveillance system,** listens far below awareness and far away from our conscious control. Neuroception, or the unconscious monitoring for safety and threat, launches a cascade of embodied events that eventually become a story. When we enter an autonomic state, the information about that state travels up the automatic pathways to the brain where a story is drafted to make sense of the embodied experience/sensations. In other words, the physiological state produced by the autonomic nervous system creates a psychological story. Dana (2020) describes this as a metaphor of a river where we can imagine the flow of experience. At the river's source is neuroception and at the river's mouth is the story. In between lie perception, autonomic state, feelings, and behavior. We are accustomed to entering the river downstream with feeling and behavior, or story. However, neuroception takes place at the furthest point

upstream. In order to understand this, we need to make our way back to the starting point, leaving behind the story, behavior, and feelings to identify the state and bring perception or awareness to neuroception (Dana, 2020). This has implications for treatment, which we will discuss "downstream" in this paper.

So, our neurosystem, left on autopilot will, when faced with stress and threat, move us to sympathetic fight or flight, which equates to (a) extreme anxiety, anger, rage, and or terror or to **(b) dorsal vagal shutdown, which leads to slowing down, withdrawal, and possibly even depression.** If these modes of coping become excessive, we are at risk of potentially using maladaptive strategies such as addictions to quell the pain of negative physical symptoms, associated negative emotions, and/or complete withdrawal and possibly self-destructive behavior.

The best response is to activate our **social engagement system of the ventral vagal pathway** of the parasympathetic branch. In this state, our heart rate is regulated, our breath is full, we take in the faces of friends, and we can tune in to conversations and tune out distracting noises.

Personal note from Jeff: *Looking back at the events described earlier, which landed me in the St Peter emergency room on that cold and snowy winter day, I came to see how Polyvagal Theory so accurately mapped out what my body was doing. Sadly, at that time, few professionals, including myself, knew much of anything about this groundbreaking research. Had I known, I believe that I would have greatly mitigated my suffering and would have acted much earlier to heed the warning my body was trying to give me. Neruorceptively, my life situation was not safe, and my body knew it, but my mind was too busy and cluttered to hear. I had been autonomically overactivated into the orange range and eventually the red zone. My sympathetic adrenal medullary (SAM) and hypothalamic pituitary adrenal axis (HPA) were activated, which initially kicked out adrenaline and eventually cortisol in an effort to keep me vigilant and alert to fend off the previously noted threats of my wife's cancer, my daughter's suspected cancer diagnosis, my son's deployment to Fallujah, Iraq, and the impact of the 2008 financial calamity that were weighing on me. In that state, sleep eluded me, and it felt as though I was literally crawling out of my skin. My feet burned, I was often tachycardic (heart beating like a hummingbird), and my cognitive processing diminished (there were days where I felt dumber than a rock). Then, after literally weeks of being tortured in a sympathetically activated state, my dorsal vagal nerve took over, and I literally hit the floor as my autonomic nervous system protectively shut me down due to the enervation of the dorsal vagal nerve. That, along*

with the accompanying false and self-destructive negative narrative my mind had created to give meaning to the events (minds often get it wrong and mine certainly did), paved the way for crushing depression.

The Therapeutic Pathway to Peace

Now that we have a new understanding of how our autonomic nervous system works with a background in Triune Brain Theory and Polyvagl Theory, we can use this knowledge to restore to emotional, psychological, and physical health. Never before has a breakthrough in neuroscience offered such a paradigmatic shift of hope.

In this chapter, we will explore three therapies I feel are particularly effective in promoting emotional healing. When integrated well, the results can be life-changing and even life-saving - they were for me.

1. Polyvagal-Informed Therapy
2. HeartMath
3. Internal Family Systems (IFS)

Part 1: Polyvagal-Informed Therapy

Building on what we have previously discussed about the body, specifically the autonomic nervous system, Polyvagal-informed therapy focuses on our body's nervous system and how it responds to stress and safety. It uses the idea that our sense of well-being is closely tied to how our body feels safe, connected, and calm. By understanding and influencing our nervous system's responses, we can much more

effectively manage our emotions, feel more connected in relationships, and recover from stress and trauma. In essence, we tune into our body's safety signals to improve our emotional health and resilience.

Dr. Steven Porges and his son, Seth Porges, just published a marvelous book, *Our Polyvagal World: How Safety and Trauma Change Us*. Unlike Dr. Porges' earlier works, this book is free of scientific jargon and is incredibly readable and useful. Bravo Steven and Seth! They start the book by summarizing Polyvagal Theory in one sentence: **"How safe we feel is crucial to our physical and mental health and happiness"** (Porges & Porges, 2023, p. XIII).

They later add, "When we feel safe, our nervous systems and entire bodies undergo a massive physiological shift that primes us to be healthier, happier, and smarter; to be better learners and problem-solvers; to have more fun; to heal faster; and generally, to feel more alive (Porges & Porges, 2023, p. XIII). Now, how cool is it that - Polyvagal-Informed Therapy can do all of that by helping us achieve regulation through safety! For trauma, they note, impacts not just our brains but stretches though our entire nervous system to every part of our body, which changes how our senses sense, how our organs operate, and just about every single aspect of our mental and physical health. As such, trauma changes our bodies in addition to our brains, and Polyvagal Theory gives us an explanation for how specifically these changes occur and, more importantly, how we can deal with them and heal.

Steven and Seth assert that Polyvagal Theory shifts our discussion away from the actual event, and toward the way it transforms and becomes embedded in our bodies, and it is through the vagus nerve that these changes occur. Therefore, it is through the vagus nerve that we find a way out of neurological disorder and disruption to a pathway to peace and healing. To quote, "A light at the end of trauma's tunnel, and a pathway toward healing and happiness in a world that seems designed

to threaten and traumatize us at every turn (Porges & Porges, 2023, p. XIII).” This is neuroscience poetry to me, and my desire for you is that it equally inspires you to feel hope and pursue your own healing.

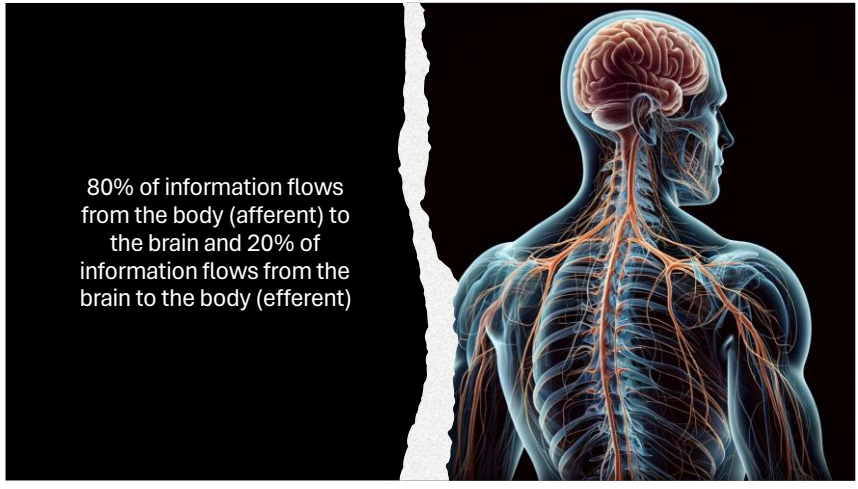
Neuroception Perception State Feelings Behavior Story

Borrowing from a metaphor of flowing down a stream, the first step in healing is to move our neuroception - what our autonomic nervous system is automatically sensing regarding safety and danger without our awareness to perception to awareness or perception. Flowing downstream, we can then appreciate what our physiological state is causing us to feel emotionally and subsequently change the behaviors that we engage in. The ensuing story or narrative we give to this process in an effort to make sense of what we are sensing and feeling, if positive and healthy, helps us correct our autonomic state. On the other hand, if our narrative is false, as it often is (e.g., we often shame and blame ourselves or we catastrophize the situation), then our

autonomic state becomes even more activated or shut down, and our subsequent emotions become more anxious or depressed, respectively, and we enter into a negative feedback loop, a process that leads to emotional problems/illness and/or physical problems.

There are two basic approaches to healing: Bottom-up and Top-Down.

Bottom-up entails working with the body more directly. It is important to appreciate that, as previously noted, 80 percent of the fibers in the vagus nerve are sensory in that they go from the organs to the brain, and 20 percent are motor in that they travel from the brain to various body organs. (Porges, 2017). This suggests that what our bodies tell us is indeed very important, and we must make every effort to listen and heal on that level. Top-down strategies, which involve our thinking and hopefully more rational brain, require a certain level of cognitive development and maturity so, very young children will not be able to benefit from this approach (e.g., Cognitive Behavioral Therapy aka CBT).



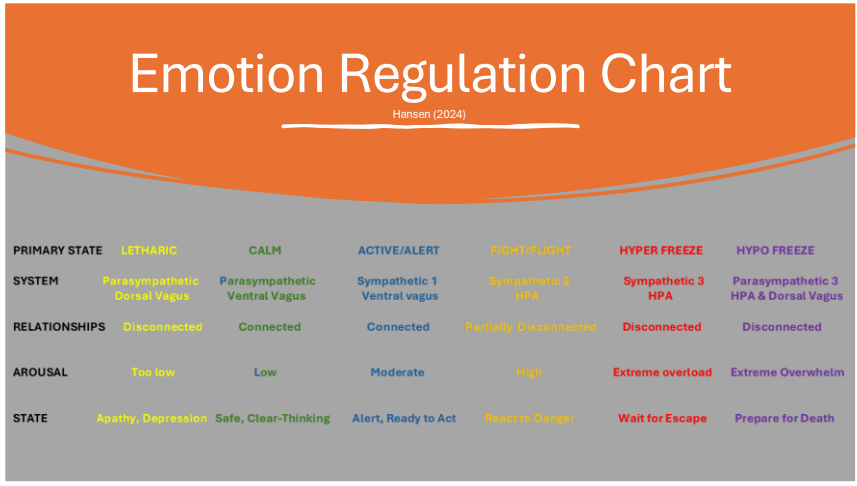
As previously noted by Deb Dana, it is in a ventral vagal state and a neuroception of safety that brings the possibility for connection, curiosity, and change. She nicely presents a polyvagal approach, which she calls the four R's (the first three and bottom-up and the last is bottom down (Dana, 2018):

The Four R's

- Recognize the autonomic state
- Respect the adaptive survival response
- Regulate or co-regulate in a ventral vagal state
- Re-story

Recognize the autonomic state

I recommend making the Emotion Regulation Chart I developed below as our companion to help us recognize where we are on that continuum of regulation. In doing so, we can make what is implicit (under the table and outside of our awareness) explicit (on the table and in our awareness). We can use the color codes to describe for ourselves and others where we and others are with just one neutral and non-judgmental word. This is also particularly helpful for children as it helps give them a physical and emotional language that connects the mind with the body.



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If we find ourselves in the **Orange Zone** (note: in the graphic, it is actually red to the **Red Zone,** we are overly activated and prone to experience:

- Rapid heartrate
- Hyperventilation
- Panic attacks
- Inability to focus or follow through
- Distress in relationships
- Emotions of fear, terror, rage, anger
- Possible health consequences, including heart disease, high cholesterol, high blood pressure, weight gain, memory impairment, headaches, chronic neck shoulder and back tension, stomach problems, and increased vulnerability to illness (lower immune response) (Dana, 2018).

If we find ourselves in the Yellow Zone, we are under activated or shutdown and prone to experience:

- Slow heartrate
- Shallow breathing
- Withdrawal from others
- Emotions of sadness, depression, shame, disgust
- Possible health consequences, including chronic fatigue, fibromyalgia, stomach problems, low blood pressure, type 2 diabetes, and weight gain (Dana, 2018)

If we find ourselves in the **Green Zone,** we experience safety and connection and prone to experience:

- Regulated heart rate (vagal brake lowers heartrate by 20 beats per minute)
- Breath is full
- Feeling regulated
- We take in the faces of others
- We can "tune in" to conversations and "tune out" distractions
- We can see the "big picture"
- We can connect with the world and the people in it
- Able to reach out to others
- Able to play and take time to enjoy life and others
- Able to be productive in work
- Able to organize and follow-through
- Able to heal emotionally and physically
- Emotions of happiness, joy, love, peace, calm
- Possible health consequences include a healthy heart, regulated blood pressure, a healthy immune system, decreased vulnerability to illness, good digestion, quality sleep, and an overall sense of well-being (Dana, 2018)

Respect the adaptive survival response

One of the beautiful aspects of Polyvagal Theory is that it removes shame from the equation. Dr. Porges kindly states in reference to

clients, *"I was going to say that depending on the age of my client, but actually, regardless of age, the first thing to convey to the client that they did not do anything wrong… If we want individuals to feel safe, we do not accuse them of doing something wrong or bad. We explain to them how their body responded, how their responses are adaptive, how we need to appreciate this adaptive feature and how the client needs to understand that this adaptive feature is flexible and can change in different contexts."*(Porges, 2017, p. 121 - 122). So, rather than shaming a woman for shutting down in dorsal vagal freeze when being molested or raped, which will only fuel her shame, guilt, and emotional pain, we must compassionately inform her that her autonomic nervous system was brilliant and that, in reading the cues, immobilized her in a situation where fighting or fleeing could have possibly cost her life. Many a court judge have literally ruined survivors of abuse by blaming them for not running or fighting and invalidated their trauma.

- Regulate or co-regulate in a ventral vagal state

Once we recognize that we are dysregulated and have pinpointed which defensive physiological state we are in and where we are on the emotional regulation continuum (see emotional regulation chart above) i.e., activation or slowing/shutting down, we can take action by using bottom-up self-regulation strategies and co-regulation strategies.

As Herman Melville once wrote, "*We cannot live for ourselves, a thousand fibers connect us.*" Connection is a biological imperative, according to Porges (2015). Our autonomic nervous system longs for connection and it is as through our biology that we are wired to connect. It is by means of co-regulation Dr Porges' co-regulation is the mutual

regulation of physiological states between individuals. In life, it occurs first between mother and infant but later extends to friends, partners, co-workers, and groups such as families, to name a few (Porges, 2017).

We humans are social creatures, and "our nature is to recognize, interact, and form relationships" with others (Cacioppo & Cacioppo, 2014, p. 1). As we know, low birthweight babies need to connect for survival and positive co-regulation and connection and when connected, these babies experience improved heart rate and temperature, breathing stabilization, more organized sleep, rapid improvement in state regulation, and reduced mortality, severe illness, and infection (Jefferies, 2012).

Connection is a wired-in biological necessity, and isolation or even the perception of social isolation can lead to a compromised ability to regulate our autonomic state, which diminishes our physical and emotional well-being (Porges & Furman, 2011). We can all appreciate that when we feel alone, we suffer. In a Ted Talk presentation, Cacioppo (2013) reported a rather shocking meta-analysis study of over 100,000 participants, which found increased risks of dying early due to the following:

- Air pollution: 5% increased risk of dying early
- Obesity: 20% risk of dying early
- Alcoholism: 30% risk of dying early
- Loneliness: 45% risk of dying early

Deb Dana notes that when there is ongoing misattunement, when ruptures are not recognized and repaired, the autonomic experience of persistent danger ends up moving the system away from connection into patterns of protection, and loneliness is the subjective experience (Dana, 2018).

So, when we recognize that we are suffering and dysregulated, it is very helpful and sometimes lifesaving to seek safe others. Conversely, when we are emotionally regulated ourselves, we can offer our safe regulation to others, be they adults or children. This is a particularly important and essential component of good parenting. We can gift our safe regulation to ourselves and others by choosing the following strategies below. Remember, through the process of neuroception, others read our cues of safety just as we read theirs. Quid pro quo, we receive back what we give and vice versa. We would do well to practice these strategies, so they become automatic whenever we move out of the **green zone** and want to return.

Below are interpersonal behavioral cues you may wish to be more mindful of as these cues affect how others co-regulate to you. While

they may come naturally to some, for others, they must be learned. When done properly and become a natural flow of your interpersonal style, you will be amazed at how others respond to you. Please do not underestimate the blessings they can bring to your life and the lives of people you care about and/or love.

Kind eyes: As they say, the eyes are the window to the soul.

Melodious voice: Speak with a more melodious voice, full of prosody and life.

Smiling mouth and eyes: Smile not only with your mouth but with your eyes. Whether or not we are aware, our neuroception scans for congruence between the smiling mouth and smiling eyes. Crow's feet wrinkles are testament to someone who lives a more joyful life. So maybe reconsider that Botox.

Avoid leaning in: Leaning in can be perceived as very threatening. Most of us don't like it when others enter our personal space, particularly in western cultures, and the end result is typically defensive activation moving us toward fight or flight or less typically, occasional freeze responses.

Slow and low Breathing: Our lungs are the only internal body organ we can directly control, and proper breathing has a huge impact on our health. Breathe slowly with exhalations longer than inhalations – breathing out slowly accentuates relaxation and actually can slow our heart rate by 20 beats per minute (vagal brake).

