

# Summary: The Body Keeps the Score Brain, Mind, and Body in the Healing of Trauma

Quick Savant

## Introduction

Since the 1970s, Bessel Van Der Kolk has specialized in the diagnosis and treatment of PTSD as a lecturer and researcher. This book is based on his fifty years of expertise in the profession, as well as his forty years as the director of a Trauma Center.

The book covers crucial issues for people researching trauma in the twenty-first century. He examines the history of trauma analysis and therapy, as well as the different causes and obstacles that have stymied development in the area. Dr. Van Der Kolk also goes through some scientific evidence on trauma and how it works, as well as broader comments on the brain's intricacies when dealing with trauma and traumatic memories. He discusses cutting-edge techniques to trauma therapy that might have good public health implications.

He devotes a few paragraphs in each chapter to sharing some of his experiences with the reader, many of which are scary and frequently upsetting, as one would anticipate given the subject matter. But he is quick to point out that many of the trauma patients he has seen are difficult and stubborn, an ironic byproduct of having to deal with extremely terrible events.

## Preface: Dealing with Trauma

From people who encounter trauma in war zones to victims of sexual assault, Bessel Van Der Kolk analyzes a variety of traumas. He goes on to say that trauma is our brain's reaction to traumatic events, a kind of survival shutting down that is very tough to 'reboot' from.

He describes his first contacts with medicine when he was fourteen years old, and how his cousin Michael encouraged him to learn about the human body and subsequently the complexity of the human brain in order to find solutions to healing. He then goes on to discuss how neuroscience, interpersonal neurobiology, and developmental psychopathology are changing our perceptions of psychological trauma.

Van Der Kolk continues by noting that the book is a guide to the topic he has spent his life researching, and he expresses his hope that it would shed light on the different ways in which persons who have experienced trauma might relieve symptoms.

# Chapter 1

## Lessons from Vietnam Veterans

The first chapter of Bessel Van Der Kolk's *The Body Keeps the Score* begins with the author recounting his first day at the Boston Veterans Administration Clinic in 1978, meeting Tom, a Vietnam War veteran who suffered from recurrent and unpleasant wartime memories in his daily life. Tom thought that taking drugs for his trauma meant abandoning the companions he had been abandoned in Vietnam, which is why he stopped taking them.

### Trauma and Loss of Identity

The author continues Tom's account by saying that one of the things Tom told him about was about how he staged a furious assault on a Vietnamese hamlet, massacred children, and raped a lady in retaliation for one of his companion's death. The author considers the long-term consequences of such activities on veterans who have left the military.

### Numbing

One of Tom's most upsetting symptoms, according to the author, was his inability to emotionally connect with his family or loved ones. Tom was a lawyer in real life, and one of the few times he felt emotionally invested in anything was when he defended a gang member accused of murder.

### The Restructuring of Perception

Van Der Kolk continues by describing how Bill, another veteran who came to visit him, had a psychotic episode when he first arrived.

With his first kid, he was on his own. PTSD was not a recognized diagnosis at the time, and instances like Bill's were often misdiagnosed as schizophrenia with paranoia. Van Der Kolk's team was able to solve the mystery after a series of Rorschach tests with Bill and others.

He hypothesized that traumatized persons saw the world through the lens of their own trauma.

## Traumatized People

This concept was reinforced when the author dealt with older groups of World War II veterans, who were as capable.

Only their painful history may be completely engaged emotionally.

## Identifying Posttraumatic Stress Disorder

Chaim Shatan and Robert J. Lifton, Vietnam veterans and psychoanalysts, successfully petitioned the American Psychiatric Association in 1980 to designate PTSD. However, truly comprehending the ever-expanding spectrum of trauma, both among veterans and victims of sexual assault, would take a long time.

## A New Perspective

He observes that a lot has changed since his encounter with Tom, and we now know a lot more, particularly about how it may impact the structure of the mind and how we might recover from it.

## Chapter 2

### Revolutions in Mind and Brain Research

Bessel Van Der Kolk continues as the author reflects on his year off from medical school in the late 1960s and his work as a research ward attendant in a Massachusetts mental health hospital.

