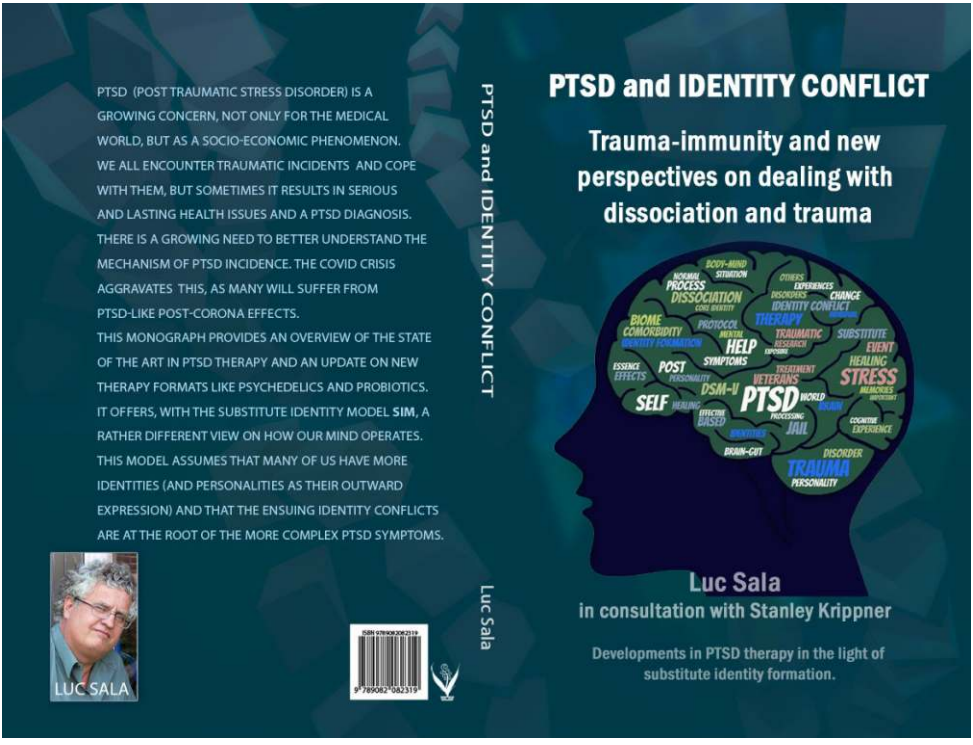

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PTSD and Identity Conflict

Trauma-immunity and new perspectives
on dealing
with dissociation and trauma

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in consultation with

Stanley Krippner

2023 update

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Introduction

Scientific literature, and this essay is more or less intended as such, is often seen as giving access to “truth”, to established and proven facts about some subject. I reality this is an illusion, they are written by people or groups with their own version of what they believe to be facts, and suffer from projections, preconceived notions, the influence of a specific paradigm, and often are nothing but attempts to please the status-quo (the faculty, the institution, the professor or sponsor) or to support an academic status like a PhD degree.

This essay is not much different, but as the author I will also admit that what I here describe as “science” is in fact the story of my own struggle and discovery of PTSD as part of my life scenario. It is the result of 40 years of struggle, of experimentation with therapies and approaches to discover how my psyche works. Some of these were what one could call “esoteric”, looking into magical practices, experiencing psychedelics or esoteric therapy forms in individual and group sessions, oftentimes with pioneers like Tim Leary, Terence mcKenna, Shulgin, Jean Houston, Stan Grof, etc. The help and stimulation of many experts in neighboring fields has helped enormously. I need to mention of course Prof. Stanley Krippner, my mentor and critical guardian, who has endlessly used his keen mind and kind tolerance to correct and help me.

I will take one subject to elucidate the process of arriving at insight in how I, myself, suffered, and suffering I did and do, my physical health is not optimal to say the least. This is past life trauma. I am trained as a rational physicist and business manager at university and in my career, so believing in past lives was not really my thing. But then, really late in life, through very serious regression work, my “inner eyes” opened to a wealth of memories and past life experiences and I had to really change my position concerning past lives, as can be also deduced from the chapter about that in this book. These may still be therapy instilled and pressurized false memories, but they became “real”for me. Addressing them has helped me to deal with the physical complaints, and in a sense has cured me. If that’s unscientific, irrational or just illusion, so be it. But it’s now part of how I see PTSD and thus part of the inspiration of this essay.

Luc Sala

1 PTSD: real pandemic and hidden curse of our times

Corona/CoVid has been an ordeal, a mega-disaster in the eyes of many, but compared to the number of people suffering or even dying from other diseases it wasn't more than a hefty "grippe" for most. There are other ailments, less in the public eye, that are growing to pandemic proportions, like dementia and Post-Traumatic Stress Disorder (PTSD).

PTSD is not unfamiliar, most people are now aware of the term and the implications, but don't realize that it is far more common than assumed. It is another more or less hidden but growing problem, especially in the Western world. We are now finding out and accept that is not only something that happens to veterans, but to many people in dangerous professions, in jail, to women as the result of childbirth and abuse, and because of adverse conditions in childhood. The CoVid-19 pandemic and its aftermath will no doubt add to the number of people suffering some form of PTSD.

PTSD is not only a growing concern for the medical world, but a socio-economic issue, as more and more people are diagnosed with the disorder. The costs of dealing with it, for society at large and for the patients and their environment, are staggering and a real concern for the government, insurance companies and the medical world itself. The costs are not only in money, but in human happiness, in the loss of meaning and in the sense of security.

PTSD therapy and the social construction of the disorder have led to a nearly epidemic or even pandemic character of the diagnosis and a multitude of therapies. One can criticize the diagnostic protocols, and the definition of the disorder in the DSM-V Diagnostic and Statistical Manual of Mental Disorders, as I will do in this monograph, but the fact remains that more and more people suffer from symptoms in the broad spectrum that points at PTSD.
To make sense of the root causes of PTSD and its subtypes, not necessarily in the DSM-V perspective, will help to develop new treatment options and to focus and differentiate according to the specific case. For this it is imperative that science studies not only the symptomatic victims but also those who show some level of immunity to the disorder or in other words, have some level of trauma-immunity.

PTSD and Corona - CoVid-19

These days, ignoring the Corona (Sars-CoV2 or CoVid-19) crisis would be ridiculous. Especially as the treatment practices of Corona victims, the lasting effects of the disease/infection for many who suffered themselves, the trauma of lost family or friends, but also the general unrest concerning this pandemic have all the telltales of a serious PTSD issue. Many people will have traumas related to the actual hospital situations, but many more, like the hospital and care staff and those close to the patients will also feel the consequences. PTSD therapy will become a hot topic in the aftermath of the crisis, but has already been diagnosed as a common consequence of what people endured, like the IC ventilator procedures. The term PICS (Post Intensive Care Syndrome) emerged, which often overlaps with PTSD. The Corona (CoVid-19) crisis will thus hopefully bring new perspectives to what trauma does.

Here the relationship with PTSD become apparent, for there is a general lack of relevant data, not only for Co-Vid but also for the effects of vaccination and PTSD. But luckily some important resources of such data do exists. The CDC figures on vaccine effects, made public after years of legal struggle in Oct. 2022, show that 7,7% (out of 10 million people in the database) had to seek medical support after vaccination, this must include quite some traumatic experiences. Also finding out that all those vaccines didn't really do the job could lead to much anger, stress and trauma. The resources and role of the Veterans Administration (VA) of the USA could be essential in studying this further, as they have the best database and health records concerning the 18 million veterans. The VA has acknowledged (VA Secretary Robert Wilkie[1], Jan 2021) their responsibility to deal with CoVid-19, but also with things like opiates, suicide and to begin a nationwide dialogue. No doubt better analysis of PTSD will be part of what they can offer.

Also the subject of the long term effects of victims indicated as „Long Corona" or Post-CoVid deserves attention. Are they due to material damage like in the oxygen-exchange in the lungs or in the adrenal complex or is there also a mental/emotional component like in PTSD?

Here an important issue comes into view, something which will surface a number of times in the monograph. Just as is the case with PTSD, most of the attention around the CoVid-19 virus and its mutations went into dealing with symptoms, looking for vaccines and treatments. Even after vac-

1 VA Secretary Robert Wilkie discusses recent VA accomplishments, Jan. 14, 2021 on Youtube.

cines became available, the focus was on effectiveness and side-effects, short term and long term. There has been little attention, apart from speculations about herd-immunity for the innate or acquired immunity level and what influenced that, in general and specific situations and in a dynamic perspective for one's immunity is not a constant. The pandemic has made clear we have to understand and study better how our immune system works; how we can help it, improve it, adapt a more healthy and sustainable lifestyle. We are, and this is maybe the positive in all of this, confronted with the consequences of our lifestyle and social-economic paradigm. Maybe our whole culture needs to reconsider its premises.

In practical terms, what is surely needed is to look at what factors make some people more likely to contract the disease, things like their health history (notably the trauma matrix), birthing and upbringing (like ACE Adverse Childhood Experiences), blood type, diet, addictions, fear levels, lifestyle, gut biome, exercise practices, ethnic background, character type, or even their DNA. There are some indicators, like lower risk for blood type O, rhesus negative, higher for type A and obesity/adiposis. There is some research concerning DNA[2]. The Rockefeller University NY Covid Human Genetic Effort project is studying type one interferon deficiency and auto-antibodies and people like Manana Katz of the Human Genome Centre in Sao Paulo, and Jason Bobe of Icahn School of medicine NY are looking for genome sequences of people resilient to CoVid-19, who are serum negative and also do not have antibodies.

A fundamental question, why and when not PTSD

There is considerable interest in PTSD as can be deduced from the numerous books, articles, research studies, conferences, etc. dealing with the consequences and the interest in both conventional and novel therapeutic approaches.

One rarely asks what happens when potentially traumatizing events do **NOT** lead to PTSD symptoms. What about trauma-immunity, how does it develop, what factors play a role? This is, in this monograph, not a philosophical attempt to falsify PTSD, but a sincere concern. Why do some people develop PTSD, and others cope with a traumatic experience without those lasting effects?

For instance, why do the harrowing episodes one encounters in basic military training rarely lead to the traumatic stress symptoms normally ascribed

2 Cox, David; The disease-resistant patients exposing Covid-19 weak spots, BBC Future (Feb. 2021)

to PTSD. There are many potentially traumatizing events during those challenges and exercises, yet very few traumatic experiences.
Where to look? There must be something in the "set and setting," to borrow a phrase from the psychedelic world, that produces the low rate of PTSD following harrowing basic training exercises. Is the rate low because the exercises are done in a supportive group setting? Or could it be low, because those in charge have had years of experience handling untoward effects?
What is the effect of the underlying culture and belief system, of group cohesion and group identity, of the challenge to "make a difference," and the reward in status and recognition if a participant passes such tests? What is the influence of ascribed meaning, of knowing that a particular challenge fits a broader purpose? Without such specification and acceptance of that purpose, trauma hits much harder. Just think of the fighting of meaningless wars, obviously a factor in PTSD incidence in veterans, especially if inhumane practices characterize the fight like the use of drones.
Understanding the mechanisms at play in dealing and coping with trauma is essential not only in treating PTSD, but in preventing it. There always will be potentially traumatic challenges, not only in combat or war, but in ordinary life. How can people learn to cope with these challenges in a way that is more mature and less damaging? Can we do something about their trauma-immunity, a somewhat novel term relevant in this perspective?

Lessons from the past

Should we look into the ways older cultures have dealt with this? The phenomenon is noticed in many situations and many cultures, like in initiation rites. War, trauma, disaster, it's not new and has been dealt with as long a humans exists. And animals deal with trauma too and develop PTSD! Many pet-owners have noticed how their darlings suffer from memories of adverse situations. It's amazing, that there is so little research into animal PTSD. Of course cognitive therapies don't really work there, but EMDR (Eye Movement Desensitization and Reprocessing) does.[3]

The issue of cultural traditions and especially ritual (here seen as a formalized way to deal with the challenges and aftereffects) seems to be important. Especially the way "set and setting" is embedded in a structure

3 Cellier, Francois; Animal EMDR: For the Treatment of Emotional Disorders, in Realite Animale (2017)

that is repetitive and has become a part of the identity of a particular individual, group, or culture, providing support and meaning.
Ritual is everywhere, not only in boot camp training but also in the way that scientific research is conducted, and the way that medicine, psychotherapy, politics and the law are practiced. Ritual pervades society even if it is not specifically identified as ritual. Ritual has personal, social and magical dimensions, as I explained in my extensive book on ritual[4].
Appropriate ritual as a traditional and often effective way to provide the institutionalized support and group building people need to cope with adversity and with the overwhelming complexity of life and reality. Ritual needs a time and a place, it may start with prayers and meditation and then extend into group activities and social identification. It provides structure and the sense of belonging, meaning and social cohesion.
However, ritual is a generally ignored resource in preparation for challenges and is more or less ignored in treating PTSD (and in practicing allopathic medicine in general).

In discussing PTSD, an important perspective can be gained by looking at how various cultures have dealt with this, especially indigenous cultures where hazardous initiation rites are an essential part of attaining maturity and acceptance as an adult group member. The are often dangerous, but as is the case in contemporary military training, there are built-in protections.
The incidence of PTSD in the Western world is, according to the WHO figures[5], much higher than in indigenous cultures, where we know family, clan, and tribal cohesion and ritual and religious roots are, in general, much stronger.
Stanley Krippner, an expert in dreams and the complexities of the human psyche, has visited many indigenous people over the years. There is a vital question he has asked himself and his students:

How is it possible that many of the rituals and notably initiations of indigenous societies, which are often a physical and emotional ordeal for the participants, do not normally result in the kind of traumatic stress that we see in the West with veterans and other people with PTSD?

It is thus relevant to ask if there something in particular in these cultures, in their world view or in the social fabric of their society that prevents or at least limits PTSD from happening? Is there trauma-immunity because of

4 Sala. Luc; Ritual, the magical dimension (2014) ISBN 9788182500600, and 8182500605

5 World Health Organization (WHO)'s World Mental Health Surveys.

their life style, diet, religious traditions, or because of different DNA factors?
The fundamental question we should ask concerning PTSD is thus this: Why do some people undergo potentially traumatizing events, suffering immediate effects such as fear, anger, and grief, but seem to heal themselves in a reasonable time-frame? Why do they not fall prey to what we now see as PTSD with its long-term consequences? This looking at why people do not suffer from PTSD requires looking critically at the paradigms of the Western world and its medical and scientific practices.

Health as the ultimate goal of medicine, not symptomatic pathology

In the Eastern approaches like in Traditional Chinese Medicine, health has always been what mattered more than the disease or complaints. Health was what a doctor had to look for, dealing with pathogens came second. Western medicine has taken a different approach, looked at pathogens, adverse conditions, viruses, etc.; looking for remedies, drugs, technologies to deal with the symptoms. Progress has been made there, no doubt; looking beyond the basics, understanding the effects of environment, nurture over nature and the expression mechanisms of genetic information is certainly valuable, but it is also limited.

The Western approach ignores the proposition that the most important information can be found by studying those who did not get a specific disease or suffered from a syndrome, but were immune or resistant to the pathogens. The early efforts to deal with the Corona/ CoVid virus are a case in point. They focused on vaccines, treatment options, non-medical measures like lockdown, but not on looking at the natural or innate immunity that so obviously keeps a large proportion of the population out of harm. The medical world operated with their blinders on, mouthcaps included! Looking at immunity as a natural phenomenon and prophylaxis was seen as anti-scientific, looking at alternative treatments considered treason or even labeled as terrorism and censored. Vaccination became the holy grail. The WHO even adapted their previous herd-immunity definition (that included natural immunity) to now only cover vaccine-related immunity. This seems to serve the vaccine industry more than accepting natural immunity. The focus on herd-immunity as achieved by artificial immunity like vaccination and antibody buildup ignored those who already have had some level of immunity. Even in the worst case situations there were always people who didn’t catch the disease and must have had

some immunity or resistance. The history of previous pandemics show the same, there were always survivors.
But I leave this somewhat philosophical discussion concerning the symptomatic versus the holistic to the reader, there are other avenues to be explored.

New perspectives

Are there other and new perspectives that we could use to analyze, diagnose and maybe treat those who suffer from PTSD? There are, there are new therapy paths, as will be shown in this monograph, but it also presents new models or rather mechanisms to look at the matter.

The notion of trauma-immunity has already been mentioned, but in this monograph my Substitute Identity Model (SIM) is also posed as a potential explanation. A better understanding of the underlying dissociation and substitute identity formation mechanisms is what this monograph tries to achieve. Dissociation as the root of trauma development is not generally accepted, but there is enough support for this view, as will be explained. With SIM the focus is on explaining how identity multiplicity fits in a psychological development model. A better understanding of the underlying immunity, dissociation and substitute identity formation mechanisms is the goal.

These models are not final answers but can be seen as hypotheses, stepping stones towards more understanding.

This approach does not see PTSD as a simple diagnosis but rather as a spectrum of symptoms related to identity and dissociation. It will thus offer a new, critical and somewhat hypothetical view on PTSD in the context of identity formation. It will also point at what is known and accepted, new developments, like more specific biomarkers, the role of certain hormones, the influence of the adrenals and the gut biome, the impact of the birth trauma and the consequences of PTSD for life-expectancy and health.
To help place the new information contained in this monograph in the context of status-quo PTSD therapy, a selection of the various approached will be given in an appendix. Not claiming completeness, but an overview for the readers not familiar with the options already available in dealing with PTSD.

PTSD; social construct or a biologically coherent and consistent diagnostic category?

The PTSD diagnosis has been the subject of considerable controversy. Some critics address what they see as a poor definition of impairment as well as the focus on the intra-psychic processes (ignoring the somatic), the lack of concern with cultural processes, and the pathologizing of otherwise normal and even necessary and healthy processes of dealing with adversity and loss, Critics also point out the vast heterogeneity of the cases in current diagnostic practice, which now includes many more than those identified with the original combat trauma.

It is also important to consider the social construct argument. PTSD can't be discussed without some reference to the proposition that it's not so much a disorder as a social invention, taking the perspective of social constructivism. As such, the PTSD diagnosis has developed from a psychiatric construct into a social construct or maybe the social construct was first. The diagnosis certainly has socio-political usefulness; it serves the interests of the medical world, as well the veterans and those who look for an umbrella term for their range of complaints and symptoms. Derek Summerfeld[6] is one of several critics who have given this perspective a voice, pointing out that PTSD is more of a grouping of symptoms than a clear and intrinsic root disorder, more an invention than a discovery. The PTSD phenomenon came about as a legacy of the American war in Vietnam. It was a product of the post-war maladies of several of the conscripted men who served in Vietnam. In addition, the anti-war movement needed an appropriate term so that veterans could claim specialized medical care. They lobbied for PTSD as a diagnostic category that would qualify veterans for compensation, pitting themselves against the interests of the military establishment. It replaced the older diagnoses of "soldier's heart," "battle fatigue" and „war neurosis". It legitimized the "victimhood" of veterans, gave them moral exculpation and recognition, and guaranteed them a disability pension because the diagnosis could be attested to by a physician. However, as Derek Somerfield argued, a psychiatric diagnosis is not necessarily a disease, and distress or suffering are not necessarily psychopathological. In his view, the PTSD diagnosis has become almost totemic, conflated with stress and trauma. In line with the

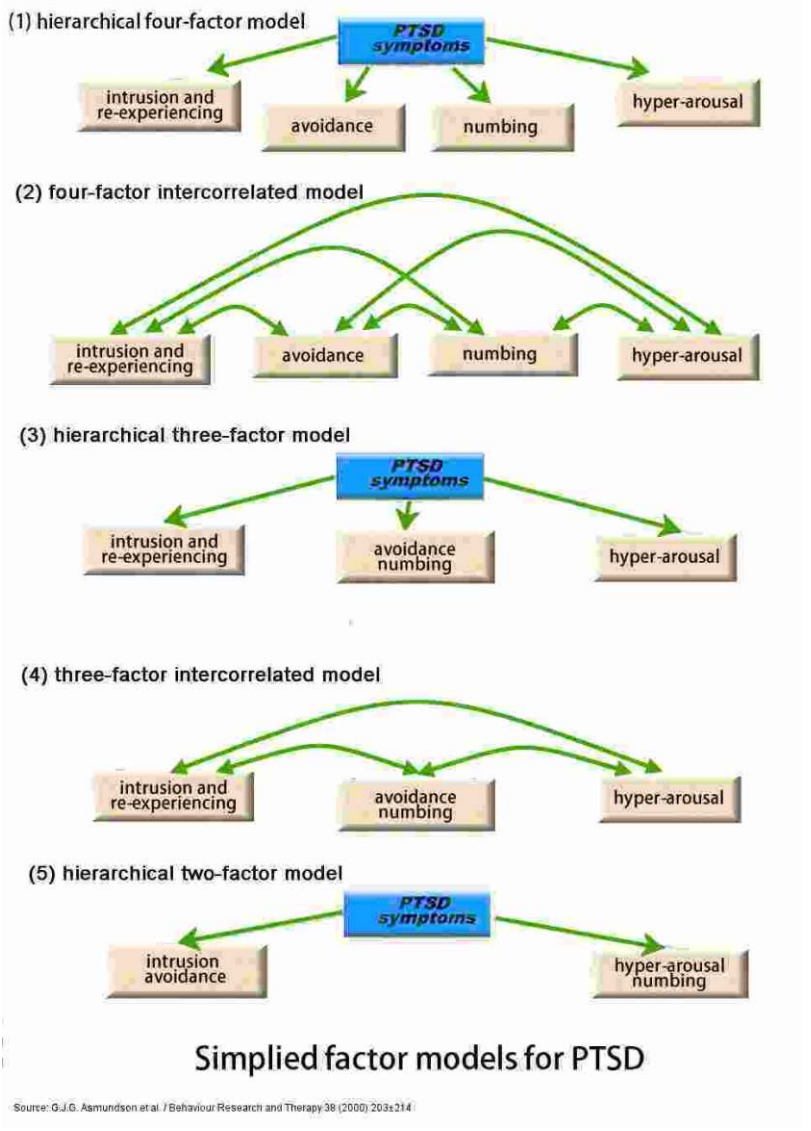
6 Summerfield, Derek; The invention of post-traumatic stress disorder and the social usefulness of a psychiatric category. British Medical Journal. 2001;322:95–98. doi: 10.1136/bmj.322.7278.95, PMCID: PMC1119389, PMID: 11154627

focus on individual personhood in the Western perspective; PTSD became the marker for an "age of disenchantment."
Collectively held beliefs about particular negative experiences are not just potent influences but often carry an element of self fulfilling prophecy. Individuals will largely organize what they feel, say, do, and expect to fit prevailing expectations and categories.[7]

The PTSD diagnosis as it stands in the DSM-V perspective has led to a veritable trauma industry comprising mental health experts, lawyers, claimants, and other interested parties. It has become a kind of social movement trading on the authority of medical pronouncements.
This outcome has had positive effects as well; the study of what happens with traumatized people offers a major opportunity to study the ways in which mental events can transform the structure and function of the central nervous system and our mind, also in positive ways. Trauma could be seen as life's way to teach us, as building experience for our souls, as our individual way to gain consciousness, self-knowledge, insight in one's purpose in life. This is controversial, mind over matter some would say or karmic nonsense, but I believe it is a perspective with potential.

This monograph before you is probably just a small part of what can be gleaned from the controversies mentioned. The main message, understanding identity multiplicity as dealt with in this monograph, is part of a complex puzzle. In the meantime, for the sake of clarity, PTSD is here accepted as a valid and feasible approach for dealing with the spectrum of complaints attributed to the PTSD diagnosis.

7 Shalev, Arieh Y.; PTSD, Disorder takes away human dignity and character, PMCID: PMC1120389, PMID: 11403051 (2001)



Simplied factor models for PTSD

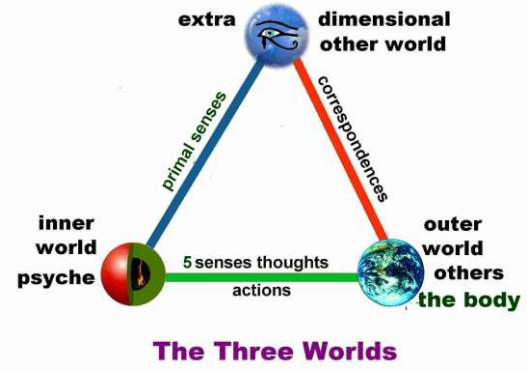
Source: G.J.G. Asmundson et al. / Behaviour Research and Therapy 38 (2000) 203±214

2 The perspective

Whatever happens in our lives leaves traces,
sometimes painful, sometimes stimulating and happy.

From the introduction you may have understood that in this monograph we look far beyond the DSM-V PTSD and DID categories of mental disorder. PTSD has socio-economic consequences, and the culture and stress in society is a factor in the incidence of PTSD too. The spiritual component is also not part of how the medical world deals with PTSD. Then there are the ambiguous terminology and the definitions that complicate the issue.

To help the reader to understand the perspective it's good to specify a few terms and concepts, and the specific interpretations used here. They are maybe not according to mainstream definitions, but illustrate the underlying worldview.



The Three Worlds

The three worlds model

The totality of the cosmos and beyond is of course unfathomable, but to give a manageable perspective I use a model with three worlds or realms: the inner world (mind/psychology), the tangible reality and the spiritual. The third, intangible realm covers the extra-dimensional and spiritual, where time and space don't matter.

This is a simplification, as the otherworld (the spiritual) is probably far more complex, has many layers and there are many views and theories about it. I don't want to go into this, I leave the invisible realms or layers of the mental, astral, etc. planes to the theologians and esotericists and keep it simple.

Psyche as a complex thing

I don't see the psyche as just the material computer or the mind, but rather as the totality of the conscious, subconscious and unconscious, and this extends even beyond the brain as it has an extradimensional component. Reflexes, resonance mechanisms (mirror neurons), the links between perception and action (embodied cognition, common coding) are part of our psy-

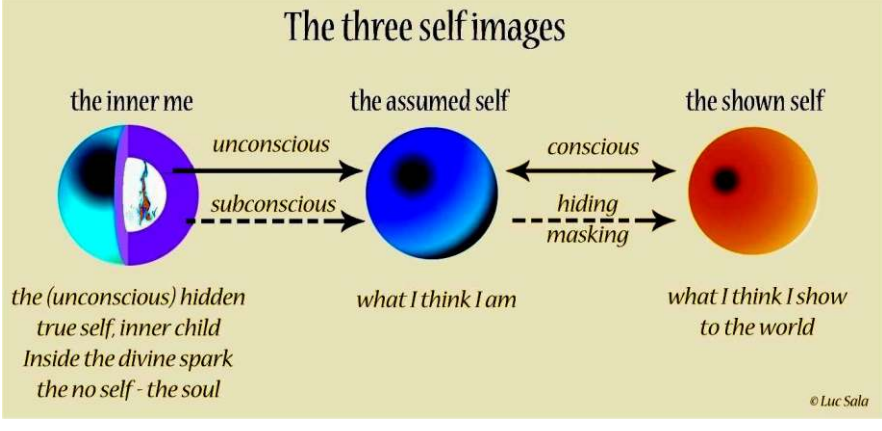
che. The mind is our information processing unit of the psyche and most of what happens there is “embedded” and automatic. The psyche includes the intelligence, instincts and memories in other parts of the body. The link between body and state of consciousness is important, not only as embodied cognition (body states influence mental states and vice versa) but the body as distributed intelligence. We exist and have an identity beyond the fetters of self-consciousness, we more than what we think or even perceive, we are also what we do, did and will do, automatically or unconscious.

The psyche is not the same as the soul

The soul is the core of our being, the divine (or quintessential) spark that also is beyond the mind; it is the transcendental part. It is at the center of the higher self, but also separate from it. This is not what Freud saw as soul (Seele); he equated that more with spirit/Geist in a materialistic sense, as a part of the mechanism of the mind. In a spiritual perspective, the soul is thus the eternal essence, beyond time. The psyche more rational, that what we assume resides in the brain (not necessarily just in our head) and is a process, not a static phenomenon and it changes and has plasticity. Looking at the psyche as a static phenomenon, as if we could take a snapshot at a given moment (the now) ignores the trajectory. What happens in our mind is always in relation to the past and the future.

Self and not-self

The notion and meaning of self has changed over time from more social to more individual, but in my view it is the subjective image that we have, as in “myself” or “me”. The sentence “I am looking at myself in the mirror” makes this clear. There is thus a distinction between the I and the me. The notion of self covers at least three selves, as it is used to indicate the deeper levels (the unconscious, higher self) and the self image that we see as the conscious self, but also the self we are showing to others, which could be seen as the ego or personality. There are many names for the higher or true self, like core self and inner child. The conscious “assumed” self image is not what we really are, it is a construction, a false self. Letting go of that self



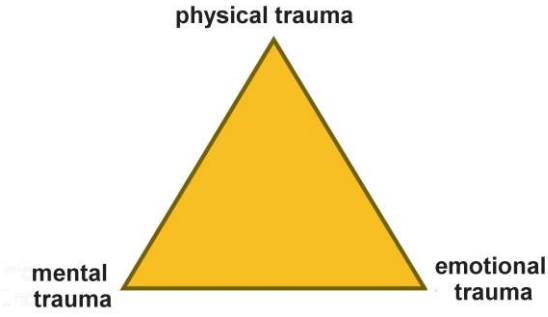


image we can access the inner me, the true self. In there we see that the deeper we probe, the less individuality there is. In the (mystical) end the self disappears, there is only not-self, the identity dissolves. I believe we have ultimately to let go of being different and special. “I am only different as I have not yet learnt to be the same”.

These three (subjective) self images are one way to look at how our psyche is working, looking at the “I” as the witness and controller and the connection to a different dimension.

Identity and personality

Identity is the totality of what one (or something) is, personality is what we are in relation to the external world: personality as the expression of identity. In the modern materialistic context the notions of self, personality and identity are ambiguous, and often mixed up. One is what one owns, mostly stuff, status, knowledge, web-content, sensitivity, taste, mainly things that distinguish one from others or show peer group affiliation. Self-concerns are very much the center of an individual’s striving for well-being and for making sense of one’s life.

Just as the self is fluid and changing, not static, so is our identity and of course also the self that we assume we are. We are often unconsciously moving between the various self modalities (masks, substitute personalities). This influences the way we show parts of our self to others, and this makes a notion of a stable personality even more contrived.

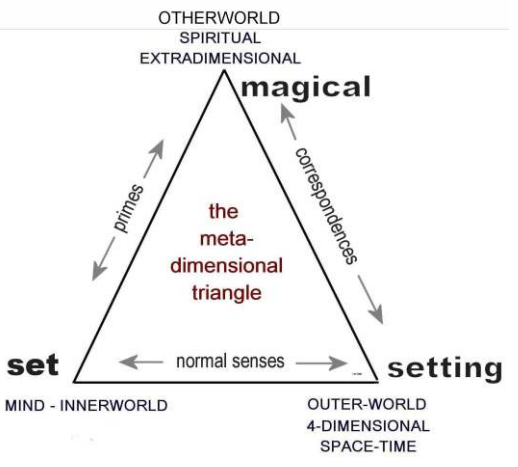
This is often called the ego, but basically it is a mask. I use that word because it kind of fits with persona (the Greek for mask) but it’s more flexible, not so rigid. This is thus not an unchanging, simple self image, a constant mask. It changes over time and develops and shows different facets.

To complicate this even further, in many people there are self-contained other egos, modalities that I usually indicate as masks, because they are separate; one can switch from one to the other. In extreme cases these become multiple personalities; normally we experience them as mood swings. Often the people around us notice the switch between masks better than we do.

All our masks or sub-personalities or ego-modes are coping mechanisms, the result of the inner me core (our original nature also called the inner child) dealing with external situations. The first and usually most prevalent ego-mode or mask is the result of dealing with our parents and our early upbringing. This is where the nature/nurture separation starts. Our inner core or inner me is nature, that what our soul chose and manifest in our genes (DNA). Nurture is our adaptation, in modern terms the epigenetic. Not all DNA is activated the same way, the environment, even in the womb, affects what DNA will manifest (expressed in actual proteins).

Primes and ESP

Quite an essential part of my ritual and therapy approach is the concept of exchange with other dimensions. This may be seen as irrational and unscientific, but at least one has to acknowledge that a large part of the population does believe in some kind of otherworld, either in a religious or spiritual context and which some would call the magical dimension.



Ignoring this and that means also ignoring the effects of prayer, confession, etc. and in general the ritual context is an omission in how the “modern” Western medical profession deals with complaints and in this perspective PTSD.

I believe we have special capabilities and thus vulnerabilities concerning the “otherworld”. Humans perceive much more than tangible physical reality; we intuit things like beauty, balance, love, danger and many such things, but have no way to measure or quantify these notions, at least in the eyes of the scientific world. These intuitions are not mere illusions; we experience them as emotions (they have physical bodily effects) and they are translated into feelings, which make us do things, decide upon actions, and shape our lives. Ignoring them or classifying them as irrational mind programs or illusions and going for the empirical, the measurable, has of course led to progress, but also limited us.

I argue that we have senses and actuators to deal with the extradimensional, that the senses are real, have measurable effects and can be used

consciously. I call them primes, for primordial senses. They are part of our human toolkit. In fact, we all use these primes unconsciously all the time. Using them beyond the usual and more consciously can be called ESP (extra sensory perception) and magic, and in ritual we use them to perceive and influence the extradimensional, beyond time, place, reason and tangible causality. In therapy these senses often play a crucial role, as they are related to existential issues, to guilt and the need for forgiveness, clearing and spiritual awakening.