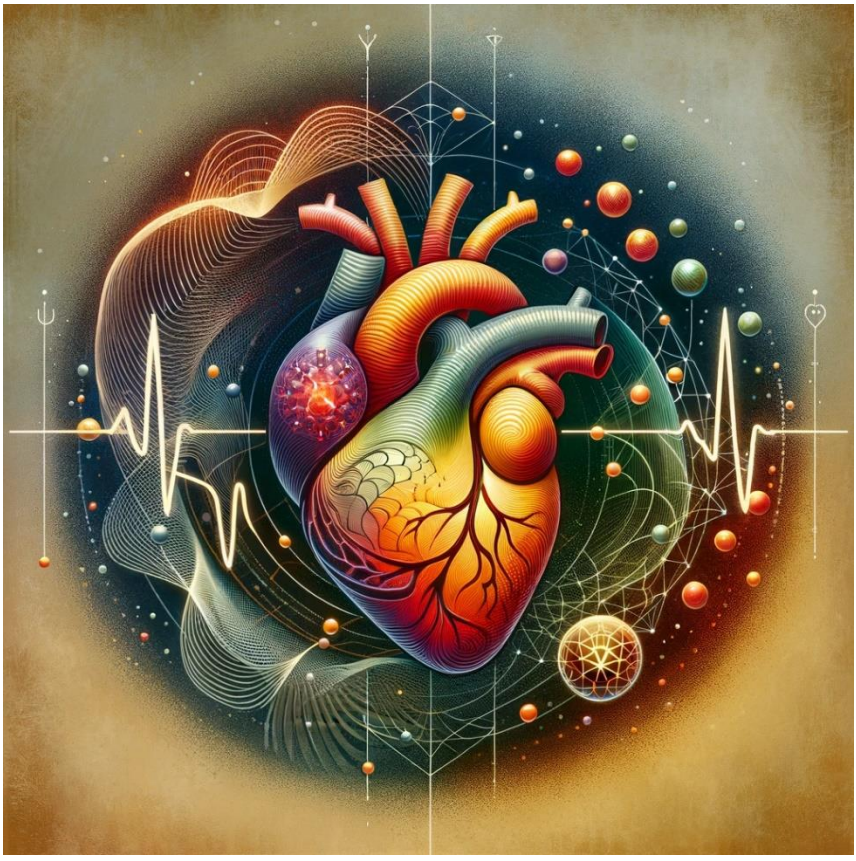
- Re-story

Now that we or ourselves and our loved ones are in a more regulated state by using the bottom-up strategies discussed above, we should be more settled and thus, more able to use top-down strategies and correct the narrative or re-story the situation, be it a current event or something in our distant past (Dana, 2018, 2020; Kain, 2018). Humans by nature are meaning-making machines, autonomically pulled to the story (Dana, 2020). Sadly, our narrative is often negative as there is a bias toward the negative (Hanson & Mendius, 2009). Although this tendency to see the negative in things and in ourselves might have a survival advantage in that we will be vigilant for the tiger, expecting him to eat us when we are in the wild, it works against us when there is no threat. Additionally, victims of shock or acute trauma are particularly vulnerable to creating false narratives about themselves and the world

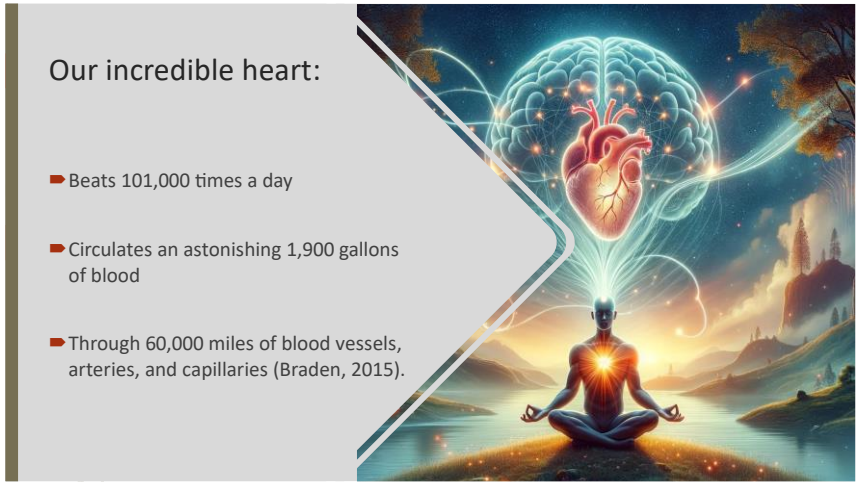
around them (Porges, 2017; Dana, 2018, Kain & Terrell, 2018). In a more regulated state, we are safe to possibly do a Ctrl-Alt-Del or deletion of the old story and rewrite a new or revised version that better reflects our past and current autonomic adventure, one that allows us to accept and appreciate the heroic nature of our autonomic nervous system that enabled us to survive through the pain and/or trauma of the past and embrace the beauty and joy of what we now have and the bright future that lies ahead.

As Drs. Kain and Terrell eloquently write, "As our capacity increases, our narratives are likely to change, including the sense of success at meeting challenges, of developing curiosity, or of a willingness to explore. Eventually, our narratives may also include access to a sense of safety and connection. Rather than *I am constantly afraid and unhappy*, a client will begin telling himself a different story: *I am stronger than I thought and able to meet challenges with greater balance and success"* (Kain & Terrell, 2018, pgs. 101-192). They add, "At the same time, our somatic narratives will begin to change. We may literally experience changes in our symptoms – decreased inflammation, less pain, fewer migraines. Our illness narratives may alter to include the possibility of being free of pain, free of symptoms that have beleaguered us for most of our lives." (Kain & Terrell, 2018, p 192).

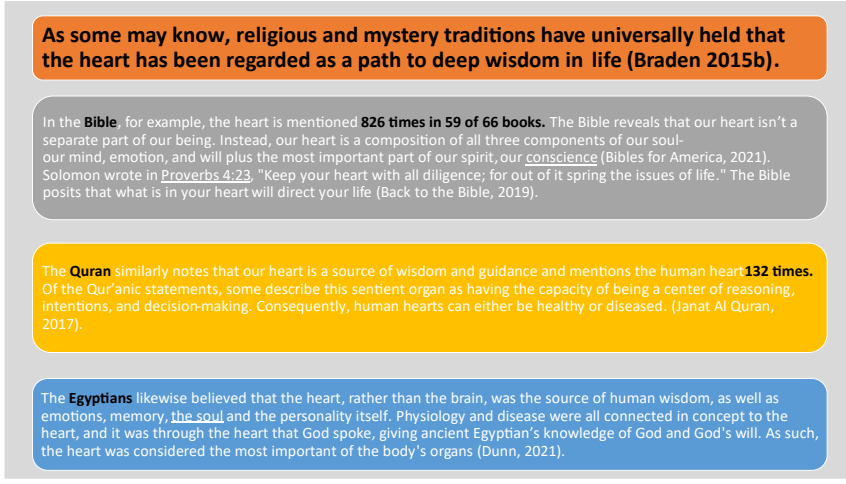
Part 2: HeartMath

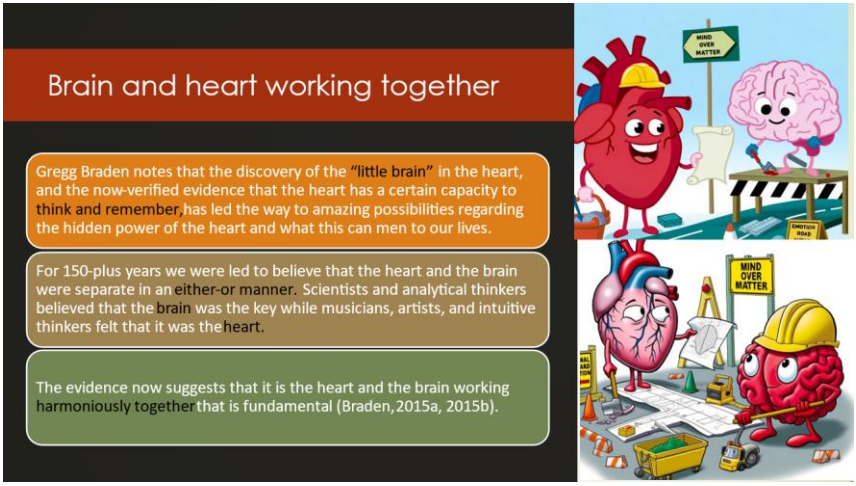


Our heart is an amazing organ and is much more than a pump. It has its own wisdom and intelligence and works cooperatively with the brain. HeartMath has sought to explore the science of this connection and translate that science into practical ways of healing mental health struggles and thus improving our lives.



The ancients knew of the importance of the heart, but that wisdom was lost with time. Happily, this knowledge is coming back to us and can lead us to fuller and more meaningful lives.





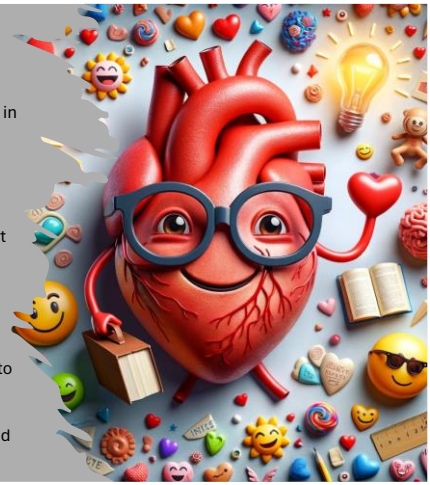
One of my heroes who advocates for new and innovative ways to promote mental health is Greg Braden. He is an author and speaker who has actively bridged science and spirituality. He has a background in earth sciences and has worked in the aerospace and defense industries during the 1980s. Braden is also widely known for his work in popularizing the concept of HeartMath. Although not a founder of the HeartMath Institute, he has been a strong proponent of its work, particularly in the areas of emotional self-regulation and the connection between the heart and brain. Braden's work often explores the role of human emotion in physical health, healing, and the interconnectedness of all life. Braden's approach combines science with spirituality to offer perspectives on personal and collective wellness, emphasizing the importance of harmony within oneself and with the environment. He is a brilliant, sincere, and inspirational speaker and I encourage you to search out some of his YouTube presentations on HeartMath. His one entitled "*Practice this Technique to Relieve Daily Stress… Three Keys to Heart - Brain - Earth Harmony"* is one of my favorites. Give it a try, you will love it.

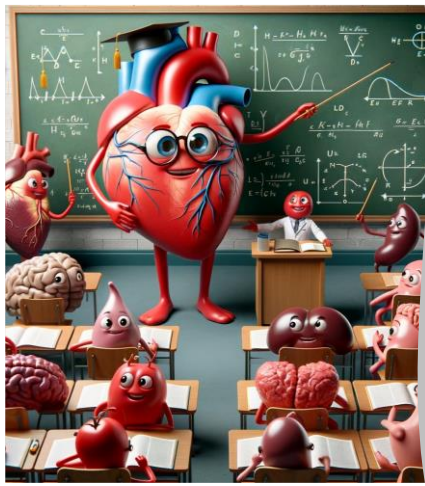
https://www.youtube.com/watch?v=2nsm8SCWjic&t=1088s&ab_channel=GreggBradenOfficial

Braden (2015a, 2015b) eloquently describes the research that supports that there is such a thing as heart intelligence and, when we are in a settled and positive autonomic state , we are able to tap much more easily into it.

What – Heart Intelligence?

- Dr. Armour, MD, PhD., at the University of Montreal in 1991, discovered that the heart has its own "little brain" or "intrinsic cardiac nervous system" (cited in Braden, 2015).
- This "heart brain" is composed of approximately 40,000 neurons, called sensory neurites that are similar to neurons in the brain, meaning that the heart has its own nervous system.
- In addition, the heart communicates with the brain in many methods: neurologically, biochemically, biophysically, and energetically.
- The vagus nerve, which is 80% afferent, carries information from the heart and other internal organs to the brain.
- Signals from the "heart brain" redirect to the medulla, hypothalamus, thalamus, and amygdala and the cerebral cortex (Braden , 2015a, 2015b).



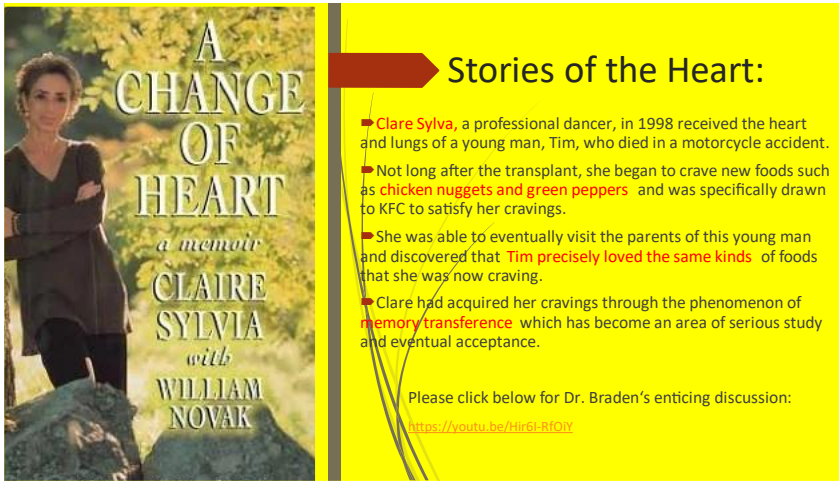


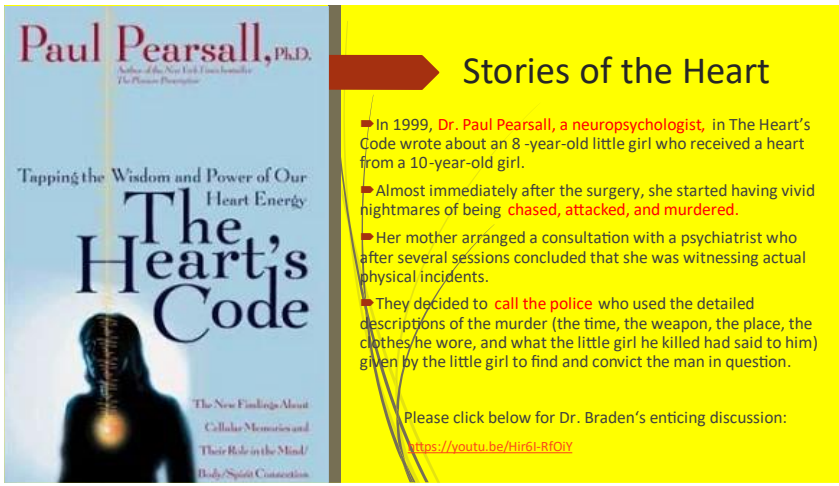
What – Heart Intelligence?

- Braden notes that a key role of the heart brain is to detect changes in the body such as hormone levels and other chemicals and to communicate this information to the brain so it can meet our needs accordingly.
- The heart brain achieves this by converting the language of the body, chemistry, to the electrical language of the nervous system so it makes sense to the brain.
- For example, the heart's encoded messages to the brain informs it as to when we need adrenalin for danger or when we need less in times of safety so the immune system can be turned on (Braden, 2015a, 2015b).

Braden (2020) notes that the heart has over 40,000 cells called sensory neurites, very similar to the cells in the brain, and there is evidence that the heart has a certain capacity for some types of memory as well as a gut level wisdom that guides us (Dispenza & Braden, 2019).

Braden nicely narrates two stories detailed in the graphics below about how memories stored in the neural networks in the heart can be transferred to the heart recipients following transplant surgeries.





HeartMath is a magnificent therapy that uses techniques that focus on heart rate variability and the heart's influence on emotional well-being and stress management. By learning to regulate our heart rhythm, we can achieve a more coherent state, where emotions, mind, and body are in sync. This approach helps reduce stress, enhance emotional

regulation, and improve overall health. In therapy, HeartMath tools teach us how to access our heart's intelligence to foster resilience, improve decision-making, and deepen personal connections. Learning to live more from the heart is a game-changer and will enable you to relate to others in safer and more profound ways and will bring much more groundedness and stability to your life.

HeartMath defines heart rate variability (HRV) as the measure of the beat-to-beat changes in heart rate, which reflects the heart's ability to adapt to stress, environmental, and physiological changes. HRV is a key indicator of the autonomic nervous system's efficiency and balance, particularly the interaction between the sympathetic (stress response) and the parasympathetic (relaxation response) branches (McCraty, 2023).

