



**BOOK AND  
MULTIMEDIA  
REVIEW**

# Traumas of the Mind-Brain- Body: PTSD: Lonely Pioneers

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Why review a book published a decade ago, a best-seller so successful as to be in its 49<sup>th</sup> printing in 2023?

For one thing, because the book's author was somehow fired from the Center that he had founded and developed, to global admiration, for outstandingly successful treatment of trauma and PTSD. These circumstances illustrate a great deal about contemporary corruption of the intellectual public square.

For another thing, I came upon this book only quite recently, even though it is very close to several of my interests; which in itself illustrates some of the flaws in contemporary intellectual punditry, discussed in the section on lonely pioneers.

And for yet another thing, this book has been personally significant because my family experienced considerable trauma when Germany took over Austria in 1938 and made us into refugees. The concept of PTSD was formulated only several decades later than that, and learning about it now has allowed me to understand a great deal about quite specific matters in the lives of my parents, my sister, and myself. For instance, I have learned that trauma can produce a relatively *permanent* sensitization of the body's alarm system, bringing chronic anxiety and pessimism, an *expectation* of unpleasantness. In addition but separately, strong emotions can be triggered by things that remind of specifics of the traumatic experiences, for instance, encountering in some way contemporary refugees — I had been surprised recently to find myself literally *speechless* on such an occasion, unable to articulate what I wanted to say.

So, this reviewer is predisposed to emphasize the book's many virtues, a bias that may well be detectable in the following.

## CONTENT OVERVIEW

That mind and body are interrelated in a vitally important way is pointed out in a well-known quote from two millennia ago; and the fact was doubtless known to humankind for many millennia before that. Yet a couple of thousand years later, our understanding of the interrelationship remains unsatisfactory and incomplete.

The Roman poet Juvenal coined the famous phrase when he wrote, 'Orandum est ut sit mens sana in corpore sano' — You should pray for a healthy mind in a healthy body — around the end of the first century AD. Nearly 2000 years later, we are still wrestling with dualism, struggling to understand the components of the biopsychosocial model of illness, and striving for parity of esteem between the sciences of the mind and biomedicine, slowly uncovering the immensely complicated relationships between mental and physical health and illness (Jones, 2017).



The indivisible self has become divided. Divided by the structures of medical specialism, which themselves reflect the understanding of a wider society. Divided too by a mind and body philosophy that prefers reductionism to holism. . . . In spite of forces that divide the self, recent years have seen some convergence in physical and mental health care. In psychiatry, there has been an increasing awareness of the need to address the physical health issues of patients (Ashworth, 2017).

*The Body Keeps the Score* offers an astonishingly detailed, empirically based understanding of how the mind, brain, and body relate to one another. Considerable evidence from anatomy, physiology, and neuroscience, including activity maps of the brain obtained in trials using brain scans, demonstrates that what we experience leaves its mark not only in memories in the mind but also in the form of learned or enhanced sensations, *physiological* memories. An important demonstration of the interconnections of mind, emotions, and physical functions is embodied in the vagus nerve (p. 83).

Successful therapy of “mental” or “emotional” illness cannot ignore this interconnectedness (pp. 88, 91). A ready way to appreciate the interconnections is what everyone has surely experienced, if not noted: anger or fear are accompanied by *muscular tension*; if that is *constant*, chronic pain can follow: spasms, back pains, migraine, fibromyalgia (p. 268).

If the interrelationship between mind and body does not function properly, as with PTSD or also with physical damage to the brain as in strokes (p. 43), then one might experience apparently inexplicable emotions — anger, fear, sorrow, etc. — without the brain/mind memory recalling the past experience to which those emotions had been appropriate.

Brain scans show that there is indeed an important distinction between largely emotional right-brain activity and largely rational, factual, realistic left-brain activity (pp. 44-5).

Instincts, reflex emotions, originate in the most primitive part of the brain, on the stem, the “reptilian” brain that controls “all the things newborn babies can do: eat, sleep, wake, cry; breathe, feel temperature hunger, weakness, and pain; and rid the body of toxins by urinating and defecating” (p. 56).

Above the reptilian is the mammalian brain or limbic system. It is where emotions are seated, and danger is monitored. It begins to develop very rapidly after a baby is born, and it is shaped in response to experience. How infants are cared for and parented, especially in their early years (pp. 86, 114-5, 154, 306) leaves indelible marks and

corresponding habits.

On top of the limbic system is the neocortex, much thicker in humans than in other mammals. Here are the capacities for conscious and abstract thought and language. Kolk cites a textbook example, leaping back in terror at the sight of a snake, as commanded by the limbic system — only to realize shortly afterwards that the frontal lobes of the neocortex recognize the supposed snake to be just a coil of rope (p. 57).