Feelings and emotions

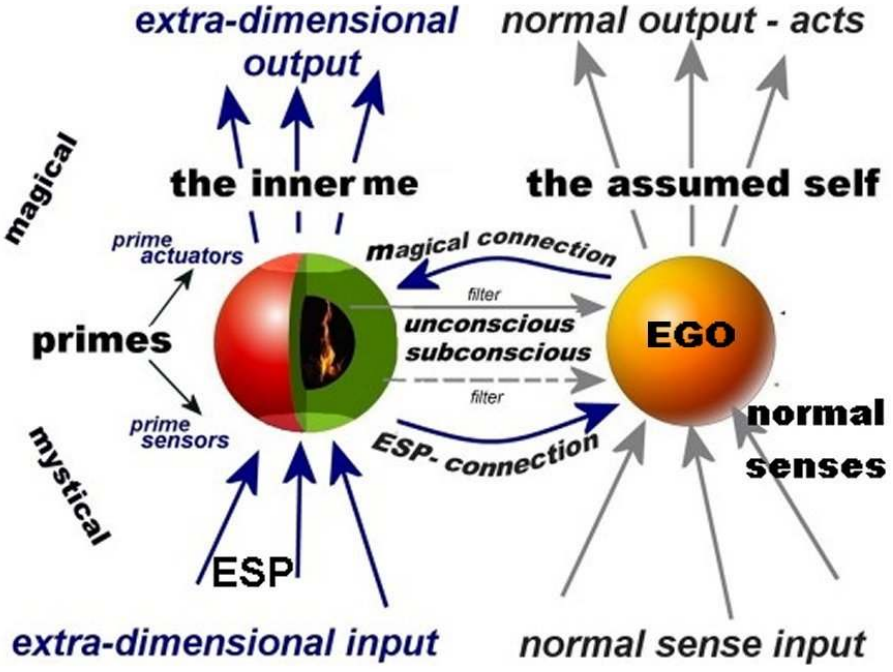
Another relevant distinction I like to make in discussing therapy options is that between feelings and emotions. This distinction became clear to me on reading Antonio Damasio, the neuroscientist who dares to admit that wisdom and science are different things, and whose books are about science as he sees it. Emotions are what happens in our body, the physiological effects of external stimuli or internal "make believe" suggestions, whereas feelings are what our mind makes of them. Feelings are in the mind, closer to consciousness; emotions often happen before we are even aware of them and are more basic. A mood is an emotional state and differs from emotions in that these are less specific, less intense and less likely to be triggered by a particular stimulus or event. Moods are subjective states and have more root elements in the personality structure. They also last longer than emotions. Temperament is even more fundamental and longer lasting

The root mechanisms of PTSD

Before going into the details of PTSD and new approaches to this disorder it is necessary to look at the root mechanisms, like what is trauma, how is it related to fear and pain, what is dissociation, is there a thing like trauma-immunity and how does this all relate to the Substitute Identity Model[1] (SIM), the notion of multiple identity formation.

What are the conditions, situations, traits, inclinations and predispositions that cause disorders like PTSD or DID (Dissociate Identity Disorder) to emerge? Why are some people less vulnerable, have a higher trauma-immunity level, why are they better able to cope with the incidents and situations causing PTSD in others? Also, why do certain environments, cultures and societies, notably our Western way of life, lead to a higher incidence of problems like PTSD, identity disorders and auto-immune diseases; what is the role of food, stress, competition, blood type, gut biome compo-

1 Sala, Krippner, Speer; Identity 2.0 (2019) explains the concept of substitute identities in more in detail



sition, and pollution? Maybe the way we do deal with adverse circumstances has to do with a worldview, with our culture and cosmology, education, family and tribal cohesion, rituals?

And does this all reflect in the physical, the somatic? Are there biophysical markers, in our body, in our brain or DNA or in epigenetic characteristics, that resonate with this?

Questions hard to really answer, but this monograph is an attempt to show how the substitute identity model SIM and multiple identity development hypothesis (see boxes) does change the perspective.

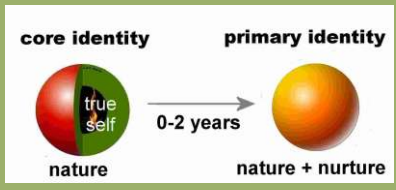
The challenges we encounter in life could be attributed to chaos and chance, to stochastic processes and probabilities, but then it becomes pretty hard to explain how we got here, against all odds. I work from a more teleological position, life is about change, not only simple reacting to stimuli, but going somewhere (the anti-entropic quality of life and evolution). and that means looking for some purpose of change and challenges, why do we encounter hardships? I think they are the lessons we have to learn.

In the following the main terms and concept encountered in PTSD and identity conflicts are addressed.

- **Stress**
- **Trauma**

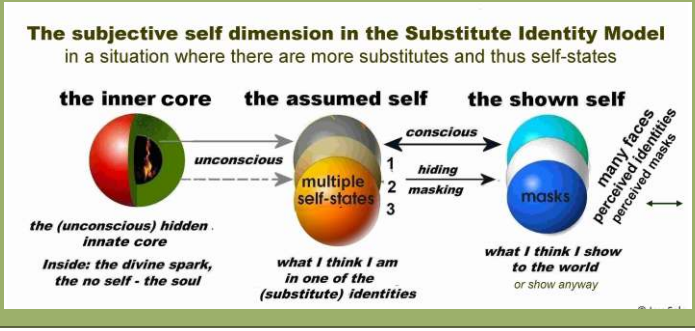
Substitute Identity formation; a quick look

The SIM model (explained in more detail later) suggests that there are sometimes such traumatic instances, that the then dominant "me" identity cannot cope with it and disassociates from that primary identity, creating a new 'self' or what could be called a 'substitute identity' that is better able to cope with the situation. Often this new identity shuts off emotional feelings, is hardened against whatever caused this process and represses the memories of whatever happened, the traumatizing event.



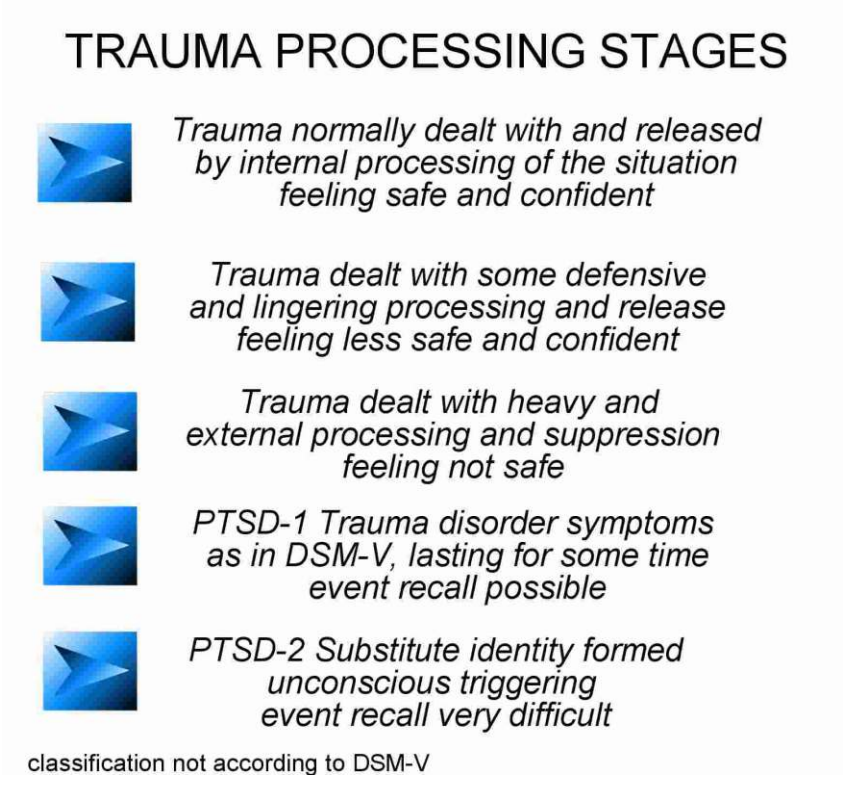
This substitute identity may last for a while, then gives in to the more original (most active in normal life, usually the primary one created in childhood) identity, but may become manifest later or stay dormant till 'trigger' situations activate it, make it again dominant, and maybe less appropriate because the way to deal with a trauma is often less positive. It is usually not the normal dominant identity, but surfaces when triggered.

The shift between identities is normally not conscious, we shift from the one to the other without noticing it. 'Substitute' identities thus can manifest incidentally and are usually not experienced as a personality shift by the person his- or herself, but are often noticed as moods or ego-states by the people around. Others may notice it, but the subjective self-feeling doesn't see any discontinuity, there is (usually) a feeling of continuity in our self-awareness, there is only one 'me', we don't realize that there are more software programs using the same hardware (in computer terms). In extreme cases the phenomenon of multiple personalities, which are manifestations of multiple (substitute) identities, is diagnosed as Disassociated Identity Disorder (DID) where the identities can be very incoherent, but the phenomenon of having less prevalent substitute identities without the memory lapses etc. of DID is actually present in many, maybe even the majority of people.



- **Dissociation**
- **Immunity**

Change happens all the time, but sometimes the changes in a human life are more distinct, more dramatic. Then terms like trauma and dissociation come into play, but it may be that the processes involved are in line with how we normally deal with the world and our impulses, just more intense and closer or even surpassing our limits. Immunity is thus far mostly seen as related to biological threats, but is introduced here as being less susceptible to trauma too.



2 Trauma; physical, emotional, mental, spiritual

The word trauma used to be mostly relating to physical incidents and their physiological effects. There is a lot of research in how traumatic incidents impact the body, the mechanisms at play like systemic reaction in immune response and how medical intervention can help to mitigate the effects[2]. This physiological (somatic, body related) is not the subject of this monograph, but needs to be seen in the context of how an incident of either a somatic or psychological nature can cause trauma, whereby the psychological has mental and emotional components. In actual cases there is always a combination of these three kinds of trauma.

The study of psychological trauma is now more prominent, even overshadowing the original physiological angle. This reversal has as a side effect that in the PTSD context the somatic is often ignored or treated as a whole separate ailment. In most cases there are both physiological and psychological effects, and the clinical somatic effects and anchoring of trauma in the body should not be overlooked .

The spiritual or ethical trauma is a category by itself and deserves attention. For veterans coming back from a war they later see as illegitimate or unjust this can be the main issue. Most people will, at some point in their lives, have to deal with situations they make them doubt fate and impact their belief system, or the reverse, become spiritually reborn. If this has lasting effects, it can be seen as a spiritual trauma. This can be positive, like in PTG (post traumatic growth).

Trauma, a normal occurrence

We deal with experiences all the time, and they leave traces, but this is how we learn and live. The less healthy way of dealing with significant and often adverse events, which then can be termed traumatic, results in symptoms like excessive stress, which can take on unhealthy and pathological forms like in PTSD (Post Traumatic Stress Disorder). It is important, seen the general message in this monograph, to point out here again that one way of dealing with trauma is extreme dissociation and developing a substitute identity, a new split-off identity that is relevant at that moment (for sur-

2 Lord, Janet, Midwinter, Mark, Yen-Fu Chen, Belli, Antonio, Brohi, Karim, Kovacs, Elis.;The systemic immune response to trauma: an overview of pathophysiology and treatment, in The Lancet, series Surgical Trauma, Vol. 384, Issue 9952 (2014)

vival or sanity). To identify and understand this split, if it has manifested, is relevant in the diagnosis and treatment of trauma-survivors.
The word “survivor” used here is less framing than “trauma victim” or “trauma sufferer”. People who have undergone traumatic experiences cannot only recover, but thrive, developing “post-traumatic strengths” along the way. To “victimize” people who have undergone trauma is to emphasize the negative aspects of their experience; such terminology may even retraumatize individuals, and derail their recovery
Going through trauma is not rare. In the US, about 6 of every 10 men (or 60%) and 5 of every 10 women (or 50%) experience at least one (serious) trauma in their lives[3]. Women are more likely to experience sexual assault and child sexual abuse. Men are more likely to experience accidents, physical assault, combat, disaster, or to witness death or injury.

The American Psychological Association’s Dictionary of Psychology defines “trauma” as an occurrence:

“in which a person witnesses or experiences a threat to his or her own life or physical safety or that of others and experiences fear, terror, or helplessness.…[Such occurrences] challenge an individual’s view of the world as a just, safe, and predictable place”

while DSM-IV-TR defines trauma as :

“direct personal experience of an event that involves actual or threatened death or serious injury; threat to one’s physical integrity, witnessing an event that involves the above experience, learning about unexpected or violent death, serious harm, or threat of death, or injury experienced by a family member or close associate.”

There is obviously a difference, are we talking about the pure occurrence, the event, or about how it is experienced at the time, or how it is remembered and stored? The word trauma is used for the occurrence, the experience and the result of the occurrence. It is, in the popular use, not clear if it is the event (or series of events) itself or the damage (or change) in the brain, the body, the adjustment in our identity that emerge as a result of a severely distressing event? We like to see, in the context of this monograph, trauma as the psychological wound in the mind, the ‘psychological debris’, the anchor created (realistically or constructed) .
Another comment on the confusing use of the word trauma is that extreme experiences from the outside are relevant, but there are also internal

3 www.ptsd.va.gov/public/ptsd-overview/basics/how-common-is-ptsd.asp

dramatic experiences, realizations and insights that affect us and even transform us.

Although psychological wounding - an injury to the psyche due to a traumatizing event - can occur along with a physical wound, bodily harm is not necessary for an emotional reaction to develop, but somatic problems can and do often arise as a consequence. The intensity (minor or major, with or without a new identity formation) of wounding that occurs is directly connected to how an individual experiences, thinks, and feels about a traumatizing encounter, activity, or occurrence.

Many centuries ago, the Greek philosopher Epictetus wrote,

"It is not what happens to you, but how you react to it that is important" (according to "The Enchiridion" by Arrian)

Events might shape one's life, but the meanings that an individual attaches to those events will be even more influential. Some will be dealt with in a more or less normal way, others will leave traces for a long time, and some will cause the emergence of substitute identities because the mind cannot deal with them and splits off a new identity by way of extreme dissociation (the term splitting or even vertical splitting is often used describing such phenomena[4]).

Significant experiences

All of us face difficulties in life, sometimes of a traumatic nature. Our lives are not a straight and narrow process of gradually aging towards an inevitable end. We go through good times and bad, we learn, enjoy, suffer and in general experience ups and downs. Some of these experiences are more significant than others, some are easily forgotten, some remembered (but all leave traces), some may be dramatic and traumatizing, others are positive, uplifting or even feel like rapture, awakening to a new worldview. The word significant thus covers more than just the negative.

The broad spectrum of such significant experiences ranges from positive and uplifting situations like meeting special people, falling in love, a marriage or finding meaning, to the very negative, like accidents, disaster and traumatic experience. Some experiences may seem or feel insignificant at the times, but later turn out to be important. In the traumagenic perspective a traumatic event (e.g., childhood sexual abuse) may have long-term negative consequences, including the development of a mental disorder.

4 Wolk, P.C., Savoy, RL, Frederick, BB. The neura l correlates of vertical splitting in a single case study. Neuropsychoanalysis (2012)

The significant events are what shape us, what makes us develop from a baby to child to mature personality, they are the forgers of our identity as it develops. Sometimes they are just instants, just one song, one passage, one teacher in kindergarten with a nice remark and sincere interest, one glimpse at the guru or one bad remark that change us and thus our identity, for better or worse. Sometimes it is a series of events, like in wartime or when a parent or teacher repeats all the time that you are no good.

Traumatic experience

It is important to remember that it is not the event that determines whether something is traumatizing, but the individual's *experience* of the event, how we deal with it. A traumatic experience is not necessarily traumatizing.

There is a difference between *traumatizing events* and *traumatic experiences.* A catastrophic event such as a car crash is *potentially traumatizing* to the occupants of that automobile. Some will assimilate the experience and bounce back easily. For others, that event will be *traumatizing* and will become a *traumatic experience.*

Change is an undeniable factor of existence, so we have to deal with positive and negative experiences and even with positive or negative interpretations of the event, sometimes in retrospect trauma was necessary to induce transformation or even catharsis.

People's encounter with trauma is no exception, but the way we deal with it covers a whole range, from relatively healthy integration to pathological behavioral changes. More often than not, life events cannot be predicted, nor are circumstances always consistent with people's desires or their wish for control. Yet these unpredictable events often yield a unmistakable effect, influencing and shaping people's development, beliefs, and overall life experiences. From the impact of earthquakes, floods, hurricanes, and other natural disasters to the role that a simple misunderstanding can play in disrupting a romantic relationship, the processes of change are inevitably at work. However, it is through understanding and accepting the nature of change and its pervasive influence upon the stressful events of everyday life (such as sickness, divorce, aging, unemployment, or loss) that people have the opportunity to develop greater resiliency and nurture the capacity to live a richer life.

How people experience their wounding brought on by a traumatizing event is strongly related to their personal temperament (innate identity), inner personality, personal history (especially any prior traumas), context (the setting or environment, social and culture), and the subjective impact of the event, in other words, how they deal with the trauma, attribute

meaning to what has happened, integrate, add it to their inventory of life's lessons or, in some cases, kind of check out, disassociate from the event and develop a substitute identity, a process that sometimes repeats itself when new traumatic incidents are encountered.

Posttraumatic growth (PTG)

We are not immutable beings, we grow, fall back, learn and forget, in a dynamic process where the significant events are like the signposts. The positive and uplifting events, the enjoying, loving, learning and growing are, for most people, the most significant in their lives, and define their identity, but the reality is there are the negative experiences too and they shape and refine our identity even more, but we like to forget them.

Many of the great people in history have overcome immense difficulties, and hardship and still came out as heroes, inventors, artists, philosophers. This is why some now look at trauma not only as a negative coincidence, but as a step in a development process. The interest in PTG (posttraumatic growth), spiritual emergence or awakening experiences has been growing. PTG is when, usually in retrospect, the trauma has led to increased insight in one's psyche, increased maturity and consciousness.

The significant experiences are, the spiritually inclined would say, not isolated or just fate, for things happen for a reason, and what seems like an accidental experience, in retrospect often can be understood as a logical step in the process of (seeking) self-realization. There is even the notion, that all negative experiences are but warnings and lessons we should heed; life as a school, as a path to growing awareness. The effects of potential trauma situation, upon the individual can thus manifest in varied ways and do not always result in pathological conditions like PTSD or DID. There are harsh experiences that have a positive outcome, like in initiations, and there are many reports of people experiencing spiritual emergence in what for others leads to negative outcomes.

The possibility of positive change or awakening, as a result of the struggle with a major life crisis, terminal diseases or extreme hardship is not unknown, it is the material of many myths and is observed in the lives of many great people. The benefits of such processes are; new possibilities, relating to others, personal strength, spiritual change, and appreciation of life. Trauma may be a way to reconfigure shattered belief systems, disengage from unreachable goals, and revise one's self-image and life narratives.

That certain experiences or even traumas play a role in our development towards more consciousness and maturity is well known, but mostly in anecdotal form, like how Nelson Mandela learned from his prison years.

Here the way we deal with trauma plays a role, a high resilience or acquired trauma-immunity might even limit posttraumatic growth, if we see the traumas as stepping stones on the path to growth. Posttraumatic growth (PTG) or benefit finding is mentioned as positive psychological change experienced as a result of adversity and other challenges in order to rise to a higher level of functioning.[5]

Fairy-tales and folk-stories but also the great epic history of cultures all over the world are full of it, the hero(ine) needs to face and endure hardships in order to attain his position or achieve his or her lofty goals. Initiation rituals, often seemingly traumatic, do not aim at PTSD-like outcomes, but at personal growth, awakening, jumps in consciousness.

Posttraumatic growth, as described by the PTG Research Group[6] tends to occur in five general areas:

*"Some people develop a sense that new opportunities have emerged from the struggle, opening up possibilities that were not present before. A second area is a change in relationships with others. Some people experience closer relationships with some specific people, and they can also experience an increased sense of connection to others who suffer. A third area of possible change is an increased sense of one's own strength – "**if I lived through that, I can face anything**". A fourth aspect of posttraumatic growth experienced by some people is a greater appreciation for life in general. The fifth area involves the spiritual or religious domain. Some individuals experience a deepening of their spiritual lives, however, this deepening can also involve a significant change in one's belief system."*

An individual's perception and experience of these significant and potentially traumatizing events will determine whether eventually the response indeed falls in the trauma process category or is remembered as being part of normal growth spectrum of a human. Dark experiences can give birth to new ideas, opening new vistas, a changing worldview, a new self-image, self-narrative, and growth. The saying „what doesn't kill you makes you stronger" does make sense.

One has looked into such Post Traumatic Growth incidents for some time, also in the context of personal growth and „positive psychology", and why some people can turn negative experiences into personal successes

5 Tedeshi, R.G., & Calhoun, L.G.;Posttraumatic Growth: Conceptual Foundation and Empirical Evidence. (2004) and The Posttraumatic Growth Inventory: measuring the positive legacy of trauma. Journal Trauma Stress (July 1996)

6 https://ptgi.uncc.edu/

and visionary change..Seligman[7] suggested that PTG is not merely a by-product of trauma; it acts as a catalyst to bring about the cognitive re-structuring that helps us grow as better human beings.
There are therapeutic questionnaires[8] to deal with this like the Post-Traumatic Growth Inventory (PTGI) of Tedeschi and Calhoun[9] that look into:

- Appreciation
- Relationships
- New possibilities and opportunities
- Personal strength
- Spiritual enhancement

There are also networks to deal with spiritual emergencies, but in general, this is not where PTSD research is directed at.
The relevance of understanding why some people can turn adverse situations into positive outcomes is that this may help us understand the whole process of trauma processing better. PTG has been criticized pointing out that the subjective feeling of contentment that individuals experienced in PTG is perceived happiness rather than real joy, also because well-being prior and post-trauma is hard to gauge.

Spiritual awakening

For some such a spiritual awakening is the best thing that could ever happen to them, but it also radically impacts one's life. A spiritual awakening wakes one up to the harsh reality that most people are unhappy, including yourself. To realize how everybody around you is mostly living on auto-pilot, chasing money and power. Your social life changes. If you enter into a spiritual awakening, you will get more and more removed from the people that you call your friends. There is the danger using your new status as a spiritual person, become a guru or healer. and to not face your issues.
The notion of rebirth (or dying to oneself) is not only part of many indigenous initiation rituals, but quite accepted in modern psychotherapy. Does this require a new perspective on what PTSD really is, a disease or one of life's deeper lessons?

7 Seligman, M.E., Csikszentmihalyi, M. Positive Psychology. An Introduction. American Psychologist.(2000)

8 Tedeschi and Calhoun developed (1995) the 'functional-descriptive model of PTG' and an inventory (PTGI) that researchers and individuals could use for evaluating PTG.

9 Richard G. Tedeschi and Lawrence Calhoun; Posttraumatic Growth: Positive Changes in the Aftermath of Crisis (Personality and Clinical Psychology) ISBN-13: 978-0805823196

The paradox of PTG is that potentially traumatizing events are in some way a necessity, a normal and necessary part of life's lessons. Something we can recognize in initiation rites in many cultures. No strain, no gain, there seems to be a more positive change in those who go through the dark and fight adversity than in those who have not experienced such extraordinary events.

Trauma processing

Dealing with the impact of the experience as in 'trauma processing' is quite an ordinary and common process in our lives. In many cases we deal with trauma by slowly converting the impact into some more or less adequate change in attitude or behavior, like a child who learns to stay away from a hot stove. In other situations, what happened will turn our lives upside down, force us to reconsider even basic beliefs, like in a spiritual crisis.

For some, trauma can turn into emotional scars that impact all future relationships. For example, if a person has been raped, he or she may no longer be able or willing to trust people of the perpetrator's gender, age, or ethnic group. In other types of abuse, the trauma wounding may manifest through discomfort and stress that, when not recognized accurately, can take on bizarre forms of expression such as avoidance of social gatherings, sudden bursts of profanity, or simmering anger and resentment.

To understand this, we have to look at what happens when people deal with external stimuli like trauma, and here the notion of dissociation comes into play.

The risk of becoming traumatized and the onset of subsequent disorders are based on three elements (with some overlap):

- (1) The potentially traumatizing occurrence is unexpected;
- (2) The person is not prepared for the experience;
- (3) In most cases, nothing could have been done to prevent the experience from happening (Herman[10], 1997).

There are many memorable events in our lives, but not all significant events are correctly memorized and accessible. Some influence us in some way and are then forgotten because they are no longer relevant, some are doctored to fit our self-image, but we also push away stuff into our unconscious (and ask our therapist to help us retrieve them).

10 Herman, Judith. Trauma and Recovery: The Aftermath of Violence-from Domestic Abuse to Political (1997)

That is not to ignore that all events in our lives are somewhere and in some way (not always realistically) retained in our memory and are constituents of our identity. The dramatic and traumatic instances may be half forgotten or placed in a different narrative, but leave hidden traces, also in the body that influence our lives and our health. As mentioned before, they can lead, through extreme dissociation and denial to new identities able to deal with the adverse situation. Recognizing those as substitute identities can help in diagnosing and treating subsequent disorders. The substitute identity model (SIM) illustrates how these identities occur and how they impact attitudes and behavior.

Recognizing the difference between coping with a “traumatic experience” in one’s normal, dominant identity in a „healthy“way or as causing a “traumatic experience leading to a substitute identity” is crucial to the understanding of trauma processing and selecting trauma therapy options.

Process, healing or disorder

Processing trauma is a complex but very natural way of dealing with the challenges life offers to us. Trauma can be seen as accidents or fate happening to us, or as lessons that fit in some notion about destiny. In the latter sense they can be experienced as positive, maybe not in the moment, but in retrospect.

The emotional and physical symptoms that can arise from and reflect trauma are by no means predictors of a disorder. The processing of trauma takes time and the symptoms related to this processing can run from recurring memory loops (flashbacks) and depressions to serious depersonalization. They can be understood as a barometer of something occurring within an individual where the emotional complexity that is being encountered is overriding the ability to easily and rapidly integrate the experience. To some extent, these symptoms can be seen as a sane response to an insane world (Ronald Laing[11]). It is in this way that we might view the expression of the physical symptoms like those used to diagnose PTSD:

- Insomnia or nightmares
- Being startled easily
- A racing heartbeat
- Aches and pains
- Fatigue
- Edginess and agitation

11 Laing, Ronald D.; The Divided Self: An Existential Study in Sanity and Madness (1965)

- Muscle tension

and the psychological symptoms like:

- Shock, denial, or disbelief
- Anger, irritability, or mood swings
- Guilt, shame, or self-blame
- Feelings of sadness or hopelessness
- Confusion, with difficulty concentrating
- Anxiety and fear
- Withdrawal from others
- Feelings of disconnectedness or numbness

which may last for days, weeks, or even months, also as a relatively normal response to a stressful life event, evoked by an unfamiliar terrain of experience that is difficult to assimilate.

Viewing trauma and trauma processing from this less framing and vindictive mindset allows both those who are observing the symptoms and those who are experiencing them to bring compassion and understanding to what is occurring. In so doing, the harmful effects that can follow from the stigma of "something being wrong" and the labeling approach of DSM-V are reduced.

The nature of trauma is dramatic and dynamic, and responses to it vary. The factors that contribute to its onset and the way it is dealt with, in whatever form of dissociation in the moment, and then the process of dealing and healing arise both from the individual's identity matrix and cultural context. As a result, it is important to understand the framework from which mental health practitioners operate when someone manifests some or most of these symptoms. Among most Western psychotherapists that framework may include the possible diagnosis of post-traumatic stress disorder, or PTSD, but in other cultures there are different modalities to deal with trauma and stress.

Dissociation, an identity discontinuity

Dissociation (in the general sense of the word) is an act of disuniting, splitting or separating a complex object into parts. In psychology, a very general indication is that it refers to an experience of having one's attention and emotions detached from the environment. In the context of identity theory one can say that it has to do with a break in the experienced continuity of one's identity.

Dissociation is, at the deepest level, a core and fundamental process to deal with the world, it is leaving the often crippling illusion of a constant selfness, of a fixed consistent and rigid reality perception, it means open-

ing up to an alternative, a different position; as such it constitutes a necessary process to learn, transform and grow. It is a shift in consciousness, which allows a shift in perspective, which allows and may cause a transformation in our self-programming of body, mind and emotions. It may be a fundamental process of what we call life, and in humans, even from before birth, it is what makes us grow, that what makes a difference, an asset rather than a burden.
Dissociation is dealing or coping with the outside world, in normal, healthy ways this is then integrated (associated again, the split healed) as in conversion and integration of experiences. It is then defending oneself against adverse influences. But it can be processed in less healthy ways too, like when the process interferes too much or too long with normal functioning.

Dissociation refers to any of a wide array of experiences from mild detachment from immediate surroundings to more severe detachment from physical and emotional experience, including altered states of consciousness. The major characteristic of all dissociative phenomena involves a detachment from reality (identity), rather than a loss of reality (identity) as in psychosis[12].
It's quite a common phenomenon, everybody at times drifts off, daydreams, and we use dissociation as a way to escape from reality and under stress, as a defense mechanism to find or regain some peace. We can do this consciously or unconsciously, in adverse but also in beneficial situations. We all experience dissociation at times, as the normal way we deal with challenges, this is not felt as a disorder, we need to step away from a position and embrace or at least consider another to be able to make decisions, the dialectical thesis-antithesis-synthesis. Dissociation is the normal way to deal with external stimuli, it's how we learn, change, grow, but when it is too much to handle for the dominant identity at play, it may cause the emergence of a new identity. Dissociation can lead to disintegration and depersonalization, but is not the same.
Dissociation ranges from creative flashes, mild detachment and absent-mindedness to entering extreme separation from a consistent identity (splitting, disintegration etc.). Dissociation is thus a continuum from fairly common occurrences like sleepwalking, (lucid) dreaming , daydreaming, idée fixe and mind wandering via consciously altered states of consciousness like praying, trance, meditation, or tripping to more pathological and enduring phenomena like depersonalization, vertical splits, de-realization and multiple identity syndrome.

12 Lillie I. VandeKar. Trauma Therapy In Treatment Of Psychosis (2019)

The term dissociation has a long history in psychology and psychiatry, but is not really well defined. It has been used since the end of the 19th century, when Pierre Janet (who also coined the term subconscious) used the term describing *divergent post-traumatic stress responses* in his diagnosis of hysteria[13], which he described as "*a malady of the personal synthesis.*" He was, according to Onno van der Hart, the first to show clearly and systematically how it is the most direct psychological defense against overwhelming traumatic experiences; he saw dissociation as a separation (split) in the personality. Trauma-related disorders in Janet's view are disorders of synthesis and realization. The focus then was on the occurrence and role of dissociation in traumatically induced disorders. It was seen as a split off from normal integrated mental functioning, an unconscious compartmentalized or automatic way to think.

In the last century, there was a branching in how (extreme) dissociation was interpreted. There was the positive branch, pointing at phenomena like lucid dreaming, trance and indigenous healing practices (with support from many anthropologists) and there was the pathological branch, which saw dissociation as a sign of mental illness, a symptom of a disorder. William McDougal[14] (1926) was a proponent of this latter school, he wrote:

> *"Normal personality, as we know it in ourselves and in our neighbors, is the product of an integrative process ..... and is susceptible to disintegration that results in the manifestation of two or more personalities in and through the one bodily organism."*

The term dissociation remained somewhat ambiguous. There were many authors who tried to describe the process in generalizing terms despite the complexity involved in its conceptualization.

One of the questions was whether it only concerned psychological or also bodily phenomena (somatoform). Dutch neuroscientist Ellert Nijenhuis[15] confirms this overlap and incorporates (with O. van der Hart) classical views on dissociation with theories related to traumatization into an integrative theory of structural dissociation. He views dissociation as a lack of integration among psycho biological systems that constitute personality, that is, as a structural dissociation of the personality.

13 Van der Hart, Onno and Rutger Horst, Rutge, The Dissociation Theory of Pierre Janet, in Journal of Traumatic Stress, Vol 2, No. 4, (1989)

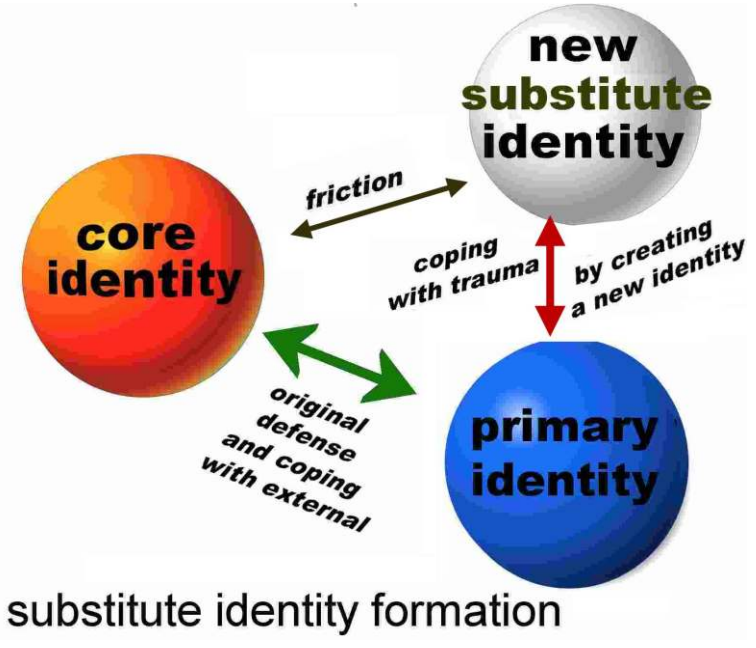
14 McDougal, W. An Introduction to Social Psychology (Revised Edition). (1926)

15 Nijenhuis, E.R.S.. The Trinity of Trauma: Ignorance, Fragility, and Control: (2014)

The prototypes of Structural Dissociation in Nijenhuis' vision are alternations between and co-existence of :

- Trauma-fixed part((s)) that experience "too much" – reliving of trauma; mediated mainly by a defense action system
- Trauma avoiding part((s)) that experience "too little"- numbing, detachment, amnesia, conscious and unconscious avoidance strategies; mediated mainly by daily life action systems.