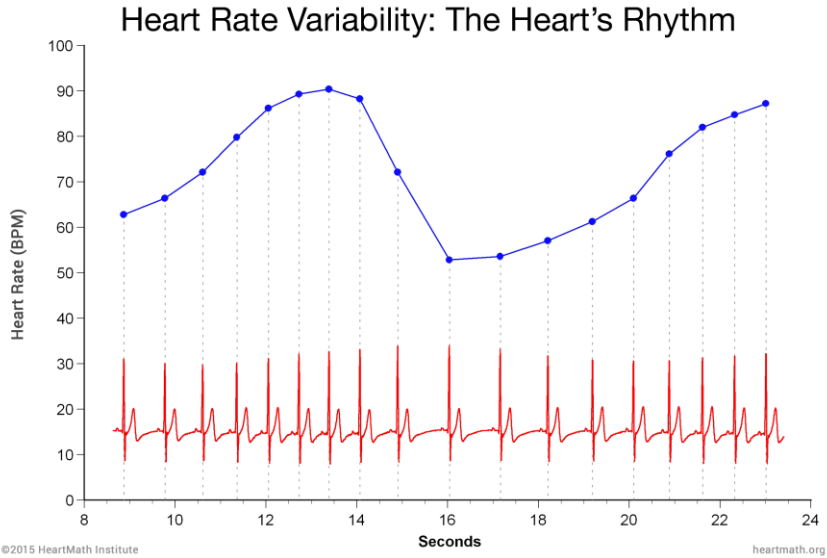


Image courtesy of the HeartMath® Institute – www.heartmath.org.

In practice, HeartMath uses HRV to assess an individual's level of coherence, a state where the heart, mind, and emotions are in energetic alignment and cooperation. This state is characterized by a smooth, wave-like pattern in the heart rhythm, indicating emotional balance and mental clarity. HeartMath techniques involve specific breathing practices and the cultivation of positive emotional states to increase coherence, thereby improving HRV. This approach is used to reduce stress, enhance decision-making, and boost overall well-being (McCraty, 2023). The graphic below shows how the heart can shift from a negative and dysregulated state on the left to a more positive and coherent stated.

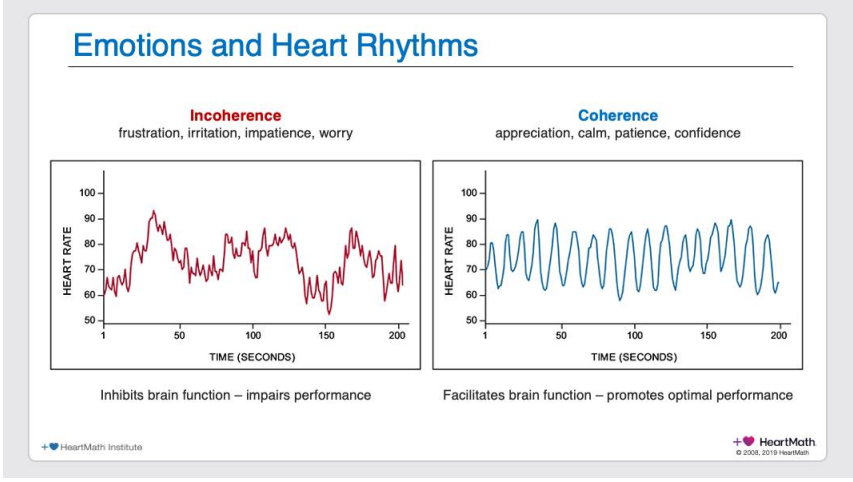


Image courtesy of the HeartMath® Institute – www.heartmath.org.

Once we achieve coherence in the heart, the coherent heart then communicates in four distinct ways to the brain to help the brain, likewise achieve coherence. Dr. McCraty notes that the heart communicates to the brain in four main ways: (1) nerves connecting the heart to the brain, particularly the vagus nerve, (2) hormones, (3) blood pressure shifts, and (4) electromatic waves (McCraty 2023). This allows

the brain to be more integrated and efficient, and on the contrary, an incoherent heart inhibits cortical function. Note that 80% of information flows from body to brain (efferent).

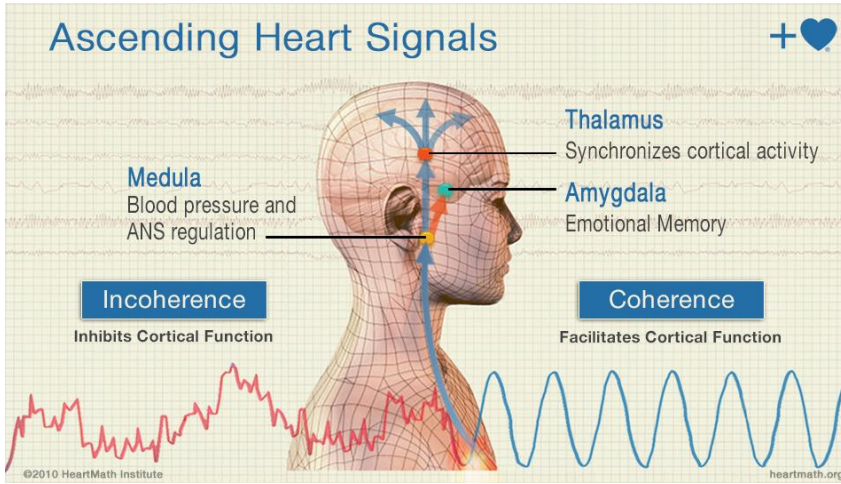


Image courtesy of the HeartMath® Institute – www.heartmath.org.

This following graphic nicely illustrates how an incoherent heart increases the activity of the amygdala and diminishes the activity of the prefrontal cortex (thinking brain/executive functioning). In this state, our thinking is governed by lower brain centers, and we thus make impulsive, emotionally driven decisions. On the other hand, the right side of the graphic demonstrates how a coherent heart signals the amygdala to quiet down, allowing the higher order processes of the prefrontal cortex to reign so great decisions can be thereby authored.

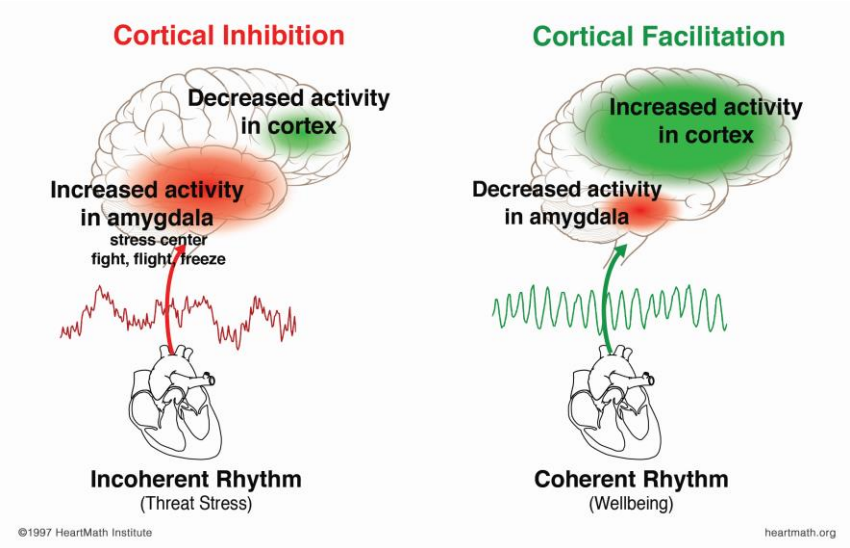


Image courtesy of the HeartMath® Institute – www.heartmath.org.

One very attractive element of HeartMath is the concept of one person's heart coherence helping another person achieve coherence, which is grounded in the understanding of interconnectedness and the physiological phenomenon known as entrainment. Here is a brief description of how it works, broken down into key points (McCraty et al., 2009; McCraty er al.; McCraty, 2023; Tiller et al., 1996):

1. **Heart Coherence**: As previously noted, heart coherence refers to a harmonious, ordered pattern in the heart rhythms, characterized by a stable, sine-wave-like pattern in the heart rate variability (HRV). This state is associated with positive emotions, physiological efficiency, and a sense of well-being. It is achieved when the heart, mind, and emotions are in energetic alignment and cooperation.

2. **Interconnectedness and Energy Fields**: The HeartMath Institute suggests that the heart emits an electromagnetic field

of up to 10 to 15 feet that can affect the people, animals, and environment around us. This field can be detected by others unconsciously. In a coherent state, the heart's electromagnetic field is more ordered and coherent. If ordered or coherent, the effect on others is positive and if disordered or incoherent, the effect on others is negative.

3. **Entrainment and Resonance**: Entrainment is a physics principle where two oscillating systems assume the same frequency. When applied to heart coherence, entrainment suggests that the coherent heart rhythm of one person can influence and synchronize with the heart rhythm of another person when they are in close proximity, leading to mutual coherence. This is a beautiful form of energetic communication, where the heart's electromagnetic field of one person can influence the heart rhythm of another person.

4. **Emotional Contagion**: On a psychological level, this concept mirrors the idea of emotional contagion, where one person's mood and behaviors can lead to the synchronization of feelings and behaviors in another person. In a positive sense, a person in a state of heart coherence can, through their calm and positive emotional state, help induce a similar state in others, promoting emotional stability and coherence. Thus, this has great implications in helping another person reach the aforementioned autonomic green state when the ventral vagus nerve is active, which promotes social engagement (Hansen, 2021).

5. **Improved Group Dynamics**: When applied in groups, this phenomenon can lead to improved cooperation, understanding, and a collective increase in coherence among individuals. This not only benefits emotional and mental health but can also

enhance group performance, creativity, and problem-solving abilities.

The HeartMath research supports the idea that practicing heart coherence techniques can not only improve one's own health and well-being but also positively influence the people around us, effectively creating a more harmonious environment and thus making the world a better place to live in.

The coherent HRV of one person positively regulates the other

Heart Lock-in Technique:

HeartMath teaches us several different breathing and visualization techniques to help us attain healthy heart rate variability and coherence each building on the basics of good breathing fundamentals. Below is a description of my favorite, which is called the Heart Lock-in Technique.

The Heart Lock-In Technique is a practice developed by the HeartMath Institute, designed to help individuals enter a state of heart coherence, where the heart, mind, and emotions are in alignment. This technique is beneficial for reducing stress, enhancing emotional stability, and fostering a sense of inner peace and well-being. Here is a step-by-step guide on how to perform the Heart Lock-In Technique:

1. **Find a Quiet Place**: Start by finding a quiet and comfortable place where you can sit undisturbed for about 10 to 15 minutes. Sit in a comfortable position and, if possible, hold your back in a straight position.

2. **Focus Your Attention**: Close your eyes and gently allow a shift in your focus to the area around your heart, the center of your chest. This really helps to center your attention and begins the process of inner alignment.

3. **Breathe Deeply**: Breathe slowly and deeply, imagining your breath moving in and out of your heart area. Inhale for 3 to 5 seconds, then exhale for about 7 seconds (or whatever rhythm is comfortable for you and try for a longer exhalation as this promotes more parasympathetic relaxation). This type of breathing helps to regulate your heart rhythms and prepares your body for coherence.

4. **Activate a Positive Feeling**: Recall a positive feeling, a time when you felt warm, at peace, and/or love inside. This could be a feeling of love, appreciation, care, or gratitude for someone or something in your life. It is important that this feeling is genuine to effectively shift your body into a state of coherence.

5. **Send that Feeling**: While maintaining your heart-focused breathing, visualize that you are spreading this positive feeling throughout your body with each breath. Imagine this feeling as a light or energy that fills you up and radiates outward.

6. **Radiate that Feeling**: Continue to breathe deeply and, with each exhale, imagine sending this positive feeling out to someone or something or just out into the world. You can envision it as a warmth or light extending beyond your body, reaching out to others or even just filling the space around you.

7. **Take in that Feeling:** With each breath you breathe in, you can allow yourself to take in that feeling of love, appreciation, and/or gratitude from the outside world of, if applicable, from that special person or place.

8. **Lock-In the Coherence**: To "lock in" the coherence state, continue to focus on your heart and the positive feeling for at least a few minutes. Gently visualize your heart attaining a beautiful and coherent HRV. The longer you can hold this state, the more benefits you will receive. Some practice this technique for 10-20 minutes to deepen the coherence state.

9. **Gently Return**: When you feel ready, slowly bring your focus back to your external surroundings. Open your eyes, stretch if needed, and carry this sense of calm and coherence with you into your day.

Personal note from Jeff: *When I "literally hit the floor" and in the days and months that followed, my false narrative continued to plague me. I thought I was weak, that I was a poor example of a husband, father, and therapist. My once positive and confident self-evaporated. The best way to describe it was that I felt like I was an "un-person." My autonomic nervous system continued to terrorize me, and I was unable to turn it off. My therapists (plural – yes, there were several), while all very skilled, could not fully explain what was happening in my body and brain. This left me feeling hopeless and further fueled the flame of negativity. It wasn't until I made many changes in my life, including leaving a lucrative practice that was no longer feeding my soul, ending a particularly toxic relationship with a colleague, and embracing new professional challenges that paid less in money but much more for the heart, making new and safer friendships, getting back into motorcycling (the perfect recipe for autonomic regulation), and learning how to make and continue safer relationships, that the sun rose again in my life. As I did these things, my autonomic*

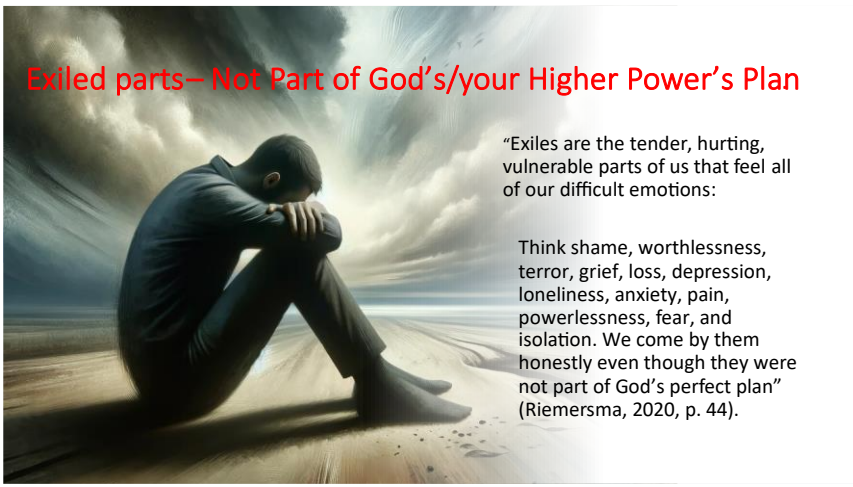
nervous system eventually settled, and I was then able to create a new narrative. This new narrative fully appreciated the wisdom of my body experience, gave meaning to my experience, and offered hope for a bright and hopeful future.

Part 3: Internal Family Systems (IFS)

Among the best top-down therapies is **Internal Family Systems (IFS) Therapy**. During early life, we are often faced with pain and/or trauma that can be so extreme that the fragile and poorly developed ego cannot handle it. Unable to be processed, these pains are stored in "implicit" memory, and as such are often nonverbal. They become part of what is called the "default mode network," which later becomes the substrate for how we think, feel, and behave. Left unchecked, we must resort to defensive behaviors to keep them from overwhelming us. IFS identifies the pain part as the **exiles** and the defensive parts as the **managers** and **firefighters.**

Internal Family Systems (IFS) is a therapeutic approach that identifies and addresses multiple sub-personalities or parts within each person's mental system.

1. **Exiles**: These are vulnerable, often wounded parts that carry painful memories or emotions, such as trauma, fear, or shame. In addition to treatment, these might be parts that are deeply hurt or neglected, driving behaviors as a form of escape or coping mechanism. Exiles are often kept out of conscious awareness by the actions of managers and firefighters.



2. **Managers**: These parts are responsible for maintaining a sense of order and control in a person's life. They anticipate and address problems proactively to protect the individual from

harm or pain. In the context of addiction, managers might try to keep addictive behaviors in check or rationalize them to maintain a semblance of control. Managers are all about performance – being the best student, employee, or even religious person.

3. **Firefighters**: These parts are more reactive than managers. They emerge when an individual's exiled emotions or experiences become too overwhelming. Their role is to distract and extinguish or numb these distressing feelings, often through impulsive behaviors like substance abuse or other addictive actions. Firefighters serve as a short-term solution to emotional pain but often exacerbate problems in the long run. The ultimate firefighter defenses can be self-injury or even suicide.

4. **Self**: The Self is seen as the core or center of an individual's being, characterized by qualities like compassion, confidence, calmness, and clarity. The Self is not another part but rather the person's true, balanced essence. In IFS therapy, strengthening the Self is crucial, so it can lead and bring harmony among the parts. In addiction treatment, this means helping the individual to access their Self to understand and heal the exiles, manage the managers, and redirect the firefighters in healthier ways. The Self is typified by eight qualities called the 8 Cs.

There are many advantages to IFS as an excellent top-down approach, some of which are summarized below (adapted from ChatGPT):

1. **Promotes Self-Leadership**: IFS encourages individuals to lead themselves with their core Self, which is characterized by qualities such as confidence, calmness, clarity, curiosity, compassion, courage, connectedness, and creativity. This helps make healthier decisions and manage parts that are causing psychological distress.

2. **Improves Self-Awareness and Emotional Intelligence**: By identifying and understanding the different parts within oneself, individuals become more aware of their inner workings. This heightened self-awareness leads to better emotional intelligence, as individuals learn how to manage their emotions effectively.