In 1994, *mirror neurons* were discovered: cells in the cortex specialized to enable imitation and synchrony with others. Mirror neurons give us the capacity for empathy, a marvelously desirable social trait that, however, also makes us prone to negative effects: feeling “down” when others we care about are depressed or in a bad mood, or angry (pp. 58-9).

The book’s thematic focus is how trauma interferes with these interrelationships, resulting in PTSD — Post-Traumatic Stress Disorder. The book’s Prologue introduces the main points: long after a traumatic experience, strong and apparently unwarranted, incomprehensible emotions may surface because our physiology had actually been altered by the trauma, making us hypersensitive to apparent danger: the brain’s alarm system had been recalibrated. Stress hormones released by some stimulus take much longer to return to baseline in traumatized people (p. 46). Treatment and full recovery may require *physiological* as well as “mental” re-recalibration. Talk therapy alone is not enough, nor are drugs alone.

Part One of the book is about Vietnam veterans and evidence from neuroscience. Part Two deals with what trauma does to the mind and body. Part Three deals with normal and abnormal child development. Part Four deals with memory problems produced by trauma: memories of normal happenings tend to be self-contained narratives, whereas memories of traumatic events are typically unorganized, isolated images or sensations.

The eight chapters of Part Five describe several approaches that have proved to be successful in treating people suffering the after-effects of trauma. Such physical activities as dancing, chanting, singing, and deep breathing are effective ways of relaxing and lessening the hyper-arousal characteristic of trauma. Kolk points out that Chinese, Indian, and other cultures, and some religions, have made such practices (for instance, yoga, tai chi, qi-gong, martial arts) commonly used rituals; unfortunately, our own mainstream culture regards these as “alternative” (p. 209 ff.). Talk therapy, writing, and introspection all have their potential use in recovery from PTSD, but Kolk believes physical treatment to be an *essential* component, and he has used quite controversial approaches: EMDR (eye movement desensitization and reprogramming, ch.

15), internal family systems theory, neurofeedback<sup>1</sup>, PBP psychomotor therapy; and he has lectured at the “alternative” Esalen Institute.

An Epilogue outlines the author’s suggestions for how society might best apply the insights detailed in the book. Much of the Epilogue, as well as a number of points in the other chapters, are sufficiently controversial to be appropriately discussed in the following Section of this review. Here, I will focus on what seems the soundest findings and assertions.

The book carries much conviction because its interpretations are so directly and closely linked to tangible evidence. Van der Kolk has spent much time listening and observing, and he shares many individual stories throughout; he knows what he is talking about.

The direction of his career was set when he took time between first- and second-year medical school to work as an attendant at Massachusetts Mental Health Center. At night, the patients talked with him very freely, and he learned far more from them than the supervising doctors appeared to know, revealed as they did the rounds with their resident interns (pp. 23-4)<sup>2</sup>. Taking patients on outings enabled him also to recognize that *physical* clumsiness often accompanied mental distress (p. 26). Later, Kolk was a research assistant in the work that brought the condition of PTSD to be recognized and included in the 1980 edition (DSM III) of psychiatry’s “Bible,” the *Diagnostic and Statistical Manual of Mental Disorders*.

Although Kolk first came to recognize PTSD among Vietnam War veterans, his work came to focus largely on trauma experienced by children. Recognition of the prevalence of traumatized children has come only in recent decades; a vital insight is that “childhood trauma is radically different from traumatic stress in fully formed adults” (p. 157). For example, sexual abuse speeds up biology and increases the secretion of sex hormones (p. 165).

The salient point of interest to **everyone** is that if or when one’s reflexive emotional reactions, at any age, seem inappropriate to the circumstances, that may be because they were instilled and learned by traumatic experiences in childhood or adolescence, even if the reflexive reactions are not accompanied by conscious memories of that initial experience. Such reflexive emotions may also include *lack* of emotion, numbness — not *feeling* situation-appropriate love, say.

A significant feature of trauma is that it creates memories that are not coherent stories but rather isolated imprints of images, sounds, and physical sensations accompanied by intense emotions (p. 70). That theme pervades the book, as does the insight that humans are quintessentially *social* animals (pp. 117, 169, 212); our interactions with others can produce trauma, and the recovery from trauma

requires becoming able to engage socially *with comfort*.