This in line with Charles S. Myers (1940) ideas of a ANP (apparent normal parts) and EP (emotional parts) of the traumatized personality. The distinction made by Ellert Nijenhuis between neutral personality states (NPS) and trauma-related personality states (TPS) already point at a multi personality kind of model, but slightly different from the substitute identity model.



Division or split

A split or discontinuity in the experience of self points at a division. In the context of trauma, Nijenhuis and van der Hart (2011) talk about dissociation in trauma and define this as:

Dissociation in trauma entails a division of an individual's personality, that is, of the dynamic, biopsychosocial system as a whole that determines his or her characteristic mental and behavioral actions.[16]

16 Nijenhuis, Ellert.R.S.,Van der Hart, Onno.: Dissociation in Trauma: A New Definition and Comparison with Previous Formulations, in Journal of Trauma & Dissociation, Volume 12, issue 4, (2011)

Note that here one refers to personality, the 'shown' or expressed part of the identity, as a biopsychosocial system, including the interaction with others, the behavior, not to identity (as in the substitute identity model). Their structural dissociation of the personality likely involves divisions among at least two psycho biological systems, each including a more or less distinct apperceptive center, that is, a dissociative part of the personality. Nijenhuis also points at the continuum of dissociative phenomena, including DID and argues that PTSD should be classified as an identity disorder[17], which feels like a better approach than just labeling it as stress-related.

There is a problem with linking trauma and dissociation in a pathological way like in DID, because there are traumatic experiences, which turn out to be cathartic. There is a whole class of extraordinary experiences (EE) including what are called encounters with anomalies, which are not reported as traumatic but do bring about serious changes in worldview, behavior and personality as an expression of identity changes. Meeting a guru, witnessing a „miracle", a psychedelic trip, spiritual rapture, even falling in love, all instances where some kind of dissociation often happens.
A definition already moving to the middle ground between dissociation as merely pathological and as a common phenomenon in identity formation was Krippner's[18] in 1997: He then defined dissociation as:

"Reported experiences and observed behaviors that seem to exist apart from, or appear to have been disconnected from, the mainstream, or flow, of one's conscious awareness, behavioral repertoire, and/or self-identity. Dissociation is a noun used to describe a person's involvement in these reported dissociative experiences or observed dissociative behaviors."

The appreciation for other, positive effects of dissociation and especially conscious dissociation has grown. The process is seen more and more as a fundamental way to deal with stimuli, as part of transformation, inner growth and change, in either a positive or negative way.
Dissociation in this context is (part of or related to) a natural process of dealing with external situations, where the balance between opposing

17 Nijenhuis, Ellert R.S; Ten reasons for conceptualizing and classifying posttraumatic stress disorder as dissociative disorder. Psichiatra e Psicoterapia, (2014)

18 Krippner, Stanley. and Powers, S.M. (eds), Broken Images, Broken Selves: Dissociative Narratives in Clinical Practice, 3-40 (1997)

drives/wills, like those to live a happy life and to defend against adverse influences (Eros/thanatos in Freudian terms), is challenged. The manifestation of dissociation as a pathological symptom is then just an extreme point on a continuum.

A definition proposed in this monograph is:

"Dissociation is a state of being where the fabric of consistent and continuous reality is torn and one experiences or shows a discontinuity of the identity, division or disconnection from one's normal identity state (self-state) in the mind, the body, emotions, perception or agency. This can be a conscious or unconscious phenomenon."

or more simply:

Dissociation is a discontinuity in one's identity.

The literature on dissociation has suggested that, under certain circumstances, an individual may demonstrate talents or skills that apparently surpass his or her own expected abilities or current knowledge. As stated by Braude[19], based on his work with hypnotic anesthesia and hypnotically induced hallucination:

"Dissociation seems to liberate or permit the development of abilities that presumably wouldn't have manifested otherwise".

Interesting examples are frequently found in cases of medium-ship and especially those involving mediumistic painting and writing, in which an individual may involuntarily produce writings or drawings that he or she is sometimes apparently incapable of reproducing in his or her normal condition, and that are often interpreted as the action of spirits or other disincarnate beings (Stevenson)[20]. One of the most impressive examples of this spiritism, Brazil's most prolific and beloved medium Francisco Cândido (Chico) Xavier has convincingly contacted thousands deceased people.

In the context of identity switches it feels as if here dissociation and substitute identity formation or activation are mixed up. Mediums obviously shift between identities and display different capabilities, but are these really contacts with external entities or just projections? Sensing the needs of a person wanting to contact a deceased one might be a supersensitive capability, not a miracle or really communicating with the dead.

19 Stephen E. Braude, The Creativity of Dissociation, (2002)

20 Stevenson, Jack; Cult of the dead (1978)

A postmodern way to identify dissociation is **reality hacking**, stepping out of the box. It is a fundamental and powerful tool, but like most tools, can work out both positive and negative. Dissociation is a more or less automatic process, sometimes unsettling, but humans can learn how to use it, hone it, and apply it for inner growth, healing, mediumship, innovation and reality hacking, or as it used to be called, magic.

Dissociation is, in this view, a fundamental process of change, we have to make a split, a step away from the old to create the new. It's becoming clear, in the context of how we defined dissociation and identity, that identity and dissociation are paired, the one cannot exist without the other, identity change results from dissociation, and sometimes we get stuck in either one. Identity is a state; dissociation is a process. Identity is a result; dissociation is what impacts that result.

The dissociation kicks in like a tic or fugue or alternatively parts of our identity freeze, become petrified and act like anchors that prevent normal adaptation. Dissociation is what happens in the moment of stimulation, it is the process of dealing with it, the adaptation, healing and recovery and notably the change in agency that it brings, is a different thing. Agency is the backdrop in which the drama of dissociation and identity change takes place.

Does this constant process of adaptive dissociation shape our identity, or whatever substitute identity we are in? It does, otherwise we would become the petrified, unchanging individuals as we sometimes encounter in catatonic patients. Normally identity shifts and develops constantly throughout life, but not always in a positive, more aware direction and the shift is not always linear.

Ordinary and disproportional dissociation

To honor the various positions concerning dissociation, it may be sensible to differentiate the term.

When we call the fundamental process of dissociation that is essential for change, meaning a moderate and proportional movement away from the homeostasis because of some stimuli "**ordinary dissociation**" and the more excessive form of it, the **disproportional dissociation,** there is already a distinction with practical implications.

The disproportionate dissociation can then be divided in negative outcome disproportionate dissociation with pathological results like PTSD or even DID and positive outcome disproportionate dissociation like in awakening.

Substitute Identity Model SIM: short introduction

A more extensive description follows later. The existence and emergence of substitute identities (multiples), which manifest as separate personalities or self-states, is far more common than is assumed by the medical world and psychologists. The term substitute is used here to distinguish it from alter, ego-state or personality states. Those words are often used, but are not covering the whole of what identity entails, and includes the unconscious.

Most of us, maybe more than 90%, have multiple identities, as distinct ways to deal with the world. They are usually caused by traumatic dissociation, but in the formal psychology approach they are only identified as separate in pathological diagnoses like DID (Dissociate Identity Disorder). That there are such identifiable structures is well known, in the literature they are mentioned as alters, masks, self-states, psychological satellites, modi. In transpersonal psychology, a sub-personality is a mode that kicks in (appears on a temporary basis) to allow a person to cope with certain types of psycho social situations. But having multiples is not how most people see themselves: we like to stick to the belief that we are an indivisible, immutable, totally consistent being and that our identity is undivided or split, it is what we experience as the continuity of our 'self'.

However, looking at identity as the totality of what defines us, many of us do appear to have different identities. The Eastern wisdom talks about the true and the false self, while the notion of the inner child as a deep, hidden identity is well known across cultures. Many, in fact most people do have more identities than the core "soul"' and the primary identity (we experience as self and is expressed as ego) that developed in early childhood as a defense coping mechanism. These additional, substitute identities emerge because of significant experiences, like trauma or awakening, where extreme dissociation (identity discontinuity) and formation of a new identity is the way in which the psyche responds and escapes confrontation.

To understand the mechanism of substitute identities, to identify them concerning behavior, traits, world views and types can be a great help in dealing with PTSD, auto-immune diseases and personality disorders, but also as a step towards personal growth and understanding one's life purpose.

It has to be noted that substitute identities are not only the result of traumatizing incidents, sometimes one creates them in response to a situation like in therapy, when developing multiple identities is what the therapist expects. This can be a conscious or unconscious process, but explains the (iatrogenic) controversy around DID. We can also pick up identifications from others (the group mind idea) that are played out like separate identities and seem to have an existence of their own as substitutes, but they are not based on individual trauma.

3 Stress and trauma, immunity

A general way to describe what happens in the aftermath of a traumatizing event is stress **or distress**, the difference is just excessive pressure we can deal with or something more severe causing problems, such as traumatic experiences. There are thus forms of stress, experienced in a given situation, so intense that they are, indeed, potentially traumatizing for the one, and not for the other.

Stress is a term we use when we feel that everything seems to have become too much - we are overloaded and wonder whether we really can cope with the pressures placed upon us. Stress in general is a symptom, not the cause, it is how we deal with an adverse situation.

Here the term „Eustress“can be mentioned. It means beneficial stress, either psychological, physical (e.g. exercise), or biochemical/radiological (hormesis) and was coined by Hans Selye. Some stress is necessary, it gets you going, keeps you from being bored and aimless, but in general stress means over-stimulation, excessive conditions. In dramatic, potentially traumatizing situations there is the stress in the experience itself, the bodily or emotional impact of what happens, but this is then the trigger for dissociation, a natural response when we deal with such choice situations. In most cases there is an ‘override’ response so that we will not immediately feel the pain and stress.

Stress and distress

Stress can also be a symptom of trauma processing and stretching out over time, till healing into a stable state is achieved (or not, in pathological cases like PTSD). Stress as in the result and symptom of trauma processing, can be psychological (emotional or mental), physiological, or both, and can affect almost every bodily system. Stress can evoke sweating, palpitations, shortness of breath, a dry mouth, negative moods, and other manifestations. Variations in stress can range from mild to severe. In the latter instance, the so-called “**general adaptation syndrome**” the consequences of intense stress, can impair a person’s functioning so badly that his or her quality of life is significantly reduced.

Traumatic stress is thus a normal response to an extreme event, one that is outside a person’s ordinary life experiences. The impact and intensity of the event then triggers the creation of emotional memories, which then become stored within the brain and body. In general, the more direct the exposure to the traumatizing event, the higher the risk for emotional harm.

Natural and herd immunity, WHO and the CoVid case

Not or being less susceptible to a certain disease and being unable to pass it on to others we could call immunity, in the broad sense before the WHO linked that only to the protection by vaccination. There is natural, innate or acquired immunity, herd immunity, psychological immunity, auto-immunity; the term is used in many ways now. I will come back to that.

What had been disregarded by the virologist and epidemiologists and has led to a redefinition by the WHO is natural or innate immunity.

In the discussion about vaccines for SARS-CoV-2 the issue of herd or population immunity is often mentioned. The idea is that if enough people would be vaccinated the virus would die out. Herd or group immunity is supposed to happen at the 80-90% level of immunity.

Before „herd immunity", was seen the indirect protection from an infectious disease that happens when a population is immune either through vaccination or immunity developed through previous infections. The WHO[1] now only refers to artificial immunity by vaccination:

> *„Never in the history of public health has herd immunity been used as a strategy for responding to an outbreak, let alone a pandemic. It is scientifically and ethically problematic."*

This has been criticized a lot, but has been seen as an edict and many governments now make vaccination or indirect, violating fundamental human rights of integrity.

If a relatively high proportion of the population has innate, natural or previously acquired immunity the dying out makes much more sense. There have always been people immune or at least better able to deal with them to specific diseases, never the whole population died out (the Plague, Spanish flu), at worst some 30% survived. If the natural immunity for SARS-CoV-2 is around 60-70% (and this varies among populations) additional natural immunity buildup in surviving patients and through vaccination did help to reach the herd immunity level (some 80%) and thus dying out of the virus.

Many people have some level of natural immunity, small or robust, for many reasons like genetic or epigenetic factors, previous exposure to similar viruses, but maybe also because of their age, good or bad health, condition, lifestyle, food patterns, climate conditions like humidity, specific gut biome bacteria, trauma history, medical history notably steroid and antibiotics use, telomere degradation of DNA, radiation, comorbidity, fear and stress levels, and what not. Left handedness, eye-color, birth trauma, aller-

1 https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19—12-october-2020

gies, relationship patterns, meditation practices, religion, sex life, vitamin and other supplements intake, oxygen efficiency, breath patterns, sleeping position, the list is endless.

Now that enough people have has SARS-CoV-2 and immunity levels are high enough, helped by the vaccination of large proportions of the population, the epidemiologist should start looking at the data and try to discern what factors are helping or even providing natural immunity, and what factors affect it negatively. More attention to comorbidity and medical history would be a practical route, but the problem Is that those who were immune, are not normally tested for all the potential immunity factors. So research has, initially, to rely on comparing the data of SARS-CoV-2 patients with the general or specific populations.

Any discussion about the effectiveness of vaccination should take this into account. There are certain risks associated with vaccination, exposing everybody by forced vaccination might be counterproductive and cause more harm than good, as is now slowly emerging as a narrative beyond the vaccination as the only road to salvation.

Immunity and trauma-immunity

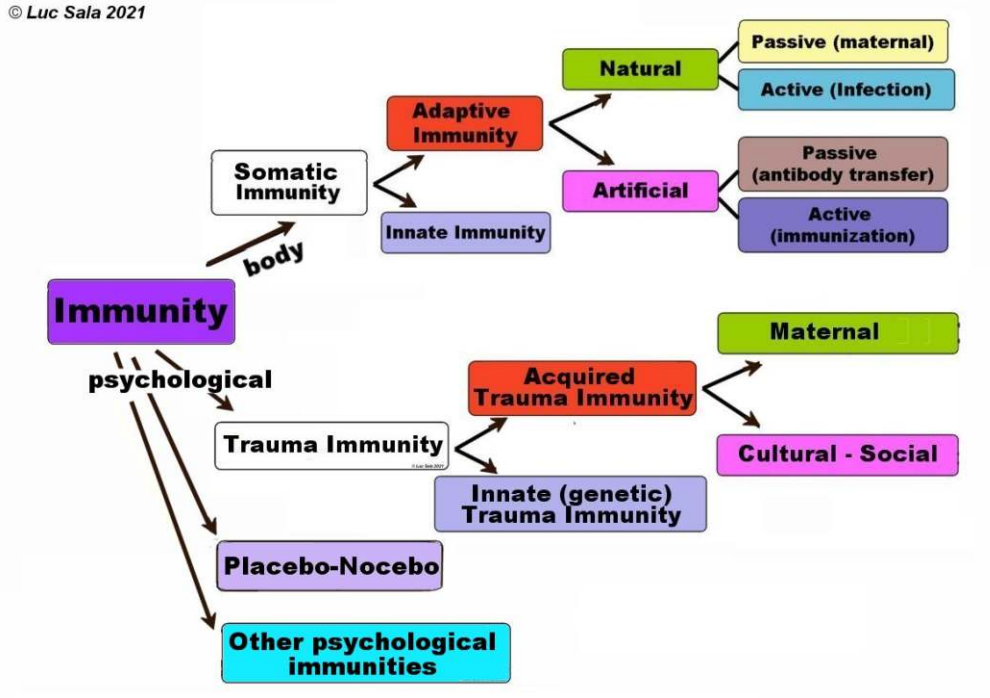
If trauma has both somatic and psychological consequences, and trauma does impact biological immunity, could there also be psychological trauma immunity, expanding the notion that immunity is not only a biological phenomenon-

It needs to be repeated, modern “Western” medicine is mostly symptomatic, not looking at healthy people and why there are able to resist disease, but at the ones with complaints and diseases. There is limited interest in prevention and environmental conditions, although the epigenetic perspective has changed this quite a bit. The holistic approach of many “Eastern” traditions is aiming at health, at prevention, at looking at deeper causes, not at superficial indicators and symptoms. They see mind and body as a single integrated complex, not separating the somatic from the psychological and include the spiritual dimension.

The current approach is mostly to limit immunity to the biological level, as what protects from diseases and infections. This means defining immunity as the ability of an organism to resist a particular infection, pathogenic (harmful) micro-organism or toxin by the action of specific antibodies or sensitized white blood cells.[2]

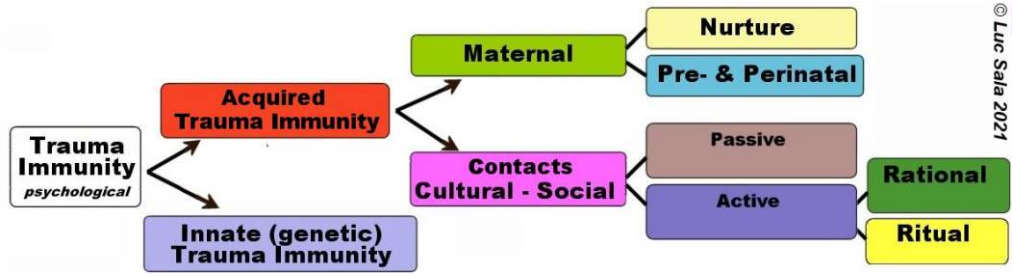
2 Merriam Webster definition: immunity is the quality or state of being immune, especially : a condition of being able to resist a particular disease especially through preventing development of a pathogenic microorganism or by counteracting the effects of its products.

It’s seen as a quality, with active more long-lasting immunity that is innate (natural inflammatory responses and phagocytosis based on genetic predisposition and/or good condition or previous accidental exposure) or acquired (adaptive) through production of antibodies within the organism in response to the presence of antigens, like the immunity acquired by a vaccine or transfer of antibodies. Immunity can be specific, offering resistance to a specific disease. Adaptive immunity has two forms: the cell-mediated immune response, which is controlled by activated T cells, and the humoral



Biological and Psychological Immunity
(with trauma immunity as part of the psychological)

immune response, which is controlled by activated B cells and antibodies. There is also immunological memory which means the immune system keeps a record of every germ (microbe) it has ever defeated so it can recognize and destroy the microbe quickly if it enters the body again) or nonspecific, acting as a barrier and protection against a wide range of threats.



Another way to look at immunity is to see it as a complex biological system endowed with the capacity to recognize and tolerate whatever belongs to the self, and to recognize and reject what is foreign (non-self) and this offers a bridge to the psychological immunity perspective, just remove the word biological.

The same as in the previous section about trauma, immunity (staying healthy) is not only a somatic issue. There is immunity at the psychological level too and one could even talk about spiritual immunity. The term Psychological Immunity[3] was introduced by Daniel Gilbert[4] and Timothy D. Wilson and there is a Psychological Immunity System Inventory (PISI) test. Psychoneuroimmunological research (C. Schubert) investigates the influence of psychosocial factors on the immune systems.

Psychological immunity is defined as "a system of adaptive resources and positive personality characteristics that acts as **psychological** antibodies at the time of stress to protect the subject from experiencing extreme negative emotions." The „**psychological immune system**" is a term used to encompass a number of biases and cognitive mechanisms like positive thinking, sense of coherence, sense of control, emotional regulation, goal orientation, that protect the subject from experiencing extreme negative emotions. These operate largely or entirely outside conscious awareness, but can be trained. The psychological immune system includes ego defense, rationalization, dissonance reduction, motivated reasoning, self-serving attribution, self-affirmation, self-deception, terror management and Fading affect bias: a bias in which the emotion associated with unpleasant memories fades more quickly than the emotion associated with positive events.

3 Wilson, Timothy D.; Daniel T. Gilbert„Affective Forecasting" in Mark P. Zanna Advances in Experimental Social Psychology (2003)

4 Gilbert, Daniel; Stumbling on Happiness, (2006)

Immunity is not a constant, being able to withstand hostile situations depends on one's genetic profile, on one's condition, mood, the environment, the food one ate, it can vary even during the day. The psychological dimension of somatic immunity is important. In the CoVid crisis the effect of fear and stress on immunity, well known as a general principle, has not really been appraised or assessed as a factor in the vulnerability of a population, the focus was mostly on vaccination as a remedy.

Can immunity be activated, stimulated, strengthened?

Innate immunity we can have as a genetic or epigenetic heritage, as something we acquire at birth by borrowing some of the mother's (gut/vaginal) biome, and as we encounter viruses and bacteria in growing up. The lifestyle, good food, a healthy environment, it all helps the immunity level. Immunity builds up, but needs maintenance in the sense, that encountering hostile influences keeps the immunity system active and functioning, total isolation doesn't (something ignored in the CoVid lockdown strategy). Children should play in the dirt, whatever doesn't kill them makes them stronger. Nature can be helped by nurture here, and it's clear that adverse childhood experiences (ACE) don't help.

Now this is true for biological immunity, but why not for psychological immunity. The birth process is a potentially somatic trauma, but has mental/emotional consequences too. However, in a „healthy" birth the baby seems to come out without much damage, due to hormonal mechanisms like the oxytocin for a bonding effect. One could see the birth as the first trauma-training. Later in life there are instances, where trauma immunity is „trained" or induced without the PTSD-like aftereffects, think about military boot camp or rites of passage in more traditional societies.

How this strengthening of the psychological immunity exactly works, and if it could be used in psycho-therapy is an interesting question; **one could even suggest that all therapy aims at restoring or building up the immunity level.**

PTSD immunity and resilience

Some people can experience potentially traumatizing events with much more than a normal reaction and trauma processing, without long lasting effects, other suffer a life time from the trauma. Others have so little immunity, that they develop a whole series of substitute identities and suffer from the consequences.

This trauma immunity can thus have many levels and gradations. Concentrating on PTSD, but accepting there may be many more mental disorders that fit within the Psychological Immunity category, trauma-immunity is a

relevant term. Nobody is really immune to stress, but there are people who deal with potentially traumatizing events in a “normal”way, without long term effects.

The immunity-level influences the susceptibility (risk of becoming a PTSD victim) and resilience (ability to withstand and overcome the effects) and could help to make predictions of the emotional responses to future events for victims.

The effects of trauma can be mental or physiological. It has been apparent[5] that serious injury in humans and experimental animals is associated with a decrease in immune functions dependent upon T cells, the principal cells involved in initiating adaptive immune responses. There is diminished resistance to infection commonly seen after major traumatic or thermal injury.

The military and veteran medical centers are becoming more accustomed to managing the deleterious late consequences of combat trauma like in PTSD, related to the dysregulation of the immune system[6]. Trauma leads to the dysregulation of both the innate and adaptive immune responses, which places the injured at risk for several late consequences, including delayed wound healing, late onset sepsis and infection, multi-organ dysfunction syndrome, and acute respiratory distress syndrome, significant for the increased morbidity and mortality of wounded personnel.

Vulnerability, predisposition. resilience, immunity

People typically experience the same event in different ways, their immediate ad long term reaction is very individual. There are many factors in how a specific incident affect a person, but obviously one’s state of mind is the most important, even before things like the physical condition. This state of mind has a history, and prior experiences with trauma (even if long forgotten like perinatal trauma) play an important role in how we deal with a potentially traumatic situation. Are we able to cope because we have an adequate trauma-immunity level, or do we end up with a more or less hidden disorder.

An example that highlights this principle can be seen through the horror of war combat. Two soldiers may endure the same exposure to the trauma of being shot at, while shooting at an enemy. Yet, it is possible that only

5 Lederer, J.A, Rodrick, M.L, Mannick, J.A.; The effects of injury on the adaptive immune response. (1999) PMID: 10188766 doi: 10.1097/00024382-199903000-00001

6 Kelly B. Thompson, Kelly B., Krispinsky, Luke T. Stark, Ryan J. ; Late immune consequences of combat trauma: a review of trauma-related immune dysfunction and potential therapies. in Military Medical Research volume 6 (2019)

one of them may go on to develop overwhelming stress that leads to a diagnosis of post-traumatic stress disorder (PTSD). Here a person's history plays a role in the vulnerability. If the soldier was already impacted before by other life traumas (for example, malnutrition, abuse, loss, accusations) his or her susceptibility to developing serious symptoms may be greater (Pitchford, Krippner[7]).

Several factors may *predispose* one individual to being more susceptible to developing emotional and psychological stress upon a traumatic experience than another. These include previous history factors such as perinatal incidents (like a C-section), childhood traumas, living in unstable or unsafe environments, separation from a parent, serious illness, intrusive medical procedures, domestic violence, emotional neglect, bullying, and sexual, physical, or verbal abuse. These predisposing factors include biological predisposition or a low capacity for resilience or could also include grieving a recent loss or experiencing a significant level of stress before the traumatizing event.

Although these factors may predispose an individual to be more vulnerable to trauma, it is not entirely predictable how a given person will react to a particular circumstance. There is the immunity level at the specific moment as this varies, depending on the condition of the person. The notion of trauma-immunity is relevant here.

People are volatile, especially when emotional issues are at play. Traumas can be very complex, the root event can be just one incident, or a series of incidents, or a combination of incidents.

There are a number of causal factors identified. Being the **perpetrator or the victim**, and often those two roles are intertwined like when involved in armed combat, makes a difference. The question of guilt, and even switching identification with either role in post-traumatic processing is possible, and morality plays an important role. Could it be prevented, who is or is not responsible, at what level, what if one had acted differently in the run-up to the event, those questions can haunt trauma-victims.

Another factor is whether the traumatizing incident was **outside human intervention** or that is was caused by humans and somebody could be blamed. It is usually assumed that Interpersonal traumas cause more problems than impersonal ones like natural disasters. For example, school violence is viewed as a human-made disaster, whereas earthquakes are consid-

7 Krippner, S., Pitchford, D.B., & Davies, J.; Post-traumatic Stress Disorder. Biographies of Disease (2012).

ered natural, impersonal disasters. The type of disaster itself may determine the impact level of trauma and intensity of trauma processing a person experiences, depending upon how the survivor's sense of invulnerability to harm is challenged. In the case of a natural disaster, one's **locus of control** (the potential ability to take charge of an event) may be basically external in nature.

How 'close' an incident was, in physical terms or psychologically, also plays a role. There is the "**identifiable victim effect**", which refers to the tendency of individuals to be involved more or offer greater aid when a specific, **identifiable** person ("**victim**") is observed in a situation under hardship, as compared to a large, vaguely defined group with the same need.

The age and attitude of the victim is also important. Young adults commonly display a sense of imperviousness to being wounded and a heightened sense of transcendent immunity to life events. When a young person's **notion of invulnerability** is challenged, his or her entire world view might be shaken. These perspectives may increase the susceptibility to the impact of a trauma. (Paulson & Krippner, 2007[8]).

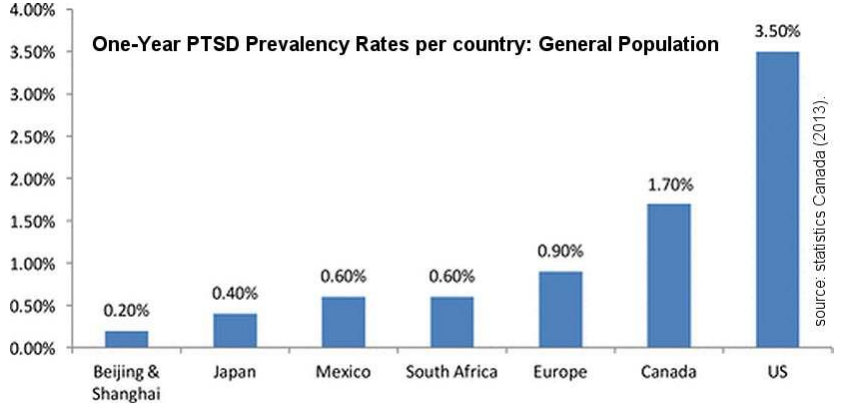
8 Paulson, Daryl S, & Krippner, Stanley. Haunted by Combat: Understanding PTSD in war veterans (2007)

4 Trauma and PTSD in society

The impact of PTSD on society and vice versa is substantial. The number of cases grows, the costs go sky-high and a good, effective and cheap therapy is not around the corner.

Will most of us experience PTSD?

Posttraumatic stress disorder (PTSD) affects approximately 8% of the general population in the USA and the Western world, but is less prevalent in more traditional cultures. Lifetime prevalence is how many people will experience it at some time. Lifetime PTSD prevalence ranges from a low of 0.3% in China to 6.1% in New Zealand. The numbers do vary a bit in different studies. The prevalence of PTSD is twice as high in active duty service members and military veterans.



Prevalence is the proportion of people in a population that have a given disorder at a given time. It represents the existing cases of a disorder in a population or group. The NCS-R estimated the lifetime prevalence of PTSD among adult Americans to be 6.8%, among men 3.6% and among women 9.7%. The incidence rates of PTSD in the active force (per 1,000 service members) steadily climbed, with a low of 1.24 in 2002 to a high of 12.94 in 2016.[1]

Cumulative incidence (sometimes called “risk”) is the proportion of people that develop a disorder over time among only the population at risk for that

1 Incidence Rates of Posttraumatic Stress Disorder Over a 17-Year Period in Active Duty Military Service Members; (2020) doi: 10.1002/jts.22558

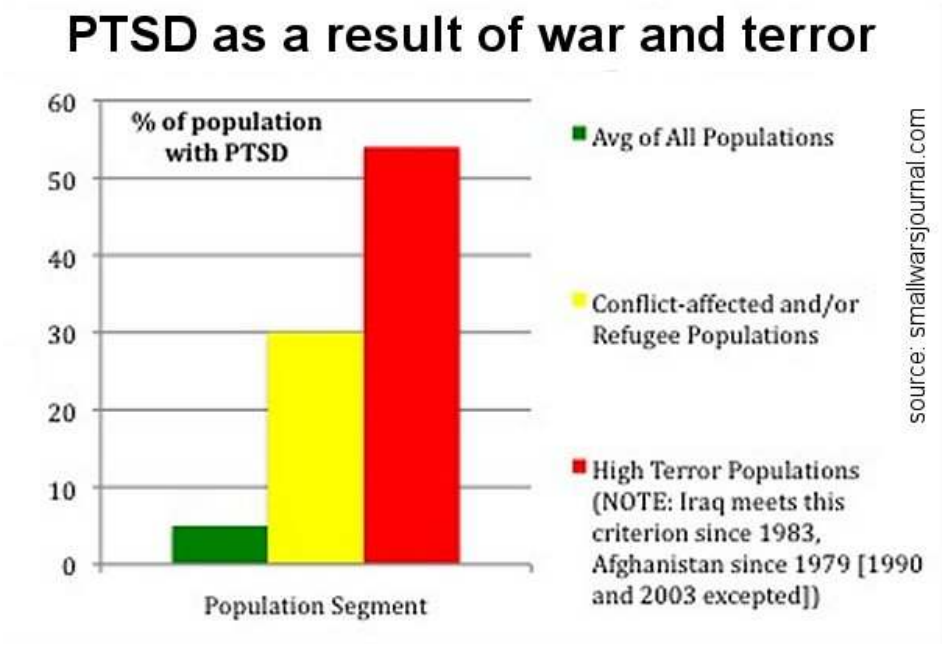
disorder. It represents the occurrence of new cases of a disorder in a population or group.
Now the usual statistics deal with cases diagnosed with “official” diseases as described in for instance DSM-V. However, more and more groups and categories are now included, like people suffering from the after-effects of witnessing (intentional like firemen or first responders) or unintentional accidents, fires, disasters, or going through serious medical incidents, like women during birth, or recently PICS (Post Intensive Care Syndrome) because of CoVid.
In this book I go a few steps further, especially in the context of multiple personality (substitute identity) emergence in many people. In the Western world this may amount to more than 90% of the people, less in more traditional societies. This is quite a frightening perspective, but I believe all people with multiple personalities will have to face PTSD kind of mental and physical problems in their lifetime.

PTSD is big business

There is a big market in PTSD therapies, it’s quite a business where visibility and public relations play a role and often making a profit may count more than helping the clients. The image of the therapies, the books written about it, the television shows, the articles in the popular press are often more important than the hard facts about effectiveness. There is a tendency, supported by the Veterans Administration (VA) and insurers, to standardize treatment by using protocols and strict guidelines for the various stages in a treatment, but this may take away from the personal and custom interaction. The fact that the standard approaches not always yield good results, also makes people look for alternatives.
Internet is an important factor as it informs clients, illustrates the options and these days has become a platform for on-line therapy too, which can be as effective as face-to-face consulting. The VA assumes that being informed about the disorder and the treatment options is an important step towards dealing with it and helps in making information available, also online.