3. **Encourages Compassion and Understanding**: IFS fosters an environment of compassion and understanding, both for oneself and for others. By recognizing that every part has a positive intent, even if its actions are counterproductive or harmful, individuals learn to approach themselves and their parts with kindness and empathy.

4. **Addresses a Wide Range of Psychological Issues**: IFS has been applied to a variety of psychological issues, including anxiety, depression, phobias, trauma, and relationship problems. Its flexibility and adaptability make it a suitable approach for many different types of individuals and concerns.

5. **Facilitates Deep Emotional Healing**: IFS therapy goes beyond symptom relief and aims for deep emotional healing. By focusing on the roots of psychological issues, it helps individuals heal the wounds of their parts, leading to lasting changes.

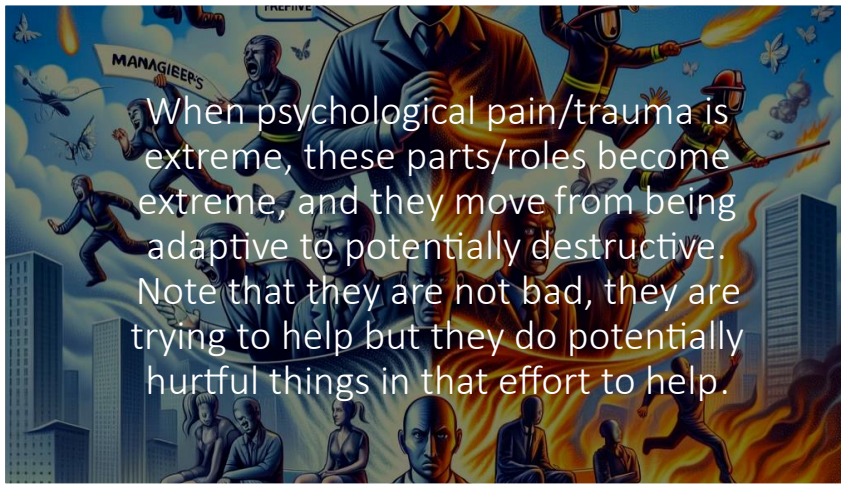
6. **Enhances Relationships**: By improving self-awareness, emotional intelligence, and communication skills, IFS can help

individuals build stronger and healthier relationships. Understanding one's own parts can also lead to a better understanding of others, fostering empathy and connection.

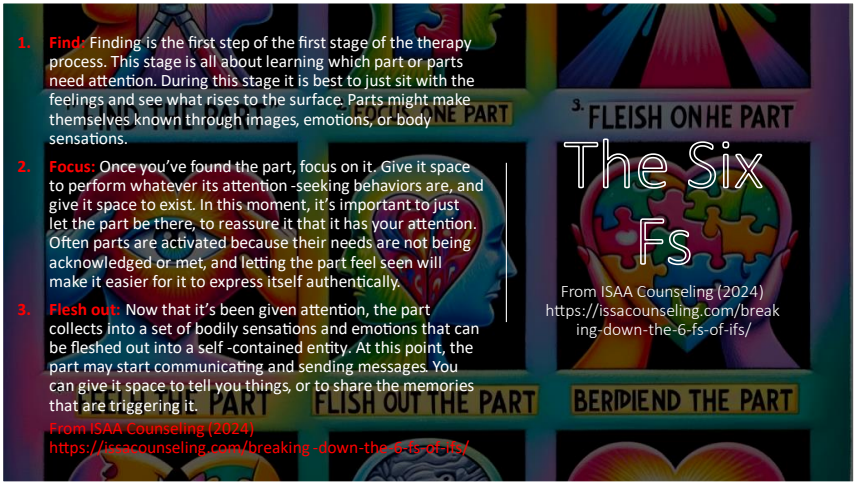
7. **Empowers the Individual**: IFS empowers individuals by putting them in the driver's seat for their healing process. The model teaches that individuals have the internal resources they need to heal, and the therapist acts as a guide rather than a rescuer.
8. **Integrates Well with Other Therapeutic Approaches**: IFS is a non-pathologizing and hopeful model that can be integrated with other forms of therapy, including cognitive-behavioral therapy (CBT), dialectical behavior therapy (DBT), and more. This makes it a versatile tool in a therapist's toolkit.
9. **Evidence-Based**: Research on IFS is growing, and it has been recognized as an evidence-based practice for treating certain conditions, such as PTSD, demonstrating its effectiveness and reliability.
10. **Cultivates Mindfulness**: The process of identifying and interacting with different parts requires a level of mindfulness, which can improve overall mental health and well-being.

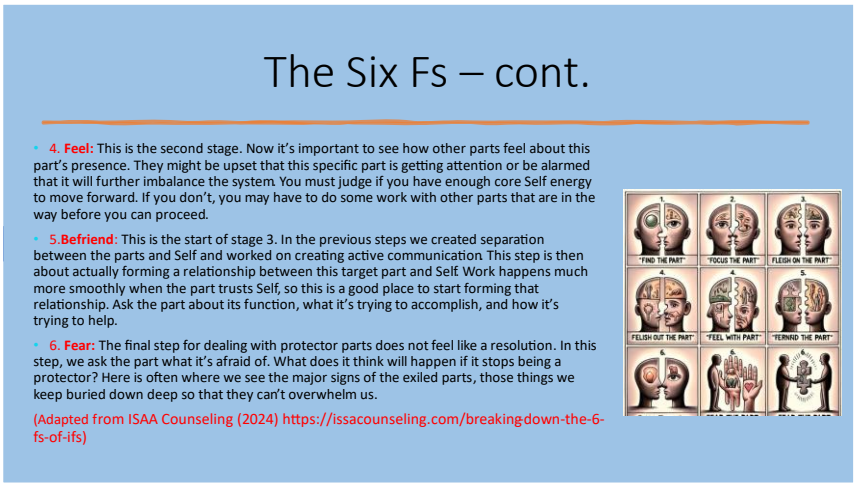
IFS therapy's holistic approach to healing emphasizes understanding and integration of all parts of the self, leading to profound and lasting psychological change.

In IFS therapy, the goal is to understand the roles of these parts, how they contribute to the problematic behavior, and how to bring them into a harmonious balance under the leadership of the Self. This approach helps individuals address the root causes of their problems and foster a more integrated, healthier state of being (facilitated by ChatGPT).



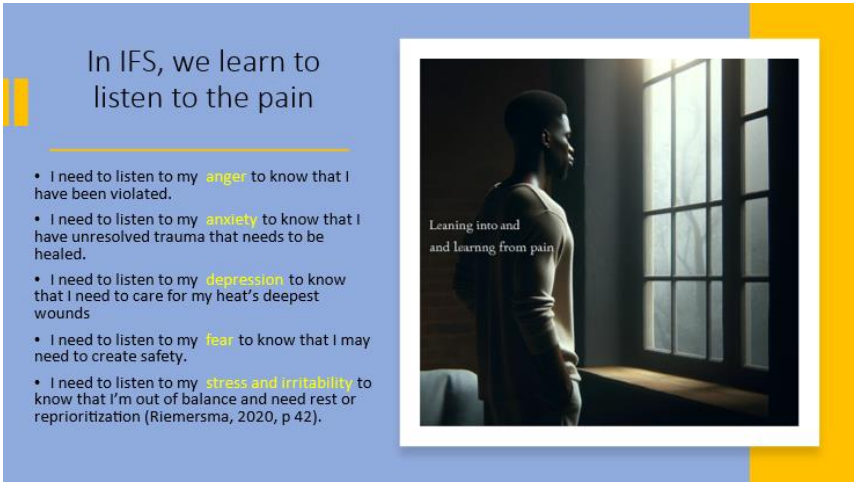
In order to access and resolve the pain that has been largely exiled out of consciousness, we must access the defensive parts and get them to back off from defending as this keeps us distanced from our true self. There are six important steps involved in this process: Find, Focus, Flesh Out, Feel, Befriend, and Fear. This process is described nicely in the two graphics below as adapted from ISAA Counseling (2024):



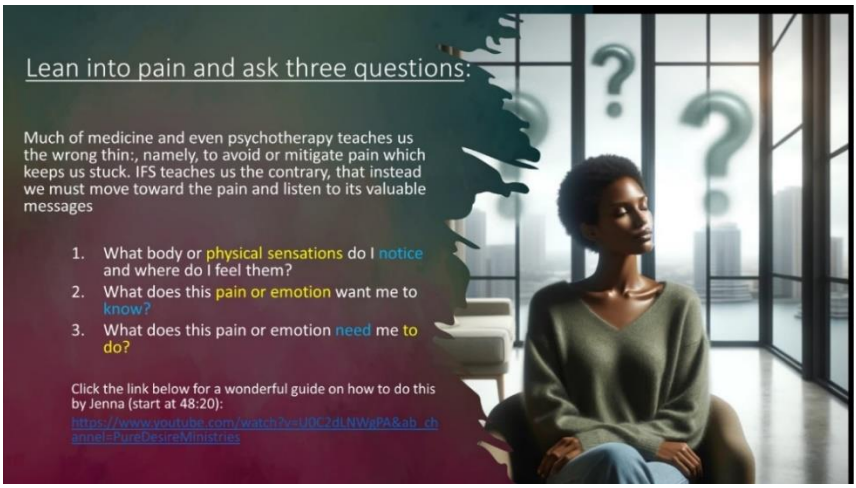


Jenna Riemersma (2020), who holds a master's degree in psychology from Harvard and integrates IFS with faith, in particular, Christianity, is one of my favorite IFS gurus. Her book, *Altogether You* stands among the best and most readable IFS books on the market and is highly recommended. Jenna teaches us that emotions are not to be avoided. Sadly, we live in a culture that teaches us that we should chase the positive emotions such as love, joy and happiness, and run from, suppress, medicate away, and avoid the hard emotions such as sadness, depression, fear, anxiety, grief, and anger. It has been said that words are the language of the mind, and emotions are the language of

the body. Jenna encourages us to listen to our emotions as they can guide us. Snuffing them out cuts us off from truths about our lives, but if listened to, emotions can lead us to better truths about our lives and point us to a better way of living. Moreover, they are often the canary in the mine, and we know how important they were.



In a wonderful exercise, Jenna suggests that we lean into the pain and do three things, as presented in the graphic below. For more detailed information on this process, I suggest you access her website https://jennariemersma.com/move-toward/. It is an amazing resource (Riemersma, 2024). I have used this exercise many times and have found it liberating to re-frame my pain as positive feedback (yes, positive, not negative), as it can lead to vital awareness of what that pain wants us to know and do.


Lean into pain and ask three questions:
Much of medicine and even psychotherapy teaches us the wrong thin:, namely, to avoid or mitigate pain which keeps us stuck. IFS teaches us the contrary, that instead we must move toward the pain and listen to its valuable messages
1. What body or physical sensations do I notice and where do I feel them?
2. What does this pain or emotion want me to know?
3. What does this pain or emotion need me to do?
Click the link below for a wonderful guide on how to do this by Jenna (start at 48:20):
https://www.youtube.com/watch?v=U0C2dLNWgPA&ab_channel=PureDesireMinistries

Lean into the pain and learn what it wants you to know and do.

A few of my favorite speakers on IFS.

Jenna Riersmesma – Faith and IFS
https://www.youtube.com/watch?v=deqxDq9Xw6g&ab_channel=geoffreyholsclaw

Dr. Tori Olds
https://www.youtube.com/watch?v=tNA5qTTxFFA&ab_channel=Dr.ToriOlds

Kenny Dennis – IFS for Kids
https://www.youtube.com/watch?v=Ji7bk3JfEmk&ab_channel=KennyDennis

Courtesy of my rockstar student, Alayna Collins, M.A., Doctoral Candidate

Personal note from Jeff: *IFS gave me explanations as to why I did many of the things that I did, not only in my adolescent and early adult years but how I responded to the pain when I seemingly flew apart. I have come to understand that the pain of my early trauma was buried outside of my conscious day-to-day awareness. Beginning as early as the fourth grade when our family moved from a rural school in Point Reyes, on the Northern California coast, to a city school in Fort Collins, Colorado, so my father could pursue a second doctoral degree in animal pathology. I was overwhelmed with the greater demands academically. It was at this time that my Managers kicked in, and I became neurotically driven to achieve in order to cover up the gaping insecurity and anxiety that the Exiles were carrying stemming from earlier. This almost exclusive reliance on the Manager defense part continued as my primary protector until my Firefighter parts first appeared in high school. During the week, I would plow down and earn top grades but with increasing misery as the Managers could no longer proactively do the job. My Firefighter parts came on board mostly on weekends to distract me from the excessive break-through exiled pain. I became a weekend Wildman with partying, chasing*

after the girls, and fast cars and motorcycles, risky gymnastics moves (as I was back in the day, an advanced competitive gymnast) in places that put me at risk, and on one occasion, jumping off a 60-foot bridge at Lake Berryessa with my equally insane brothers. My Firefighter defensive parts quieted down and largely behaved themselves when I married until my crisis hit and, in a move to help stop the unbearable psychological turmoil I was facing at that time, offered the solution of "just removing myself from the planet." That thought was oddly comforting at times but also terrifying. I then knew that I was in terrible peril.

IFS offered me a way of understanding and appreciating that my fear that I was decompensating was, in fact, not true and that I was merely defending to protect myself from the pain of insecurity - feeling as though I was not good and smart enough and that my need to employ the Managers to protect myself from feeling by overachieving and then resorting to my Firefighter parts to act-out to distract were quite effective initially but ultimately became destructive and would have surely brought on my demise if these defensive parts were not understood and befriended so I could address the pain and access my true Self. I am so profoundly thankful for IFS as it "de-pathologized" my sense of myself and allowed me to understand that my defenses were never bad but were merely attempting to protect me. Happily, my Managers and Firefighters, although still present, behave in balance as I am much more at peace and connected with my true "Self" and with loved ones, friends, and colleagues.

Liberated with IFS

A Few Thoughts on Finding the Right Therapist and Therapy:

Before we leave this chapter, I would like to say a few words about the importance of finding the right therapy and therapist to meet your needs.

This can be difficult as the psychotherapeutic community can be confusing, especially for the first time consumer.

It is unfortunate that there is much to be criticized regarding the state of psychotherapy today. To begin with, psychotherapy's outcomes can be hard to measure, with variable effectiveness across different types of therapy and individual therapists. In some cases, it is reasonable to be concerned about potential harm, including dependency on the therapist, misdiagnosis, or worsening of symptoms.

Abigail Schrier (2024), in her new book, *Bad Therapy: Why the Kids Aren't Growing Up,* expresses her concern about too many bad therapies. In fact, Abigail devotes an entire chapter to **iatrogenesis,** which refers to any condition, symptom, or complication caused directly by medical treatment, intervention, or advice rather than by the underlying disease or condition itself. She specifically comments on how psychotherapy can be harmful and notes that therapists often do not want to acknowledge that the "medicine" is not working because the therapist is "the medicine." Moreover, she notes that it is often in the therapist's best interest to treat the *least sick for the longest period of time* and, on the other hand, many therapists run from more complex clinical presentations, such as complex trauma, bipolar disorder, and borderline personality disorder to name a few (Schrier, 2024).

Sadly, many therapists are poorly trained, and many others, although well-trained initially, fail to stay current with the literature that either supports or fails to support their therapeutic techniques. Finally, far too many therapists, at the encouragement of their training institutions, see their primary responsibility as being the harbinger of progressive ideology and belief that it is in their client's best interests to broaden their client's thinking in accordance with what the therapist believes that thinking should be. This, in itself, is a violation of informed consent. Nowhere is this more evident than in early affirmative care when

children are encouraged to progress through radical and permanent physical changes without being able to fully comprehend the consequences of those changes. And yes, the lawsuits are coming and rightly so.

Finding the right therapist for you or your loved one is a tremendously important matter, and it pays to do your homework and vet your prospective therapist with great discernment. If you do, the rewards are considerable. Here is a list of things you may wish to consider:

- **Credentials and Licensing**: Verify the therapist's qualifications, including education, licensing, and certifications. Check with the appropriate licensing board for any negative actions or complaints. You might want to consider seeking a therapist with a Ph.D. in Clinical Psychology from an American Psychological Association (APA) accredited school. Such Ph.D. psychologists are also trained to be scientists in that they are likely to understand research more fully and thus are more likely to appreciate and follow the research as it relates to your presenting concerns. That said, and to be fair, there are many excellent and talented master's level therapists who hold to, likewise, appreciating and following the research, just as there are many PAs who offer excellent medical care and, in some cases, they are even better than MDs.

- **Consultation**: Many therapists offer a free initial consultation, which can help you gauge compatibility and comfort. Keep score of the initial phone contact. If they are short with you and won't take the time to connect, then that can be a negative harbinger.

- **Recommendations**: Seek referrals from trusted sources or read reviews that can provide insights into the therapist's effectiveness.

- **Comprehensive Training**: Look for a therapist who specializes in treating your specific issues, such as anxiety, depression, or trauma. Ask your prospective therapist if they have a deep understanding and training of various psychological conditions and the skills to address your specific needs effectively.