### The Night Before Dawn

He recalls that during the night shift, when restless patients would tell their horrible abuse memories, he found some of the most valuable times at this health institution. He noticed that some people suspected of being plagued with schizophrenia were instead plagued by hallucinations that resembled incomplete recollections.

### Suffering and Its Meaning

He recounts his training as a psychiatrist and how one of his professors, Elvin Semrad, was determined to convey a feeling that basic human needs, outside the complexity of psychiatry, are vital to mental health. But it was also a period of change in psychopharmacology, with the introduction of antipsychotics, a subject in which Van Der Kolk was interested and started study at Boston State Hospital.

### Unavoidable Shock

In 1984, he went to a presentation by Steven Maier, who had used electric shocks on dogs in cages to explore acquired helplessness, which he dubbed "inescapable shock." Though the author was disturbed by such heinous testing, he sensed a parallel between this condition and that of traumatized people he had met.

### Trauma Addiction: The Pleasure of Pain and the Pain of Pleasure

Combat veterans, like caged creatures, felt most alive when they could relieve their suffering. Van Der Kolk recalls subsequently testing veterans' reactions by showing them video from Platoon and submerging their hands in freezing water. These trials shown that powerful emotional reactions may mask pain.

### Brain Relaxation

He examines the creation and usage of Prozac and finds that it has been very beneficial, using instances from his own practice to back up his claim.

#### The Pharmacological Triumph

Antipsychotics' effectiveness has turned mental health facilities into places to be treated rather than avoided. The author, however, expresses his worry that such pharmaceuticals have become a business before therapy, and that therapies that do not employ them are dismissed as pseudoscience.

#### Adaptation or Illness?

Van Der Kolk lists four realities about the brain-disease paradigm at the end of this chapter. These are they:

People have the ability to both damage and heal one another.

Language is essential to our capacity to heal and find meaning. It allows us to control our physiology, even involuntary actions.

We can help children and adults by creating beneficial social settings.

## Chapter 3

### Looking into the Brain

Bessel Van Der Kolk begins this chapter of *The Body Keeps the Score* by discussing the introduction of computer technologies such as PET and fMRI in the 1990s, which opened up new opportunities in the study of the human brain and its activities.

He goes on to discuss his own research, which looked at brain activity during traumatic event recollection.

One of the most startling findings in his research was a drop in Broca's area, activity, which is one of the brain's speech centers. The Brodman's section, which analyses photos, however, was brightly illuminated. It may be concluded that for people reliving trauma, it feels very much like it is truly happening.

### Shifting the Brain to One Side

Furthermore, trauma recollection elicited significant activity on the brain's right side, suggesting that the victim responds emotionally rather than intellectually.

### Fight or Flight Stuck

According to Van Der Kolk, the research revealed that trauma and recreating it are difficult to convey on a physiological level.

## Chapter 4

### The Anatomy of Survival: Running for Your Life

Bessel Van Der Kolk continues with his meetings with Noam Saul, a five-year-old who saw the World Trade Center attacks in 2001. He especially likes the photo Noam took the next morning, in which he placed a trampoline at the bottom of the buildings. He recalls Noam not losing anybody in the assaults and being able to escape his school with his parents, despite being within sight of the victims. Noam was able to flee and conceive of solutions, albeit stupidly, to remedy the issue he observed, which set him apart from individuals who suffer from PTSD.

### Surviving Organized

He takes a minute to explain how trauma may arise when the brain's natural fight or flight circuits are shut down, causing the stress hormones to continue to be secreted, often long after the traumatic event has occurred.

### From the Bottom to the Top of the Brain

Van Der Kolk shares the following general brain geography, from oldest (bottom) to newest (top):

Breathing, eating, sleeping, and defecating are all reptilian functions.

Limbic system (or mammalian) - detects danger, pleasure, and emotional reactions to stimuli. The author refers to the emotional brain as the combination of the first two.

The uppermost layer, the neocortex, is capable of comprehending abstract and symbolic concepts, as well as planning and reflecting.

### Interpersonal Neurobiology: Mirroring Each Other

Then there's the case of a monkey in a lab who was linked up to a brain activity monitor while watching a lab researcher put away food pellets. The imaging revealed that the monkey's brain reactions matched those of the researcher.