Cultural perspective

Potentially traumatizing experiences are a normal part of life, we all encounter them, but we react to them in different ways. This is an individual matter, but the context (setting) of what happened is important too.
Understanding the culture, the subcultures, the mores and the social contexts in which people live is crucial in appreciating the full spectrum of experiences that may be impacting and shaping their lives. An event that



traumatizes people in one culture may be shrugged off as a daily occurrence in another one. Tattooing, piercing the skin or being left alone in the jungle for days during a coming-of-age ritual may be experienced as a mark of maturity in a tribal society, but the same intervention could be traumatizing to a person raised in a Western culture, one who lacks the context and meaning to reduce the pain and appreciate the privilege of such a ritual act.

Dramatic experiences like in many indigenous initiation rituals do not evoke the psychological problems we see in for instance prisoners of war. The coming of age rituals and the training and initiation of shamans or tribal leaders often involve a very intense and painful process. The effect, often a noticeable jump in consciousness, is quite different from what in other situations in our modern world, for instance as the result of interrogation including torture, leads to lifelong incapacitation and the psychological problems we see in for instance some combat veterans.

A more traditional life without all those ‘modern’ trappings, but closer to nature and feeling more connected to friends and families, with less competing for individual gain, and living in a less stressful culture, is maybe a healthier way to deal with such dramatic events. This doesn’t imply that all traditional cultures are stressless, we shouldn’t overly romanticize the „primitive“.

Fear and pain; the price of comfort

The socio-cultural context of what we can broadly characterize as the Western neo-liberal world is different from what we see in older, more traditional and in many respects more mature societies. Since a few centuries, the relevance of the otherworld (as in religion and belief systems) has given way to an idea of individuality. No longer do we answer to the Gods and their spokesmen, the priesthood, but we made reason (and technology) our new divinity. Even as some say that religion was a psychological necessity to deal with the overwhelming complexity of the external world, the same can be said about science, we need some kind of explanation and answer to the perennial philosophical questions. If we see, in the Sufi perspective, that manifestation is God's way to help us bridge the abyss between love and truth, that pain, misery and suffering are but the shadow of God's love, one can smile about such a simple theodice (an explanation of the world) but this means ignoring that this is the way older cultures and people, and many still today, see reality.

In the West, we chose individuality and reason, with some social collectivism and we see ourselves a civilized people, still somewhat above the „primitives" with their complex and irrational belief systems and worldviews. We shouldn't, but we do, and we export this as neo-colonialism or neo-imperialism, by way of the media, internet and 'popular culture'.

Then the question is; why do we, in the West, suffer so much more from PTSD than in those other, traditional societies?

The most obvious answer is that we have created a culture of fear, of anxiety, stress, forever at war with this or that (terror, drugs, communists) and never satisfied with what we have, we want progress, more material wealth, more comfort, even as our earth is suffocating and our environment moving towards a crisis. Fear is what has been used to keep us in line, fear of poverty, fear of crime, fear of the other, fear of death. That fear is not pushed upon us by some illuminati, the banks or the rich people, it's part and parcel of our society at large, where greed and mistrust have replaced the traditional values and virtues. The ego rules and wants to win, but at what cost?

One of the most relevant aspects of that fear is the fear of pain, of physical pain or the pain of missing out, not being better, smarter, richer, healthier that the next person.

Pain-phobia is everywhere, we want to have medication not to feel pain, we want protection against pain, we will design our lives to be risk-free, even making sure our children will not even get scratched in their play.

Playground these days are designed not to pose any risk, or else, we will take the school, the city, the designer to court.

Pain-evasion is the hallmark of our times

In the West, everybody has some painkillers in the bathroom drawer, takes relax-pill, downers, sleeping pills, anaesthetics, or uses alcohol, drugs, meditation, yoga and whatever to ease or escape the pain, that is so much part of life. We don't want to feel physical pain, emotional pain, we don't want to fight and feel, we choose the easy way, the pills, the divorce, ignoring that pain is a messenger, a friend, warning us, helping us.
Pain evasion thus means ignoring potential lessons and warnings our body is giving us, so deeper conflicts and problems can go on devastating our health en well-being. Societies where pain is seen as a more normal part of life might in the long run turn out to be more healthy.

The broader relevance

It is well noted that PTSD is no longer something only war-veterans suffer from, it has become an umbrella, a diagnostic coat hanger with a DSM-V label these days, with many more groups at risk, like emergency workers and people in prison. But PTSD also affects also people growing up in traumatizing conditions, incidental or for a longer time.

PTSD reflects trying to behave sanely in an insane situation

Stanley Krippner

Prof. Krippner tries, with this quote, to free the notion of PTSD from its reputation as a disease, as only a negative phenomenon. He points out that many way of dealing with a situation are simply the best option available for a individual who is in a double-bind, a horrendous relationship, or an oppressive environment. They are considered pathological or the after-effects are considered pathological, but this is a judgment that may affect and hurt the survivor.
PTSD, within the DSM-V is classified as a Trauma and Stressor-Related Disorder, no longer as an anxiety disorder, but also not regarded as an dissociative disorder like DID (dissociated identity disorder) or related to identity conflicts and substitute identity formation. The dissociative disorders (DD) are, however, placed in the DSM-V next to the trauma- and stressor-related disorders (TSRD) section to indicate links between these categories like the existence of a dissociative subtype of post-traumatic stress disorder (PTSD).

This chapter focuses on this particular way of trauma processing, referred to a complex PTSD or posttraumatic stress disorder and then often related to war and combat veterans. But trauma processing and its effects, of course, are not limited to that. Even auto-immune diseases can be related to earlier trauma.

The focus on PTSD in veterans is a practical one, because the most extensive and accessible research into trauma processing at this time is related to veterans. Not that this has led to unambiguous insights. Even as there is much data, and there are many different therapies and experiments, there is no conclusive understanding of why PTSD and related complaints occurs, why and what disposition factors influence the process, etc. It is therefore an interesting challenge to look into the relationship of identity and trauma, the dissociation associated with it and see how the SI-model (substitute identity) might apply.

That much of data here are concerned with veterans does not mean other causes of PTSD are less relevant. Prison situations, emergency services, sexual abuse, criminal violence, the effects of early childhood situations, birth trauma, C-section births, those deserve attention too, but there is less access to large datasets and broad therapy assessment than in the case of veteran-PTSD. Especially the relationship of PTSD and extreme violence like in terrorist 'lone wolf' attacks is relevant, because it points at the role of adrenal hormones and a dysbalance there. Looking for substitute identities where for instance oxytocin and adrenal hormones are out of line might be a way to identify potential problem cases.

Not because terrorist are special or exceptional, we all experience extreme aggression at times, but usually we have no AK-47 at hand to express this.

A disease of the West and specifically of the USA

The incidence of PTSD in the USA is markedly higher than in the rest of the world[2], about twice as high as in Western Europe and compared to countries with a more traditional culture the difference is very obvious. The PTSD worldwide is monitored by the World Health Organization (WHO), which published estimates for lifetime PTSD prevalence range from a low of 0.3% in China to 6.1% in New Zealand and 7.8% in the USA. In much of the rest of the world, rates during a given year are between 0.5% and 1%, higher where war or public unrest prevails.

This difference may have to do with increased individualism, lack of social connectivity, cultural differences, lack of spiritual reference, the edu-

2 www.pts d.va.gov/professional/ptsd-overview/epidemiological-facts-ptsd.asp

cational system, economic competition, but surely deserves a lot more attention. This not only because of the direct and indirect (social) costs, but because PTSD seriously affect not only the lives of the patients, but their social circle and their sense of safety, happiness and meaning.

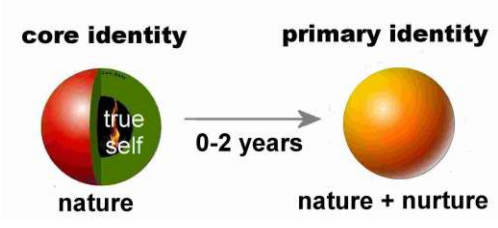
The incidence of PTSD has a lot to do with the interaction between the cultural and social identity of the victims and their personal identity and identity problems. Can one expect a soldier, engaged in a battle he or she sees as unjustified, disproportional or even criminal, to deal with trauma as well as someone who feels a holy mission and is willing to accept hardship, injury and death to serve a higher goal?

The incidence of PTSD can be interpreted as a general touchstone (acid test) to indicate the intrinsic health and wealth of a society or culture, much beyond the common references to material wealth.

5 The Substitute Identity Model (SIM)

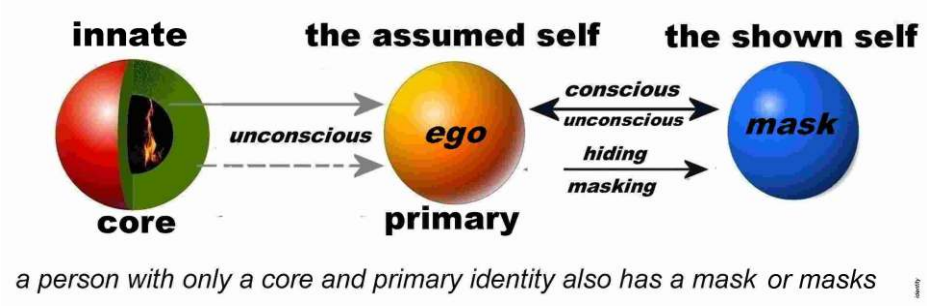
In this monograph, a model of the psyche is used which is based on the concept of substitute identity formation and an extended identity matrix. It is the (hypothetical) proposition that we can have more selves, in that we can develop substitute personalities beyond the dominant (primary) one from our childhood. We all have at least a core (inner me, essence, inner child) and one assumed self (based on the primary identity we develop as a baby and developing into an ever-changing but experienced as stable narrative). Life however, (in traumatizing circumstances) sometimes forces us to check out, escape a threatening situation by dissociation and developing a new identity, a substitute for the one unable to handle the situation. Sometimes even more substitute identities develop, when we encounter new traumatizing events. Some people have 3, 4, or even 10 multiple substitute identities, in pathological cases like in DID (Dissociative Identity Disorder) cases even more. The substitute identity hypothesis however doesn't see having more identities as a pathological state, it is quite common, most people have these substitute identities.

We all struggle with whom we are. Who am I, who is me, why do I react the way I do, why do people react to me as they do, why am I not consistent in my behavior, why do I sense this inner dialogue, why is there this saboteur that obstructs my life at times? Important questions, but no easy answers.



When we look for help, science has no consistent answer, even though philosophy, psychology and sociology have pondered upon these questions for a long time. There are many approaches and theories, but at best they provide a guideline for self-knowledge.

We all have a core identity, sometimes called essence, inner child, true self, or soul, and then a primary identity which develops in our first years and becomes our „self" (the narrative we adapt) or ego (in the eyes of others), our primary defense or coping shield we identify with. This doesn't mean the core identity is always perfect and „good", it is what we bing to this incarnation, and as some would say, comes with a karmic load. We are seldom in that „core identity state", maybe in our dreams and during extraor-

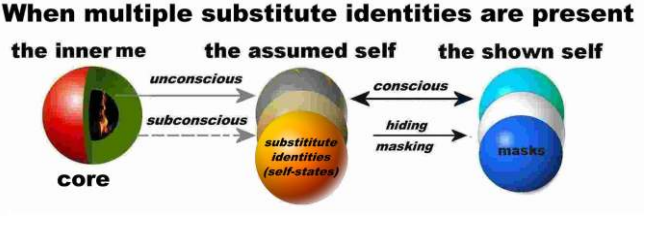


a person with only a core and primary identity also has a mask or masks

dinary experiences, but most people never experience their „true, core self“. Spiritual traditions emphasize that entering that state is what brings enlightenment and deep unity, as this core level is not rooted in our normal time/space consciousness. All kind of methods, like meditation, yoga, psychedelics and what not are suggested to reach this „samadhi“state, but for most of us it’s not achievable. It’s even the question whether being in that state all the time, like when living in a cave in the Himalayas, is what life is all about. Maybe we need the challenges and dangers of the world to grow towards true maturity.

This simple model with a single (visible) personality (mask, self state) is a correct picture for some of us, but not for all. There are of course people with just a core and a **primary identity**, but they are a minority, less than 10% in the Western world, more so in less „modern“cultures. They feel like single mask people, you know to whom you talk, no hidden agenda’s, **what you see is what you get**. Their dominant (normal, day-to-day) identity is their primary identity, they don’t switch. Such people are trusted intuitively, even as their core identity might be less „benevolent“. These single mask people can be recognized because their faces and voices are usually more symmetric, more beautiful, less aged, less prone to have PTSD, more radiating their inner unity. They rarely show up as patients in psychotherapy, sometimes there is some conflict with the underlying core identity, but this is rare. Many actors are like this, but also often salespeople and politicians are single mask type.

Many of us (and more so in the West) will have developed additional identities because of significant events and traumatic experiences. I call



them substitute identities or multiples, they are a like the alters in DID, but they are not necessarily pathological, in fact having substitutes is more or less normal.

This all has to d with existential questions that many of us have pondered upon. Are we always the same, do we have a stable identity, or are there more "me's" or „selves" at work?
The core message of this monograph is the substitute identity model (SIM) which kind of suggests and explains the possibility that you may have more self-states, more ways to deal with the world, people, stress, and love than you realize. If this is the case for you, this is not an easy message to digest, as we normally experience our selves as a continuum, as a single identity. The person you see in the mirror is always 'ME', a singular person, and it is hard to accept that you are maybe looking at a complex of multiple self-states; each convinced they are the one and only me.

More me's

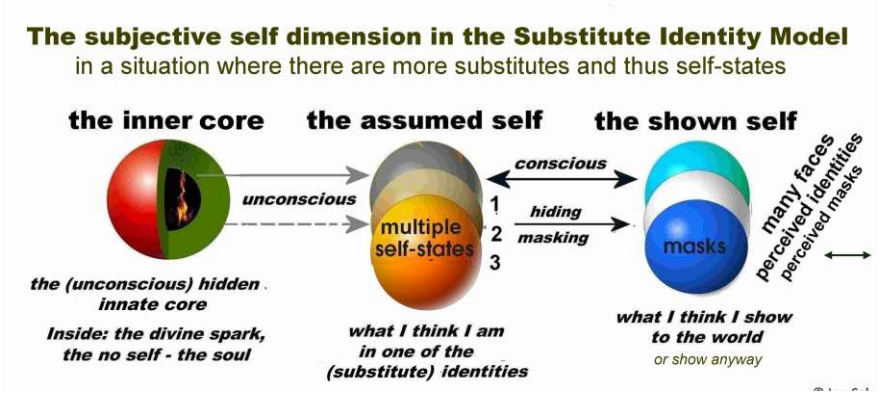
Are you confident that there is only one 'ME' in you? This is a deep conviction for most of us and yet, when probed a little deeper, illusory . You may not have a single self image (ego or what some call a false self) but more! You may have multiple identities, call them personalities or self-states if you like, and what you show to the world is very complex, a kind of mask that adapts to continuously changing conditions, goals, moods, roles. In many people such a multiplication of the "me" is present, but not always very manifest or noticeable. While this may not be apparent to yourself, others may notice it. We believe we are the same all the time, but people around you may see you behave different at times. They will probably know more 'YOU's' or at least recognize your moods and masks, and will even treat you or cope with you in an appropriate manner, without telling you.

The SIM model deals with these additional "me's". It expands the simple model of how identity, self and masks work together with what I call substitute identities.

More identities

We develop additional identities when confronted with such dire and traumatic situations that our normal (dominant) identity is unable to handle. We check out (dissociate) and form a new identity to deal with it. This new identity is a substitute for what we were before. It may remain dominant for

a while, but sooner or later becomes dormant, but usually showing up again at a later time.
Not all people develop such substitute identities. The simple model with just a core and a primary identity explained earlier applies to people who have not had to experience such traumatizing events. They may have ex-



perienced significant events (see box) but were able to deal with those and integrate them. Even what are usually considered to traumatic experiences, for them may not have been so traumatizing to lead to a substitute identity. This doesn't mean they didn't notice them, but the trauma processing was more gradual and less of a shock.
Some people can deal with adverse situations in a such a way, that they don't have to push their experience away into subconscious memory layers, but give them a place in their development, learn from it and grow more naturally. This is learning from each experience, which is indicated as normal differentiation or conversion.
New (substitute) identities thus emerge in situations, where traumatization is experienced to such a degree that people can't handle it and have to resort to such intense dissociation, that a new identity is formed.
We call such a new identity or self-state a substitute identity, as it (temporarily) takes the place of the then dominant identity. Substitute identities emerge at all ages, when a traumatic experience is so intense, that the dominant identity at the time is unable to cope with the situation. Some people are more prone to develop them, genetically, or because of the environment and childhood situation. Once an extra identity has been formed, there is increased predisposition for having even more substitute identities. Substitutes can emerge from other substitute identities, if these are dominant at the time. This means a whole network of identities can emerge.

We can, just as we did in the formation of our primary identity (in interaction with the mother or care givers) slowly develop a substitute identity. If we put on a mask and play it out many times, we not only identify with it, but slowly internalize it, till it becomes a true substitute identity. A good example is how performers often develop a more or less artificial stage personality but then identify so strongly with it, that after a while it really becomes a separate identity. The sad and depressed clown who, when on stage, is a happy comedian is a classic. The strong interaction with the audience and the environment plays a role here. The same happens with people following a spiritual or ascetic discipline, they fake it till they make it! This is then not the result of a single trauma, but of prolonged identification.

Triggers and activation

We usually don't remember the original situation that caused the emergence of the substitute, as the memories are repressed, but somehow retained as implicit body memory and in our unconscious mind. The substitute identities will reach the surface and become activated and dominant because of triggers that resonate with the original experiences. The triggers that activate a substitute personality can be sensations or remarks by someone, a situation or a detail of a situation that resembles the traumatizing event. The activation is thus involuntary, the substitute becomes dominant without one normally noticing it, but once recognized (as an independent state of identity) can be somewhat controlled. In ritual and shamanistic practice it seems possible to more or less control or guide one's state (of identity) or cause the core identity to surface.

This **substitute identity model** is, admittedly, not more than a model, but derived from practical interaction with many people and validated in therapy. It does explain a lot of psychological phenomena.

A sub-personality is not a substitute

Here it is necessary to make a distinction between sub-personality and substitute personality (which is the actual behavioral expression of a substitute identity). A sub-personality (a word used in various schools in somewhat different ways) is a subordinate level, a part of the personality, or sometimes indeed a separate personality, but not specified as really the expression of another identity. A substitute takes over totally, it is not inferior or a part, it is on the same hierarchical level, but of course is not always the dominant identity, it comes into play when triggered. A substitute is not a mask, it is not the stage personality or image one puts out, those are conscious masks and each identity can have more of such masks, depending on the situation.

Identity conflicts and identity state switches

There is always a dominant identity, the one we experience (assume) as self, but it is not the same all the time (for those with substitute identities). This can be the root of identity conflict and can lead to physical ailments. We can switch or flip between the identities and this can happen more often if we have substitute identities that are activated easily and come into play because of some trigger situation (anchors of an earlier trauma situation). Some people can willingly switch, this requires some training. Meditation for instance and a trance state (used in hypnosis and in many indigenous rituals, dances, etc.) can bring one into an inner child (essence) state where the self narrative (often indicated then as ego) disappears or dissolves. In that state it is possible to look at other parts of the identity matrix without switching into that state and understand why the substitute identities emerged, with the purpose of easing their influence or even dissolving such substitutes. In the core or true self state, time and place constraints dissolve, and allow to explore and maybe heal what went wrong.
Also the use of some (psychoactive) substances, exercises (yoga), therapy, falling in love, drumming, dancing, mantra's and mudra's, listening to music or being at a specific place can bring forth a switch.

The idea, that one's personality can **not** change, as is assumed and often stated in most of the typology and psychometric schools, ignores the gradual maturity with age or experience in the spiritual, vertical direction (towards higher consciousness). Jumping to another type, however, is rare, incidents and accidents are more likely to lead to substitutes.
Our identity involves also the unconscious and also matures, but stays more stable over time, a jump to another type is unlikely for an identity. Our personalities are more fluid than the underlying identities, what we display is a reaction to the context and this can vary very much. This is also why we often answer differently in personality tests at different times.

Developing multiple substitute identities is very common. Especially in the Western world and the USA, fear, stress, competition, and lack of social cohesion makes one likely to encounter traumatic situations, dissociate in order to cope en thus boost the emergence of substitute identities. A majority of the people do have multiple identities (more than 90% in the US, which in itself is alarming, less so in more traditional and cohesive cultures). This doesn't mean they all suffer from this condition, in many cases it doesn't affect their normal life. When a substitute identity is

rarely activated, it may not substantially affect our life and health, but when it pops up 10-20% of the time, it may become more of a factor in daily life. Others will notice substitute identities more easily than oneself does, they will maybe call it moods or at least notice and maybe wonder why you act differently.

The various identities are obviously different, as they emerge as a means to deal with situations the dominant identity can't handle, even as they are usually limiting, for instance shutting out certain emotions. They are functional, they serve a purpose, protecting the integrity of a person. The difference between the identities, like that certain emotions are skipped, is a cause of internal conflict later, at conscious and unconscious levels. Those conflicts between identities, which are always potentially there, are at first suppressed and not noticed, but usually becomes more visible later in life, and may then manifest as discomfort, sleeplessness, depressions, mental disorders and worse.

The classic symptoms of PTSD (post traumatic stress disorder) which in many cases have to do with substitute identity formation, are well known, but identity conflicts could be the cause of many more problems, mental and somatic (in the body). The notion of identity conflicts as the root cause of health issues is important, as it goes beyond the normal medical approach of just dealing with symptoms and not looking at the underlying causes. Dealing with the identity conflicts might be a far more effective and fundamental way to deal with health issues that just prescribing drugs to relieve symptoms.

Identity conflicts are basically mental conflicts, but they play out in the body too, in many ways. The mind seems to open a gate for adverse impulses, infections, immune system disturbances, environmental damage, so at the bodily level something may go wrong, with symptoms like depression but eventually disorders.

We will, mostly unconsciously and involuntary, flip from the one identity to the other, and this can be triggered (activated) by perceptional cues or even thoughts, related to what caused the substitute identity in the first place (drugs can be a factor in this). And one can also go back to the previous identity. Such identity switches are well studied in the case of DID (Dissociated Identity disorder) but happen in many more people, not diagnosed or suffering from this.

These changes normally happen involuntary, but can be induced too, with therapy, shamanistic practices, hypnosis, psychedelics, alcohol, drugs of any kind. Just seeing a specific object, smelling something, thinking about a

memory or situation can bring one into another identity, and this can be a tool to deal with negative situations. The memory of a positive experience, looking at a particular photo, listening to specific music, or using some meditative anchor (breath, imagery) can help.
This 'intentional identity shift' opens the possibility to use such more or less conscious changes of identity in therapy (and apply this in daily life). There are a number of therapeutic approaches (hypnosis, regression, body work, EMDR, certain drugs) to call forward certain identities, make them the dominant one, and then try to heal the adverse influence or conflicts.
Bringing people back to the core identity is what is normally tried, and can be fairly effective in respect to understanding one's matrix of identities, not only the core but also to see how the others function. In that core state (some would call this the inner child state) the normal boundaries and limitations of identities become fluent and one can see them for what they are, different states of being, different selfhoods. There are certain drugs (especially psychedelic substances) that help bring one to the core identity and one's essence, but using meditation, hypnosis etc. is also a possibility.

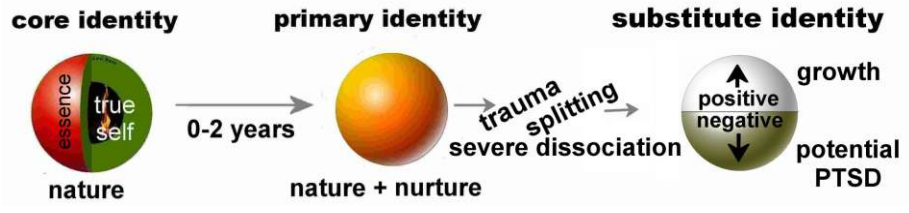
This can help to really see and recognize one's own substitute identities and integrate them (or at least diminish their negative impact). Becoming aware of the substitute identities, seeing how and why they function and formed is a major step in dealing with their effects. Accepting their 'help' as a function in situations of distress is a good step towards healing.

However, such 'drastic' approaches are not the only way to wander in the multistate world and deal with the conflicts and possibilities this offers. Depending on the individual, more 'normal' cognitive behavioral therapy may be helpful too, interactively outlining to a person how there are different behavioral modes, how moods are maybe identities, how masks hide parts of us from others. There are all kinds of exercises to help this becoming conscious. In many cultures one has found ways and performed exercises (often as rituals) to deal with identity conflicts, intuitively and often effective. These days in the West one tries modern techniques like virtual reality to help access forgotten events and the roots of trauma, and reprogram the mind (actually changing the identity) but shamans have done this forever. Therapy and healing can be effective even without understanding or theorizing about how it works!
Finding out what the triggers are that make one step into a specific identity, can be a help in preventing switches and understanding the underlying root experiences. Understanding who you really are and why you be-

have in specific ways is an important step in dealing with the adverse effects.

The switch

The shift from one identity to another can happen unnoticed and very quick, but sometimes the switch isn't that fast and easy, a person gets into an in-between state. Vacillating between the then competing (for dominance) identities this can be very unnerving, making one uncertain and this lack of a fixed identity can lead to pathological conditions. It is possible, and part of the substitute identity concept, that this is the root of many mental disorders. Not knowing who one is, the lack of the sense of selfhood in such situation can lead to what is labeled as psychotic, but can also lead to looking for solutions, like using narcotics to alleviate the sense of being lost and this might be one of the roots of addiction. The study of the switch phenomenon seems a worthwhile direction of research, but it is not easy for the switch is normally not under conscious control. The means we have to study such a switch state like MRI-scans and sampling of neurotransmitters takes time and interferes with the experience, especially the epigenetic processes during such a shift are hard to pin down.



Note that in some cases the substitute may have a positive accent, like spiritual growth. The negative is more common, and can lead to PTSD.

Each identity is unique and different

It is important to realize, that one is really a different person in each identity. An identity develops as a reaction to specific circumstances, where specific characteristics are required and become part of the identity (and thus the personality). Each (substitute) identity not only has specific and identifiable emotional characteristics, but even bodily functions like blood pressure, heart beat, pH and epigenetic tags will show distinctive patterns. We will use the same hardware but with a different software operating program. Patterns in our voice, listening abilities, handedness (left/right), visual acuity, word use, spelling mistakes, typing speed and handwriting are just a few of the markers, but in our body there are many more. In short,

our biological signature changes are specific to each identity. That even things like intelligence (IQ) and sexual orientation can be different for different identities goes very much against the classical psychological insights, but offers explanations for otherwise difficult cases.

The difference between the core and the substitutes

There is a fundamental difference between our identities, in the sense that the core (inborn) identity, while developing over time and with experience, has more of a timeless quality, a tendency towards wholeness and a certain resilience. In the background it remains present and on course. Even if we don't go into the layers and structure of this core identity, leaving that to others who are writing about inner child, wounded child and the soul, it is the identity which contains all the potential and has no 'ego' of its own. The core has the quality of being able to aim for and approach "completeness" while the substitute identities are more of a guiding and learning tool (a function) to aid the core in its quest for completeness. People who have learned to access this core identity, and not many have this capability, acquire authenticity, they are felt as 'real people', the Germans call them 'Mensch', fully human. Some would call this 'realized' or 'enlightened' or 'holy' but this ignores that this state is not meant to be permanent. We have the self (and the ego as what others observe) and our 'formed' substitute identities too, which can be seen as the teaching mode and just as important and necessary as the core. Trying to be always in that 'core' mode is futile, even as we see many an aspiring 'holy' identifying with that state, but just look behind the veil.

Incidence and advantages of single mask people

It needs to be emphasized that not everybody has (multiple) substitute identities. In the USA an estimated 6-7% has a (mostly hidden) core identity and only one assumed self identity, which is then the dominant identity and we call those single mask individuals. For another 40-50% of the people the substitutes are so dormant, that they have little effect on daily behavior and how a person is perceived. The ones with only one visible identity thus have some advantages, in dealing with others and also because they are usually healthier, better looking, and less confused about who they are. On an intuitive level we seem to be very sensitive to 'real' or 'authentic' people without hidden agendas, we experience the single mask ones as trustworthy, what you see is what you get, no hidden agendas.

We often will intuitively recognize and go along with such people with only a single mask, they often have careers in music, sales or politics.

They are quickly trusted, not necessarily trustworthy. People like Donald Trump, who we think has only one visible (primary) identity, are often recognized as having no hidden agenda and are (sometimes irrationally) more trusted than people with more, multiple identities.

In the self-complexity approach of Patricia Linville they can be seen as low-complexity, with enhancing well-being and self-esteem and deterring the effects of depression and physical illness that are typically stress-induced.[1]

Once one becomes aware of the existence of such single-mask people, they are not hard to recognize, their faces often show a higher symmetry, they come across as more beautiful, more composed, less twisted. Symmetry, averageness and youthfulness are considered the important characteristics in aesthetics and physical attractiveness, with the genetics of a person as the root of their looks, but the difference in beauty between siblings is often very distinct, the development of the identity matrix (nurture not nature) plays a role here. There is also the culture and ethnic factor, beauty characteristics are not uniform.

The development of a person and thus their character type shows most prominently in their faces, also in the aging of the face. Males with more symmetric faces in old age have higher intelligence and are more efficient at information processing than males with less symmetric faces. The people with beautiful and symmetrical faces and a clear male/female identity (and thus likely a single mask) also tend to have more ‘open’ and extrovert faces, less lines and an inner strength and self confidence that shines through. Another marker is that they often have identical lines in their left and right hands (palmistry).

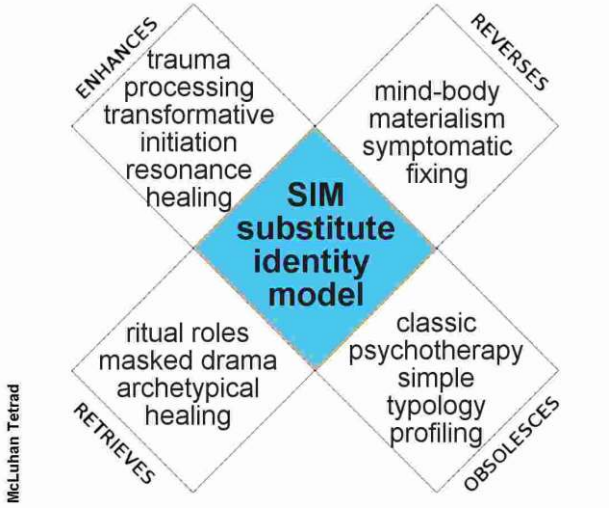
It’s a maybe a matter of using observations by experts and using AI techniques to make this practical, but things like over/underbite, the facial proportions and shape, form and placement of eyes, mouth, lips, chin etc., the facial expressions, micro-expressions, length of the neck, clarity of the eyes, the body stance, and probably much more could be markers for single mask people. The Chinese have developed their Siang Mien (Miang Xiang) face reading for a long time, it’s an important part of their culture. They see the face as a map of the personality as well as representing one’s whole life (nature and nurture). The existence and traces of multiple (substitute) identities are less recognized, at least in the Western renderings of Siang Mien literature.

1 McConnell, A.R., Strain, L.M., Brown, C.M.,& Rydell, R.J.; The simple life: On the benefits of low self-complexity. Personality and Social Psychology Bulletin (2009).

People with a more complex identity matrix with more substitutes are in general different in the way they experience life. They are often seen as less trustworthy or even less healthy with a shorter life-expectancy. This is a very tricky one, for here the number and differentiation of the substitutes, the incidence of them surfacing and a myriad of other factors play a role. But the reality of things like now a lower general life expectancy in the USA, the impact of Corona with subsequent PTSD, the resonance between PTSD incidence and a trauma-ridden culture and many other circumstantial pointers are too obvious to be ignored. Resonance doesn't mean causality, but here an interesting field of research opens.

There are also people, where the substitute identity or identities are so dormant, that no adverse effects will ever surface. They are the ones with substitute identities that are seldom or never activated (becoming dominant). If someone is like that, usually the same as in being the same identity more than 95% of the time, there are usually less problems, but be aware, in certain conditions even such an identity may be triggered! Often this happens later in life, and this is why looking at earlier traumas may then be the way to find out what causes illnesses and problems.

Having multiple substitute identities is more prevalent in the modern, Western societies. The more traditional and indigenous societies have far less substitute identities (the PTSD incidence in the various countries is a good indicator here). In societies where competition and individualism is less prevalent, there is obviously less stress, more support and hence less chance of traumatic experiences. People there learn to deal with stress in a more resilient way. This may be related to better family or tribal cohesion, initiation or ritual and maybe to the religious stance, the closeness to nature, lack of stress in childhood and education, but does seem to affect happiness beyond material wealth.



The multiple identity model offers quite a different perspective on identity and personality. One way to look at such

phenomena is how media-philosopher Marshall McLuhan analyzed the new media of his time. He contextualized them, using a tetrad; looking at the effects of a medium (model) from various perspectives. He constructed such tetrads for a variety of human activities and phenomena.
His approach is here applied to something he maybe never envisioned, but illustrates nicely why our model is relevant.