- **Continual Learning**: The field of psychotherapy evolves with new research; ongoing education allows therapists to stay current with the most effective treatments. Ask about what training your prospective therapist has done or is undertaking to stay current.

- **Client-Centered Approach**: Ask if your prospective therapist will tailor their approach to meet your unique needs rather than applying a one-size-fits-all ideology. Therapies, even though they might be good, when too rigidly and too dogmatically applied to all presenting problems without modification and/or consideration of better options, have a cultish feel. Please remember, you are seeking a therapist, not a cult leader.

- **Ideology**: Do not be afraid to ask your prospective therapist if they will keep personal ideology out of the therapy relationship and will instead treat in concert with solid empirical and evidence-based therapeutic techniques.

- **You are the boss**: Remember, you are the boss and, as such, your therapist works for you. You have the right to agree, disagree, and/or question. A good therapist will not only respect that but will encourage your right to do just that.

- **Trust Your Instincts**: After meeting with the therapist, trust your gut feeling about whether you can work well together. If it's a bad fit, end it sooner rather than later. To be fair, most therapists are very well-meaning and have a heart to help others. But well-

meaning, although wonderful, does not necessarily equate to competence or being a good fit for your unique needs.

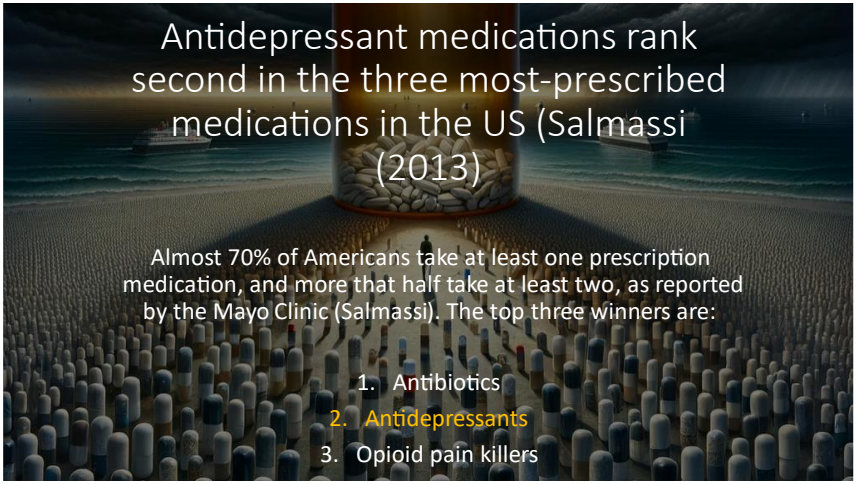
Medication Caution

Are We Being Misadvised and Mistreated?

Allow me to begin this chapter by saying that I am not recommending that you take or not take any psychotropic medication. Rather, I suggest that you apprise yourself of the outcome research as best you can before you take any

psychotropic medication. I have chosen to discuss only antidepressant medications as they are the most-prescribed of the psychotropics and, sadly, are the second most-prescribed medication in the United States – in rank order of number of prescriptions according to the May Clinic and cited by Salmassi (2013):

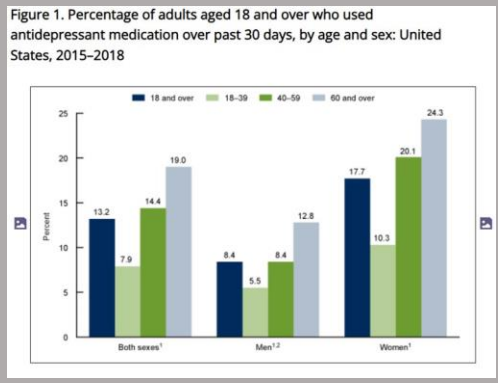
1. Antibiotics
2. Antidepressants
3. Opioid pain killers



Empower yourself to ask your prescriber about any concerns you might have, including the content of this discussion. It has been said that we, as a culture, are too quick to run from pain, and part of that process involves an overreliance on psychotropic medications. Robert Whitaker (2023) notes that in 1987, we spent about 80 million dollars on psychotropics and in 2007, that figure rose to 40 billion dollars – an astounding 50 fold increase in just 20 years.

The data from the CDC indicates that an alarming percentage of people in the US are taking antidepressant medication.

SOURCE: National Center for Health Statistics, National Health and Nutrition Examination Survey, 2015–2018. (CDC, 2020)



Robert Whitaker Speaks Out:

One of my literary heroes, Robert Whitaker, is an American journalist and author. He has been a prominent critic of the psychiatric medication paradigm, including antidepressants. Through his investigative work, Fobert has raised significant concerns about the efficacy, safety, and long-term impacts of antidepressants, drawing attention to what he perceives, and I agree, as the over-medication of society and the influence of the pharmaceutical industry on psychiatric treatment.

Criticism of Efficacy and Long-term Outcomes

One of Whitaker's main criticisms regarding antidepressants is their efficacy and the quality of the evidence supporting their use. In his ground-breaking book, *Anatomy of an Epidemic* (2010), he examines the scientific literature and argues that while antidepressants may offer short-term relief, their long-term efficacy is questionable. He cites studies that suggest the possibility of antidepressants worsening long-term outcomes for many patients. Whitaker addresses the issue of publication bias, where studies showing positive outcomes are more likely to be published than those showing negative or inconclusive

results, potentially skewing the perceived effectiveness of these medications.

Dependence and Withdrawal

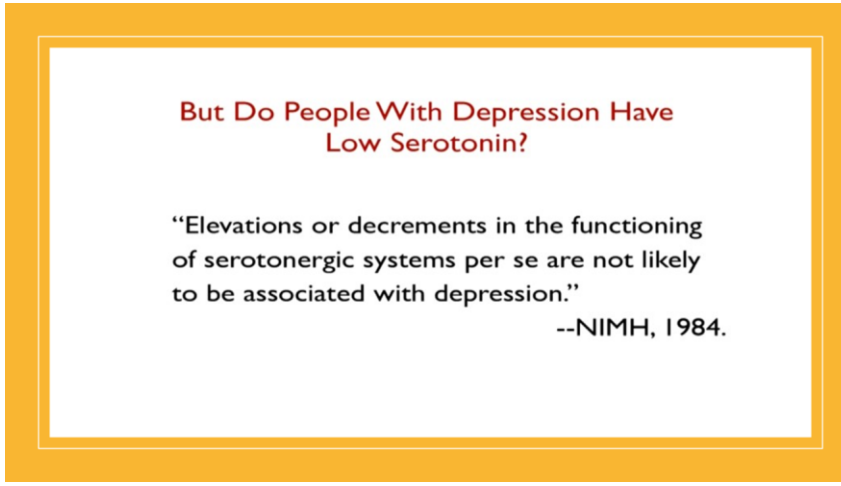
Whitaker also addresses the issue of dependence and withdrawal from antidepressants. He argues that the long-term use of antidepressants can lead to a physical dependence, making it difficult for patients to stop taking them due to severe withdrawal symptoms. This dependence is often not adequately discussed with patients prior to starting medication, according to Whitaker's findings. I am amazed that many of my patients have not been sufficiently counseled about the side effects of psychotropics such as Post SSRI Sexual Dysfunction (PSSD).

The Role of the Pharmaceutical Industry

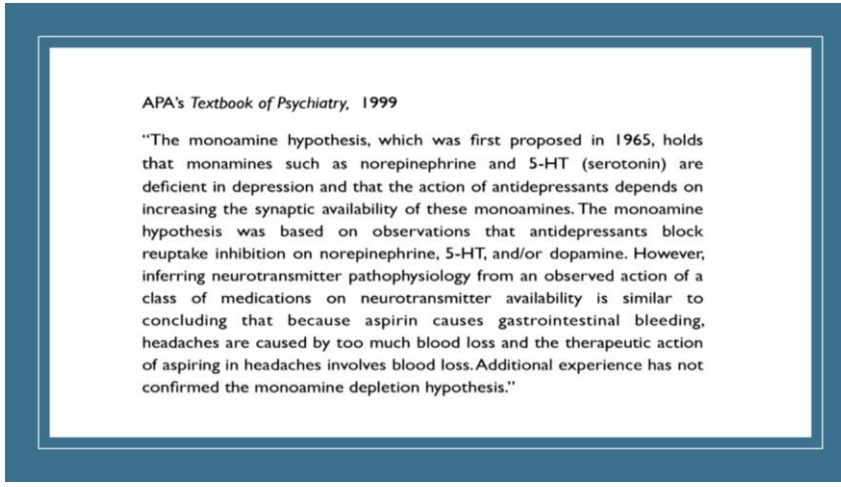
A significant part of Whitaker's critique focuses on the role of the pharmaceutical industry in promoting the use of antidepressants. He accuses the industry of exaggerating the benefits and underplaying the risks of antidepressants and intentionally misrepresenting and influencing both prescribers and patients. Whitaker's investigative work argues that marketing strategies and financial incentives have contributed to the widespread use of these medications, often at the expense of more comprehensive approaches to mental health care.

The pharmaceutical industry knew early-on that the low serotonin model of depression was not valid, yet they propagated the myth, along

with either mis-informed, naïve, or patently unethical and/or incompetent prescribers, that SSRIs corrected an imbalance.



Whitaker (2018): https://youtu.be/FY-5npruTGc



Whitaker (2018): https://youtu.be/FY-5npruTGc

Moreover, in an extensive metanalytic study, psychiatrists Joanna Moncrieff and Mark Horowitz (3023) critically examined and challenged

the serotonin hypothesis of depression. The serotonin hypothesis posits that depression is caused by an imbalance of serotonin levels in the brain and that increasing serotonin activity through antidepressants can correct this imbalance. However, Moncrieff, Horowitz, and other researchers have presented unquestionable evidence that the low serotonin hypothesis is dead (Moncrieff & Horowitz, 2023).

The deception that depression is an imbalance in serotonin promotes a disease model of depression and can lead one down the wrong path of healing. Moncrieff (2023), in a brilliant podcast interview, notes that Horowitz's and her research alternatively revealed that most depression is a result of past trauma and/or difficult circumstances in life and, moreover, that negative feelings are the signals that something is wrong and needs to be addressed. While antidepressants might offer some initial relief, namely, "If I just fix my brain with this medicine, my depression will remit," this reasoning comes at a steep price in that it takes away any sense of agency and reduces the likelihood that we can take responsibility for our lives and heal the pain rather than masking that pain.

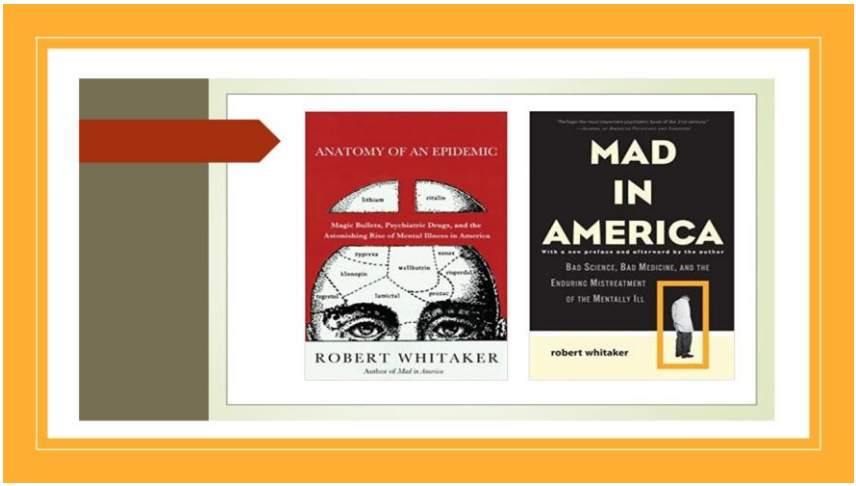
Alternatives to Medication

Whitaker advocates, and I fully agree, for a broader approach to treating depression and other mental health issues, beyond the pharmacological/medical model. He highlights the importance of psychotherapy, lifestyle changes, social support, and addressing the underlying causes of mental health conditions as critical components of treatment that are often overshadowed by the focus on medication.

Conclusion

Robert Whitaker's criticism of antidepressant medications is part of a broader challenge to the conventional psychiatric treatment model. His work encourages a more nuanced conversation about mental health care, urging a reevaluation of the reliance on medication as the primary

form of treatment. Whitaker's contributions have spurred an important and essential debate within the medical community and among the public, highlighting the dire need for a more holistic and informed approach to mental health treatment (Whitaker, 2010; Whitaker & Cosgrove, 2015).



Antidepressant Side Effects:

Although many good prescribers competently review side effects with their patients, far too many do not. Dr. Mark Horowitz is a psychiatrist, clinical researcher, and one of my heroes, and is known for his critical examination of antidepressant medications, particularly focusing on their efficacy, side effects, and the challenges associated with discontinuing their use. He has a background in psychiatry and neuroscience and has been involved in research and advocacy related to the careful use of psychiatric drugs, the importance of evidence-based approaches to medication tapering, and the reconsideration of how mental health conditions are understood and treated. Mark Horowitz has openly discussed his personal struggles with

antidepressants, providing a unique perspective that blends professional expertise with personal experience. His journey with antidepressant withdrawal has informed his research interests and advocacy for better understanding and management of antidepressant discontinuation syndrome.

Horowitz has shared how his own attempt to taper off antidepressants led to severe withdrawal symptoms, underscoring the lack of guidance and support available for individuals trying to reduce or stop their medication. This experience highlighted the gap between clinical practice and the real-world challenges patients face when discontinuing antidepressants. It spurred him to focus on researching the mechanisms of withdrawal and advocate for the development of evidence-based tapering protocols to help patients safely discontinue these medications.

His personal encounter with the difficulties of antidepressant withdrawal has made him a vocal advocate for greater awareness of these issues within the medical community. He emphasizes the need for prescribing clinicians to be better informed about the potential for withdrawal symptoms and for the development of tailored tapering schedules that consider the individual patient's response to medication reduction. Horowitz's work aims to bridge the gap between clinical research and practice, ensuring that patients receive care that supports both the initiation and discontinuation of antidepressant therapy in a way that minimizes harm and maximizes well-being. In his excellent and just published book, *Deprescribing Guidelines for Psychiatric Medications*, he details, along with his co-author, Dr. David Taylor, the all-too-frequent mismanagement of these medications and how to safely taper off them. Specific to this discussion, he does a superlative job of bringing together the most recent research on antidepressant side

effects, many of which are not shared with patients before they take them.

Emotional Numbing and Other Effects:

- Emotional numbness – 71%
- Feeling foggy or detached – 70%
- Feeling not like myself – 66%
- Drowsiness – 63%
- Reduction in positive feelings – 60%

Horowitz and Taylor (2024) note that emotional blunting appears to be a rather common and dose-dependent consequence of antidepressant use. This is to say that you may feel the lows less, but you also feel the highs less.

Weight Gain:
It appears that long-term use of antidepressant use may result in more weight gain than suggested in short-term trials. Specifically, studies suggest that there is a 30% risk of normal weight people becoming obese after 10 years of common antidepressant use than those not taking antidepressants.

Cognitive Effects:
Metanalytic Studies have found that some antidepressants can produce cognitive impairment in otherwise healthy controls – specifically on tests of information processing, memory, eye-hand coordination, and concentration. This finding might be particularly troubling for children and teens who may be struggling with academics.

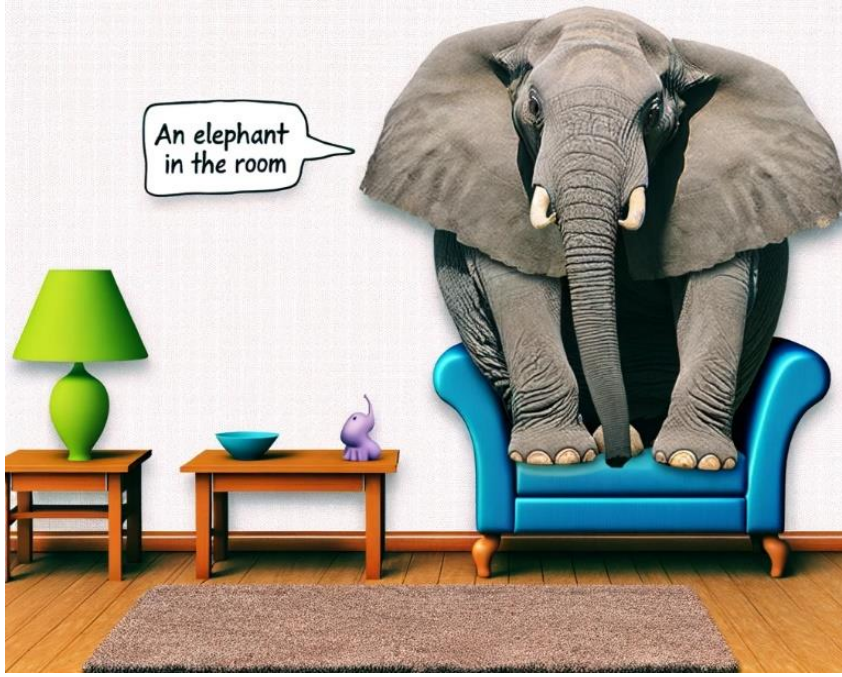
Potential Increase in Dementia:
Horowitz and Taylor (2024) report that the research suggests that there is a dose-dependent relationship between total exposure to antidepressants and risk for eventual diagnosis of dementia. Quite

alarmingly, patients with the highest exposure to more antidepressants – more than three years of daily use of standard antidepressants – had a 34% chance of dementia as compared to patients who had no exposure to antidepressants at all.