## PROS, CONS, AND THE BOOK’S CONTRIBUTIONS TO THE LITERATURE

### Pros:

I had encountered the term “mindfulness” on many occasions, but this book gave me for the first time a genuinely helpful definition: A state in which mind, brain, and body are so well integrated that one is *conscious* of one’s bodily sensations in their entirety. That also offers a very practical way of learning to be “mindful”: paying attention consciously and steadily to one’s physical sensations. That makes for the desirable ability “to hover calmly and objectively over our thoughts, feelings, and emotions . . . and then take our time to respond [which] allows the executive brain to inhibit, organize, and modulate the hardwired automatic reactions preprogrammed into the emotional brain” (p. 62).

At the same time, Kolk points out that emotion is not *opposed* to reason; our emotions assign positive or negative *value* to experiences and thereby serve as a foundation for reasoning (p. 64). That point deserves to be made vigorously whenever nonsense is spouted about the dangers of artificial intelligence taking us over; the only real danger of artificial intelligence (the phrase is an oxymoron) is the abuse of its capabilities by careless or evil human beings.

Like many others (Frances, 2013; Greenberg, 2013)<sup>3</sup>, Kolk regards the current (5<sup>th</sup>) edition of the DSM as disastrous (ch. 9 & pp. 166-70). As one particular, he notes that traumatized children and veterans are typically diagnosed with *several* “disorders”, all of them merely symptoms of PTSD (pp. 111, 161, 166-170).

A number of book-length treatments discuss the many failings of contemporary mainstream standard psychological and psychiatric treatment<sup>4</sup>. Kolk had begun to glimpse this four decades ago when he had been confronted by cumulatively 47 women traumatized by incest, although the standard textbook asserted incest to be a one-in-a-million phenomenon (p. 20); and later, he met a number of women consigned to electroshock treatment for depression but who had never been given the opportunity just to talk off their depressions (p. 24).

Kolk shared the initial enthusiasm (p. 27) for drug-medicating mental illness but now recognizes its deficiencies and enormously expensive over-use (pp. 36-8). He notes what remains puzzling to him: Prozac was very effective for the patients coming to his Boston clinic, yet it did not help combat veterans at the Veterans Administration hospital (p. 35).

Shame over not having acted differently in traumatic circumstances seems a common feature not only with mili-

tary veterans but also with people sexually abused in childhood (p. 13). The victims come to think that what happened was in some way their own fault, and they seek to placate the abusers, even to maintain a connection with them. These generalizations seem plausible explanations for why abused women so often do not bring formal complaints or do so only a very long time afterward<sup>5</sup>.

Childish attempts to placate an abuser are a natural reaction, and role-playing exercises with troubled youths from high-crime areas found them always siding with the aggressors (p. 341); reminiscent of the attempt by victims to “identify with the aggressor”, discussed by (among others) Anna Freud and Sándor Ferenczi<sup>6</sup>.

### Cons:

I was a little surprised to find no mention at all of Wilhelm Reich, an early apostate from Freud’s acolytes who had insisted that talk therapy needed to be combined with some form of body work.

I would have liked an extended discussion of how the common concept of an “unconscious” or “subconscious” mind relates to the mechanisms and pathways described in this book; and to what degree the triune brain (reptilian/mammalian/neocortex) corresponds to the Freudian id/ego/superego.

I wondered whether Kolk was rather overreaching in attributing to trauma such possible consequences as fibromyalgia, chronic fatigue, and other autoimmune diseases (pp. 53, 293); though the book does offer supporting data from actual measures of immune-system cells (p. 129).

Some of the estimates caused me to doubt whether the data and interpretation are always quantitatively impeccable. The book appears to accept that “the gravest and most costly public health issue in the United States . . . [is] child abuse” and that eradicating it “would reduce the overall rate of depression by more than half, alcoholism by two-thirds, and suicide, IV drug use, and domestic violence by three-quarters” as well as affecting dramatically workplace performance and the need for incarceration (p. 150). I was also skeptical of the estimates cited from the Centers for Disease Control & Prevention (CDC) that one in five Americans have been sexually molested as a child; one in four beaten by a parent so severely has to leave marks on the body; one in three couples engaging in physical violence; a quarter of us growing up with alcoholic relatives; one out of eight having witnessed their mother being beaten or hit (p. 1).

The discussion about epigenetics (p. 154) lacks detail about how methylation patterns are or can be passed on to offspring; but that can be blamed on the state of lack of knowledge more than on the book’s mention of it.

### POLITICAL

Kolk regards trauma as arguably the greatest threat to our national well-being. Violence against women is twice as prevalent as breast cancer. One’s health and safety are predicted better by the ZIP code where one resides than by heredity. Eliminating its causes calls for measures that seem politically impossible, however, for example, universal health care.