SIM versus other personality models

Most of the common psychological theories and models assume we have only one self (better self-state) as the subjective interpretation of our identity, ignoring the interplay and conflicts between the multiple identities and our core essence we might have.
The whole existence of multiple self states or identities has not been widely acknowledged, but is mentioned here and there, sometimes more as roles, ego-states, self-states alters, inner voices, self-aspects[2], agencies (M. Minsky) or as a multiplicity or 'community of selves[3] (M. Mair)'.
Here the term „self" needs some specification, for it is used in many ways, also in this monograph, where it is assumed we are not a steady, unified, single self. It is, however, not used as Gruber and Fadiman[4] do, as more or less describing the multiplicity of the selves as mostly healthy, easily recognized instruments in an orchestra, limiting the self to a personality, not an identity. They see becoming aware of the multiples as a tool to be used at will and as a way to improve one's life. The SIM model sees the multiples more as less desirable damaging and limiting, not as happy extensions of one's capabilities.
.
People with many self identities featuring distinct behaviors and traits, are sometimes called highly self-complex people. Self-complexity is a person's perceived knowledge of herself or himself, based upon the number of distinct cognitive structures, or self-aspects, they (subjectively) believe themselves to possess. These self-aspects can include context-dependent social roles, relationships, activities, superordinate traits, and goals of the individual.
This is different from having more identity states as complete independent identities with specific body, emotional and cognitive identifiers as sug-

2 Linville, Patricia, W. Self-complexity as a cognitive buffer against stress-related illness and depression. Journal of Personality and Social Psychology, (1990)
3 J. Miller, M. Mair, in D. Bannister (ed.), New Perspectives in Personal Construct Theory (1977)
4 Fadiman, James, Gruber, Jordan; Your Symphony of Selves: Disire (2020)

gested in the SI-model. However, the difference between low and high complexity individuals is interesting and in line with the SI-model. Highly self-complex individuals, according to Linville are capable of better limiting their affective reactivity to negative events, using them as buffers, but low complexity ones experience increased positive affect in their lives, it enhances well-being and self-esteem and deters the effects of depression and physical illness that are typically stress-induced.

The problem of having more me's or 'I's' has of course been mentioned a lot in psychology. Pierre Janet[5] was one of the first to talk about splitting of consciousness (German: Spaltung) resulting from innate weakness in „De l'Automatisme Psychologique (1899)". In the early days of psychotherapy Freud also talked about **splitting** as resulting from inner conflict. His daughter Anna Freud noted how in healthy childhood development a splitting of loving and aggressive instincts could and should be avoided. Melanie Klein's work concerns the idea of 'splitting of the object' (Objektspaltung) in terms of experiencing 'good/bad' objects and how children struggle to integrate (depolarize) love and hate into constructive social agency (object relations theory).

In de development of identifying what is now called DID (Dissociative Identity Disorder, earlier indicated as MPS Multi Personality Syndrome or MPD) and OSSD (Other Specified Dissociative Disorder) this notion of splitting did play a role in understandng how alters develop.
G.I. Gurdjieff pointed out that we are seldom our true 'Real I', not only because we act as automatons most of the time (being asleep), but we are more of a series of ' many I's', there is no permanence.
Jung saw two states in himself, and talked about complexes, autonomous partial systems like archetypes in the collective subconscious and the persona (part of the ego in the Freudian meaning) as the mask we present to others, but counteracted by an unconscious shadow with an animus and anima.
Ego-states, separate manifestations with different behavioral and emotional patters, were identified by Federn and Weiss in the fifties.
Ego-state therapy[6], developed by John Watkins is a psychodynamic approach in which techniques of group and family therapy are employed to resolve conflicts between various "ego states" that constitute a "family of

5 Janet, Pierre; De l'Automatisme Psychologique (1899)

6 Watkins, John; Ego-State Therapy: An Overview, American Journal of Clinical Hypnosis,, April 1993

self" within a single individual. Although covert self-states do not normally become overt except in true multiple personality, they are hypnotically activated and made accessible for contact and communication with the therapist.

Eric Berne, in his transactional analysis and subself theory (1961), pointed at the possibility of organized subsystems or states in the mind, notably adult, child and parent. This is criticized as a mere conceptualization of the mind, but many therapists use this as a satisfactory model to explain behavioral patterns. In the context of the SI-model, these subself states can be seen as situational approaches, present in all substitute identities.

Maslow noted that the personality is composed of syndromes, but saw behavior as an integrated expression of all the personality syndromes. In his approach of hierarchical stacked needs (the famous pyramid) a development model is posed that is more or less valid for the dominant Western culture, but less so for other cultures, where for instance the social or the spiritual connection (which Maslow nicely hid in self-realization, but really needs to be treated separately as a human need) is more fundamental.

David Lester[7] noted that there are subselves and in his book "On Multiple Selves" (2015) nicely describes the various views, again referring to people like Gurdjieff. He also mentions Mardi Horowitz who identified (1988) the concept of various states of mind, accompanied by characteristic expressive behavior. This is, however, not going as far as to ascribe to these a complete identity with a specific and identifiable emotional and body state.

The idea that we have more sub-personalities is thus not unique, John Watkins and the ego-state school, based on the work by Eric Berne and Stewart Shapiro[8], see the person as a confederation of components (subs). The relations between these segments are expressed through catharsis, investing energy in a specific sub-personality. Ego-state therapy is a psycho-dynamic approach and uses multiple techniques like voice dialogue, to resolve conflicts that manifest in a "family of self" within a single individual.

John Rowan[9] has further developed this approach, to identify and deal with sub-personalities or what he more recently indicates as I-positions. He sees

7 Lester, David; On Multiple Selves (2015) publ. Transaction and Theories of personality (1995) and A multiple self theory of personality/ publ. Nova Science.

8 Shapiro, Stewart; Critique of Eric Berne's Contributions to Subself Theory 1969

9 John Rowan, Personification: Using the Dialogical Self in Psychotherapy and Counselling, 2010 and Subpersonalities: The People Inside Us (1990)

these as semi-permanent and semi-autonomous regions of the personality capable of acting as a person. He considers them as real, but also as fluid and changeable processes.

Roberto Assagioli[10] works with a similar concept. In his Psychosynthesis approach sub-personalities however are more seen as functional adaptations to situations, like work, relationship, fights etc. In that view, a person can have many substitute identities and sub-identities, which are supposed to kick in when needed, more or less under the control of the will and not the result of traumatic experiences. He recognizes triggers to bring them about, like roles or internal conflicts, and expands the notion of sub-personalities to include sometimes the body or parts of the body, acting independently. These can be addressed in voice dialogue or hypnosis, leading him to the concept of the "*dialogical self*". Assagioli also used various imagination meditations to create a dialogue of selves.

Why the need for the SI-model?

One of the relevant objections to introducing a rather different model of the development of the human psyche could be that there is little resonance with older approaches, notably the Eastern wisdom in yoga and ayurvedic medicine.

The great myths and sagas of old, the Veda's, the Bhagavat Gita, they all point at spiritual and psychological challenges and growth, the hero on a quest is a universal theme , but there is little mentioning of multiple identities. And yet, even the hero archetype has multiple identities, as in Kierkegaard's notion of the tragic hero, such as Abraham in the Bible who is willing to kill his son for God – to give up his personal desire for duty to a higher order

The phenomenon of DID is well known, but just as in the West is seen as an extreme case, not as something we all have. The notion of a true self and a false self is widely accepted, but not the emergence of new substitute identities in 'normal' people.

There is an explanation for this which has to do with how our Western world has fallen prey to individualism and competition, and how our educational system is now more like a continuous test, stressing our both parents and children to achieve, perform, compete. The difference in PTSD incidence, in the USA this is diagnosed like at least five times more than in stable, less materialistic cultures, support this view. Not all PTSD is related to substitute identity formation, but it is a major factor.

In the more stable and conventional societies, where social cohesion, family support and otherworld contact (faith) still structure education and life,

10 Roberto Assagioli, Psychosynthesis (1965)

where growth and maturity are not achieved by sending people to immoral wars or joining illegal gangs, where sexuality and morality in general are still embedded in a cosmology and worldview and a set of generally accepted practices, there is just less risk (or need) of developing substitute identities. There may be very different rules, for instance the incidence of intergenerational sex may be part of the culture as was the case in some Aboriginal cultures, but there wasn't this constant insecurity, this challenge and stress about what is good or bad that so colors modern life.

So why would a medicine man in these cultures worry about a phenomenon that just rarely happened. Why would Zoroastrian or Vedic sages, Ayurvedic healers, Chinese mandarins or Zen masters write about it and develop models?

They were not blind to it, the Ayurvedic notion of ahamkara deals with subpersonality, and assumes that human personality is a group of qualities brought together by this ahamkara. Change the ahamkara self-identification and a new personality will emerge. However, this is seen more as a transformational process, not as an identity discontinuity. In Ayurveda every disease has its own personality, with specific characteristics, but to turn this around and state that each personality has its own disease (or potential disease, called a miasma in homeopathy) is a further step that may be the ultimate result of studying identity formation in the way suggested in this monograph.

The SI-model reflects the pressure the modern world puts on our identity, absence of faith and increased competitiveness and individuality. The need for a model to explain how we are now victims of educational and societal expectations did only arise in the last few centuries. It was people like Freud and Jung (who wrote about his own number 1 and 2 sub-personalities) that started thinking about how to deal with this aspect of modernity, and the SIM-approach is just an extension of that. This doesn't mean substitute identities didn't happen in all cultures, just like PTSD which is described, in other words of course, in the Vedic literature and in Shakespeare, but the incidence was less.

Identity specification; diarization

A multiple identity situation can be observed and identified by a trained therapist, but we can use modern technology, notably the smart sensors and scanning technologies now on the market, to help identify the different substitute identities. The notion we suggest that each separate identity mode has its own biological signature can be checked, the modern sensor technology should be able to use real-time data to establish how many identities we have and when we are in one of them. Many biometric and

psychometric technologies are available, like EEG, galvanic skin response, blood pressure, heart beat analysis, acidity, facial expression, retinal and iris identification, chemical and electrical signals, fingerprints, but also voice analysis[11].

Voice is a very rich source of information and voice can be acquired in a non invasive, cheap and fast way. We normally use some 50 kilobits/sec in normal conversation, but voice has a much deeper information load. In normal situations this is not used and considered redundant, but there are obvious hidden layers in our speech that convey messages, like emotional intonation and lots of physiological information, about the speaker's identity state. Voice analysis is not (yet) part of the standard medical or psychological toolkit, but could well be.

Multiple identity recognition

Most people don't realize they have additional substitute identities. Their sense of self is a continuous, unbroken stream and they don't notice when switching between identities. People around them may notice, and very often the circle of intimi is very aware of the various moods or modes some has, but don't recognize this as substitute identities, they just know a person is in 'that state'. Especially if such a state brings about aggression, violence and unpleasant moodiness, it can be very important for the people around not only to notice the shift, but even notice the triggers that cause the shift. Substances like alcohol and drugs (of any kind) may be such triggers.

A good therapist may notice multiple identities, even if they don't fall within the pathological spectrum like in DID where the continuity of behavior and awareness may be distorted. It would be of some value, if there would be some way, to identify the various identities in a person, mapping the identity matrix. Not by a trained therapist, but in some semi-automatic way, by using biometrical information like the voice, the heart-rhythm, brain activity, facial symmetry, facial expressions, etc. However, at present there is no such technology, although the wave of biometric sensors like in smart-bands is providing lots of way to acquire biometric data in real time and store that for evaluation. The 'quantified self' approach, people storing all kinds of information about themselves, is a clear trend, and no longer something only done in laboratories. This has, however, not resulted in broad applications beyond monitoring, e-health and sports. The mapping of one's identity states would be a different matter. Maybe this is not so bad, as spotting and recognizing one's

11 Voital.org

identity matrix could be a major breach of privacy, it's like psycho-analyzing on the spot, and could be used in all kinds of unsavory ways.
On the positive side, it would help people understand their behavior and emotional responses, be of great help in diagnostics and be a great feedback tool. Know thyself as in '**know thy selves**'.
The data acquisition tools to carry out such an analysis are there, but so far nobody has turned this into a software package or app or laboratory procedure. Understanding the relationship between the sensed information and the identity matrix and substitute identity model explained in this monograph may help to get there, the signal processing to do this is certainly within reach. There is voice analysis software that already produces emotional state indicators, and if this is combined with a scripted text, maybe enhanced with visuals to trigger identity switches, an identity matrix map could be produced, without invasive technology and the high cost of medical scans and tests.
Here we can mention the development of diarization technologies, ways to identify for instance who is speaking in a conference call. Speaker diarization (or diarisation) is the process of partitioning an input audio stream into homogeneous segments according to the speaker identity. To do this requires the unsupervised identification of each speaker within an audio stream and the intervals during which each speaker is active. It is used to answer the question "who spoke when?" If this technology, using advanced signal processing like the Gaussian mixture model (GMM) and Hidden Markov Models to model and identify each of the speakers, would be applied to what a single person says and thus the switches between the identities could be identified, a more encompassing model of soneone's identity matrix could be deduced. Multimodal monitoring as in adding media like EEG, heart-rate, video and other real-time biometric indicators would make it even easier to do this. Starting with people with DID (the multiple personality syndrome of old) would be a logical step. The basic technology is there, is has only not been applied in the context of multiple identity.

We are thus not always the same person, or better we are not always the same identity, even as we think we are one 'self'. This is not only emotionally and cognitive, but shines through in our whole body. Our body in general will, over time, adapt to those different identity parameters/patterns, facilitate what is more dominant, and in one identity try to heal what goes wrong in another. Often the internal confrontations between substitute identities will be the cause of mental problems and eventually show up as diseases.

Dissociation, the separation mechanism

The mechanism that people can radically step away from their normal state under extreme conditions (stress, trauma) is called dissociation. In psychology dissociation is any of a wide array of experiences from mild detachment from immediate surroundings to more severe detachment from physical and emotional experience. The major characteristic of all dissociative phenomena involves a detachment from reality, rather than a loss of reality as in psychosis. In very general terms we could see dissociation as **identity discontinuity**, and we will return to this in a later chapter.

The normal reaction to outside pressure is differentiation, learning to deal with the situation. Dissociation is at the extreme end of the continuum that begins with normal differentiation. Extreme dissociation can lead to DID (Dissociate Identity Disorder), and in DSM-V PTSD diagnosis there is a subcategory associated with extreme dissociation. Dissociative disorders are sometimes triggered by trauma, but may be preceded by stress, psychoactive substances, or no identifiable trigger at all.

Dissociation is not only a symptom, but also a therapeutic tool. Hypnosis is a process to assist focus and dissociation. Through hypnosis the therapist can focus on a single self-state or segment of personality and dissociate other parts.

Dissociation is not a typical Western phenomenon. In many cultures we can see trance and possession, often in ritual context, and these are clearly dissociative states. There is a kind of continuum in dissociation, from daydreaming and substance induced loss of identity through subpersonalities to possession and then the pathological situations, as described by Stanley Krippner[12].

Relevance and consequences

To understand the mechanism of substitute identities, to identify them concerning behavior, traits, worldview and type, and to relate them to the original experience(s) in the past can be a great help in not only dealing with psychological problems like PTSD and personality disorders, but also as a step towards personal growth and understanding one's life's purpose.

12 Krippner, S. & Powers, S. M ; Broken images, broken selves: Dissociative narratives in clinical practice (1997)
Krippner, S & Friedman, H. Mysterious Minds: The Neurobiology of Psychics, Mediums, and other Extraordinary People (2010)

If the notion that many more people suffer from multiple identities than those diagnosed with DID holds true, this has consequences. Even as these substitute identities might be hard to identify, their effect on our general wellness is substantial. They are the source of much of the inner conflicts that will manifest as stress, depression, but also as disease, autoimmune disorders, and much more. That the substitute identities are often well hidden, showing up in very private and peculiar situations with their causes suppressed, makes this much harder than diagnosing symptoms related to more easily 'remembered' traumatic incidents, like we see in the simpler forms of PTSD where one can often retrieve the memories, relive the events and thus learn to integrate them.

A different view on mental disorders.

We have suggested that identity conflicts are the root of many diseases and disorders, some kind of inner struggle between the identities (at the personal identity level) carries over to the organ level and on to the cell identities, where epigenetic processes then manifest this conflict as illnesses. This view is rather divergent from the standard medical and psychological models, and is expanded here to show how a different view on identity and multiple identity can change our paradigm concerning disease and dysfunction. When we could look at mental disorders in this way, we can try to see how common descriptions fit into the model.

If we use the fairly common idea that we can move outwards, inwards or freeze (denial) the focus on externalizing the negative aspects of our identity, we can see that as the root cause of psychosis. If we also do this with more positive aspects, this may be what we call manic-depressive or borderline.

Depression could be seen as turning inwards as towards the negative, the dark side of an identity. The focus wanders towards the parts in that identity that feed negative emotions, recall negative experiences and thwart the future outlooks.

The various identity states are separate (more or less independent from each other) and maybe the underlying conflict with other states can cause all kinds of nasty symptoms, but it is makes sense to see the symptoms for what they are, and not interpret them as the cause. The feeling of stress (not the stress caused in the moment by external conditions) is mostly such a symptom, and not the disorder. Just symptomatically dealing with such stress (manifested in different ways like sleeplessness, etc.) by medication or even meditation or mindfulness may bring relief, but not true healing.

The in-between state, vacillating between identities, and this can take a while or happen instantaneous, points at a different kind of psychological

condition, being psychotic. In that situation, there is no firm identity to cling on, one is left hanging in the void, there is no stability and one may express just extreme parts of the various identities at play. It's a most troubling state, for there is nothing to hold onto, no identity that gives some stability and this means one's sense of reality is distorted, fleeting; there is no control over one's expressions. Every small impulse or stimulus takes over, out of proportion and one responds excessively but basically lost, the anchor that an identity provides not there.

Maybe this all means rewriting the DSM-V as basically an inventory of identity problems, and this may be a bridge too far. We can only point at how certain widespread conditions, like PTSD, are more and more seen as identity and dissociation conditions (see the chapter 22 on PTSD).

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The wake-up call

Substitute identity conflicts may not show up immediately. But they are there, may become dormant or seldom triggered, so the inner conflicts, the confrontation between the identities with the resulting symptoms at the various levels, down to cell-identity ambiguity and resulting diseases does not become fully manifest. Maybe it does, but we are good at ignoring the signals, using pills or various routines to go back to the primary identity. When we are young, and able to deal with some inner conflict stress, the effects are not noticed. We live with our subs yet do not notice them much, viewing them as moods or tempers. But then the wake-up calls come through dreams, depression, and phobias, creeping slowly towards physical complaints, the struggle and conflict between the identities becomes manifest.

The purpose & functionality of substitute identities

Like all physical and psychological phenomena it makes sense to assume some kind of evolutionary role; things don't happen without some cause or reason. Even as one can recognize a kind of substitute identities in animals - dog and horse owners will see this more easily - in humans it is quite developed and we can assume it plays a role in our over time developing self-consciousness. The inner conflicts they generate are what in a

dialectical perspective provide a synthesis, progress, transformation, something that creates the negative entropy some call life. In that sense trauma is not necessarily negative.

The notion that the substitute identities develop as teachers (providing situations, which we can see as lessons) to help us achieve the goals or scenarios we bring to this world makes more sense than seeing them as random accidents on our life's path. Our core identity is like the director of the whole game, and in a sense responsible for the occurrence of substitute identities too. That is, if we see them as learning tools in a more transpersonal perspective. Then they cannot be all negative, even as they come with problems, inner conflicts, and cause diseases and disorders. Even apart from the positive outcome in some cases (Growth trauma) we need to accept at least the potential for inner development towards greater consciousness. The identity we form (as a result of the trauma and dissociation) may at first be just a way to eliminate what was threatening, but also contains a positive part. Recognizing, honoring and maybe gradually move away from the negative towards this (often well hidden) positive, or in other world look beyond the shadow or dark part of the new substitute identity may be the way to bring it back in concordance with the core identity, integrate it and thus render it superfluous.

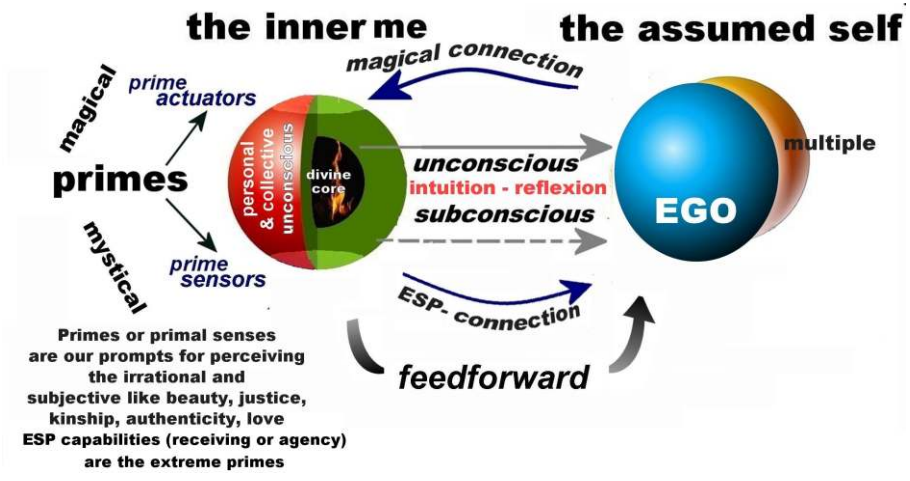
This sheds another light on the whole process of substitute identity formation. It allows us to think in terms of potential substitute identities being part of the 'scenario' of the core identity (soul). If we suppose that all substitute identities have a positive and a negative potential, the actual formation can lead to an identity leaning towards one of those two. What we see in therapy are obvious the ones with negative charge, and they cause problems. But an emerged substitute could be positive too, or it has the potential to develop from negative to positive. That may take some time and the process may fail and then the inner conflicts develops into a terminal situation, the potential is not realized. But if it is, the whole mechanism worked out!

This view would also explain, how shamanic practices are aiming at developing the positive side of the future substitute identity, or influence it's formation towards this positive outcome. Then there will be no negative symptoms, in fact the substitute identity that emerges then or later is aligned with the intention of the core identity, or as Aleister Crowley might have called it, aligned with the divine will (*Do what Thou willst*).

This realization (as a workable model) opens a whole new perspective for therapy! For if we focus on 'upgrading' the substitute identity from negative to positive, help it to see its shortcomings or conflicts as stepping stones towards growth and balance, then a different therapy path emerges.

In practical terms, if for instance we could help a person to uplift a 'helper' syndrome from self-serving towards true compassion, this would overcome the negative impact. The substitute identity would have served its purpose!

This, however, would require that we acknowledge the psychological matrix of a person, discern the various identities present (or potential) and find ways to single out the negative and positive tendencies in them. This can be done with intuitive means, and this is how this whole model evolve and manifested, but modern technology holds some promises here. Modern scanners, things like smart-bands and the now emerging array of bio-sensors and the software to interpret the data obtained from them could help to establish the identity matrix of a person. We are not there yet, but as in many cases the difference between identities (or identity states) manifest in quite obvious ways, like a distinct pattern of blood-pressure, acidity (like galvanic skin conductance response) or heart rate, these could be used. For a good observer, the facial expression (facial coding) of a person gives away a lot too. More advanced methods,



like fMRI scanning, EEG, blood or biofluid tests would offer more detail. Here it is relevant to mention that many of the scans and tests are not real time and not dynamic, they produce off-line data, while real-time online measurement would be more appropriate.

The neurological angle; neuro-marketing

These days there is quite some fascination with fMRI scans of the brain, many studies focus on what happens in the brain during stress, when using psycho-active substances including the studies into the effect of psy-

chedelics on activity levels in various relevant parts of the brain. The results are reported as very positive, we now can see what certain stimuli produce in terms of activity. However, we have to realize that what we notice as activity in specific regions is very hard to relate to what we actually see, feel or think, and memories are even harden to pinpoint, so some caution is warranted. Especially if we assume that the brain acts as a tuner rather than as a storage device for memories, looking at what happens on the electric and chemical level may not be relevant at all. It may be that we are looking at symptoms only, at what results and not what causes it. The correlation proves causation approach may not be valid concerning thins like consciousness or thinking in general.

At the other hand, science is registering a lot these days with advanced means and we know a lot more about the neurological processes and even how they relate to judgments, agency and emotions.

This is widely studied in the medical perspective, but as this has also relevance for marketing, disciplines like neuro-marketing and neuro-economics have sprung up and even in the security world these techniques are used, a development which is at crossroads with privacy considerations. One looks at scans like EEG's and fMRI, but also uses eye-trackers and other sensors to establish links and patterns between stimuli and how people respond. The idea is that certain stimuli cause brain processes that display scannable patterns that are specific and can be interpreted. This is for instance used to see and predict the response to advertizing and it has come so far, that one can actually predict which commercials will have a better yield. Experimenting with variations one can then optimize such commercials. One of the findings, although still debated, is that there is a kind of 'buying-button' location, the nucleus accumbens that lights up when there is a buying intention. Other specific areas are the insula (pain) and the medial prefrontal cortex (judgment).

This kind of research, measuring intuitive rather than cognitive responses is based on insights by Nobelist Daniel Kahneman[13] who identified two 'thinking modes', one fast and instinctive, the other slow and rational. We seems to make decisions about people and situation mostly from the fast, intuitive mode, and this means that for instance using self-reporting with questionnaires is less relevant than measuring real-time responses with bio-scanning. An example of how this kind of research with modern real-time scans is used[14] is to analyze how people react to the faces of poli-

13 Kahneman, Daniel; pelijke bestseller Thinking, Fast and Slow (2005)

14 Resarch by the Dutch neuromarketing company Alpha.One

ticians. Todorov[15] started this in 2005 and more recent research by Roeland Dietvorst shows how even very slight alterations in for instance the size of the mouth results in different appreciation levels.

If we see this in the light of the substitute identity model, we have the idea that people with only one visible identity (state), thus with only a single perceived personality, are intuitively recognized as being more trustworthy. This may show in the relative size of the mouth, but there are probably more facial traits that matter.

Neuromarketing is a fast developing field, because the results are quite convincing and the commercial applications seem to be developing faster than what we see in the medical world. For instance the research into the effects of psychedelics uses fMRI scans, but the researchers have not translated what they observe as better coordination and potential resetting and harmonization of brain connections, analyzed using connectome-harmonic decomposition[16]

into clear emotional cues, like the commercial researchers do.

Another example of the approach of the neuromarketeers we find in what the company Neurensics[17] does, using fMRI scans to look at how people relate to brands in an objective way. They can predict the commercial success of certain changes and have successfully predicted concerning awards in the advertizing discipline. They use a model with 13 dimensions in four categories to gauge the reaction (at the brain scan level and related to neural pathways or connections between brain regions):

- positive (desire, lust, expectation, trust)
- negative (danger, disgust, anger, fear)
- impact (novelty, attention)
- personal appeal (value, involvement, familiarity)

Identity and entity, states and domains of consciousness

There are different states or rather domains of consciousness, apart from sleep, dream, and waking there are trance states, mystical states, channeling or psychedelic states, lucid dream states, ‘possessed’ states, and maybe out-of-body or near-death states, take your pick. They have much in common but have different perspectives.

15 Alexander Todorov, Anesu N. Mandisodza1, Amir Goren, Crystal C. Hall; “Inferences of Competence from Faces Predict Election Outcomes”, Science Vol 308, Issue 5728 (2005)

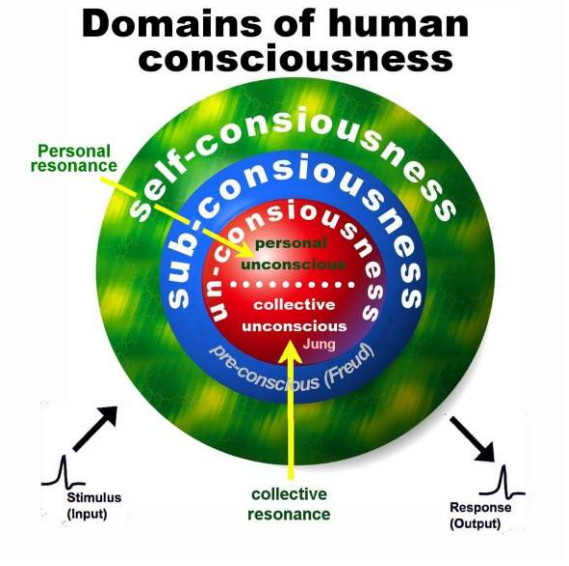
16 Connectome, the theoretical map of all the connections in the brain

17 www.neurensics.com with Martin de Munnik and Victor Lamme>

There are also levels of consciousness, of being aware of oneself or of things. Consciousness may be a fundamental of all the manifested, even self-consciousness or self-reflective consciousness these days is not exclusively human, some animals seem to have some level of it, like recognizing themselves in a mirror.

The subconscious, as the hidden domain which can be addressed and made conscious by hypnosis, trance states, psychedelics, etc. and shows up in nightmares etc. and the unconscious which evades such exploration, are factors in how we think, feel, and behave (Freud also indicated the pre-conscious as a more readily accessed level).

Especially the collective unconscious which is not a constant but is all the time influenced by the collective resonance is quite a factor and usually overlooked. Identification with for instance the CoVid-19 fearing faction (because of security and permanence) or with those who oppose the lock-down, vaccination, etc. (as an invasion of their freedom) is not likely a planned (conspired) phenomenon, but a collective resonance effect. This is sometimes referred to as „the lemming effect“ and is also related to what Rupert Sheldrake called the morphogenetic field. This of course assumes some kind of consciousness field and (unconscious) interface mechanism to tune into that. But isn't that what quantum-physics also suggests as the root of manifestation.



This collective resonance is not the group mind[18] as an ontological entity or distinct agency (as Emile Durkheim suggested) or a collective programming of the mind[19], but a shared and unconscious intuition.Collective Consciousness is a different matter.

18 Ludwig, Kirk; Routledge Handbook of Collective Intentionality, ed. with Marija Jankovic, (2018).

19 Hofstede, Geert; Cultures and organizations: Software of the mind.(1991)

The difference between consciousness and subsconscious perception is also not very well defined, as usually only the normal senses are acknowledged. We all know or rather feel when something is beautiful, just, authentic, lovable. This capacity is not generally seen as a sense but does exist and I call these perception „tools“ primes, prime senses or prompts. They are our interface for the irrational, the magical, the unseen, and do influence us probably more than the rational or even emotional triggers. They may include our capacity to sense the collective resonance and influence our normal conscious in a feedforward (teleological) goal (telos) oriented way, perceived as intuition or synchronicity. I agree that this picture of the consciousness complex is a bit unusual and not the main focus of this monograph.

How these notions about consciousness relate to substitute identities, however, is a relevant and important question. An easy answer could be that they all are versions of the core identity state (where time and space and rational causality don't matter so much) but here I suggest another possibility. Maybe such states are also ways to engage not yet formed but potential substitute identities? Take the situation of possession, in many cultures quite common and accepted as a kind of exchange and identification with a spirit entity, a daemon, ghost, divinity and such. The 'possessed', in a trance state or burdened with such an entity (in dreams, visions or affecting their physical state) feels the 'other' identity is taking over. But what if this identity is nothing but a substitute identity (or the core identity acting up) or an unmanifested identity. Something that was there anyway (as part of our soul or genetic make-up), but not activated as a separate identity yet?

What if in those states we access parts of our genetic or epigenetic matrix that we have not manifested otherwise. That what we see and feel is not an external but an internal emanation? We can see such an exceptional state usually confirms to the social and cultural environment, one will act and speak as expected. In the West this notion of being possessed is labeled as primitive and superstitious, but here we do have many people who are a medium, who channel entities, do automatic writing etc.; the best-seller lists are full with such insights and tales.

What all these states have in common is some access to spiritual and other external dimensions. These include the otherworld and the possibility to retrieve insights, prophecies, visions, and even healing from there. All of this is considered non-rational by conventional writers and thinkers. Whether this is true or not, I leave to the reader, but even if all these

PTSD and Multiples; the good, the bad and the beautiful

Does one's mental and emotional condition show in the body and especially in he face? Is the outside mirroring the inside? Does one's identity matrix have an effect on one's looks, and therefore on beauty, career opportunities, lifespan and health? Are people with only a single (primary) identity less susceptible or even immune to PTSD? Are PTSD victims on average less pretty? Tricky questions, a potential can of worms, politically a risky subject, but relevant to understand the impact of multiple substitute identities.

We will usually recognize a person who suffered from adversities and developed substitute identities as it shows in the face, the posture, the skin, etc.; they look older, more craggy. It's not very politically correct to suggest that beautiful (on the outside) people have a good inside too. It's a generalization and the response normally is to point out that beauty is in the eye of the beholder. But then we know that for instance people with symmetrical faces and more prominent seuxual dimorphism are usually perceived as beautiful.

Philosophers have forever linked beauty, truth and goodness (the transcendentals), Plato saw the world of ideals as a superior plane and Thomas Aquinas saw beauty as closely related to the good and considers physical beauty as intimately connected with spiritual beauty (Summa theologiae 1a2ae, 27.1 ad 3, Summa theologiae 2a2ae, 145.2 and ad 3, De ver. 22.1 ad 12),

The Merriam-Webster Definition of beauty: the quality or aggregate of qualities in a person or thing that gives pleasure to the senses or pleasurably exalts the mind or spirit.

and in the Oxford Dictionary as:

„A combination of qualities that delights the sight or other senses or the mind".

and in a more esoteric perspective:

„Beauty is God's handwriting" Ralph-Waldo-Emerson

Beauty, as related to health, vitality and wellness are hot topics, The subjective experience of „beauty" often involves the interpretation of some entity as being in balance and harmony with nature. Looking beautiful thus has a deep resonance with "healthy" and "being comfortable in your own skin" and that indicates it's more than skin-deep, the inner beauty is reflected in the manifested. This is why sometimes less "perfect" people are seen as "real", as having character, having a clear identity, no hidden agenda. This of course resonates with the idea, that "single mask" people

without additional substitute personalities are perceived as more beautiful, more trustworthy, more reliable.