Bleeding:

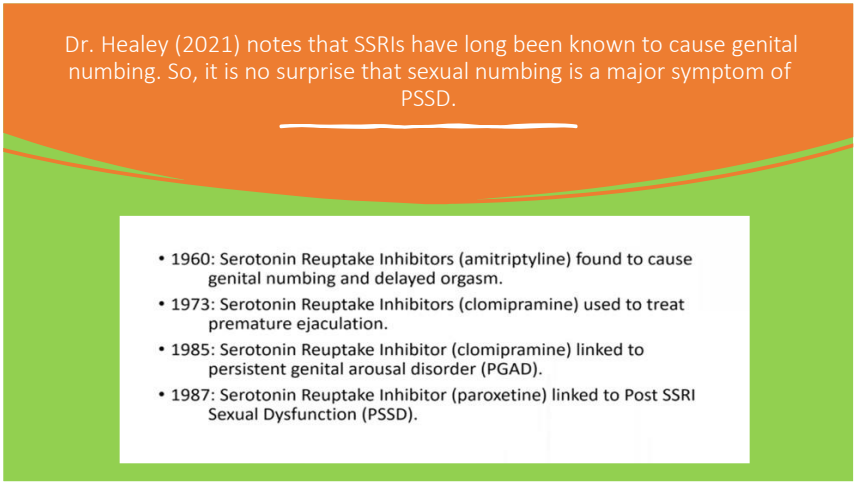
Horowitz and Taylor (2024) note that SSRIs and SNRIs inhibit the uptake of serotonin into platelets. Depletion of platelet serotonin reduces the body's ability to form clots and hence increases the risk of bleeding. This can, of course, have very serious consequences. For example, in coronary bypass procedures, they note research, which indicates a 50% increased risk of mortality in serotonergic antidepressants than non-users.

Sexual Effects:

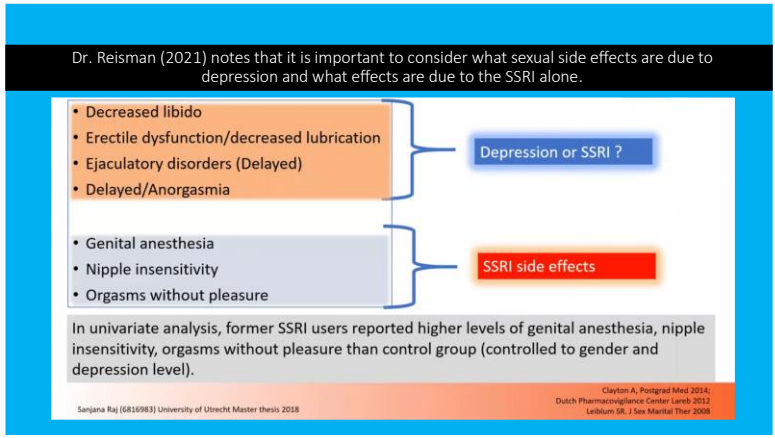


And the elephant in the room that far too many do not want to talk about. Horowitz and Taylor report that sexual adverse effects include a lack of

desire, as well as reduced sexual sensation, and failure to reach orgasm in both sexes and, very concerning, this occurs in 25% to 80% of patients, depending on the study. Moreover, and even more alarming, is that these sexual effects can persist even after cessation of antidepressants in a minority of patients. This condition is now called Post-SSRI Sexual Dysfunction (PSSD) and has been formally recognized by the European Medicines Agency. This is a devastating condition, and patients deserve to be warned about it, especially adolescents who are just beginning to explore their sexuality.



Healey (2021)
https://www.youtube.com/watch?v=yFxMeoaIc3c&ab_channel=ISSMInternationalSocietyforSexualMedicine



Reisman (2021)
https://www.youtube.com/watch?v=yFxMeoaIc3c&ab_channel=ISSMInternationalSocietyforSexualMedicine

Black Box Warning – Increased Suicide Risk:

Surprisingly not summarized by Horowitz and Taylor (2024), suicide risk needs to be mentioned. Black Box Warnings are the most stringent labeling requirements that the U.S. Food and Drug Administration (FDA) can mandate for prescription drugs. They signify that medical studies have shown that the drug carries a significant risk of serious or even life-threatening adverse effects.

The warning about Selective Serotonin Reuptake Inhibitors (SSRIs), a class of drugs commonly prescribed for depression and anxiety disorders, is a notable example. In 2004, the FDA issued a Black Box Warning for all antidepressants, including SSRIs, highlighting the increased risk of suicidal thinking and behavior in children, adolescents, and young adults up to the age of 24, especially during the initial treatment phases (FDA, 2004). This decision was based on a comprehensive review of clinical trials that showed a higher rate of suicidal ideation and behavior in individuals within these age groups when taking antidepressants than those receiving a placebo. It is crucial for healthcare providers to closely monitor patients for worsening depression or emergent suicidality, especially during the first few

months of treatment or when changing doses. The FDA's action underscores the importance of cautious use and vigilant monitoring of these medications in vulnerable populations (U.S. Food and Drug Administration, 2004).

Listed below are several of my distinguished and favorite medication critics who offer brilliant and well-researched perspectives on the topic of psychotropic mismanagement. Some have taken a radical approach that no psychotropics are warranted, and others argue that there are times when psychotropics makes sense, but only in more severe cases, when alternatives have been exhausted and when side effects are fully and completely disclosed. Personally, I subscribe to the latter camp. Judicious and well-thought-out medication can indeed save lives, but outcomes can be disastrous when incompetently administered. You can find links to each of these courageous professionals on my website: Jeffreyhansenphd.com under the page *Psychotropic Medication Reviewers* (Hansen, 2024).

Robert Whitaker is an American journalist and author, writing primarily about medicine, science, and history. He is the author of five books, three of which cover the history or practice of modern psychiatry. He has won numerous awards for science writing, He is the founder and publisher of Mad in America, a webzine critical of the modern psychiatric establishment. Dr. Whitaker's lecture, Our Psychiatric Drug Epidemic, is particularly compelling. Click button to listen:

Professor Peter C Gøtzsche is a specialist in internal medicine. With about 80 others, he co-founded the Cochrane Collaboration in 1993 (the founder is Sir Iain Chalmers). He became professor of Clinical Research Design and Analysis in 2010 at the University of Copenhagen. He has been a proponent of caution regarding psychotropic medications. His lecture, Why Few Patients Benefit and Many are Harmed, is particularly compelling. Click button to listen:

Dr. Joanna Moncrieff is a British psychiatrist and a leading figure in the Critical Psychiatry Network. She is a prominent critic of the modern 'psychopharmacological' model of mental disorder and drug treatment, and the role of the pharmaceutical industry. Dr. Moncrieff's lecture, The Myth of the Chemical Cure: The Politics of Psychiatric Drug Treatment, is particularly compelling. Click button to listen:

Dr. Irving Kirsch is the associate Director of the Program in Placebo Studies and a lecturer in medicine at the Harvard Medical School and Beth Israel Deaconess Medical Center. He is the originator of response expectancy theory, and his analyses of clinical trials of antidepressants have influenced official treatment guidelines in the United Kingdom. His lecture, The Emperor's New Drugs: Exploding the Antidepressant Myth, is particularly compelling. Click button to listen:

Dr. Peter Breggin is a Harvard-trained psychiatrist and former Consultant at NIMH who has been called "The Conscience of Psychiatry" for his many decades of successful efforts to reform the mental health field. His work provides the foundation for modern criticism of psychiatric diagnoses and drugs, and leads the way in promoting more caring and effective therapies. He continues to education the public and professions about the tragic psychiatric drugging of America's children. Dr. Breggin's lecture to the Council for Evidence Based Psychiatry is particularly compelling. Click button to listen:

Dr. Robert Raffa is a professor of Pharmacology who has devoted much of his distinguished career to researching benzodiazepines. Although Dr. Raffa acknowledges that benzodiazepines have some use in the very short-term, long-term use can very dangerous and even potentially life-threatening and withdrawal can be beyond your worst nightmare. His interview with Jocelyn Petersen is particularly compelling: Click button to listen:

Dr. Anna Lembke, distinguished psychiatry professor at Stanford. was one of the first in the medical community to sound the alarm regarding opioid overprescribing and the opioid epidemic. In 2016, she published her best-selling book on the prescription drug epidemic, "Drug Dealer, MD – How Doctors Were Duped, Patients Got Hooked, and Why It's So Hard to Stop" (Johns Hopkins University Press, 2016). Her book was highlighted in the New York Times as one of the top five books to read to understand the opioid epidemic (Zuger, 2018). "Drug Dealer, MD" combines case studies with public policy, cultural anthropology, and neuroscience, to explore the complex relationship between doctors and patients around prescribing controlled drugs. It has had an impact on policy makers and legislators across the nation. Dr. Lembke's second book, Dopamine Nation explains the connection between addiction and dopamine and how this is ruling us. Her interview with Dr. Andrew Huberman is particularly compelling. Click button to listen:

Dr. James Davies is a co-founder of Council for Evidence Based Psychiatry (CEP) and editor of The Sedated Society: The Causes and Harms of our Psychiatric Drug Epidemic. He graduated from the University of Oxford in 2006 with a PhD in social and medical anthropology. He is a senior lecturer in social anthropology and psychotherapy at the University of Roehampton and is a practicing psychotherapist, having worked for MIND and the NHS. His lecture on the origins of the DSM - III is particularly compelling. Click button to listen:

Dr. Kelly Brogan is a holistic psychiatrist, author of the NY Times Bestselling book, A Mind of Your Own, Own Your Self, the children's book, A Time For Rain, and co-editor of the landmark textbook, Integrative Therapies for Depression. She is the founder of the online healing program Vital Mind Reset, and the membership community, Vital Life Project. She completed her psychiatric training and fellowship at NYU Medical Center after graduating from Cornell University Medical College, and has a B.S. from M.I.T. in Systems Neuroscience. She is specialized in a root-cause resolution approach to psychiatric syndromes and symptoms. Click here to listen:

To be clear, I am not saying that antidepressants have no place. It is clear that in cases of severe depression, antidepressants can save lives. On the other hand, there is consensus amongst many professionals that there is little convincing evidence in cases of mild to moderate depression. Moreover, the aforementioned side effects should caution us not to jump too quickly into taking them, which is even more concerning given considerable side effects. I encourage you to talk with your prescriber about your concerns, and if that prescriber is indifferent to them or is not on top of the literature, consider moving on.

Criticism for the DSM:

This chapter would not be complete without a few comments on the DSM-5-TR as it is the basis on which diagnoses are made that pave the path to medication and/or psychotherapy. Additionally, it allows providers to bill insurances for reimbursement. The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR), despite being a crucial tool in psychiatry and clinical psychology, has faced several criticisms since its publication. Key concerns include its categorization of mental disorders, the validity and reliability of some diagnostic criteria, and its influence on clinical practice and insurance reimbursement.

Below are some of the more significant criticisms highlighted in the literature:

Before we address the DSM-5-TR, we will need to take a look at the DSM III, as it is this revision that the DSM took a wrong turn. The time was 1980 when psychiatry was struggling to maintain its legitimacy and joined forces with the pharmaceutical industry. The decision was made to broadly expand pretty much everything to be a **"disorder"** because, in doing so, the disorders could be considered a **"medical problem"** that requires medication and, therefore, a billable event (Davies, 2013).

Dr. James Davies, a medical anthropologist, psychotherapist, and one of my favorite critics, questioned the utility of the Diagnostic and Statistical Manual of Mental Disorders, Third Edition (DSM-III) and its subsequent editions for several key reasons. His criticisms focused on the DSM's conceptualization, development, and impact on mental health practice. Here is a brief summary of his main points:

1. **Pathologization of Normal Behavior**: Davies argues that the DSM-III and its successors have increasingly pathologized normal variations in human behavior, leading to a massive inflation of mental disorder diagnoses. This expansion of diagnostic categories can turn what is really everyday challenges and emotions into unwarranted medical conditions, potentially leading to unnecessary medicalization and treatment (Davies, 2016).

2. **Lack of Empirical Basis**: Davies critiques the DSM-III for its lack of solid empirical foundations for many of its diagnostic categories. According to Davies, the criteria for numerous disorders are not based on rigorous scientific research but on committee consensus, which can be influenced by various non-scientific factors, including industry interests.

3. **Pharmaceutical Industry Influence**: Davies has raised concerns about the potential influence of the pharmaceutical industry on the development of the DSM. He argues that the expansion of diagnostic categories can serve the interests of pharmaceutical companies by enlarging the market for psychiatric medications. This relationship between the DSM committees and the industry may bias the manual toward pharmacological treatments.

4. **Reductionist Approach**: He criticizes the DSM's reductionist approach to mental illness, which focuses on symptoms rather than the underlying causes of distress. This approach, according to Davies, overlooks the complexity of mental health issues, including the socio-cultural and psychological factors that contribute to mental illness.

5. **Impact on Clinical Practice**: Davies is concerned about the impact of the DSM on clinical practice, suggesting that it encourages a checklist approach to diagnosis. This can lead to oversimplification of complex human experiences and may neglect the individual's unique context and story.

6. **Global Influence**: Finally, Davies critiques the global influence of the DSM, arguing that it exports a Western model of mental illness to non-Western cultures. This can lead to cultural insensitivity and the inappropriate application of Western diagnostic categories in diverse cultural contexts.

Current concerns about the DSM-5-TR, which is the version now in use, repeats and expands on Davies (2013) points and include:

1. **Overpathologization and Expansion of Diagnostic Criteria**: Critics argue that the DSM-5-TR has expanded diagnostic criteria for many disorders, potentially leading to the overdiagnosis of normal behavior as pathological. This expansion no doubt increases the prevalence rates of certain disorders without sufficient empirical evidence (Frances, A., 2013). For example, the broadening of criteria for disorders like Attention Deficit Hyperactivity Disorder (ADHD) and Generalized Anxiety Disorder (GAD) raises significant concerns about overpathologizing normal variations in behavior and mood.

2. **Lack of Empirical Support**: Previous revisions and new additions in the DSM-5-TR lack robust empirical support. Certain diagnostic categories were included based on limited research, potentially leading to misdiagnosis and inappropriate treatment (Paris, J., & Phillips, J., 2013).

3. **Reliance on a Categorical Model**: The DSM-5-TR continues to use a categorical approach to diagnose mental disorders, which fails to capture the complexity and full spectrum of mental health issues (Kendell, R., & Jablensky, A., 2003). I would argue that a dimensional or spectrum-based approach could more accurately reflect the nuances of mental health conditions.

4. **Financial Conflicts of Interest**: Concerning questions have been raised about the potential conflicts of interest among the DSM-5-TR's authors and the insidious influence of the pharmaceutical industry. It is probable that decisions may have been driven by interests that could benefit from expanded diagnostic criteria and increased medication prescriptions (Cosgrove, L., & Krimsky, S., 2012).

Personal note from Jeff: *In my case, medications indeed initially served a vital purpose, and for that, I am very thankful. The beneficial part was that the mirtazapine and additional sleep aids got me sleeping again, which was, in itself, lifesaving. But that is where the good part ends. My prescribers, although very well-intentioned, kept me on my psychotropics for far too long. My cocktail of SSRI, mirtazapine, and the dreaded benzodiazepine, clomipramine, kept me in a repeating pattern of anxiety, breakthrough depression, and eventually akathisia – a symptom, as mentioned elsewhere, which almost drove me to consider "the final solution." And the final kicker and rather embarrassing symptom was that I was put down so solidly at night that I occasionally wet the bed, which further eroded my already devastated sense of agency and self-worth. So, after nearly six years on various regimens and dosing, I elected to wean myself off all of them. The journey out was nothing short of horrific and took me more than a year. In time, my mental acuity returned, I was more able to engage in meaningful therapy, and the perpetual and aforementioned side effects completely disappeared. In short, I was one of the lucky ones - I got my life back. I am convinced that had my prescribers properly warned me of the side effects and, once on medications, had guided me to not stay on them for so long, my healing would have been accelerated by three years at least.*

Johann Hari's Connected Living

So, as we look toward solutions to getting our emotions and lives on track, we must have a template for what healthy lifestyles looks like. One of the most influential books I have found to address this issue is the groundbreaking book, *Lost Connections* by my literary hero, Johann Hari (2018). (Note: Please consider getting Johann's book, I am confident that you will find it life-changing).