### The Cook and the Smoke Detector Identifying Danger

In this part, Van Der Kolk compares the thalamus to the 'chef' of the brain, a place that processes information and converts it into an 'autobiographical

soup,' based on Paul MacLean's descriptions. He compares the amygdala to a smoke alarm that releases cortisol and adrenaline to warn the thalamus to possible dangers, but stress increases the possibilities of it misinterpreting.

#### The Watchtower Approach to Stress Management

He goes on to compare the medial prefrontal cortex to the brain's watchtower, the part that can better analyze the threat and warn us whether it's a false alarm. The link between the amygdala and the medial prefrontal cortex is disrupted by PTSD, making it more difficult to relax.

#### The Horse and the Rider

Van der Kolk uses MacLean's analogy of a ride with a misbehaving horse to compare the logical and emotional brains.

When the two are at odds with one another, psychological distress results.

#### The Trauma Brains of Stan and Ute

Stan and Ute Lawrence were engaged in a catastrophic traffic accident in which they almost perished and watched a young lady burned in flames, according to the author. Stan had a whole flashback and relived the event on a subsequent PET scan with Dr. Ruth Lanius.

#### Reliving and Dissociation

The sensory shards of traumatic memories to which they react in sometimes unreasonable and excessive ways are referred to as dissociation. Depending on the nature of the trauma, they may show in a number of ways, ranging from minor bumps in the path to sexual imagery. Dissociation may turn into a perpetual battleground with genuine psychophysical consequences including headaches, high blood pressure, and sexual desire.

#### The Smoke Detector Is Activated

Returning to Stan and Ute's narrative, the author notes that when Stan recalled the events of the collision, his amygdala was no longer able to discern between past and current danger, and his body responded in the same manner.

#### The Timekeeper Breaks Down

This section provides a breakdown of Stan's fMRI scan, which demonstrates that during remembrance of the vehicle accident, his

dorsolateral prefrontal cortex, which helps us to perceive our location in time, went inactive.

#### The Thalamus Goes Dark

He goes on to say that the scan also reveals the right and left thalamus shutting down during recollection. This implies that, in addition to the dorsolateral prefrontal cortex being shut down, the PTSD patient is exposed to the ravages of sensory overload, with nothing to lead them back to safety other than sensory sources being shut down with medicines or alcohol.

#### Separation from the Self: Depersonalization

He now turns his attention to Stan's wife, Ute, whose response to PTSD was very different. Almost every region of her scan is deactivated, a psychological survival tactic she learned as a youngster through a tumultuous relationship with her mother.

Learning to Live in the Present Van Der Kolk closes the chapter by stating that trauma therapy should concentrate on improving the sufferer's everyday life rather than just desensitization to the cause of trauma.

## Chapter 5

### Brain-Body Connections

Bessel Van Der Kolk addresses Darwin's *The Expression of the Feelings in Man and Animals*, in which he claims that all animals' emotions are biologically based.

### Through a Window: The Nervous System

This section covers the autonomic nervous system, which is divided into sympathetic and parasympathetic nervous systems. The sympathetic nervous system speeds up the body to get it going, while the parasympathetic nervous system calms it down, repairs it, and helps with digestion.

### The Human Brain's Love Code

In 1994, Stephen Porges introduced the Polyvagal Theory, which we will look at following. It implies that our vagal nerve controls a relationship between our bodily experiences and the emotional responses of those around us. It also indicates that arousal management, in all of its forms, may be crucial to trauma healing.

### Safety and reciprocity

Van Der Kolk goes on to say that feelings of safety and security are often governed by a sense of reciprocity, which may be useful at first but can be harmful when it involves isolating oneself from others who have experienced similar trauma.

### Three levels of security

The author now examines the role of the ventral vagus complex, a nerve that instructs us on how to react physically to emotional stimuli. It's our first instinctive response to a possible threat, and it may drive us to change our facial expression to convey fear or discomfort. He transmits this information as one of the three responses to threat or danger.

There are three degrees of safety:

- Social engagement: alarm expressions (ventral vagus complex).
- Fight or Flight: active dread or (sympathetic nervous system) anger.
- Collapse: decreased metabolism and heart rate (dorsal vagal complex).