Beauty is "looking healthy" and "being comfortable in your own skin"

Healthy and beauty, plainness, unattractiveness,
Is beauty necessary?
Emotional health, mental health, physical health (or beauty), self esteem
beauty - that is said to 'engender the experience of positive reflection and meaning of one's existence'.
Being 'beautiful' on the other hand is defined in various terms, some of which include: aesthetic, alluring, appealing, artistic, attractive, becoming, bewitchhing, brilliant, captivating, dainty, decorative, elegant, exquisite, graceful, hansome, irresistible, picturesque, pleasing, pretty, radiant, ravishing" etc.,

Voice, scent, taste?

Our looks are not coincidental, but the result of our genes and past (nature/nurture/experiences) and thus part of our identity. Our face, but in fact our whole body is thus also a representation of what we experienced and how we dealt with that. Maybe not a mirror, but for instance the eyes are often mentioned as mirrors of one's soul and in the iris there is information about one's condition and health. Our looks do define us, at least in the eyes of others. There are families with good genes and good looking offspring, but also ones who don't make it to the pageants.
Now beauty is a matter of taste, it depends on the culture, it shifts over time and is subject to what fashion and the norms of the day dictate. But there is also universal beauty, based on symmetry and , but

A large part of our looks is related to one's identity matrix. The presence of multiples as discussed in the context of the substitute identity model tends to affect the symmetry and regularity of a face and a body (and voice, stance, health, etc.). Especially trauma and dissociative multiple personalities show up in how our faces and body developed, in the lines and cracks, the shape and the irregularities, something the Chinese noticed thousands of years ago (Mien Shiang).

One of the problems in psychological testing and demographical statistics is that it's not considered political correct to concentrate on issues like

looks, age, background, class, or grooming out of a fear that this would support discrimination. It's hard to find data concerning beauty, but also the characteristics of voice, stance, movements, aging, body proportions. Assessing them is deemed to be subjective and thus prone to abuse. Universities are not likely to support research in this direction. For instance, no data could be found relating beauty to life expectancy and health. The subjectivity of marking a face as beautiful is blamed, but there are fairly universal characteristics like symmetry and dimorphism characteristics (the male/female accents), while for a voice the audiogram (spectrum of frequencies) is an indication for pleasantness of a voice. Computer assisted benchmarking of beauty is quite possible.

The tenets of "Fair Play"and "Equal Opportunities" kind of forbid to include such information in personality tests, especially if these are used in HR situations like recruiting, hiring and career planning, even as they are very important in actual situations and choices. In some countries having the name or the picture of an applicant for a job in the file is even forbidden by law. The reality, however, is that good looking people have better jobs, are better paid, and have all kinds of career advantages.

The ones with no additional substitutes beyond their primary identity are, in very general terms, better looking. This also means they do have better cards to succeed. But is there a biological explanation for this?

It could be argued that (on average of course) being more beautiful means being more social, the Silver Fox experiment by Dmitri Belyaev and Lyudmila Trut in Russia about domestication points in that direction. It is often referred to as one of the most relevant experiments about evolution mechanisms. Foxes were bred based on their tameness and the resulting offspring (after 6 generations already) showed not only more tameness, but specific physical traits emerged. As a result of what was called domestication syndrome, things like floppy ears and curly tails, juvenilized facial features, and changes in hormone (glucocorticoid) levels and adrenal glands were noticed, their looks became more puppy-like. The foxes became happier, nicer, more social, more pleasing to humans like dogs are more pleasing than the wolves they descent from. The neural crest cell hypothesis suggests that the selective breeding (for tameness) results in a reduction of the number of migrating neural crest cells, which subsequently leads to changes in fur coloration, facial structure, the strength of cartilage (floppy ears, curly tails and so on), the length of the reproductive season, and more.

This applies not only to silver foxes, but also to dogs (domesticated wolves) and other pets. Domesticated animal development towards matu-

phenomena are the result of what our brain generates, attributing them to normally 'hidden' identity layers or states makes sense.

Multi-state

It makes sense here, to refer again to the work of Thomas Roberts, who has studied psychedelic states extensively. He has developed a model about "multi-states", which comes close to our idea of multiple identities, although he does not specifically point to substitute identities.

His multistate model is opposed to the "singlestate fallacy," which he notes "*is the erroneous assumption that all worthwhile abilities reside in our normal, awake mindbody state*," This concept supports the existence and value of altered states. In his case Roberts is primarily concerned with psychedelic states, which he believes can fruitfully be explored for their medical, creative, and personal growth potentials. If we expand his model to other states of consciousness, such as shamanic trance, meditative states, and magical states in general, his ideas have universal relevance. They are relevant not only for the present wave of psychedelic research into depression, PTSD, and other disorders, but for society at large. However, including the notion of substitute identities would make his model even better.

Push or pull, nature or nurture?

If we assume that the emergence of a substitute identity has roots in our genetics (nature), as the predisposition research into PTSD and DID suggests (like in methylation genes like MTHFR, but also CA1, FLVCR2, GRIK1, PDLIM4, PDYN and many more), then the epigenetic tags (nature) and the epigenetic effects (nurture) of our experiences are what makes them emerge or not.

In other words, it's life and how we deal with its lessons that influences the activation of potential substitutes. Here our culture may be an important factor, there are for instance distinct differences in the incidence of PTSD between our Western stressful life and that of more traditional and quiet societies.

It's a terrible truth that in some people the emergence of multiple (substitute) identities leads to suffering, disease and worse, but is there a reason why humans have this? I there maybe an evolutionary need for what in general could be described as dissociation mechanisms. Are they essential for progress and development? How relevant is this capacity to split off identities with resulting inner conflicts in the evolution, in dealing with adversity?

rity seems to happen later, the babies need more and longer care. This is called neoteny, also called juvenilization, and is the delaying or slowing of the physiological (or somatic) development of an organism. The embryo is in a more primitive state, and the newborn needs longer to mature, This is not typically an animal thing, humans are a case in point here, a newborn baby needs a lot of care, much more and longer than for instance apes, even as the embryo is very much alike. The human embryo resembles very much the chimpanzee embryo, and newborns are not very different, but the ape baby becomes independent much faster.
The implications of this biological insight for the human race are immense, this is mentioned often, but very few have dared to take this much further, as in looking at humans as more or less domesticated with resulting looks and social behavior, and see the reverse effect, animals in adverse conditions becoming more adapted to the wild, less social, more individualistic, ugly, but more creative. And the hypothesis that this applies to humans too is rather controversial, but supported by this silver fox experiment.

Plato already points at the black- and the white-winged horses in the Phaedrus, the two sides of the human psyche, the tamed and the wild. Taking domestication (social, cooperative, permanence) as the tame horse and the individualistic (creativity, change, challenge, flux) as the black wild horse would, in the perspective of the Silver Fox experiment, lead to different behavior but also looks.

Again we are touching rather philosophical questions, but if we see dissociation as a fundamental dialectical principle to create flux (versus permanence) then the development of life towards ever more complex organisms demands it. Maybe in humans it got a bit out of hand, maybe it's very functional, who knows? We pay a price for 'creating' substitute identities (in life expectancy, health, quality of life) but it feels this is necessary to be able to deal with the challenges and achieve progress (whatever that means). In this perspective people with more substitute identities provide more flux, more transformation and change than the ones who can do without extra identities. Or, in evolutionary terms, in times of change we may need more people with such substitute identities! No easy answers here, we need much more insight in how the specific combination of genetic and epigenetic markers of a person, defining his or her identity, manifests and how the selection process of nature works.

Beauty and type

That people can have multiple identities has an effect on their looks (and body, movements, posture). The internal conflicts that accompany multiple identities do show, they affect the symmetry and alas, diminish the original beauty we for instance see in babies.

Those conflicts cause wrinkles, do age us prematurely, make us more susceptible to diseases and the face is where it shows most. It is like there are more masks and hidden agendas, which diminishes one's trustworthiness and "acceptance resonance". They can smile all they want, act sympathetic, show humbleness and respect, but our intuition usually warns us that this is fake, a mask.

Those looks, are you fixed as you are or can you help nature a bit? Maybe, make-up, nice clothes, a wig, even cosmetic surgery can change your face and boost your image, your reputation, your success. Some claim plastic surgery even helps to change your personality, the outside changes are mirrored in your inside. It helps self-esteem for sure.

There is little doubt that beauty is a factor affecting success and happiness, who doesn't realize that good looks help a career? Of course beauty is a matter of taste and fashion, but if we look at universal traits like symmetry and dimorphism (male/female looks), the beautiful people are considered more sympathetic and generally do better in life, they are more social, more inclined to accept the status quo (as they fit in nicely) and are experienced as more sympathetic, less inclined to project shortcoming onto others, more responsive. Not that they are really more honest or have higher integrity, but they give this impression. Less beautiful people have more tainted faces, age more, have more cracks and tics, the number of multiples matters and shows. Less (trauma induced) masks usually means a more beautiful and relaxed face. This doesn't mean people with multiple substitutes are less valuable, for they are the ones who overcome the hardships, rise to the occasion, come up with solutions and inventions, they are the change agents, and we need them as badly as the more conventional and social ones. And often this also shows, we talk about a person having a characteristic face, showing the hardships, but also the victory over them.

The notion of beauty as a factor in capability testing, psychotherapy and typology has not been part of the current ideas about one's personality, traits, drives and relational attitude. Even as beauty (both cultural and evolutionary) does lead to more income, better choice of partners, usually an easier and more happy life and probably to a longer life expectancy and better health, this has not been researched in-depth, as it goes against the fair-play and equal opportunity culture we now live in.

We thus end this with a most relevant, but difficult issue. Is what happens to us in our lives pure chance, or do we meet or even cause what we need to grow towards self-realization? Are we predestined or at least predisposed so suffer what we suffer, or is all just the outcome of chance and chaos. Do we attract accidents, diseases, etc., or are they just pushed upon us by bad luck? What is fate? Do substitute identities happen to us, just like that, are we subject to chance events, the stochastic chaos of the universe, or do these experiences fit into our life's path, into the lesson of this incarnation? Is what happens to us a push by fate or do we make things happen? Are we, at a much deeper level of connectedness, pulled towards the experience? The answer of course depends on the perspective and neither position can be confirmed. The mystics come up with answers, there are awakening experiences, we often learn from the adverse. One can point to the incidence of post-traumatic growth (PTG), and what is now called spiritual emergence and how in retrospect even the most challenging experiences in our lives turn out to be the genesis of great teachings, helping us along on a path to self-realization and increased awareness.
The issue remains tricky and will go on forever, just like the discussion about determinism and free will.

The SIM approach maybe just one step towards understanding the identity matrix of people. More research into what defines a substitute identity could help, perhaps using modern sensors to see what we can discern about the identity and thus mental state of a person. Smart bands and other devices can be used to obtain data about a person's body state that give an indication of the mental state. Here not only heart beat, breath patterns and the standard measurements are interesting, but the separate identities show up in things like the voice (and thus in audiograms), cortisol and other adrenal hormones and many more measurable biomarkers, like the telomere degradation in DNA. If we assume that every identity has a specific set of such biomarkers an algorithm could be developed to isolate these markers and help define the identity structure (matrix) of a person.

6 PTSD: a medical and a social problem

Some disorders and diseases are going to cost us dearly, in human happiness, meaning and in economic and social terms. PTSD (Post-Traumatic Stress Disorder) is not only a growing concern for the medical world, but a socio-economic issue. More and more people are diagnosed with it, not only war-time veterans, or emergency workers; whole new groups like mothers after difficult labor, inmates and those with birth trauma and maybe C-section born are vulnerable to PTSD.

This is one of the serious problems of the "Western" world, and the recent crises like CoVid/Corona and the Ukraine war don't make thing easier. They may lead to an increase in mental problems, dementia, PTSD. More stress, more anxiety, less meaning and feeling connected, one could say our mental condition is slipping. The CoVid-19 crisis will bring many more victims.

The costs of dealing with it, either by treatment or for those who suffer the social consequences of non-treatment, are huge. New developments, like more specific biomarkers, the role of certain hormones, the influence of the adrenals and the gut biome and the consequences for life-expectancy and health, now shed more light on what is as yet too broad a diagnosis (in the DSM-V). But understanding the underlying dissociation and substitute identity formation mechanisms as discussed in the previous chapters can help to find better diagnostic and therapeutic tools and procedures.

PTSD is associated with reduced cognitive and psychosocial functioning, fractured relationships, inability to maintain employment, substance abuse, and increased risk of depression and suicide.

PTSD is a disorder, but the range of symptoms in the usual definitions is so broad, that syndrome would be a better moniker, and even the term spectrum of disorders would be appropriate, like in autism.

If we follow NIMH's (National institute of Mental Health of the USA) definition;

PTSD is a disorder that develops in some people who have experienced a shocking, scary, or dangerous event.

On their website[1] they state:

"It is natural to feel afraid during and after a traumatic situation. Fear triggers many split-second changes in the body to help defend against

1 www.nimh.nih.gov/health/topics/post-traumatic stress-disorder-ptsd/index.shtml

danger or to avoid it. This "fight-or-flight" response is a typical reaction meant to protect a person from harm. Nearly everyone will experience a range of reactions after trauma, yet most people recover from initial symptoms naturally. Those who continue to experience problems may be diagnosed with PTSD. People who have PTSD may feel stressed or frightened even when they are not in danger."

There are other definitions, like what is mentioned by Psychology Today:

'Post-Traumatic Stress Disorder (PTSD) is a trauma and stress related disorder that may develop after exposure to an event or ordeal in which death, severe physical harm or violence occurred or was threatened. Traumatic events that may trigger PTSD include violent personal assaults, natural or unnatural disasters, accidents, or military combat.'

The illness makes one re-live the event or rather the experience in some way, often unconscious, which causes distress and difficulty in day-to-day life. Symptoms may become worse if someone is triggered, when one sees, hears or smells something that reminds of the trauma.

We focus on PTSD here in the context of identity formation and notably substitute identity formation. Despite the DSM-V and NIMH classifications, in many and especially the more complex cases it basically is an identity problem and goes deeper than one's superficial personality. Many mental and personality problems can be seen as inner identity conflicts, the sense of self being damaged with various symptoms like depression, flashback memories, suicidal tendencies, hyper- and hypoarousal, but also learning problems, behavioral aberrations, often substance abuse and addiction and much more.

The subject of PTSD was chosen as a focal point of this monograph because it has reached epidemic proportions, and because PTSD is now often seen as a dissociation and identity conflict, and DID is of course related to this. Thus the idea of Substitute Identity as the result of severe dissociation seems relevant. But there is more, PTSD therapy is often the result of trial and error interventions like EMDR (Eye Movement Desensitization and Reprocessing). These do help but there is no clear understanding why or how they work, even it is now understood these target (and overload) cross-hemispheric integration of emotional and cognitive imprints that persist after traumatic events.

Most contemporary curative approaches like in exposure-based therapies are derived from World War II desensitization treatments for battle fatigue.

The concept of posttraumatic stress disorder, or traumatic neuroses as it was initially called, did not come into North American psychology's purview until around 1941 with the publication of Abram Kardiner's The Traumatic Neuroses of War.
Much has been found since, but what is needed now is a more multisystemic approach to the mind–body constellation that is clinically informed by state-of-the-art neuroscientific research relating to the pathophysiology of trauma[2]. Exposure therapy, working with memories of the trauma, comes in many forms, these days even with the help of virtual reality and psychedelics. It is seen as an effective approach but again lacks a clear theoretical framework. Also there is the risk for the traumatized individual that subsequent "re-traumatization" could occur.

The body ignored

PTSD is seen as a mental disorder, part of the DSM-5 ((Diagnostic and Statistical Manual of Mental Disorders) classification. It's in the mind, one assumes, which basically ignores the anchoring of traumatic experiences in the body.
This, while effective therapy approaches like EMDR, and EFT (Emotional Freedom Technique) use somatic procedures, notably body polarity and cross-hemispheric integration. They kind of overload and then reset (clear) the memories and belief system associated with a specific identity or substitute identity.

Ignoring the anchoring in the body is serious oversight. people like Bessel van der Kolk[3] and Robert Scaer[4] have pointed this out, based on their clinical expertise and analysis of the relationship between mind, body, and the processing of trauma. They point at neurobiology's fundamental tenets, the connections between mind, brain, and body, and the many and varied ways that symptoms of traumatic stress become visible in the body. Their position, however, has been critized by the medical establishment.
People often experience sensory elements of the trauma without being able to make (cognitive) sense out of what they are feeling or seeing. They are experiencing emotions and sensations, but unable to remember

2 Newton, Priscilla; Sourcing Image Formation in a Depth Psychological Approach (2015)
3 Bessel van der Kolk;The body keeps the score: mind, brain and body in the transformation of trauma (2016)
4 Robert Scaer; The Body Bears the Burden (2001)

the origin and the content. These origins are obviously also anchored in the body, not only in the mind.

Body-mind therapy is increasingly seen as the more holistic route to deal with PTSD accepting the trauma is not only anchored in the mind, but also in the body. New approaches are coming to light, also for diagnosis. One can use for instance interoceptive awareness (awareness of sensory information in the body) to diagnose and heal difficulties with emotion regulation as encountered in PTSD. Traumatizing experiences, incidental or for a longer time, can lead to suppressing the memories or rather the emotions connected to the situation, they become what Bradley Nelson[5] calls 'trapped emotions'. They have become unconscious, but still affect us, often in very negative ways.

PTSD is associated with reduced cognitive and psychosocial functioning, fractured relationships, inability to maintain employment, and increased risk of depression and suicide. The illness makes one re-live the event or rather the experience in some way, often unconscious, which causes distress and difficulty in day-to-day life. Symptoms may become worse if someone is triggered, when one sees, hears or smells something that reminds of the trauma. The sense of self is being damaged with symptoms like flashback memories, hyper- and hypoarousal, but also learning problems, behavioral aberrations, often substance abuse, addiction and much more.

Holistic perspective

The focus on mostly the cognitive aspects of PTSD may have to do with the limited way Western psychology often bypasses the soma and is more symptomatic than holistic. Eastern medicine traditions offer a more holistic approach, like looking at meridians (energy lines) and the various polarities in the body as more than just the brain.

Body-mind therapy is increasingly seen as the more holistic route to deal with PTSD. The trauma is not only anchored in the mind, but also in the body. New approaches are coming to light, also for diagnosis. One can use for instance interoceptive awareness (awareness of sensory information in the body) to diagnose and heal difficulties with emotion regulation as encountered in PTSD. Traumatizing experiences, incidental or for a longer time, can lead to suppressing the memories or rather the emotions connected to the situation, they become what Bradley Nelson calls 'trapped emotions'. They have become unconscious, but still affect us, often in very negative ways.

5 Nelson. Bradley; The emotion code (2007)

A metacognitive model including emotion-focused therapies, mindfulness, meditation, yoga and breath training as well as the incorporation of somatic and ecopsychological approaches such as saltwater immersion are probably more effective than just cognitive therapy interventions.

Too broad a label

The term *post-traumatic stress disorder* is descriptive but applied to a very broad range of symptoms, it has become an umbrella for dissociation, trauma and depression. It is, at least in the DSM-V approach a socially-constructed label that Western mental health workers have affixed to noticeable changes in someone's behavior, attitudes, and/or values following accidents, natural disasters, armed combat, rape, torture, abuse, sexual assault, and a host of other threatening experiences (Young, Allan 1995)[6].

Beyond the individual suffering from PTSD in veterans, the most publicized group of victims, the term and the diagnosis is applied more and more; it has become nearly a household term. It is a label for dysfunctional behavior, a disorder, but obviously so common that it is part of the human condition. We can qualify certain symptoms as PTSD, but dealing with extreme adverse situation and the trauma they cause and the traces they leave is a necessity for all of us, from our birth onwards. We can all have upsetting memories, feel on edge, or have trouble sleeping after significant experiences (not only the negative) but we react within a normal range and don't see this as pathological. But when such symptoms linger on, get more intense and the trauma processing disrupts normal functioning, it is then deemed a disorder. This diagnosis, however, is a more or less arbitrary position on a continuum of trauma processing symptoms. Or widening the perspective, a continuum of ways to deal with stimuli and situations.

With the reductionistic listing of symptoms there is the risk that in looking at the proverbial elephant from all sides we miss the grand picture of what an elephant really is. To understand PTSD beyond assigning a list of symptoms, beyond the deconstructional approach, we have to understand how humans (and animals, they suffer from trauma too and develop substitute identities) react to their environment and to real or perceived threats, what happens in their bodies, nervous systems and in their brains? What are the root mechanisms, what makes one deal with an incident in such an extreme way, that we call it a disorder? Why do some suffer from

6 Young, Allan; Inventing post-traumatic stress disorder (1995)

it, others walk away from a similar situation without the burden? Why is the interplay between personal and social cultural identity so important, what are underlying patterns, causes and how do they manifest.
Just isolating PTSD as something that happens to a few unlucky ones or to just veterans returning home means ignoring that society as a whole may be in a PTSD situation. What we see in veterans seems just the tip of the iceberg. For many, including veterans, PTSD started much earlier than the traumatic (combat/war/abuse) situation, it has roots in infancy and early youth, in social deprivation and socio-economic adversity; some of us are predisposed and this may even be hereditary. It is also clear that some cultures have more PTSD incidence than others, and this means the culture, the education and the lifestyle are factors too. The USA is one of the most vulnerable and this justifies asking some nasty questions, like what is the role of fear (so stimulated by the media and politicians) and the need to be an individual and have some kind success? One could ask, is a culture so full of ego-symbolism, competition and identity conflicts maybe causing all this PTSD?

Unspecific and too vague

The labeling of PTSD as a general mental disorder, with just very limited subcategories (dissociation, young age, complex) and with a diagnose protocol that involves little 'hard' biological data and is mostly based on fairly subjective interpretation of symptoms with quite some risk of faulty diagnosis, wrong assessment and malingering from both patient and evaluator side, is not specific and needs an update.
The DSM-V diagnosis by qualified professionals) is strictly symptomatic, based on interviews and questionnaires (sometimes clinically administered, some self reported) and not always consistent.
Notably the inclusion of (ill defined) dissociation symptoms, development stages of the disorder that are not properly identified as either normal trauma processing, acute stress disorder (ASD), lingering but healing ASD after the artificial period of one month, substitute identity formation, late-onset stress symptomatology (LOSS) makes the whole label or category less effective, to say the least. There is also the overlap with DID (Dissociative Identity Disorder).
Recognizing PTSD and related disorders as basically an identity and dissociation problem may be a suggestion (Nijenhuis and van der Hart[7]).

7 Van der Hart, Onno, Nijenhuis, Ellert. e.a.Trauma-related dissociation: conceptual clarity l ost and found, in Australian and New Zealand Journal of Psychiatry (2004)

DSM-V: PTSD diagnosis

The more or less ‘standard’ diagnosis in this manual of the American Psychiatric Association’s classification and diagnostic tool is what is used in “official” diagnose procedures, and although here a different approach is advocated, the DSM-V diagnosis is of course relevant. DSM-V indicates it as a “trauma- and stressor-related disorder"

To be diagnosed with PTSD in DSM-V, an adult must have all of the following for at least 1 month:

- At least one re-experiencing symptom
- At least one avoidance symptom
- At least two arousal and reactivity symptoms
- At least two cognition and mood symptoms

Posttraumatic stress disorder (PTSD) is defined and listed in the DSM-V as a mental disorder that can develop after a person is exposed to a traumatic experience, such as sexual assault, warfare, traffic collisions, or other threats on a person’s life. Symptoms may include disturbing thoughts, feelings, or dreams related to the events, mental or physical distress to trauma-related cues, attempts to avoid trauma-related cues, alterations in how a person thinks and feels, and an increase in the fight-or-flight response, suicidal tendencies, substance abuse and even reduced life-expectancy. To qualify for PTSD the symptoms must last more than a month, are not due to substance use, medical illness, or anything except the event itself and be severe enough to interfere with relationships or work to be considered PTSD.

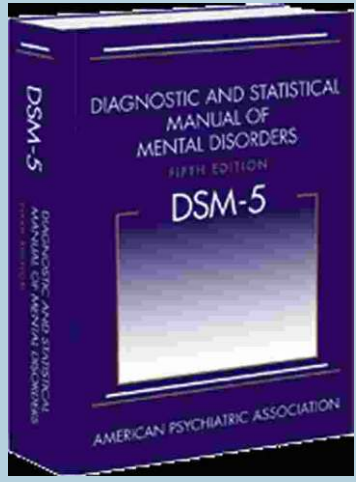
PTSD is usually diagnosed by using the Clinician-Administered PTSD Scale for DSM-5 (CAPS-5) in an 30-item structured interview or the PCL checklist. A DSM-V PTSD diagnosis is thus based on long lists of symptoms and conditions and how serious they are, but is in the end a judgment call. And given the consequences of such a diagnosis, thus open to manipulation from both sides, including malingering.

The addition of a **dissociative subtype** of PTSD as part of the DSM-V was based on three converging lines of research: (1) symptom assessments, (2) treatment outcomes, and (3) psychobiological studies. A subgroup of PTSD patients (roughly 15 - 30%) exhibits additional symptoms of dissociation, including depersonalization and derealization, and the subtype of PTSD specifically focuses on these two symptoms.

The American Psychiatric Association summarizes the diagnostic criteria for PTSD (In DSM-V)

Criterion A (one required): The person was exposed to: death, threatened death, actual or threatened serious injury, or actual or threatened sexual violence, in the following way(s):

- Direct exposure
- Witnessing the trauma
- Learning that a relative or close friend was exposed to a trauma
- Indirect exposure to aversive details of the trauma, usually in the course of professional duties (e.g., first responders, medics)



Criterion B (one required): The traumatic event is persistently re-experienced, in the following way(s):

- Intrusive thoughts
- Nightmares
- Flashbacks
- Emotional distress after exposure to traumatic reminders
- Physical reactivity after exposure to traumatic reminders

Criterion C (one required): Avoidance of trauma-related stimuli after the trauma, in the following way(s):

- Trauma-related thoughts or feelings
- Trauma-related reminders

Criterion D (two required): Negative thoughts or feelings that began or worsened after the trauma, in the following way(s):

- Inability to recall key features of the trauma
- Overly negative thoughts and assumptions about oneself or the world
- Exaggerated blame of self or others for causing the trauma
- Negative affect
- Decreased interest in activities
- Feeling isolated
- Difficulty experiencing positive affect

Criterion E (two required): Trauma-related arousal and reactivity that began or worsened after the trauma, in the following way(s):

- Irritability or aggression
- Risky or destructive behavior
- Hypervigilance

- Heightened startle reaction
- Difficulty concentrating
- Difficulty sleeping
- **Criterion F (required):** Symptoms last for more than 1 month.
- **Criterion G (required):** Symptoms create distress or functional impairment (e.g., social, occupational).
- **Criterion H (required):** Symptoms are not due to medication, substance use, or other illness.

ICD-11 criteria (the WHO's International Statistical Classification of Diseases and Related Health Problem) for PTSD

- A. Exposure to a stressful event or situation of exceptionally threatening or horrific nature likely to cause pervasive distress in almost anyone
- B. Persistent re-experiencing that involves not only remembering the TE, but also experiencing it as occurring again
- C. Avoidance
- D. Persistent hyperarousal (i.e., heightened perception of current threats) **Hyperarousal** is a specific cluster of symptoms as a consequence of heightened (hyper) anxiety and altered arousal responses with symptoms such as: Having a difficult time falling or staying asleep.
- E. Clinically significant functional impairment

The diagnosis PTSD has become so broad (and trendy some say) that nearly every noe rmal person suffers from it, as we all have lived through trauma of some kind, starting with or even before childbirth. The official numbers vary, but it is estimated that in the United States about 3.5% of adults have PTSD in a given year, and 8-9% of people develop it at some point in their life. It is more prevalent in women[8], about 10 of every 100 women (or 10%) in the US develop PTSD sometime in their lives compared with about 4 of every 100 men (or 4%). but for people who have been in combat the incidence is much higher (15-20%). About 8 million adults in the US suffer from PTSD during a given year.

PTSD has become a media item and a national concern after it became clear that a substantial number of the millions of troops involved in the Vietnam, Iraq and Afghanistan war (until 2007 approx.1.64 million U.S. troops have been deployed in Operations Enduring Freedom and Iraqi

8 www.ptsd.va.gov/public/ptsd-overview/basics/how-common-is-ptsd.asp

Freedom[9]) suffered from it. Major depression (14%) and traumatic brain injury TBI (19%) are other deployment legacies. Sleeplessness, depression, suicide, addiction, suicide attempts and extreme acts of aggression were among the symptoms. For many, PTSD, TBI and major depression are a reality, one third of all deployed people has one of the three, meaning more than half a million people, and this only from the Iraq and Afghanistan operations until 2007. As of June 2016, (according to MAPS) more than 868,000 veterans were receiving disability compensation for PTSD, with an estimated taxpayer cost of $17 billion per year. Approximately 7% of the U.S. population, and 11-17% of U.S. military veterans will suffer PTSD in their lifetime. PTSD is estimated to affect about 1 in every 3 people who have a traumatic experience, but it's not clear exactly why some people develop the condition and others don't. Individuals with PTSD are six times more at risk of committing suicide.[10] In the general population, 27% of suicides are associated with PTSD.

PTSD as one of the most visible mental disorders or disturbances (although ADHD probably comes close) probably existed all through human existence, but only came to light because of what happened to soldiers in the World Wars. They suffered from shell shock or combat neurosis, but PTSD was given its now so common designation after the Vietnam War.

Not just veterans, ex-prisoners and PISC

The number of people suffering from PTSD might be much larger than now officially recognized, if we would for instance include victims of abuse and rape, emergency workers (firemen, police, ambulance, emergency rooms in hospitals) and those who have been in the prison system. Especially in the VS, with the largest prison population (per capita) in the world and averaging roughly double the time served (63 months) elsewhere (Australia 36), roughly 1% of the population is incarcerated and another 2% in the judiciary system (probation, parole etc.). Together more than 7 million in the correctional system[11] and probably 20 million or more having been in the system[12]. There may be many millions who already have symptoms or will develop something, which people like Terence T. Gorski[13] labeled as PICS (post incarceration syndrome).

9 Terri Tanielian, Lisa H. Jaycox; Invisible Wounds of War Psychological and Cognitive Injuries, Their Consequences, and Services to Assist Recovery, Rand Corporation (2008)

10 Sarah Knapton, The Telegraph (UK) Sept 14, 2017

11 www.bjs./gov/index.cfm?ty=pbdetail and iid=5870

12 Wagner, Peter: www.prisonpolicy.org/reports/pie2016.html

13 Gorski, Terence, www. gorski.com/ criminal, since 1999

It turns out (PICS) or PISD[14] (post incarceration stress disorder) is a serious factor that contributes to relapse and recidivism (60%) in addicted and mentally ill offenders who are released from correctional institutions. His concept has emerged from clinical consultation work with criminal justice system rehabilitation programs working with currently incarcerated prisoners and with addiction treatment programs and community mental health centers working with recently released prisoners. Already those in prison suffer; overcrowding, supermax prisons and extended solitary confinement, racial and ethnic disparities, the general dehumanizing conditions of an increasingly commercialized (privatized) prison system contribute to rising numbers of mentally ill inmates and what is termed "internal controls atrophy", a loss of moral decency.

The Bureau of Justice Statistics (BJS), Mental Health Treatment in State Prisons, 2000. (NCJ 188215) in July, 2001 reported 16% of prisoners nationwide are mentally ill. But the numbers are growing, according to the BJS statistics, over half of all prisoners in 2005 had experienced mental illness as identified by "a recent history or symptoms of a mental health problem". Not only do people with recent histories of mental illness end up incarcerated, but many who have no history of mental illness end up developing symptoms while in prison.

Compared to the cost of PTSD in veterans, the incidence of PISD may be a multiple. The cost of US incarceration[15] taking into account social cost, effects on children of inmates, etc. is already estimated to be more than 1.000 billion, but long term effects and costs may be even more and PISD may be a very expensive affair for future generations.

The formerly incarcerated also have a mortality rate 3.5 times higher (apart from in-prison violence) than that of people who have never been incarcerated. This premature aging effect is also well researched at the DNA level and documented for those diagnosed as PTSD by the Veterans Administration[16]but also observed in the general population as the result of depression and anxiety like in the CDC-ACE study[17] about the effects of adverse childhood experiences.

14 Craig Haney: The Psychological Impact of Incarceration: Implications for Post-Prison adjustment (2002)

15 Matt Ferner, Huffington Post, Sept 13, 2016: The Full Cost of Incarceration in the U.S. is over $ 1 Trillion, and about half of that falls upon the families, children and communities of the incarcerated.

16 Research on Military Veterans, lifespan Implications of Military Service, PTSD Research Quarterly, National Center for PTSD (2009)

17 Kaiser CDC study: www.cdc.gov/violenceprevention/ acestudy/about. human internal study 1995-1997

Types of PTSD

The National Center for PTSD in the US[18] indicates more subcategories; They see five main types: normal stress response, acute stress disorder, uncomplicated PTSD, comorbid PTSD and complex PTSD.