Johann is an award-winning journalist and critical thinker and has suffered from depression since he was a child. In order to write his book, he set out on a three-year journey around the world to seek answers to his own depression. He talked with psychiatrists, epidemiologists, neurologists, neuroscientists, social scientists, and many other experts in their fields of study around the globe and explored different cultures and how they fared with these issues. In addition, he conducted a comprehensive review of the literature. Johann concluded that much of what we have been led to believe about the genesis and treatment of depression and anxiety is off the mark in many ways, and I fully agree. He determined that, in many cases, depression and anxiety are the

result of crucial and growing problems with the way we are living our lives. He discovered that there are nine underlying causes:

1. **Disconnection from Meaningful Work**: Feeling unfulfilled or lacking control in one's job can contribute to depression.
2. **Disconnection from Other People**: Loneliness or a lack of meaningful relationships impacts mental health.
3. **Disconnection from Meaningful Values**: Living by external values such as material success instead of intrinsic values that bring joy.
4. **Disconnection from Childhood Trauma**: Unresolved trauma from childhood can affect adult mental health.
5. **Disconnection from Status and Respect**: Feeling inferior or experiencing social status anxiety can lead to depression.
6. **Disconnection from the Natural World**: A lack of connection to nature and spending too much time indoors can negatively affect one's mood.
7. **Disconnection from a Hopeful or Secure Future**: Pessimism about the future or financial insecurity can lead to anxiety and depression.
8. **The Real Role of Genes and Brain Changes**: While not a "disconnection" in the same way as the others, Hari discusses the overemphasis on the biological causes of depression without considering environmental and social factors.
9. **Disconnection from a Meaningful Society**: Feeling disconnected from society or feeling that society is moving in a direction that doesn't align with one's values.

I will summarize most of Johann's disconnections points and add one on the value of faith. Note that I will share substantial content from his superlative book as it is hard to duplicate perfection. Again, I urge you to purchase your own copy of *Lost Connections*. That said, here goes:

Cause One - Disconnection from Meaningful Work:

Johann noted that the polling company Gallup conducted the most comprehensive study to date on work satisfaction/dissatisfaction between 2011 and 2012 to determine how people across the world felt about their work. Of the millions of workers across 142 countries, Gallop determined that only 13 percent reported that they were "engaged" with their work (Hari, 2018). On the other hand, 63 percent were "not engaged" - meaning no passion in one's work. Finally, 24 percent were "actively disengaged" - which translates to acting-out their unhappiness. In sum, twice as many people hate their jobs as love their jobs. In an effort to better understand high rates of depression and suicide in civil servants, investigators determined that a **lack of control** and little connection between **effort** and **reward** were highly predictive (Marmot et al., 2002).

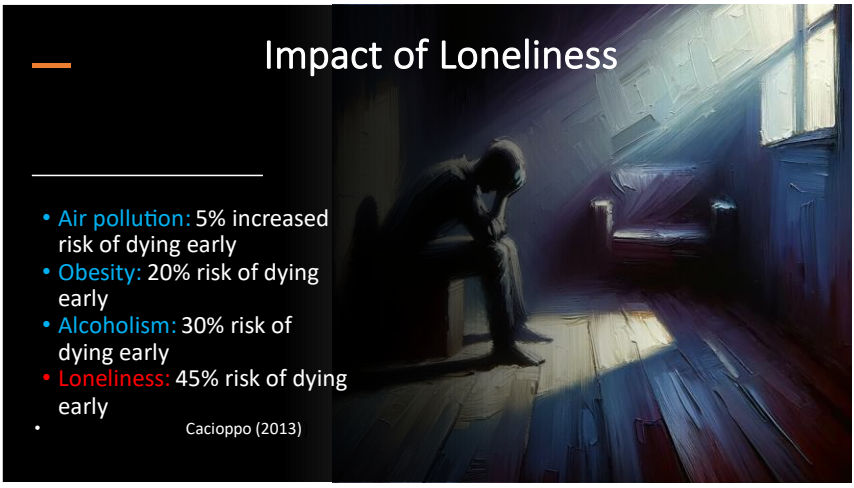
The above studies suggest that we need to develop a sense of empowerment, purpose, and accomplishment in what we do. If we are unhappy with our job, we can try to make changes to make it better. If that does not work, we can consider looking elsewhere. I see far too many unfulfilled people in my practice

come home from work and bathe themselves in unhealthy life patterns, including addictions, to ease the pain. This is no more evident than in the military, where the demands are particularly stressful.

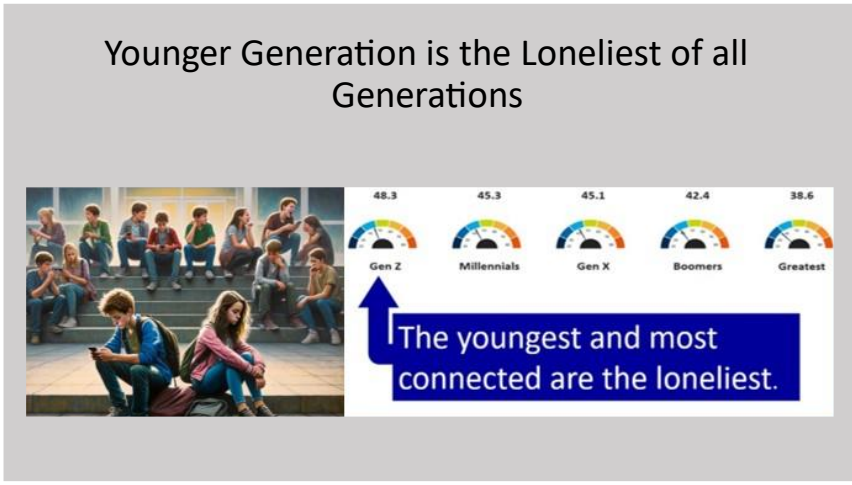
Cause Two – Disconnection from Meaningful People:

Dr. John Cacioppo et al. (2006, 2008, 2010), a neuroscience researcher, studied the impact that loneliness has on health. He and his colleagues determined that loneliness causes **cortisol** levels to go through the roof – as much as that caused by some of the most disturbing things that can ever happen in your life. As Hari (2018) summarizes Cacioppo's research, "Becoming acutely lonely, the experiment(s) found, was as stressful as experiencing a physical attack." Another researcher, Lisa Bergman, followed both isolated and highly connected people over nine years and found that isolated people were two to three times more likely to die during lonely periods and that, specifically, almost everything during lonely periods becomes more fatal for lonely people, including heart disease, cancer, and respiratory problems (Pinker, 2015). In short, loneliness can be deadly (Monbiot, 2014). In addition, Cacioppo et al. (2010) conducted a five-year longitudinal study, which showed that

loneliness is not merely the result of depression but indeed leads to depression as well. In this study, he found that on a measure of 0 percent loneliness to 100 percent loneliness, moving from 50 percent loneliness to just 65 percent loneliness increases your chances of becoming depressed by eightfold. He concluded that loneliness is causing a significant amount of depression and anxiety in our society. In a Ted Talk presentation, Cacioppo (2013) reported a rather shocking meta-analysis study of over 100,000 participants, which found increased risks of dying early due to the following:



A 2018 study conducted by Cigna (see diagram below) revealed that compared to older generations, the youngest is the loneliest generation ever (Cigna, 2018).



The implications of this research are clear; specifically, it is to our benefit that we stop isolating ourselves and connect in positive and fulfilling family and social relationships.

Cause Three – Disconnection from Meaningful Values:

Family Values

Johann notes that an American psychologist, Tim Kasser, has spent much of his professional career investigating the impact of values on our emotional and physical health. He specifically researched what philosophers had been suggesting for thousands of years - that you will be unhappy if you overvalue money and possessions or if you think about life mainly in terms of how you look to other people (Belk, 1983). Kasser's research specifically determined that the more materialistic we are, the more likely we are to score higher on measures of

depression. In his studies, materialistic people were having a tougher time with life in general. They tended to be sicker and angrier. “Something about a strong desire for materialistic pursuits,” Kasser wrote, “actually affected the participants’ day-to-day lives” (Kasser, 2002). Johann notes that materialistic values, which tell us to spend our way to happiness look like real values, yet they do not give us what we need from values, namely, a path toward a satisfying and fulfilled life and instead fill us with **“psychological toxins,”** which can distort our minds (Hari, 2018).

In my family therapy sessions with media and porn-addicted teens and young adults, I ask the family to define, evaluate, and clarify their family values and additionally determine what their family name means. In addition, I sometimes assign them to develop a family ***Coat of Arms*** (a pictorial symbol to identify their family values and what they stand for). Sadly, there is far too little discussion about family and personal values these days. Good values are like a compass that helps keep us on a “true north” path toward healthy living.

Cause Four – Disconnection from Childhood Trauma:

As noted earlier, childhood trauma is a leading reason many turn to media and/or pornography in an effort to quell that pain. As such, unless that trauma is adequately addressed and resolved, efforts to stop our addictions can be much more difficult, if not impossible. Moreover, many individuals with unresolved trauma may be successful in stopping one addiction but will only end up switching it out for another. As Johann Hari (2018) put it, "There's a house fire inside many of us."

Cause Five – Disconnection from Status and Respect:

🌟 Status and Respect 🏆

Robert Sapolsky's baboon research revealed that baboons with the lowest status must compulsively show that they know they are defeated. They do this by making subordinate gestures – lowering their heads, crawling on their bellies, etc. Moreover, when a baboon is looking and acting this way, and when no one is showing him any respect, he will

look a lot like a depressed person in that he will keep his head down, he will not want to move, he will lose his appetite and all energy, and when someone comes near him, he will pull away (Sapolsky, 1992, 2002). Sapolsky subsequently determined that depressed humans are flooded with the same stress hormone, namely cortisol, that low-ranking baboons experience and that the same constellation of changes in the brain and pituitary and adrenal glands also occur (Sapolsky, 1992, 2002).

As noted earlier, spending much of the day in media does not afford us the necessary time and experience to build real 3D relationships, nor do we develop competence in a world that will ask much of us and, as a result, we will most assuredly lose "status and respect," not only from others but we will also lose self-respect and self-confidence. We need to ensure that we are unplugging to develop those necessary skills. As Twenge (2006), in her book, *Generation Me*, astutely pointed out, self-esteem is not based on air but on mastery and real-world competence.

Cause Six: Disconnection from the Natural World:

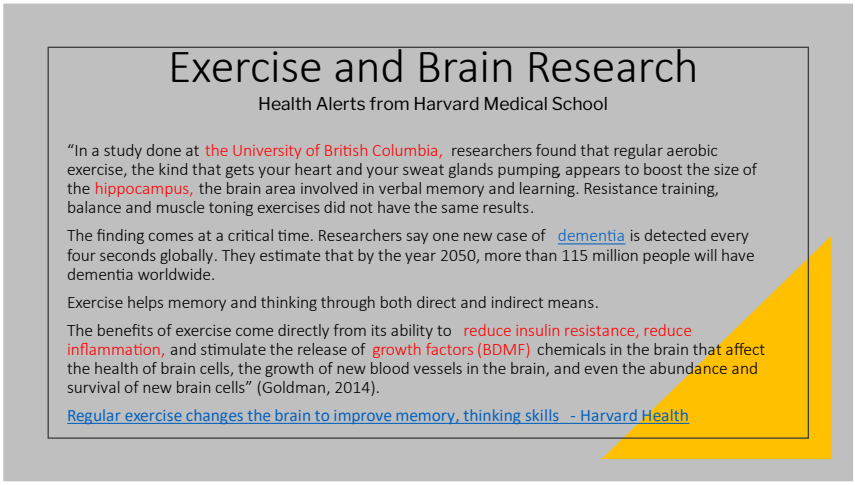
Our children no longer learn how to read
the great Book of Nature
From their own direct experience or how to interact creatively
with the seasonal transformations of the planet.
They seldom learn where their water comes from or where it goes.
We no longer coordinate our human celebration with
the great liturgy of the heavens.

-Wendell Berry

Chilean primatologist Isabel Behncke has spent much of her professional career studying the behavior of chimpanzees and Bonobos in both the wild and captivity. She noted that Bonobos in the wild can become sad or depressed, but there is a limit to how far they will go. However, in captivity, Bonobos often become so deeply depressed to the point they will scratch themselves until they bleed and can develop tics or start to rock obsessively, whereas, in their natural habitat, these behaviors are never observed (interview with Isabel Behncke cited in Hari, 2018). Elephants in captivity will often grind their tusks- which is a source of pride – against the walls to the point that they become stumps, and some elephants in captivity are so traumatized they will actually sleep upright for years; all behaviors that are never seen in the wild

(Sutherland, 2014). Isabel Behncke postulated that, similar to the animal world, we, too, are more prone to depression when we starve ourselves from connection to the natural world (interview with Isabel Behncke cited in Hari, 2018). Berman (2012) conducted a study that asked city dwellers to simply take walks in nature and then evaluated their mood and concentration and predictably found that everyone reported feeling better and noted improved concentration, and most interestingly, previously depressed people reported five times greater improvement than non-depressed people. The scientific evidence is very clear that exercise indeed improves depression and anxiety (Strohle, 2009); however, getting out and exercising outdoors has even better rewards. For example, Gilbert (2009) reported that both people who run on treadmills in the gym and people who run in nature show a reduction in depression; however, this is significantly greater for people who run in nature.

Richard Louv, who coined the term **Nature Deficit Disorder,** wrote that humans are hard-wired for a genuine nature connection. Louv believes that the exponential increase in emotional and psychological problems in kids today are all related to an erosion of their connection with nature and immersion into the digital world (Louv, 2005). We need to ensure that we are unplugging and going outside to bond with nature, play, and reap the benefits of exercise. Doing this in a social context is even better.



Research, as summarized by Bathina et al. (2015), reveals that exercise increased brain derived neurotrophic factor (BDNF), which acts on health in the following ways:

BDNF Promotes Brain Health

1. Promotes growth and differentiation of neurons and synapses.
2. Serves as a neuroprotective factor, helping to support the survival of existing neurons and encouraging the growth of new neurons and synapses.
3. Influences mechanisms of memory and cognition, contributing to the processes of learning and memory.
4. Influences neurotransmission, including glutamatergic and GABAergic synapses, which can impact serotonergic and dopaminergic neurotransmission.

Cause Seven – Disconnection from a Hopeful and Secure Future:

🌟 Hopeful and Secure Future 💼 🌱

Johann notes that as Native Americans were stripped of their identities, they lost their connection to the future, became increasingly depressed, and then often resorted to alcohol abuse, which resulted in addiction. I would conjecture that as we lose connection with our true identities, not only within our families but within our culture, we will further retreat to media in hopes of cultivating an identity. Sadly, the cyber-world cannot fill this need and only perpetuates a sense of disconnection, loneliness, and feelings of despair about a probable insecure future. We need to

ensure that we have hope for what lies ahead, and that life has purpose and meaning. This can only happen when living a connected life.

One of the most influential studies highlighting the value of hope in mental health and its role as an antidote to depression and suicide is the work by Snyder et al. on Hope Theory. Snyder's research has been foundational in psychology, particularly his article "The will and the ways: Development and validation of an individual-differences measure of hope" (Snyder et al., 1991). This study introduced the Hope Scale, a tool used to measure a person's hopeful thinking, and discussed how hope consists of agency (goal-directed determination) and pathways (planning to meet goals), contributing significantly to positive outcomes in mental health.

Snyder's hope theory posits that higher levels of hope correlate with better psychological wellbeing, including lower levels of depression and reduced suicidal ideation. According to Snyder, hope acts as a buffer against the development of mental health issues by fostering resilience, enhancing problem-solving skills, and encouraging positive future-oriented thinking. In clinical settings, hope has been integrated into therapeutic interventions, showing promising results in improving mental health outcomes (Snyder et al., 1991; Snyder 2000).

Cause Eight – Disconnection from Faith (emphasis mine):

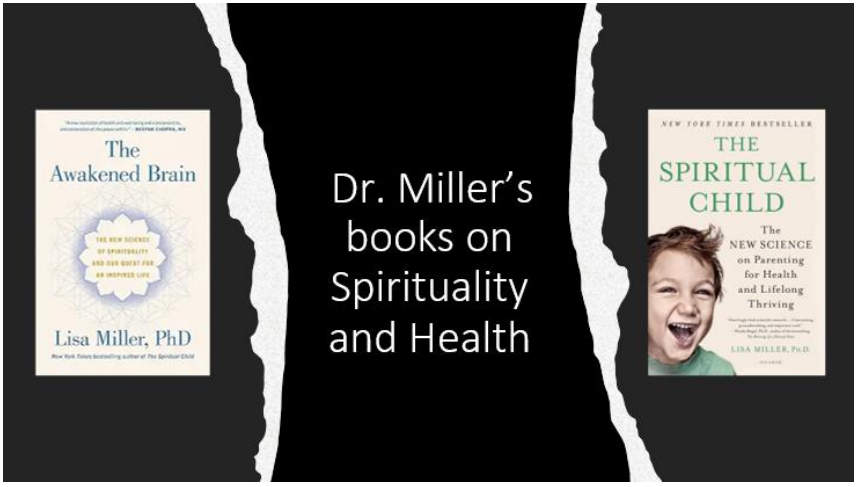
"Man is not destroyed by suffering; he is destroyed
by suffering without meaning."