### RECOMMENDATION

Everyone can surely benefit in some way from this book. Lightly scanning or skimming over some of the lengthy individual case-studies or some of the technical details of anatomy and brain-scans will still allow the chief messages to be absorbed: the inescapable interactions of mind, brain, and body; and the Pavlovian influence of environmental factors immediately after birth, in particular, parenting; influences that determine reflexive reactions and emotions throughout later life (pp. 114-5).

This book is also relevant to the frequent discourse about the desirability of holistic thinking and practices. The emphasis on necessary harmony among mind, brain, and body is fairly central to the differences between “East” and “West”: some strong Western cultural influences even picture the body as somehow *inimical* to the “self”, as in religions that make a virtue of celibacy and regard the intangible “soul” as more important than the physical body.

### LONELY PIONEERS: “IN” BUT NOT “OF” THE MAINSTREAM

A Google search as I prepared to write this review startled me with the information that Kolk had been fired in 2018 from the Center that he himself had founded decades earlier and had later brought under the aegis of the Justice Resource Institute (JRI)<sup>7</sup>.

“Van der Kolk’s firing, according to JRI president Andy Pond, was based on allegations by staffers that the psychiatrist had ‘created a hostile work environment’ and behaved in a way that ‘could be characterized as bullying.’ Pond . . . was unable to share specifics of the allegations because the accusers had asked that the details be kept private”<sup>8</sup>. “His behavior could be characterized as . . . making employees feel denigrated and uncomfortable”<sup>9</sup>.

Readers interested in following up on this should also read Kolk’s side of the story and the many supporting letters<sup>10</sup> that directly contradict Pond’s allegations.

For my part, I am reminded sadly of much that political correctness and similar ideologies have wrought on contemporary society: Publicly made allegations are so non-specific that they cannot be disproved. There is no

opportunity to identify or question the actual accusers, and derogatory speculation inevitably suggests that the asserted transgressions must have been even worse. This goes against the most elementary understanding of what constitutes fairness, impartiality, “blind justice”, “innocent until proven guilty”. We have kangaroo courts and Star Chambers, not courts of law.

There is no objective definition of what constitutes a “hostile work environment,” or “bullying” or “denigration”. All those are subjectively made judgments, which means that outsiders cannot reach informed opinions without knowing who made those initial judgments and what specific actions were involved. I note that JRI’s CEO and COO have no careers outside management, which predisposes me to place more weight on what is said by the world-renowned founder of the Trauma Center and his supporters<sup>10</sup>.

I sense a similarity with the ouster of Peter Gøtzsche (Gøtzsche, 2019) from the Nordic Cochrane Center that he had founded, having also co-founded the international Cochrane Collaboration (European Ombudsman, 2013): Gøtzsche was fired by a journalist who had become Director of the Center and was concerned that fund-raising, especially from pharmaceutical companies, might be negatively influenced by Gøtzsche’s demonstration of harmful side-effects of HPV vaccines (Jørgensen et al., 2020; Gøtzsche & Jørgensen, 2022).

I find it quite plausible that junior staff, as well as senior management, can feel somewhat jealous of leaders who are widely acknowledged high achievers and also feel intimidated because they are less knowledgeable, less competent, less experienced, and may have relatively fragile self-esteem, possibly even an inferiority complex<sup>11</sup>.

The contemporary cultural climate instructs all sorts of under-dog groups to interpret feelings of inferiority, of being denigrated or bullied, as being caused by other people rather than by their own inadequacies. Nevertheless, such interpretations remain inescapably subjective. As the late Maxie Maultsby (Pennsylvania Psychiatric Institute, n.d.; Wirga et al., 2019) and other exponents of cognitive-behavioral approaches have long pointed out, no one can make another person feel any particular emotion: we all ourselves choose what emotion to feel, albeit sometimes by reflex and subconsciously, on the basis of our own prejudices, biases, expectations, presumptions. One task of psychotherapy is to change reflexive emotions from dysfunctional to properly consonant with external events.

Van der Kolk exemplifies the ilk of pioneers who are so much ahead of their time that their profession doesn’t know how to deal with them. Their work fits Gunther Stent’s (1972) concept of “premature discovery”: recognized as possibly important but not really accepted be-

cause the profession as a whole doesn’t know what to do about it, and isn’t ready to exploit it. Kolk showed that successful treatment of PTSD required more than medication at a time when drug treatment had become the universal standard in psychiatry, heavily reinforced by medical insurance companies and drug manufacturers. Kolk was rocking the boat, not bowing to Groupthink, and too many of his professional colleagues were not prepared to stick out their own necks for what they privately knew to be right. The profession’s ambivalence about Kolk was shown when his firing from his own Center did not lead to a full-fledged public, national protest.