The normal stress response occurs when healthy adults who have been exposed to a single discrete traumatic experience in adulthood suffer from intense bad memories, emotional numbing, feelings of unreality, being cut off from relationships or bodily tension and distress. Such individuals usually achieve complete recovery within a few weeks.

Acute stress disorder is characterized by panic reactions, mental confusion, dissociation, severe insomnia, suspiciousness, and being unable to manage even basic self care, work, and relationship activities. Relatively few survivors of single traumas have this more severe reaction, except when the trauma is a lasting catastrophe that exposes them to death, destruction, or loss of home and community.

Uncomplicated PTSD involves persistent re-experiencing of the traumatic experience, avoidance of stimuli associated with the trauma, emotional numbing, and symptoms of increased arousal.

Complex PTSD is a result of repetitive, prolonged trauma involving harm or abandonment by a caregiver or other interpersonal relationships with an uneven power dynamic, such as childhood sexual abuse. Judith Herman[19] proposed an even wider description of C-PTSD addressing the circumstances of multiple (prolonged and repeated) trauma's sometimes throughout the lifetime, as opposed to PTSD, because of abuse, hostages, prisoners of war and concentration camp situations, totalitarian control, hostages.

Comorbid PTSD

PTSD comorbid with other psychiatric disorders is actually much more common than uncomplicated PTSD. PTSD is usually associated with at least one other major psychiatric disorder such as depression, alcohol or substance abuse, panic disorder, and other anxiety disorders. The best results are achieved when both PTSD and the other disorder(s) are treated together rather than one after the other.

Following Gorski, the Post Incarceration Syndrome (PICS) is a mixed mental disorders with clusters of symptoms like:

18 National Center for PTSD in the US, www.psychcentral.com/disorders/ptsd/

19 Herman, Judith; Trauma and recovery, The aftermath of violence from domestic abuse to political terror (1997)

- *Institutionalized Personality Traits* resulting from the common deprivations of incarceration, a chronic state of learned helplessness in the face of prison authorities, and antisocial defenses in dealing with a predatory inmate milieu,
- *Post Traumatic Stress Disorder (PTSD)* from both pre-incarceration trauma and trauma experienced within the institution,
- *Antisocial Personality Traits (ASPT)* developed as a coping response to institutional abuse and a predatory prisoner milieu, and
- *Social-Sensory Deprivation Syndrome* caused by prolonged exposure to solitary confinement that radically restricts social contact and sensory stimulation.
- *Substance use disorders* caused by the use of alcohol and other drugs to manage or escape the PICS symptoms.

PICS often coexists with substance use disorders and a variety of affective and personality disorders.

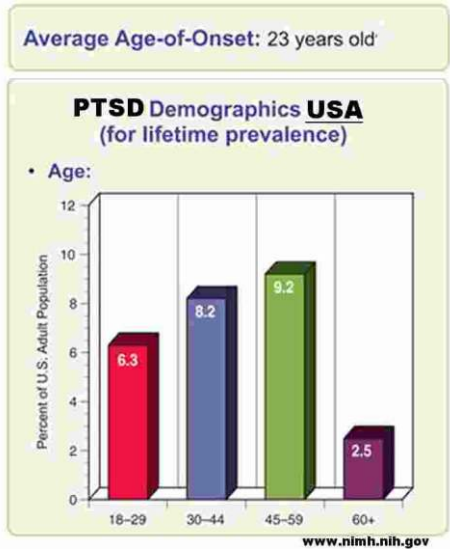
Gorski warns that the effect of releasing large numbers of prisoners with psychiatric damage from prolonged incarceration can have devastating impacts upon society like including deterioration of inner city communities, the destabilization of blue-collar and middle class districts unable to reabsorb returning prisoners who are less likely to get jobs, more likely to commit crimes, more likely to disrupt families. This could turn many currently struggling lower middle class areas into slums.

ADHD and PTSD

The rise of Attention Deficit hyperactivity Disorder (ADHD), especially in children, seems to resonate with that of PTSD. Studies show there is a definite link between the two conditions[20].There are significant overlapping symptoms and risk factors for post-traumatic stress disorder (PTSD) and attention-deficit/hyperactivity disorder (ADHD) and maybe autism too. Both can cause impulsivity, lack of focus, emotional outbursts, and social isolation. There is also evidence to support the fact that one of these conditions can make a person more likely to have the other. Children who experience family and environmental stressors, and traumatic experiences, such as poverty, mental illness and exposure to violence, are more likely to be diagnosed with ADHD. If indeed ADHD is also trauma related (including birth trauma of the baby and maybe the effects of postpartum/postnatal trauma of the mother), it could be seen as an early or age-specific PTSD symptom, rather than comorbidity of ADHD and

20 https://www.bridgestorecovery.com/blog/can-ptsd-cause-adhd-exploring-overlap-and-treatment-options/ retrieved Nov 2019.

PTSD. Adrenal disbalance might be a factor in both. Adler[21] pointed at the increased vulnerability for PTSD in people with an ADHD background, he found ta significant association of PTSD with ADHD. In the substitute identity model, children with only a single mask (identity) could be expected to have no or much less ADHD.



Biomarkers, a new perspective

A biomarker in medicine is an objectively measurable sign of a disease or condition: a molecule, gene, brain pattern or characteristic that shows up in a test.

The diagnosis of PTSD is still largely a matter of interpretation of self-reported symptoms and is not (yet) based on clear biological markers like specific activity or anomalies in brain regions, certain sequences in DNA, telomere degrasation, the existence of a virus or a bacteria in the body, clogged arteries, hormonal disbalance, specific gut-biome constellations, specific markers in molecules in blood or specific brain (dis-)functionality or connectivity etc. So far there are no easy biomarkers to diagnose PTSD, also because the symptoms of the disorder are many and heterogenous. There are some telltales like small hippocampal volume that indicates predisposition and indications that epigenetic markers (methylation patterns, miRNA damage) may play a role.

The availability of more objective criteria and biomarkers is badly needed[22]. Lots of work here. Sam McLean stated it:

> *Yes, we're really living in the dark ages of post-traumatic stress diagnostics.*

Better and specific biomarkers are also needed because PTSD, as mentioned before, is not (yet) a clear and unambiguous diagnosis with

21 Adler, LA; Attention-Deficit/Hyperactivity Disorder in adult patients with Posttraumatic stress disorder (PTSD): Is ADHD a vulnerability factor? (2004) https://doi.org/10.1177/108705470400800102

22 McLean, Sam, University of North Carolina PBS NewsHour: War on the Brain (March 2017)

biomarkers that prove the condition, but more of an umbrella term with a diagnostic spread of subtypes. Better specifications and defining more clear sub-categories might help.
A problem here is also the comorbidity, additional disorders, associated mental health problems and complaints appear and often there is other damage. like TBI (traumatic brain injury) because of physical blunt force trauma to the brain, hearing (combat blast exposure), etc.

There are, however, more and more potential biomarkers identified and this is where there is some real progress concerning PTSD diagnosis, treatment and even prediction of susceptibility. Research looks at blood tests, MRI and echo scanning, RNA and DNA damage evaluation (genome decline), thermographic (temperature of skull, face and specifically nose area) indicators, adrenal functions and cortisol levels, gut-biome constellations, but also psychomarkers and voice analysis etc. could help in narrowing the diagnostic spread and 'human factor' noise.
As remarked by Michopoulos[23]the potential avenues for the identification of diagnostic biomarkers for PTSD include, but are not limited to, monoaminergic transmitter systems, neuroendocrine effects in the hypothalamic-pituitary-adrenal (HPA) axis (like cortisol and adrenalin reactivity), metabolic hormonal pathways, inflammatory mechanisms, psychophysiological reactivity, and neural circuits. Some of these biomarkers could also indicate increased risk/suceptibility for the development of PTSD.
PTSD comes with augmented levels of catecholamine secretion, norepinephrine (NE) and alterations in the serotonergic system like decreased levels of paroxetine binding and serotonin (5-HT). [2425]

Psychophysiological biomarkers of PTSD

The autonomous hyperarousal symptoms of PTSD like heart rate (HR), blood pressure (BP), skin conductance (SC), respiration rate (RR), muscle contractions, iris contraction, and body temperature can be measured, these days with devices like smart bands and EMG electromygraphy, but

23 Michopoulos, Vasiliki, Davin Norrholm, Seth and Jovanovic, Tanja; Diagnostic Biomarkers for PTSD; Promising Horizons from Translational Neuroscience Research, Biol. Psychiatry. (Sept 2015)

24 Yehuda Rachel; Neuroendocrine aspects of PTSD. Handb Exp Pharmacol. (1995)

25 Mouthaan J, Sijbrandij M, Luitse JS, Goslings JC, Gersons BP, Olff M. The role of acute cortisol and DHEAS in predicting acute and chronic PTSD symptoms. Psychoneuroendocrinology (2014)

it requires advanced software to identify the specific patterns for PTSD like an exaggerated startle response. This kind of e-health applications is rapidly advancing.

Neuroanatomical and neuroactivational biomarkers of PTSD

There is a lot of interest in using fMRI scanning to establish which parts of the brain are activated or have undergone changes, looking for bio-markers that would help diagnose certain disorders or even indicate where stimulation of the brain could be effectively used a remedy. Neuroimaging data gathered during the last decade demonstrate that PTSD is associated with greater amygdala activation compared to controls. Also the rostral anterior cingulate cortex (ACC) is less active in PTSD patients relative to controls; an effect not found in other anxiety disorders.

Genetics

There are genetic and epigenetic biomarkers of PTSD like the genes critical for the neuroendocrine regulation of the HPA-axis ((Hypothalamic-Pituitary-Adrenal axis), but they are associated with other psychiatric conditions as well.

Researchers headed by a team at Indiana University School of Medicine (professor Alexander Niculescu and the Richard L. Roudebush VA Medical Center) [26]have identified blood-based genetic markers of psychological stress that could help scientists develop improved, earlier diagnostics for post-traumatic stress disorder (PTSD) and other stress disorders, and offer up new leads for the development of drug or natural compound-based therapeutics. Their evaluation indicated that some of the newly identified predictive biomarkers, including NUB1, APOL3, MAD1L1, or NKTR were comparable or even better at predicting the state of stress and stress trait than either TL (telomere length) or FKBP5 mRNA levels.

Looking at microRNA is a promising approach here. In September 2017 it was reported, at the annual meeting of the European College of Neuropharmacology in Paris, and this made it into an article in The Telegraph[27] (UK) that “Blood test for PTSD on horizon as scientists find genetic changes in traumatised soldiers”. Scientists from Maastricht University (Laurence de Nijs) found crucial genetic changes, differences in the microRNA (miRNA) molecules, in soldiers suffering from trauma after serving in Afghanistan. MicroRNA regulates how active specific genes are,

26 Roudebush, Richard; Towards precision medicine for stress disorders: diagnostic biomarkers and targeted drugs. Molecular Psychiatry

27 Knapton, Sarah; The Telegraph (UK), www.telegraph.co.uk/science/ (Sept. 4, 2017)

the epigenetic expression; they offer a kind of fingerprint. MicroRNA can circulate throughout the human body and can be detected in the blood, which makes it more practical. This kind of research confirms VA (veterans) findings that there is distinct DNA/RNA degradation in PTSD victims concerning telomere length (TL), which is another well-established biological marker of psychological stress. Their life-expectancy is shortened and they are more prone to health problems. This also could be the case for groups like (ex-)inmates and many more groups with higher risk to experience trauma, like Corona IC patients. Post-traumatic stress disorder (PTSD) affects up to 7 in 100 women after giving birth. Having an emergency c-section increases the risk of getting PTSD (for the mother).[28]

The PTSD Biomarker Database (PTSDDB) is a database that provides a landscape view of physiological markers being studied as putative biomarkers in the current post-traumatic stress disorder (PTSD) literature to enable researchers to explore and compare findings quickly. The PTSDDB currently contains over 900 biomarkers and their relevant information from 109 original articles published from 1997 to 2017.

Adrenal perspective

The adrenal neurotransmitters/hormones are of interest, as they are related to what is so important in PTSD situations, the fight/freeze/flight mechanism. The role or disbalance of hormones like adrenalin, cortisol and oxytocin has not widely be seen as relevant. Only recently have they become part of the PTSD puzzle. It was seen as less relevant; it only only recently became part of the research curriculum[29]. Additionally the role of the adrenal glands and the hypothalamic-pituitary-adrenal (HPA) axis feedback in PTSD is not very well recognized in the allopathic Western medical approach. This while fight or flight response are usually present in traumatic circumstances and are so clearly related to the hormones produced in these glands. Intense fear, helplessness, self-absorption or horror as experienced in PTSD are related to these organs and hormones. De-

28 Lopez, U, Meyer, M, V. Loures, V. Iselin-Chaves, I. Epiney, M. , Kern, C. and Haller, G.; Post-traumatic stress disorder in parturients delivering by caesarean section and the implication of anaesthesia: a prospective cohort study; PMCID: 5457569 Health and Quality of Life Outcomes. (2017)

29 Kolassa, Iris-Tatjana, Cindy Eckart, Martina Ruf, Frank Neuner, Dominique JF de Quervain, and Thomas Elbert; Lack of cortisol response in patients with posttraumatic stress disorder (PTSD) undergoing a diagnostic interview. BMC Psychiatry (2007) PMCID: PMC2175503, PMID: 17916253

scribing the **adrenals as emotion-ears** is a way to clarify to the lay person how this might work.

Gut Biome

Also the role of our gut microbiome is now more and more relevant, also for psychological problems like autism[30] and the use of pre- and probiotics as a treatment for ADHD and PTSD[31] (and many more diseases) has been suggested and is being researched.

The use of psychedelics in PTSD-therapy is not new, but there certainly is a revival, new and large-scale experiments are underway and protocols for treatment are drawn up, the legality of using specific substances like MDMA or psilocybin is seriously considered. The experiment are somewhat limited and focus on the cognitive and emotional in a somewhat sterile clinical setting, but more attention for the somatic and how the body has stored trauma will certainly emerge.

Predisposition and immunity

Not all traumatic experiences lead to a trauma with PTSD or to longer lasting identity problems and can thus be called traumatizing. Not every traumatized person develops ongoing (chronic) or even short-term (acute) PTSD, not all experience a rupture of their sense of self (identity), time, and cognition. The have a non-pathological 'normal' way to deal with adversity, this may not be easy and can take time, but mean going back to the 'healthy' situation. So some people can experience very potentially traumatizing incidents without long lasting consequences, they have some kind of immunity. Others do not, predisposition (PTSD Predictor) models show that childhood trauma, especially such as peritraumatic dissociation, chronic adversity, and familial stressors increase risk for later PTSD, but also later trauma experienced in adulthood leaves biological markers of increased risk for PTSD after a 'new' traumatizing event. Intrauterine trauma and birth trauma are also a factor.

A study by Mirjam van Zuiden in the Netherlands basically took a thousand soldiers, before they went into combat, and looked at cortisol and glucocorticoids receptor measures and markers, as well as genes and

30 Pulikkan, Mazumder, Grace; Role of the Gut Microbiome in Autism Spectrum Disorders; in Adv Exp Med Biol. 2019;1118:253-269. doi: 10.1007/978-3-030-05542-4_13.

31 Sophie Leclerq, Paul Forsythe, John Bienenstock; Posttraumatic Stress Disorder: Does the Gut Microbiome Hold the Key? (2016) DOI: 10.1177/0706743716635535

epigenetic markers of the glucocorticoid receptor. They found that low cortisol and enhanced glucocorticoid receptor sensitivity were predictors of people that had PTSD a few months later. [32]

Another direction in the research looks at the effect of oxytocin on the trauma processing. Sniffing Oxytocin[33] has a positive effect on PTSD recovery[34].

There seems to be a genetic predisposition for PTSD (30% hereditary), as research in twins in the Vietnam war demonstrated, but it is not yet very clear how this can be used to predict PTSD. There may be epigenetic transgenerational transfer effects.There are also often shared genetic influences common to other psychiatric disorders, addiction, panic, anxiety disorders, which complicates the matter.

Some of these predispositions and markers are shared with DID (multipersonality) but there the hereditary transfer is not recognized, even as some (non genetic) social or environmental heredity exists and some epigenetic marks are hereditary.

Resilience

Not the same as immunity, resilience refers to the ability to thrive despite adversity and is defined as a multidimensional phenomenon, spanning internal locus of control, sense of meaning, social problem-solving skills, and self-esteem.

Resilience, which has neural correlates in blood oxygen level-dependent signal strength in the right thalamus as well as the inferior and middle frontal gyri (Brodmann area 47) is a factor[35] in the development of the disorder. Factors that favor resilience include:

- Seeking out support from other people, such as friends and family
- Finding a support group after a traumatic experience
- Learning to feel good about one's own actions in the face of danger

32 Van Zuiden, M, Kavelaars, M. A, , E Geuze E., Olf , M, CJ Heijnen, CJ. Predicting PTSD: pre-existing vulnerabilities in glucocorticoid-signaling and implications for preventive interventions, in Brain, Behavior, and Immunity 30 (2013)

33 Donadon, M.F. , Martin-Santos, R. , de Lima Osório F. ; The Associations Between Oxytocin and Trauma in Humans: A Systematic Review in Front Pharmacol. (2018). PMC5838009, PMID: 29545749

34 Koch, S. B. J. Boosting oxytocin after trauma: Effects of oxytocin on fear neurocircuitry in patients with post-traumatic stress disorder. (2016)

35 Daniels JK, Hegadoren, KM, et al.: Neural correlates and predictive power of trait resilience in an acute traumatized sample; a pilot investigation, J Clin. Psychiatry. (2012).

- Having a positive coping strategy, or a way of getting through the bad event and learning from it
- Being able to act and respond effectively despite feeling fear

There are also cultural differences that affect resilience. Studying the way some cultures actually inflict what could be seen as traumatic impact like in initiation rituals do not lead to PTSD, but affect the initiates in a positive way. Anthropological research into the way indigenous and older cultures dealt with stress, war and trauma may shed new light on the root mechanisms at play.

In a really traumatic situation, with the formation of a substitute identity, the memory of the trauma is usually so suppressed, that normal recollection doesn't work. In other words, the dissociation, the checking out of self-continuity is not remembered and things like hypnosis, regression therapy etc. are needed to bring them to the surface and these are not part of the normal diagnostic process.

It could even be suggested, that those who do remember the experience, have not dissociated and are thus a less serious (not complex) case of PTSD. But as the system, the therapist protocol, the VA etc. require some dissociation symptoms, they will be produced, the mind is very compliant.

A person who is relaxed and centered in their cognitive mind at the time of the incident will probably not suffer emotional trauma. Someone in the same incident who is already in a state of heightened emotion - anger or anxiety - will react to the incident in a different way. People who have already suffered trauma in their childhood or later in life will more likely be suffering from generalized anxiety. In their case the limbic system, where flight/fight responses reside) is already energized and primed and the prefrontal cortex is depressed by the emotional state so they are less able to process and respond appropriately to the incident and instead react emotionally, utilizing automatic emotionally driven behavior patterns stored in the hippocampus. The result is heightened emotional response to the event and more severe dissociation, resulting in emotionally unresolved memory traces which will normally require processing later in REM sleep.

The relation between sleep and PTSD is complex. Individuals with insomnia prior to trauma exposure are more likely to develop PTSD following the exposure, indicating that disturbed sleep increases vulnerability to PTSD (Gehrman et al., 2013)[36].

36 Gehrman, Philip; Behavioral Sleep Medicine Program, Univ. of Pennsylvania (2013)

Insomnia occurring and fragmented REM sleep in the acute aftermath of a traumatic experience is also a significant risk factor for the later development of PTSD[37].

Suicide: a different take

Here a somewhat daring proposition concerning suicide is posed. In a somewhat esoteric perspective one could see all deaths as suicide, as obviously the soul has to agree with the death. This is usually understandable in the case of terminal illnesses, where a person eventually gives up the struggle, but accidents are harder to explain as related to a death wish. (A common argument is the question why so many people would choose to die in a plane-accident at the same time)

But following this line of thinking, we have then to assume there are more or less conscious suicides and unconscious suicides. Conscious suicide is usually obvious, although maybe 70% of the attempts are more like a cry for attention, more so with women where suicide is less common than with men. Suicide rates differ considerably per country, between 1.0 and 30 suicides per 100k and in general only a small percentage of the people die by conscious suicide, although the numbers go up because of physician-assisted suicide (euthanasia) in more and more countries.

Unconscious suicide would mean something in the unconscious mind/body has a death wish, and this will manifest in diseases or accidents not normally seen as suicide. The idea is that PTSD is a factor in both conscious and unconscious suicide, accelerating the process. The internal conflicts between multiple identities, typical for complex PTSD cases, would cause degradation of vitality and acceleration of the death tendency. This would not only explain the higher incidence of conscious suicide, but also the shorter life-expectance. If more data becomes available concerning people with only one or more masks (substitute identities) and a difference in suicide rates could be established, this could be substantiated. Maybe the increased suicide tendency among millennials is another indication of their susceptibility to PTSD or similar problems, maybe related to birth trauma issues and C-section, as argued before.

37 Mellman, Bustamante, Finchs, Pigeon, Nolan: REM sleep and the early development of posttraumatic stress disorder. Am. Journal Psychiatry (2002).

Post Traumatic Stress Disorder as an identity issue

Identity problems are at the root of many medical and especially psychosomatic problems, so let's look at one of the most prominent complaints these days. PTSD is seen by many[38] in the field as an identity disorder, as a condition somewhere between normal dealing with adverse situations and the more extreme identity disorders and multi-personality syndrome.
This is, however, not the way the DSM-V of the American Psychiatric Association or the somewhat less strict International Classification of Diseases ICD-11 counterpart (ICD-11-CM F43.10) (a draft update from ICD-10 including a complex PTSD classification) describe PTSD as a trauma- and stressor-related disorder, not as an identity disorder. DSM-5, from the earlier DSM-IV, expanded the context of PTSD from a fear-based anxiety disorder to a disorder that also includes anhedonic/dysphoric and externalizing phenotypes, emotions like shame, anger and guild. This meant removing PTSD from the anxiety disorders, but not yet classifying it as dissociative, except for a specific subcategory. The number of clusters of PTSD symptoms required to qualify for a diagnosis was increased from 3 to 4, with avoidance and numbing symptoms split into separate clusters and expanded to represent avoidance and persistent negative alterations in cognition and mood. The expanded symptoms include persistent negative evaluation of self or others, elevated self-blame, a negative emotional state, and reckless or self-destructive behavior.

Post traumatic means it is a condition that is caused by a situation or event or series of events that is experienced by the person as traumatizing. Note that here the stress is seen as a symptom, not as the root cause, which is the traumatic experience. Stress in life or leading up to the actual event or events can be a factor, but in PTSD it refers to what happens afterwards, as part of the way the incident is dealt with. It involves all kind of problems, sleeplessness, depression, flashbacks, addiction, hyperarousal (overexcited) or hypoarousal (slowing down), but the general term for the whole complex is stress.

What biomedical mechanism exactly causes PTSD is not totally clear. One of the more recent theories by Abelson and Liberzon[39] contends that people

38 Nijenhuis, Ellert, R.S.,Van der Hart, Onno.: Dissociation in Trauma: A New Definition and Comparison with Previous Formulations, in Journal of Trauma & Dissociation, Volume 12, issue 4, (2011)

39 Liberzon, Israel and Abelson, James : Context Processing and the Neurobiology of Post-Traumatic Stress Disorder, Neuron (2016)

with PTSD appear to suffer from **disrupted context processing**. A core brain function is for people (and animals) to recognize a particular stimulus as requiring different responses depending on the context in which it is encountered. It's what allows us to call upon the "right" emotional or physical response to the current encounter. Context processing involves a brain region called the hippocampus, and its connections to two other regions called the prefrontal cortex and the amygdala and these are disrupted in PTSD patients. By showing how a disruption in this circuit can interfere with context processing, this theory aims to explain most of the symptoms and much of the biology of PTSD.

This disrupted context approach combines a couple of models/hypotheses. The first, abnormal fear learning, is rooted in the amygdala - the brain's 'fight or flight' center that focuses on response to threats or safe environments. The second, exaggerated threat detection, is rooted in the brain regions that figure out what signals from the environment are "salient", or important to take note of and react to, with vigilance and disproportionate responses to perceived threats. The third, involving executive function and regulation of emotions, is rooted in the prefrontal cortex, and serves keeping emotions in check and planning or switching between tasks.

Liberzon argues all these models work together when seen as falsely or inadequately dealing with a context. He points out that context is not only information about one's surroundings - it's pulling out the correct emotion and memories for the context one is in.

This context approach is not very far removed from the idea, that identity discontinuity problems (and dissociation is also the way we respond to stimuli in a context) and thus disrupted responses to situations are at the root of PTSD.

Sometimes people do have very serious symptoms following a traumatic experience that go away after a few weeks. This is then called **acute stress disorder**, or ASD. The normal, not pathological, process of dealing with trauma and the resulting stress is fairly natural, indeed something we have inherited from our animal ancestry. Animals have to with traumatic experiences a lot and developed strategies to cope with the, but sometimes a kind of PTSD situation results and we see multiple identities in animals.

Are humans better in coping with traumatizing experiences? Maybe, but there is little research into animal trauma and trauma-immunity.

Humans of course can anticipate trauma situations, plan ahead and seek help in pathological situations (the whole PTSD industry). Unexpected

incidents do happen and cause damage, but like animals we learn to cope. Because of the specific human capability to understand and contemplate the situation, calculate and parse time ahead (Michio Kaku[40]) we know and hope that the initial effects wear off and we can leave it behind, the healthy answer in coping..

Healthy dealing with trauma is similar to the grieving process, with stages like:

- Denial: being shocked or numb, is natural dealing with overwhelming emotion with a defense mechanism by escaping or shutting out feelings.
- Anger: the pain of the loss or trauma may induce feelings of frustration and helplessness, which may later turn into anger, directed toward other people, even victims, a higher power, or life in general.
- Bargaining: in this stage one dwells on what one could've done to prevent it. "If only…" and "What if…"
- Depression: some sadness sets in upon understanding the effects, both physically or emotionally and this may be felt as overwhelmed, regretful, and lonely.
- Acceptance: the reality is what it is, it is in the past and can't be changed and moving forward with life is the only option, only the perception of it can be adapted.

To understand and support these stages after a traumatic experience can prevent later pathological deterioration. It is also important to integrating the emotional and the bodily, we have memories stored in our organs and limbs and using techniques of embodied cognition like EMDR (Eye Movement Desensitization and Reprocessing) can help to reprogram these memories and the belief system that underlies a specific identity. There are many ways to do this, Bruce Lipton[41] lists some 20.

Therapy options should be considered also in the context of a belief system; belief and faith is an important part of one's identity. Indigenous cultures will often have some kind of ritual, like ritual cleansing or purging and dancing or even a party after dramatic events, this helps to re-sensitize and integrate. The body and the mind both store memories and the dissociation between the two cannot be ignored and needs repair, also a kind of penance to let go of the feelings of guilt is quite common. In the Bible, ritual cleansing is also prescribed for Hebrew soldiers after a battle.

40 Kaku, Michio, the Future of the Mind (2014)

41 www.brucelipton.com/other-resources#belief-change

Understanding natural healing of traumatic impact and dealing with the wider social psychological effects, also on the people around, has not been a standard part of the medical inventory, especially in the de-spiritualized West. It is, however, becoming more normal to weigh in the emotional and intangible damage these days, the impact on family and society. Trauma support techniques and services, also for the caretakers and buddies have been developed and are available.

Subtype classification

DSM-V has defined subtypes, like the dissociative subtype, where depersonalization and derealization comes into play. This subtype comes closer to what here is indicated as substitute identity formation and may manifest as de-personalization and de-realization.

DSM-V is not universally accepted as the final verdict. In the literature there are many attempts to redefine PTSD or identify subtypes that are more relevant than the general DSM-V or ICD groupings.

PTSD subtypes are mentioned as based on the type of the incident like:

- Victim-related trauma with the patient is in a passive role.
- Natural disasters, such as a tornado, earthquake, or hurricane.
- Survivor guilt. The patient is not a perpetrator, symptoms are related to surviving while others close to the patient did not.
- Perpetrator guilt, often not initially disclosed.
- Single event, multiple events/single episode, multiple events.

The state of mind during the potentially traumatizing event, but also during the recovery period is very important, and this has to do with the identity and the psychological structures of a person. The crux of the diagnostic difficulty resides in the individuality; we all have a different pre-disposition to events that shocks us physically, mentally, or morally. The label is too broad and individual differences are not really identified as relating to the various symptoms, development and healing processes and options. It remains a matter of trial and error, which can be fairly costly and even limit the recovery options.

Another subtype approach is that one has recognized three personality-based subtypes of PTSD: externalizing (acting out), internalizing (depressive) and even a mild form of the disorder (‘low-pathology PTSD’). This is a step towards including personality typology and other psychometric approaches in the study of PTSD.

Moral injury and trauma, meaning

The trauma causing PTSD can be **physical/material, mental. emotional or moral** and mixed, both active (perpetrator/victim) and passive (spectator). Moral injury is not specified explicitly in most studies, but is a major factor in one's identity. We are what we are, because of how we make moral choices, and this is quintessential in the way others see us. Research into how people tend to associate moral traits with identity over other mental or physical traits (Strohminger and Nichols, 2015)[42] shows that even in cases of severely damaged capabilities like in dementia and neuro-degenerative diseases it is the moral identity that is mostly valued.

Dealing with a traumatizing event can, especially in the case of an identity discontinuity, substitute identity formation, result in a new balance between social and individual values, a new morality. Especially in cases where the trauma is based on active participation and intention, like killing someone, torture of others, abuse, but also directing drones and such, this plays a role. Guilt and shame are two aspects of what we could call the "moral injury cluster" of PTSD. The real, or imagined guilt and shame are factors that may be suppressed initially, but need attention. Specific approaches like storytelling, artistic expression and mirroring emotions in a 'safe' environment and setting may be of value here.

The moral redirection as the result of an experience can take unexpected paths, like an identification with the enemy, captor, abuser (Stockholm hostage syndrome, capture bonding). If this diverges too much from the old morality this can become part of the inner struggle. Morality is a complex issue, good and bad are not always opposites, especially in traumatic circumstances. Even the concept of death is fluid, as the suicide bombing trend illustrates.

Morality is about the position a person (and the culture forming that position) takes concerning justice, truth, integrity, but also concerning meaning and values. Ethical behavior is how that works out in practice. It is the result of judgments between right and wrong, but these are based on the individual's moral identity image, how the individual thinks of him/herself as an ethical person.

Belief systems, like the position versus death and the afterlife, play an important role. Social and individual goals, security and freedom are not on a

42 Srohminger,N, Nichols. S.:Moral capacities form the core of how we perceive individual identity in Neurodegeneration and Identity. Psychological Science (2015)

single axis, but are independent dimensions, but with a common direction, i.e. aiming for happiness or meaning.

Signs and Symptoms

There is research that indicates that neurotransmitter levels are affected and that there are even deep DNA-effects and genetic predispositions. Many PTSD patients develop other disorders and complaints like depression, substance abuse, anxiety disorders and it also has an effect on the whole body or organs like the heart (comorbidity effects) and life-expectancy is shortened. The course of the illness varies, but there are no clear models for how PTSD develops over time, it has been compared with grieving. Sometimes the problems only last a limited time, but there are chronic cases.

A different perspective and classification

In the context of the Substitute Identity Model (SIM), where some, not all traumatic experiences lead to substitute identities, we can divide PTSD in two major groups:

- The more or less simple PTSD: no substitute identities formed, but with many of the usual stress symptoms.
- The more complex PTSD, which is the result of the emergence of substitute identities, with usually also stress and dissociation symptoms, but with distinct substitute-identities (but not so extreme as in DID) that are activated by specific circumstances and triggers.

In the second group in this sense the actual traumatizing incident is deeper hidden in the subconscious. It only surfaces and can be recalled and relived when the person is in the relevant emerged substitute identity or when deeper probing with the help of hypnosis or other techniques reaches into the unconscious levels.

The identification of substitute identities, as the result of the specific traumatic experience or already present before that, is not an easy job and requires trained professionals, but maybe modern technology like big-data analyzing of sensor data over a longer time may help here. Brain scan approaches offer a potential way to help in this process, but also techniques like infra-red temperature scans of the facial expressions or advanced voice analysis could be used, not unlike and thus with the same practical limitations as lie-detectors, galvanic skin response measurement etc..

Dissociation in the moment of trauma (peritraumatic dissociation) obviously is a fundamental part of the process, but there are dissociation symptoms in the trauma processing later too. In the aftermath of a traumatizing experience people also experience dissociation symptoms. They escape from the memories, the depression and the stress by check-

ing out (unwillingly or willingly like by taking drugs), and here the whole range of dissociation symptoms can surface, from just daydreaming via out-of-body experiences to identity shifts and segregated memories, sometimes seriously affecting behavior like in DID.

Psychometrics, typologies and PTSD

Even as we all experience dramatic events, only a small percentage (5-10%) of the population develops PTSD. The incidence of PTSD depends on genetic factors and early childhood experiences, but the question is can we predict it? What is clear is that there are specific traits, like moodiness, anxiety, envy and anger, that predispose for PTSD. Can we use character tests, trait analysis, personality factors, psychological tests in general or maybe even brain scans to help in assessing vulnerability (or trauma-immunity)?