-Victor Frankl

Although not specifically mentioned by Johann, I believe that faith can be fundamentally important. Observational studies suggest that people who have regular spiritual practices tend to live longer (Strawbridge et al., 1997). Another research study investigated 1,700 older adults and found that those who attended church were half as likely to have elevated levels of interleukin-6 (IL-6), associated with an increased incidence of disease. These authors concluded that religious commitment might improve stress control by affording better coping mechanisms, richer social support, and the strength of personal values and worldview (Koenig et al., 1997). Spirituality is essential to the "existential domain," as measured in quality-of-life scores. Positive reports on those measures, i.e., a meaningful personal existence, fulfillment of life goals, and a feeling that life to that point had been

worthwhile, correlate with a good quality of life for patients with advanced disease (Cohen et al., 1995).

The most widely known and my favorite researcher on spirituality and its relationship to mental health is Dr. Lisa Miller. Dr. Lisa Miller is a prominent clinical psychologist and a leading researcher in the field of spirituality and psychology. She is best known for her work on the impact of spirituality and religion on mental health. Dr. Miller has extensively studied the scientific underpinnings of spirituality and its relationship to wellness, especially in preventing depression and substance abuse among adolescents and adults. Miller serves as a Professor in the Clinical Psychology Program at Teachers College, Columbia University. She is also the Founder of the Spirituality Mind Body Institute at Columbia University, where she leads research initiatives to explore the integration of spirituality into psychological practice. Dr. Miller's amazing work emphasizes the protective factors that spirituality and religious beliefs can provide against various mental health challenges.



In her seminal book, "The Awakened Brain: The New Science of Spirituality and Our Quest for an Inspired Life," she presents compelling evidence and insights into the profound benefits of spirituality on mental

health and well-being. Drawing on her extensive research in the field, she makes several key conclusions regarding the positive impact of spirituality:

1. **Enhanced Resilience**: Miller argues that spirituality and a deep sense of connection to something greater than oneself can significantly boost resilience against stress and adversity. She provides evidence that people with a strong spiritual life tend to recover more quickly and thoroughly from life's challenges.

2. **Decreased Risk of Depression**: One of the critical findings shared in the book is the protective effect of spirituality against depression. Miller's research suggests that individuals with a rich spiritual life have a lower risk of falling into depression, and if they do, they often experience a milder form.

3. **Improved Emotional Well-being**: The book also highlights that spirituality is linked to enhanced emotional well-being, including feelings of happiness, contentment, and purpose. Miller posits that spiritual practices and beliefs contribute to a more optimistic outlook on life.

4. **Increased Connectivity**: Miller discusses how spirituality can increase a sense of connectedness, not only with the divine or a higher power but also with the community and the world at large. This sense of belonging can be profoundly healing and fulfilling.

5. **Support for Physical Health**: While the primary focus of "The Awakened Brain" is on mental and emotional health, Miller also touches upon the interplay between spirituality and physical health. She suggests that the mental health benefits associated with spirituality can indirectly support physical health by reducing stress and promoting healthier lifestyle choices.

Personal note from Jeff: *Johann Hari's work was profoundly helpful to me as it summarized much of what I did to get myself once again regulated emotionally and back on track, so much so that I felt compelled to write him a letter of gratitude.*

Hi Johann,

I have been wanting to write to you for quite some time and on this cold and wet Saturday evening in the Pacific Northwest, I am finally reaching out.

By way of introduction, I am a clinical pediatric psychologist working at Madigan Army Medical Center, one of the largest Army training hospitals in the US. I also have a small private practice in Olympia, Washington State. But this is not really that relevant. What is relevant and what connects me to you is that I, too, have struggled with profound depression, so severe, in fact, that it landed me in the psychiatric ward at St. Peter Hospital some twelve years ago after hitting a point of deep depression – precipitated by my wife's cancer diagnosis, my daughter's

possible lymphoma diagnosis, my son's deployment to Fallujah, Iraq in 2008, and the loss of my financial stability due to heavy real estate investment losses during the financial collapse and worldwide recession of that time. After my total emotional collapse, I embarked on a long journey of recovery, one that took me almost eight years. Once recovered, I began to do an internal assessment and inventory of the many things I did to bring back wholeness to my life and, by way of a gift, once nearing completion of that inventory, I happened to hear your interview by George Noorey on Coast to Coast radio. I was immediately captivated by your story. I bought your book, Lost Connections, and was nothing short of validated, blessed, moved, intellectually challenged, and deeply touched by your words. You helped lend credence and validation to my struggle and to what it took to save myself and heal. I came to know you as a fellow traveler in the struggle of life. I have watched nearly every YouTube and Ted Talk interview and presentation you gave and came to know you as a sort of friend, if not even a brother, in the life experience we all share.

I am very happy to say that my life is now nothing short of amazing. I left my very lucrative full-time private practice where money ruled, toxic relationships reigned, and fulfillment in service to others diminished. I returned to an Army medical center, perhaps by universal design, the one where I once served when I was on active duty some two and a half decades ago - with half the pay but twice the fulfillment, as I was no longer working for

the mighty dollar but was instead dedicated to the service of others. In short, I found my soul.

My journey to hell and back, the lessons learned, and your book all contributed to my salvation. Johann, I cannot thank you enough – for your humility in sharing your story, your brilliance in researching the truth, and your courage in sharing it. You have helped to enrich and save the lives of many, not the least of which is mine.

I have applied your teaching not only to my life but to the lives of the many severely disturbed and often emotionally challenged patients I serve at Madigan and in my private practice. I have developed your multi-point model of connection into a therapy protocol for many of my patients at Madigan Army Medical Center, as well as in my private practice, which I have affectionately named The Center for Connected Living, LLC. In addition, I have a personal interest and passion for helping those who are imprisoned by media and pornography addiction, the epidemic plagues of modern culture, and I use your model of connection as one of the key components of recovery for them both in my therapy and my speaking engagements.

I hope you don't mind, but I have made considerable reference to your work in my papers and PowerPoints, which I have developed for my patients at Madigan and in my private practice. Should you ever wish to peruse them, you can find them on my website: ***jeffreyhansenphd.com****. No worries if you choose not to review*

them but suffice it to say that you are helping restore the emotional lives of many, my friend.

I hope to meet you one day and have the privilege of shaking your hand. You are the best of humanity, and I am honored to count you as one of my literary mentors.

With fond regards,

Jeff

Johan's reply (and I am so honored):

Dear Jeffrey,

I am so moved by your email and what you have achieved. You should be really proud of yourself to have built so much after the pain you were in and using it to help people.

If I am ever in Olympia again I will buy you dinner.

Very best wishes

In Closing

So, thank you for taking a walk with me. The journey of life for most of us takes us through an emotional storm because that is just part of the human condition. For some lucky few who have inherited healthy genes and epigenomes, enjoyed the best of secure attachment early in life, experienced little trauma and few Adverse Child Experiences while growing up, and lived connectedly,

emotional stability comes much more easily. But most of us, to some degree, have taken on damage, which has impacted our ability to manage the emotional storms of life, and we are instead managed by it. But I want you to know that no matter how bad your life previous to this moment might have been, you can heal, and you can restore your mind, body, and soul. If I can take such a fall from grace and heal to live a life better than I ever could have imagined, so can you. Keep looking up, keep learning, keep hoping, keep hold onto your faith, and keep persevering. You can do it if you remain connected with all good things.

For as one of the greatest baseball player ever to have graced the field said, **"Never give up, because it ain't over 'til it's over.**

Jeff

P.S. With deep heartfelt thanks to family and friends for walking connected with me through the peaks and valleys of life, You know who you are.

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.

Anderson, F. (2021). *Transcending trauma: Healing complex PTSD with Internal Family Systems*. PESI Publishing.

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.

Braden, G. (2020). The Science of Heart-Brain Harmony with Gregg Braden.

The Science of Heart-Brain Harmony with Gregg Braden (youtube.com)

(accessed March 10, 2024).

Braden, G. (2015a). Practice this Technique to Relieve Daily Stress... Three Keys to Heart - Brain - Earth Harmony

https://www.youtube.com/watch?v=2nsm8SCWjic&t=1088s&ab_channel=GreggBradenOfficial

(accessed March 10, 2024).

Braden, G. (2015b). *Resilience from the Heart*. Hay House, Inc. Carlsbad, CA.

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*

CDC (2020). Antidepressant Use Among Adults: United States, 2015-2018.

https://www.cdc.gov/nchs/products/databriefs/db377.htm

(accessed March 7, 2024).

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

Cosgrove, L., & Krimsky, S. (2012). A comparison of DSM-IV and DSM-5 panel members' financial associations with industry: A pernicious problem persists. PLOS Medicine, 9(3), e1001190. https://doi.org/10.1371/journal.pmed.1001190

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.

Davies (2016). Dr James Davies: The Origins of the DSM.

https://www.youtube.com/watch?v=6JPgpasgueQ&ab_channel=CouncilforEvidence-basedPsychiatry

Davies, J. (2013). *The making of DSM-III: A diagnostic manual's conquest of American psychiatry*. Oxford University Press.

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. & 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/

Filipowicz, W., Bhattacharyya, S. N., & Sonenberg, N. (2008). Mechanisms of post-transcriptional regulation by microRNAs: Are the answers in sight? *Nature Reviews Genetics, 9*(2), 102-114. https://doi.org/10.1038/nrg2290

(accessed March 16, 2024).

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.

Frances, A. (2013). Essentials of psychiatric diagnosis: Responding to the challenge of DSM-5. Guilford Press.

Goldman, H. (2014). Regular exercise changes the brain to improve memory and thinking skills.

Regular exercise changes the brain to improve memory, thinking skills - Harvard Health

(accessed March 14, 2024)

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.

Hansen, J. E. (2024). Psychotropic Medication Reviewers:

https://www.jeffreyhansenphd.com/mediction-outcome-research

(accessed March 15, 2024).

Hansen, J. E. (2023). *HeartMath/Neurocardiology as a Pathway to Autonomic Safety*. Paper presented to Family Advocacy Program International Staff at the Academy of Health Sciences, Fort Sam Houston, TX.

Hansen, J (2021). *Our Internal Tempest and the Pathway to Peace*. Olympia, WA: Center for Connected Living, LLC

Hansen, J. E., Doan A. P. (2023). Digital Drugs and the Seach for Connection. Prescott, AZ: Center for Connected Living, LLC.

Hari, J. (2015) "Everything You Think You Know about Addiction Is Wrong." TED Global London, 14:42. June2015. https://www.ted.com/talks/johann_hari_everything_you_think_know_about_addiciton_is_wrong?language=en

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

Healey, D. (2021). ISSM Webinar on Post SSRI Sexual Dysfunction.

https://www.youtube.com/watch?v=yFxMeoaIc3c&ab_channel=ISSMInternationalSocietyforSexualMedicine

(accessed March 8, 2024).

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).

Horowitz, M., & Taylor, D. (2024). *Deprescribing guidelines for psychiatric medications*. John Wiley & Sons, LTD. Pondicherry: India.

ISAA Counseling (2024) https://issacounseling.com/breaking-down-the-6-fs-of-ifs

(accessed March 2, 2024).

Jefferies, A. L. (2012). Canadian Paediatric Society, Fetus and Newborn Committee. Kangaroo care for the preterm infant and family. *Paediatrics & Child Health, 17*(3), 141-6.

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

Jenuwein, T., & Allis, C. D. (2001). Translating the histone code. *Science, 293*(5532), 1074-1080.

https://doi.org/10.1126/science.1063127

(accessed 16 March 2024).

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.

Kendell, R., & Jablensky, A. (2003). Distinguishing between the validity and utility of psychiatric diagnoses. American Journal of Psychiatry, 160(1), 4-12.

https://doi.org/10.1176/appi.ajp.160.1.4

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-Q9Y2-0GG74WH6

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.

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-Fernández, R., & Aggarwal, N.K. (2013). Culture and psychiatric diagnosis: A DSM-5 perspective. American Psychiatric Pub.

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.

Attachment relationships among children with aggressive behavior problems: the role of disorganized early attachment patterns - PubMed (nih.gov)

(accessed March 16, 2024).

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

McCraty, R. (2023). The Science of HeartMath.

The Science of HeartMath - HeartMath

(accessed March 10, 2024).

McCraty, R., Atkinson, M., Tomasino, D., & Bradley, R. T. (2009). The coherent heart: Heart-brain interactions, psychophysiological coherence, and the emergence of system-wide order. *Integral Review*, 5(2), 10-115.

McCraty, R. (2015). Science of the heart: Exploring the role of the heart in human performance. *HeartMath Institute*, 2, 1-96.

McCraty, R., & Childre, D. (2010). Coherence: Bridging personal, social, and global health. *Alternative Therapies in Health and Medicine*, 16(4), 10-24.

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).

Moncrieff, J. (2023). Dr Joanna Moncrieff | Chemical Imbalance: Truth or Myth | MH360°

https://www.youtube.com/watch?v=FdbX5JstwgA&t=19s&ab_channel=TheRedDoor

(accessed March 8, 2024))

Moncrieff J, Cooper RE, Stockmann T, Amendola S, Hengartner MP, Horowitz MA. (2023). The serotonin theory of depression: a systematic umbrella review of the evidence. Mol Psychiatry. 2023 Aug;28(8):3243-3256.

doi: 10.1038/s41380-022-01661-0. Epub 2022 Jul 20. PMID: 35854107; PMCID: PMC10618090.

Moore, L. D., Le, T., & Fan, G. (2013). DNA methylation and its basic function. *Neuropsychopharmacology, 38*(1), 23-38. https://doi.org/10.1038/npp.2012.112

(accessed March 16, 2024).

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

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

Paris, J., & Phillips, J. (Eds.). (2013). Making the DSM-5: Concepts and controversies. Springer.

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

Porges, S.W., & Porges, S. (2023). Our Polyvagal World: How Safety and Trauma Change us. New York, NW: W.W. Norton & Company.

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

Riemersma (2024). https://jennariemersma.com/move-toward/

(accessed March 3, 2024.

Riemersma, J. (2020). *Altogether you: Experiencing personal and spiritual transformation with Internal Family Systems Therapy*. Atlanta, GA: Pivotal Press.

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

Salmassi, M. (2013). Almost 70 Percent of Americans Take at Least One Prescription Medication, Study Finds.

https://drugfree.org/drug-and-alcohol-news/almost-70-percent-of-americans-take-at-least-one-prescription-medication-study-finds/#:~:text=The%20most%20common%20prescriptions%20are%20for%20antibiotics%2C%20antidepressants%20and%20opioid%20painkillers

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

Schrier, A. (2024). *Bad Therapy: Why the Kids Aren't Growing Up*. Sentinel.

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).

Snyder CR, Harris C, Anderson JR, Holleran SA, Irving LM, Sigmon ST, Yoshinobu L, Gibb J, Langelle C, Harney P. (1991). The will and the ways: development and validation of an individual-differences measure of hope. J Pers Soc Psychol. 1991 Apr;60(4):570-85.

doi: 10.1037//0022-3514.60.4.570. PMID: 2037968.

Snyder, C. R. (Ed.). (2000). *Handbook of hope: Theory, measures, and applications*. Academic press.

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]

Tiller, W. A., McCraty, R., & Atkinson, M. (1996). Cardiac coherence: A new, noninvasive measure of autonomic nervous system order. *Alternative Therapies in Health and Medicine*, 2(1), 52-65.

University of Lancaster

https://www2.le.ac.uk/projects/vgec/highereducation/epigenetics_ethics/Introduction

(Accessed June 9, 2020).

U.S. Food and Drug Administration. (2004). FDA MedWatch - Antidepressant drugs: Antidepressants updated labeling includes warnings about increased risks of suicidal thinking and behavior in young adults ages 18 to 24 during initial treatment. Retrieved from

https://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/UCM096273

van der Kolk, B. A. (2014). *The body keeps the score: Brain, mind, and body in the healing of trauma*. Viking.

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).

Whitaker (2023). Podcast 413: The Great Psychiatry Fruad.

https://www.youtube.com/watch?v=9_XkmsRfSX4&t=2s&ab_channel=Dr.CarolineLeaf

Whitaker, R. (2010). *Anatomy of an Epidemic: Magic Bullets, Psychiatric Drugs, and the Astonishing Rise of Mental Illness in America*. Crown.

Whitaker, R., & Cosgrove, L. (2015). *Psychiatry Under the Influence: Institutional Corruption, Social Injury, and Prescriptions for Reform*. Palgrave Macmillan.

Whitaker (2018): Long Term Effects of Anti-Depressant Medication with Robert Whitaker

https://youtu.be/FY-5npruTGc

(accessed March 6, 2024)

Wikipedia (2020a). Epigenetics

https://en.wikipedia.org/wiki/Epigenetics

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

Reisman, Y. (2021). ISSM Webinar on Post SSRI Sexual Dysfunction.

https://www.youtube.com/watch?v=yFxMeoaIc3c&ab_channel=ISSMInternationalSocietyforSexualMedicine

(accessed March 8, 2024).

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.