Other pioneers of this ilk, too much ahead of their time for the mainstream’s comfort, include (as well as Gøtzsche) Peter Duesberg, whose work on cancer causation is so undeniably important that *Scientific American* could not ignore it, albeit apologizing<sup>12</sup> that their publication about it should not be construed as endorsement of his views on HIV/AIDS! Duesberg’s own colleagues at Berkeley did not try to help resolve the substantive, scientific questions. Instead, Duesberg was treated as a renegade: his own Department persuaded graduate students not to work with him, his only committee assignments were the least sought-after, his laboratory was moved into a building without air-conditioning, and he was persistently refused merit-pay increases (Farber, 2006).

Mainstream scientists have become excluded for their minority views also about Big-Bang cosmology, climate change, IQ, and other heresies<sup>13</sup>. Further examples include Linus Pauling (benefits of vitamin C), Martin Fleischmann and John Bockris (“cold fusion”), Hannes Alfvén (space plasma), Jacques Benveniste (water memory), Harold Hillman (fired for pointing to artifacts in electron microscopy), Paul McLean (triune brain), Charles Townes (1999): masers and lasers could have been built years earlier than they were, had his ideas not been dismissed.

In 1980, shortly after the American Psychiatric Association had created the new diagnostic category of PTSD, Kolk’s proposal to the Veterans Administration for a grant to study the biology of traumatic memories had been declined because “It has never been shown that PTSD is relevant to the mission of the Veterans Administration” (p. 19). This exemplifies how mainstream peer review and institutional bureaucracies hinder progress. Pioneers rock the boat and do not participate in the Groupthink of the mainstream.

It is not often emphasized enough that “mainstream” also means the *lowest common denominator*, which all too often means mediocrity (Klein, 1985), in these days when “researchers” are as dime-a-dozen as teachers, engineers, and other “white-collar” professionals.

Bureaucracies are inevitably self-serving, and they can

also be vindictive. Kolk mentions without detail the firing of Frank Putnam from NIH (p. 253); Putnam suspects<sup>14</sup> that it came because he exposed the pedophilic activities of Carleton Gajdusek, who was then a laboratory head at NIH as well as Nobel-Prize winner.

## END NOTES

1. The book states (p. 317) that there are 10,000 practitioners of neurofeedback in the USA, but that widespread acceptance is hindered by lack of research funding.
2. Those of us who have spent significant time as patients in hospitals may have observed, similarly, that experienced nurses often have specifically relevant, empirical understanding not shared by the attending doctors.
3. The main criticisms are usefully summarized by the Psychological Care & Healing Center: <https://www.pchtreatment.com/dsm-5-issues>
4. See the two dozen books cited under "Psychiatry" in the bibliography, *What's Wrong with Modern Medicine*; <https://mega.nz/file/gWoCWtGK#1gwxo995AyYAcMTuwvpvP40aaB3DuA5cvYjK11k3KKSU>
5. An iconic illustration: If Anita Hill had felt harassed by Clarence Thomas, why had she followed him to his next position?
6. Peter Gay, in *My German Question* (Yale University Press, 1998), describes the notion as "obscene"; but what other psychological recourses are available to children? <https://jri.org>
7. <https://www.yahoo.com/news/famed-trauma-therapist-responds-allegations-bullying-outrageous-story-213600039.html>
8. <https://www.bostonglobe.com/metro/2018/03/07/allegations-employee-mistreatment-roil-re-nowned-trauma-center/sWW13agQDY9B9A1rt9eqnK/story.html>
9. <https://web.archive.org/web/20200408182345/https://www.besselvanderkolk.com/about/behind-the-globe>
10. I am indebted to my late friend, distinguished chemist Sever Sternhell, for this useful phrase. Inferiority *complex* describes unwarranted feelings of inferiority; the **simplex** describes fully realistic feelings of actual inferiority
11. Editor's note at p. 54 in Peter Duesberg, "Chromosomal chaos and cancer", *Scientific American*, May 2007, 53-9
12. "Exclusion of Dissident Scientists", pp. 32-8 in Henry H. Bauer, *Dogmatism in Science and Medicine: How Dominant Theories Monopolize Research and Stifle the Search for Truth*, McFarland, 2012
13. An interview with Frank Putnam, Part I, *ISSTD News*, 23

May 2019; <https://news.isst-d.org/an-interview-with-frank-putnam-part-i/>

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