It is widely noticed that certain psychological disorders and somatic diseases are more common in specific psychological and body types. One could say certain types have a predisposition to develop certain disorders, mental or somatic. Looking at specific traits or types that have a higher risk in contracting PTSD[43] indicates there are indeed ways to predict susceptibility to the disorder.

It turns out, based on meta-studies, that in the Big-Five system PTSD is positively related to negative emotionality, neuroticism, harm avoidance, novelty-seeking and self-transcendence, as well as to trait hostility/anger and trait anxiety. On the other hand, PTSD symptoms are NOT associated with extraversion, conscientiousness, self-directedness, the combination of high positive and low negative emotionality, as well as with hardiness and optimism, while posttraumatic growth (the positive outcome of a trauma or awakening experience) shows inverse relation to most of these traits.

In the MBTI typology it was found[44] that IT types were more likely to suffer from Post-Traumatic Stress Disorder (PTSD) and that 64% of the tested Vietnam veterans with PTSD had either an ISTP, ISTJ or INTP profile. Gerald D. Otis[45] also found that the MBTI types ISTP, INTP, ISTJ (roughly

43 Jakšiæl, Nenad, Lovorka Brajkoviæ1, Ena Iveziæ, Radmila Topiæ1 & Miro Jakovljeviæ, The Role of The Role of Personality Traits in Posttrauma tic Stress Disorder (PTSD) (2012)

44 Coolidge. L. Hook, An Empirical Investigation of Jung's Psychological Types and Personality Disorder Features, (2001)

45 Otis, Gerald; Application of Psychological Type in PosttraumaticStress Disorder Treatment, Journal of Psychological Type, Volume 64 (2005)

relates to enneagram 5,6 and 2) are more common (70% of total) among PTSD victims.
Take the enneagram typology, which assumes one's type is where one directs the energy (chi). Enneagram pioneer Claudio Naranjo has, in one of his early books, associated the DSM III personality disorders with the nine Enneagram types. Manuele Baciarelli[46]is one of the researchers who has codified and developed such psychological and somatic resonances in I'Enneagramma Biologico, a comparative study of personality and illnesses, using the enneagram.

Typologies like MBTI, Big Five or Enneagram could thus help establishing the susceptibility and trauma-immunity profile and suggest which therapies are the most effective given the personality type of the identity that is related to the PTSD trauma. This focus on a specific identity could be helpful as long as is understood that some people have substitute identities (personalities) and one can identify the trauma that has created that one.
The primary identity, the more or less normal identity, is the most relevant, but also the original (core identity) type plays a role, but once additional identities are recognized and an identity matrix pictured the most relevant identity of the set can lead to a diagnosis and specific treatment could be suggested. An example of such a treatment could be the standard approach like EMDR and,or cognitive therapy, but also visualization (hypnosis, psychedelics, VR) with a specific theme for each personality type complex.

Group mind and social identity effects

An important angle when looking at PTSD and trauma is the influence of the environment, the social and cultural context at the time of the trauma incident and later, during initial processing and in therapy. It must be noted, that in many indigenous initiation rituals the participants are exposed to potentially very traumatic experiences, but don't seem to come out of the ordeal with long term damage like PTSD. There the purpose, set and setting are obviously creating a situation with (mostly) beneficial effects, of course within the cultural setting.
Being part of a group, during the incident or later, can be a deciding factor in how it is processed and group interaction in the post-trauma therapy model can be seen as a mandatory part of any therapy model, but is not recognized as such by the medical establishment.

46 Baciarelli, Manuele; The Biological Enneagramma (2014)

Understanding how group cohesion, moral umfeld (is the war justified in the eyes of the warrior?), posttraumatic support, homecoming rituals and integration back into 'normality' affect the incidence and severity of PTSD. It is a field that needs more research. Studying the procedures, process and group mind mechanism of older cultures may shed light on this.

Pre-trauma personality defects

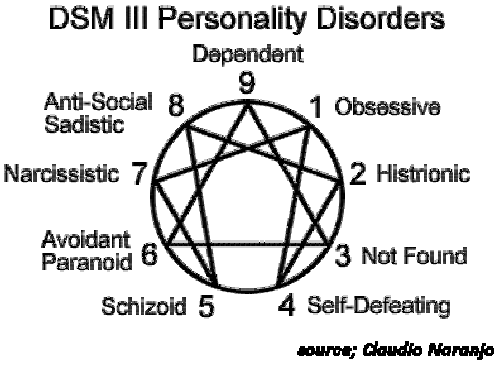
Some people experience a dramatic event as just a nuisance, some get ill, and some even turn it into a positive influence like in posttraumatic growth (PTG) and awakening experiences. This has to do with predisposition due to genetic influences, upbringing, social environment and culture, earlier trauma traces, pre-trauma situation, peri-trauma conditions and the aftermath and support and why not, divine grace.

The differences in trauma reactions (including pre- and post-trauma) are based on culture, worldview and preparation, but according to many researchers mostly to the personality (traits). There are a number of models, that link specific traits to trauma impact and have been confirmed statistically, but as these also influenced the DSM-V conditions (and the changes it underwent) for PTSD there is a bit of self-confirmation bias in the whole approach. The models confirm by lengthy questionnaire analysis that specific traits, often in cumbersome wording, resonate with PTSD incidence, vulnerability, severity and resilience. This makes clear that those traits are a factor, and even that such traits may be the result of earlier trauma and childhood conditions, have genetic roots or are epigenetically passed on to the next generation, but there is no underlying model explaining why this is so. This is the same approach used in many typologies like the Big Five (FFM, see appendix) and certainly has predictive value, but has not yielded a clear model of the relationship between PTSD and identity, as the substitute identity model (SIM) attempts. Also these models are mostly limited to psychological markers and psychopathology, the relation with physical traits and somatoform PTSD symptoms (like motor anomalies or tics) are rarely mentioned.

The pre-trauma personality approach seems valuable, but lacks a good understanding of how trauma, dissociation and change in general fits into our human condition. The paradoxes of life, for instance that 'wise' people often have a history of trauma and adversity, are mentioned, but not explained. It is good that we know that certain emotional characteristics, but also trauma history, post-trauma support, intelligence, living situation, life style, belief systems, expectations and attributions affect how PTSD affects a person, but what we really need to know how this can be used to prevent the negative impact and help people heal or at least cope with the symp-

toms. It is argued here that the root identity formation processes as the root of personality are what we need to study and understand better. There lie the causes of what plays out in the personality, in the lifestyle and epigenetically in how things develop, in the mind and the body, even at the cell level.

DID (dissociated identity disorder)



This then is the challenge. How can we diagnose and gauge such a problematic identity matrix. We can maybe learn from what we know about DID (Dissociative Identity Disorder. It is, many claim, on the same axis as PTSD, even as it's a different category in de DSM-V. This disorder (previously known as **multiple personality disorder**) is a complex psychological condition, whereby a patient exhibits at least two identity states with such different behavior and separate consciousness, that one talks about 'alters', different people (experienced as assumed selves) occupying the same body. There seem to be multiple, operationally separate centers of consciousness, each with its own private inner life. There is consistent and uncompromising sense of separateness experienced by the alter personalities, often they have separate memories, sometimes the alters know about the others. It is likely caused by many factors, including severe trauma during early childhood (usually extreme, repetitive physical, sexual, or emotional abuse).

However, DID -even as it is in the DSM-V-, is one of the most controversial psychiatric disorders, with no clear consensus on diagnostic criteria or treatment. It is now placed, influenced by David Siegel, in the category Dissociative Disorders with Dissociative amnesia and Depersonalization/derealization disorder, but these could also be seen as symptoms of DID. The various phenomena like amnesia, memory impairment, depersonalization, derealization, identity confusion, identity shifts are indications of DID, but could be ascribed to PTSD too.

There has been even serious doubt about the DID condition itself. The influence of prototypical cases like Louis Vivet's, the controversy around the nature of dissociation and multiple personality, the hysteria label by

people like Charcot, the validity of Putnam's Dissociative Experience Scale[47], there is much debate. Some see it as an iatrogenic condition, the result of therapy. The controversy surrounding the book Sybil[48] is a case in point here, how much does the approach of the therapist helps or causes alters to emerge? The book and case are charged as having caused a template for the later upsurge in the diagnoses of dissociative identity disorders and 'repressed memory'. Approaches like hypnosis and certain medications (amobarbital) have been cited as being part of this iatrogenic infusion of personalities.

Not ignoring the 'fashion' aspect of DID we could see (and assume in the following) DID as a real disorder, being an extreme form of substitute identity formation, where the integration between identities and the continuity of the 'self' is lacking. In a 2014 neuroimaging study[49], functional brain scans on both DID patients and actors simulating DID displayed clear differences, showing that dissociation has an identifiable neural activity fingerprint.

Along with the dissociation and multiple or split personalities, people with dissociative disorders may experience a number of other psychiatric problems, including symptoms like addiction, depression, mood swings, suicidal tendencies, sleep disorders (insomnia, night terrors, and sleep walking), all not unlike what we see in PTSD[50]. This is actually what researchers like Ellert Nijenhuis[51] have concluded, PTSD and DID are both dissociative disorders.
Because DID is assumed also to be the result of trauma, it's highly comorbid with posttraumatic stress disorder (PTSD) and complex

47 Hacking, Ian; Rewriting the Soul (1995)

48 Sybil is an influential 1973 book by Flora Rheta Schreiber about the treatment of Sybil Dorsett (Shirley Ardell Mason) for dissociative identity disorder by h er psychoanalyst, Cornelia B. Wilbur. Mason later admitted to her psychiatrist that she'd made the whole thing up, but even that is controversial, the case remains disputed.

49 Yolanda Schlumpf , Antje A. Reinders, Ellert R. S. Nijenhuis, Luechinger, van Osch,\Jäncke ; Dissociative Part-Dependent Resting-State Activity in Dissociative Identity Disorder: A Controlled fMRI Perfusion Study (2014)

50 Dell, P. F. A new model of dissociative identity disorder. Psychiatric Clinics of\ North America, (2006),

51 Nijenhuis, Ellert R.S; Ten reasons for conceptualizing and classifying posttraumatic stress disorder as dissociative disorderI Psichiatra e Psicoterapia, (2014)

posttraumatic stress disorder (C-PTSD), and flashbacks, emotional numbing, nightmares, emotional deregulation, and pessimism about the future are common. Individuals with DID often have other comorbid disorders as well, including mood disorders (such as major depressive disorder), anxiety disorders (such as social anxiety disorder), panic disorder, personality disorders (such as borderline personality disorder (BPD)), eating disorders (such as anorexia nervosa), or conversion disorder.

"As an undergraduate student in psychology, I was taught that multiple personalities were a very rare and bizarre disorder. That is all that I was taught on ... It soon became apparent that what I had been taught was simply not true. Not only was I meeting people with multiplicity; these individuals entering my life were normal human beings with much to offer. They were simply people who had endured more than their share of pain in this life and were struggling to make sense of it." Deborah Bray Haddock[52]

Effects of Identity Alterations

Splitting is the act of creating a new 'alter', a new identity. Splitting refers to the creation of a new alter and so involves the accommodation of a completely new identity and sense of self. Alters may present individually or in groups, may or may not identify themselves, and may work alongside host parts or cause complete inter-identity amnesia for the duration of their presence. Alters can have the ability to take executive control. Identity alteration refers here to alter interactions on a basic level. Identity alteration describes how alters manifest and interact with the outside world. Two of the main manifestations of identity alteration are switching and passive influence. Switching completely changes the presenting identity while passive influence allows alters to influence presentation from the background. Switching can lead to time loss and black outs, though coconsciousness can prevent these effects while introducing a new dimension of identity alteration by allowing multiple alters to be present and to present their own unique self views at once.

Comprehensive DID therapy is associated with reduced self harm, fewer hospitalizations, fewer medications being needed, reduced symptoms of dissociation and posttraumatic stress disorder (PTSD), higher functioning, increased engagement in productive and social activities, less overall distress, and an increased sense of well being. It is usually based on providing safety, stabilization, and symptom reduction then trauma processing then integration and coping. There are several common approaches to

52 Bray Haddock, Deborah; The Dissociative Identity Disorder Sourcebook (2001)

therapy for dissociative trauma survivors and they are basically the same as for complex PTSD (which can be seen as a dissociation disorder too). The most common trauma focused therapies are eye movement desensitization and reprocessing (EMDR), prolonged exposure (PE) therapy, and cognitive behavior therapy (CBT).

Could this dissociation and trauma in DID have anything to do with lapses, switches, dips in our identity, in PTSD, panic disorder, and in radical behavior? Is maybe looking at the identity matrix of a person a better way to understand, and maybe even predict such incidents?

The substitute identities referred to here are a way to survive the threat and situation, usually suppresses one's normal reactions and emotional patterns. Such a substitute identity may then retreat to the background, but can be evoked by certain stimuli (triggers related to the original trauma) at which point a person reverts to trauma reaction patterns, which can be extreme and radical, aimed at oneself or others. This is what we see in acts of terrorism, especially those perpetrated by solitary individuals or "lone wolfs, it seems they make an identity switch and become violent.

As mentioned before, such a change-over to a substitute identity may be the root mechanism of many violent reactions in other fields as well — in crime, family violence, and in panic reactions. Understanding this mechanism and how it may be triggered is fundamental to risk assessment, prevention, and treatment.

In the DSM-V the trauma and stressor related (conversion) disorders (including PTSD) are separated from identity disorders like DID (dissociated identity disorder), while in view of the development model about identity it makes sense to see them both as identity related. This view is also supported by trauma researcher Ellert Nijenhuis[53] who proposes a single category of trauma-related disorders. The perspective, however, that positive experiences, an epiphany, spiritual realization or awakening can also lead to identity developments, discontinuities, or substitute identities, but with positive results (post traumatic growth), is usually ignored in the thinking about trauma. Nijenhuis[54] does mention positive dissociative symptoms. The trance of a shaman, which may have to do with traumatic or dissociative experiences in his training, is clearly entering a dissociative state, but is this negative or pathological? The realization at some stage, as

53 Nijenhuis, E.R.S. The Trinity of Trauma: Ignorance, Fragility, and Control 2016

54 Van der Hart, O., Nijenhuis, E.R.S. e.a.Trauma-related dissociation: conceptual clarity lost and found, in Australian and New Zealand Journal of Psychiatry (2004)

the result of therapy, medication or as a spontaneous insight, that whatever happened was a necessary lesson and thus a positive step in one's development, gives a new and even positive perspective.

Similarity between PTSD and auto-immune diseases

Another group of diseases with a similar lack of understanding (in a holistic perspective) of the root mechanisms like for PTSD are the auto-immune diseases, it remains one of the persistent medical mysteries. There are clear resonances between PTSD and auto-immune diseases. The highest incidences of these are in Western societies. Seemingly our culture, food regimes, stress-causing competition, individuality, lack of family ties etc., are not really helping to prevent what some call welfare diseases. The hypothesis offered here is that many of the health problems in the West are related to the development of substitute identities, which results from traumatic experiences caused by the way we educate our children, our lifestyle and the stress of a competitive economy. Substitute identities may or may not be triggered (by conditions related to the original trauma) and play out later in life. If they do, they may come with mental and physical problems as they may provoke identity conflicts, manifesting as diseases such as PTSD and auto-immune diseases. Diagnosis and treatment of these should, in this perspective, therefore include looking at the roots of the substitute identities, the traumatizing experiences in the past.

An autoimmune disease is a condition arising from an abnormal immune response to a normal body part, like an organ, but also to skin and blood. Many of the chronic health problems encountered today are labeled autoimmune, and in the absence of a consistent curative therapy, the medical world really doesn't know how to deal with them. We can treat the symptoms, suppress the worst with medicine like nonsteroidal anti-inflammatory drugs (NSAIDs) or steroids like Prednison (often with nasty side-effects), but the root causes are not very clear. Some statistics indicate about 7-15% of all people in Western society suffer from these diseases, while worldwide the numbers are estimated as 2-5%. This resonates with the differences in incidence of PTSD, and indicates that our modern life-style, which is clearly not very healthy, may have to do with the rise in autoimmune victims.

The general medical notion is that an auto-immune disease develops when your immune system, which defends your body against disease, decides your healthy cells are foreign. As a result, the immune system attacks healthy cells. Auto-immune diseases usually fluctuate between peri-

ods of remission (few or no symptoms) and flare-ups (worsening symptoms).

The on-off character of these kind of diseases resonates with the idea in this monograph, that diseases are usually limited to one of a number of substitute identity states, and as we shift between identities the presence of the disease changes. Seeing autoimmune diseases as resulting from identity conflict could help in diagnosis and treatment.

A few remarks, which could be seen as hypothetical:

People with substitute identities are more at risk of contracting an auto-immune disease. This doesn't mean there is no genetic (family) influence, but just as with some kinds of cancer, it is the expression of such genetic inclination that matters.
The emotional state of someone suffering from an auto-immune disease plays a role in when the disease appears, and this, we assume, is because one is emotionally triggered into a specific (substitute) identity state.
Autoimmune diseases are not only somatic, but are depending on the state of mind or better termed, the identity state.

One of the ways of fighting auto-immune diseases then is to adopt a life-style or routine that keeps one away from the conditions triggering the specific substitute identity. Such triggers are usually related to the traumatic experience that caused the substitute identity to emerge. Here we see the similarity with PTSD, also a disease that is related to a specific identity.

There are different views about why and how auto-immune diseases happen, beyond the notion that the immune system attacks healthy cells by way of disease-causing (self-reacting) antibody or disease-causing T lymphocyte white blood cells.

One suggestion (originally from the German immunologist Paul Ehrlich) is that the body is never fighting itself. This opinion is dated, but this would, in the light of the SIM model, mean that even as there is a conflict between the identities, there is no inner fight, but one opens up to some external disturbance, like a virus, bacteria, or a cancer factor. This means the epigenetic profile of some cell is opened to external influence. Modern insights however made clear that the processes around the T-cells etc. do indicate the system does fight itself.

There are no clear treatment options for ailments resulting from identity conflicts, including auto-immune diseases, beyond the symptomatic. Some therapies, like EMDR, seem to have good results, but using them in

auto-immune diseases is not a common practice. Looking at the similarities between the two groups, and honoring the hypothesis that they are both the result of identity conflicts resulting from prior trauma it may contribute to the development of alternative treatment option.

It seems that the best approach, within the model explained here, would be to try to discern what original trauma or experience lies at the root of the substitute identity causing the problem. This is much more a psychological or even a psychiatric challenge than a somatic problem, and the emotional state of a patient is more important than the normal medical indicators. Approaches like hypnosis, regression therapy or psychedelic therapy may offer insights in what has caused these diseases, but so far no clear treatment approach has surfaced with conclusive evidence of effectiveness. The problem is that the original traumatizing experience is suppressed and not easily remembered (this is different from for normal trauma processing, where the original incident usually is remembered). Memories about the incident causing the substitute identity in the first place are not only repressed, but can be distorted or rationalized, making it very challenging to reach the core of the problem. Of course, from the triggers and situations that do cause the identity conflicts later to emerge and play out (with the health or emotional problems), clues about the root incident can be deducted, but this requires experienced professionals. More research into what defines a substitute identity could help, perhaps using modern sensors and big data analysis of what we can discern about the identity and thus mental state of a person. The advancements in biotechnology/synthetic biology are enormous, smart bands and other devices can be used to obtain data about a person's body state that give an indication of the mental state. Here not only heart beat, breath patterns and such standard measurements are interesting, but the separate identities show up in things like the voice (and thus in audiograms), the acidity and many more measurable biomarkers. If we assume that every identity has a specific set of such biomarkers an algorithm could be developed to isolate these markers and help define the identity structure of a person. Linking substitute identity formation to auto-immune diseases, indicating that earlier trauma might be the root cause of such illnesses is, for now, somewhat speculative, but offers a new perspective for research and a more holistic approach for something the medical world so far can mostly deal with symptomatically.

7 New treatment perspectives: PTSD

Diagnosing PTSD is one thing, but what can be done to assist people suffering from this disorder? It makes sense to first look at the basic premises and what is missing in the more general and accepted therapies[1].
One of those things is that it's seen as a mental condition. PTSD is a multisystem condition, not just mental, but also somatic and should be studied and treated in that perspective, more holistic, not separating the mind and the body into different spheres. The body can be a much better guide to identify and diagnose problems than probing and dealing with just the mind, and addressing conscious and unconscious (often doctored, fabricated or induced by therapists) memories of the trauma event.

General approach in PTSD therapy

There are several clinical practice guidelines offering recommendations for the treatment of PTSD, for example the VA/DoD PTSD Clinical Practice Guideline (2010). The guidelines unanimously recommend Cognitive Behavioral Therapies (CBT), which may include Prolonged Exposure (PE) and Cognitive Processing Therapy (CPT), as an approved treatment for PTSD, and the majority of guidelines recommend Eye Movement Desensitization and Reprocessing (EMDR) as well. These are considered evidence-based treatments (EBTs). This is usually, but not formally, accompanied by additional approaches like rescripting, relaxation, and providing adequate information about what PTSD is and does.

The authorities that mostly deal with PTSD, like the Veterans Administration (VA) and the NIMH in the USA, do a good job in disseminating information, setting up treatment programs, stimulating research, but also complain about the (lack of) adoption of the treatment options they promote into routine practice. Dissemination of EBTs or practice guidelines through traditional educational activities (e.g., formal continuing education programs) has, the VA regrets, limited impact on day-to-day clinical practice, this is what comes out in many of their communications.

The „evidence based model"(EBM) approach of modern medicine works, but is sometimes based on 'limited' statistics and traditional perspectives, and is not very suitable for multimorbity (complex combinations); for instance the combination with the NNT (number needed to treat) criteria has

1 A selection of more current and accepted approaches is in an appendix

Prayer, the denied therapy and confession

One of the things missing in most texts about PTSD is how prayer is one of the oldest and most used therapy forms. It's close to the hearth, and many traditions honor it, and if we see meditation as a kind of preyer, it's almost universal. The omission of prayer has to do with the secularization of health care and society in general, but prayer has been and will be a very powerful tool.

It doesn't matter whether it works or not, it's one of the major ways people have dealt with adversity for as long as we know. It's kind of denied in the „rational" therapy world. The VA in the USA has even taken a position against group therapy for veterans, as these usually would go to 12 (AA-type) step programs, where praying is part of the structure.

Prayer, alone and quiet, or with singing, dancing, with a group and in a ritual setting is part of most if not all older cultures and society. It's a formal part of Christianity, Islam and Hinduism, and comes in an abundance of forms. One can call it superstition, but it has survived fro so long, it must have value. Neglecting it in the literature and therapy practice is an omission, and more research should be dedicated to the effects of prayer, especially in PTSD.

Greater knowledge of self, others and the World is what religions also aim at, and the tools they developed, sometimes called sacraments, are basically transformative and vital tools that help to reach the deeper expressions of human potential.

Confession

Confession is the sacrament of reconciliation and penance in the Catholic church, in which "sinners" gain forgiveness and reconciliation with God and the Church and are given penance, usually prayer, to make good on their "sins". It happens in a safe and secure setting. The therapeutic value of confession, which exist in different forms in many religions and cultures, also has been ignored and deserves serious research.

The essential features of Catholic Confession include:

- Sanctifying grace is restored and punishment due to sin is remitted, offering the penitent consolation from the guilt of sin;
- It is based on the unconditional forgiving love of God;
- It gives an opportunity for a transformation to a new life for the penitent, encouraging him/her to avoid sin, and revive his/her commitment to good work;
- The seal of confession is absolute;

led to a nearly perverse use of prescription drugs (50% of Americans use a prescription drug).

The number of PTSD victims is growing. There is a clear need for more therapists to deal with them, the VA is desperate to enlarge the pool of therapists who can work with soldiers and veterans. One of the problems is that PTSD patients are not very consistent in the reactions, they can become violent or just difficult, and many therapists don't want to deal with these a they are usually not fragile seniors, but hefty blokes that are hard to contain when they get out of line.

Medication

Medication is an option, but as even the VA explains; patients with mild personality disorders may be treated effectively without pills. Medications alone are unlikely to address all of the needs for those with more complex trauma histories.Medication ignores existential aspects of the disorder.
The current evidence base for PTSD psycho-pharmacology is strongest for the antidepressants like selective serotonin reuptake inhibitors (SSRIs), Tricyclic Antidepressants (TCA) or Monoamine Oxidase Inhibitors (MAOI), but only sertraline (Zoloft) and paroxetine (Paxil) are approved by the Food and Drug Administration (FDA) for PTSD. Prazosin is an alpha adrenergic receptor antagonist (traditionally used as an antihypertensive agent). It acts to reduce the level of activating neurochemicals in the brain and, via this action, is supposed to damp down neurological pathways, which are over-stimulated in people with PTSD.
CBD (cannabidiol) is a non psychedelic marijuana ingredient, used as a pain and stress reliever by many PTSD patients, but not an official medication.

The new perspective

There are a number of innovative approaches concerning PTSD that deserve attention as they are not widely known. Before going into specific treatment modalities and therapy models (see appendix) we will first look at the new kids on the block, from a broader perspective. These are the he biome/probiotic angle, the HPA (Hypothalamic-Pituitary-Adrenal axis) angle, and the psychedelic therapies being studied more recently. Also things like group therapy and hypnotherapy are mentioned, as they became part of the standard approach, but lack the stamp of the VA as evidence-based treatments (EBTs). Virtual Reality therapy and sensory reality are also new kids on the block.

The examination of conscience, the Act of Contrition (i.e., a short prayer of sorrow and repentance) and some form of penance are essential aspects of the sacrament.
Confession does not judge anyone for their faults; the ultimate goal of Confession is the penitent's spiritual, physical, and mental well-being. in Confession, a priest plays the role of mediator between the penitent and God, different from therapy or counselling. It deals with spiritual grievances, which is different from exploring mental stresses in counselling.
It's not usually understood as a form of therapy, but in the old days it probably was the only way to administer some kind of advice about one's ways in a ritualized way, to a large part of the population. People may feel confused about something they have done or said, and it relives feelings of guilt. It involves, from the part of the priest, being empathetic, unconditional, non-judgemental, keeping confidence, and careful listening. It can contribute much comfort to many who are seeking peace. For some, even today, it is cathartic. The Church doesn't like the use of confession as a kind of psychotherapy. Catholic priests are reminded not to confuse confession with psychotherapy, with penance being reframed as "reconciliation" and a blurring of the lines between good and evil, between truth and lies and between sin and virtue.
The notion of penance, part of the confession, could be understood as a kind of commitment towards a meaningful, mindful life. Not unlike what is part of techniques like acceptance and commitment therapy (ACT). This is a mindfully-oriented behavioral therapy that uses an eclectic and humanistic approach to help people fight their demons. ACT, developed by Steven Hayes[2] accepts the so-called 'abnormality' as part of the human psyche and lays more emphasis on change through acceptance. ACT theorists pointed out that most human struggles are the result of four factors. They called these the 'F-E-A-R' factors, which is an acronym for:
F – Fusion of thoughts.
E – Evaluation of experiences.
A – Avoidance of thoughts and actions.
R – Reasoning.

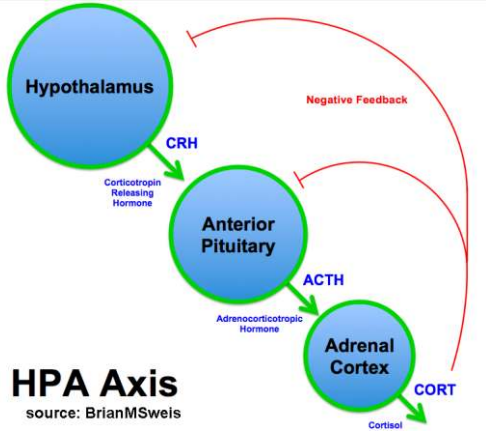
Confession in a more general sense is an important part of many therapy models, but also part of what happens in society at large. In one sense it is

2 Hayes, Steven, C.; Acceptance and commitment therapy, relational frame theory, and the third wave of behavioral and cognitive therapies. In Behavior Therapy (2004).

After that a number of relevant questions about PTSD therapy in general are discussed.

The Gut Biome and the HPA axis

Increasingly the medical world has become aware of the importance of our gut biome[3], where the life forms like bacteria, archaea, protists, fungi, yeasts, eukaryotes, viruses[4] including bacteriophages) play an important role, not only in the digestion but in our whole hormonal and neurotransmitter system and in our immunity. For instance serotonin comes mostly from our gut biome. The influence of what happens in our gut on the central nervous system, our mental state and moods is widely recognized[5] and for instance in the treatment of autism[6] and PTSD[7] one uses pre- and probiotic tools to re-balance the gut biome to affect the mental state of patients.



There is little information yet about how the gut biome of PTSD victims is different, but as this is the case for a number or related problems like autism and ADHD, more research in this direction might be a fruitful effort. Here is is maybe interesting to note, that in the context of the substitute identity model a PTSD patient switches between identity states and that the symp-

3 Joël Dore, Magnus Simren, Lisa Buttle and Francisco Guarner; Hot topics in gut microbiota, in: United European Gastroenterology Journal (2013) DOI: 10.1177/2050640613502477 2013 1: 311

4 The Human Microbiome Project (HMP) was a US (NIH) research initiative started in 2007 and ended in 2016 to improve understanding of the microbial flora involved in human health and disease. A European HMP-counterpart is MetaHIT.

5 Kelsey M. Loupy and Christopher A. Lowry; Posttraumatic Stress Disorder and the Gut Microbiome in The Oxford Handbook of the Micro-biome-Gut-Brain Axis (2020) DOI:10.1093/oxfordhb/9780190931544.013.10

6 Pulikkan, Mazumder, Grace; Role of the Gut Microbiome in Autism Spectrum Disorders; in Adv Exp Med Biol. (2019);1118:253-269.

7 Sophie Leclercq, Paul Forsythe, John Bienenstock; Posttraumatic Stress Disorder: Does the Gut Microbiome Hold the Key? (2016) DOI: 10.1177/0706743716635535

the acknowledgment of having done something wrong, whether on purpose or not. Thus confessional texts usually provide information of a private nature previously unavailable. What a sinner tells a priest in the confessional, the documents criminals sign acknowledging what they have done, an autobiography in which the author acknowledges mistakes, and so on, are all examples of confessional texts. A confession of love is often considered positive both by the confessor and by the recipient of the confession and is a common theme in literature. Confession often benefits the one who is confessing.

Paul Wilkes[9] characterizes confession as "a pillar of mental health" because of its ability to relieve anxieties associated with keeping secrets. He sees is also a pillar of mental health, for confession is about self-examination. It demands something for which there is no substitute: that we be honest with ourselves.

Confession or critical self-examination, often in public gatherings, is a part of many cultures and social constructs, movements, etc. Through confession and self-criticism, social control over individual behavior or conduct is enforced. An example of this is the Marxist and Communist practice of public disclosure, part of the political system and used as part of a brainwashing approach to align and even bond the audience in what were sometimes called "struggle sessions".

toms are limited to the one substitute identity that was formed because of the original traumatic experience. This suggests that the biome is also not in a single and stable state, parts of it are activated in conjunction with the identity states and it changes during the day and with our moods too. It's the activation of biome cultures that matters, not unlike what we see in the epigenetic activation of DNA. Reduced biodiversity in the guts is associated with an increased risk of inflammatory comorbidities and an increased tendency to overweight/obesity, something largely overlooking in the CoVid-19 research. Diet, functional foods (selective probiotics and prebiotics) and microbiota (stool) transplantation are areas that have yielded some therapeutic success in modulating the gut biome.

The cortisol/oxytocin angle

There are a few relatively new perspectives in PTSD diagnosis and treatment and hormone balance or disbalance concerning adrenal hormones

9 Wilkes, Paul; The Art of Confession: Renewing Yourself Through the Practice of Honesty ISBN 9780761168720 (2012).

like cortisol and oxytocin are certainly interesting and promising[9]. However, the organs where a traumatic experience hits most, like the adrenal glands where the flight or fight response and stress hormones like cortisol originates, or amygdala activation (with fMRI scans) are not normally part of the diagnostic process concerning PTSD, which is mostly seen as a mental problem.

Yet there is growing evidence[10] that extremely stressful adverse experiences have a lasting impact on the neurobiology of the stress response, the hormonal stress system and notably the hypothalamic-pituitary adrenal (HPA) axis, where eventually the stress induced adrenocorticotrophic hormone (ACTH) is released with cortisol as the final product in the adrenals, with oxytocin to bring back the cortisol levels. The adrenals have many functions, but one of them seems that they act as 'emotion-ears', they resonate with the emotions of other people and when this function is damaged or misbalanced, which might be the effect of traumatic experiences (as the root cause of PTSD), this may affect other somatic or mental functions.

The stress hormone Cortisol, according to Rachel Yehuda[11], is a key player in the subtle hormonal changes that have come to be associated with PTSD. PTSD patients show a different (somewhat lower) level of cortisol release which was already noted in 1986 by J. Mason[12]. Glucocorticoid treatments in PTSD cases are an interesting avenue, also as an augmenter of the more standard psychotherapeutic approaches. Cortisol levels and a disbalance in adrenal hormones might also be a biomarker for predicting later PTSD in people. It seems that cortisol levels will impact PTSD symptoms, also affects the susceptibility for PTSD due to a later trauma and the resilience in actual cases.[13] And in this adrenal/cortisol perspective there are ways to

9 Donadon, M.F. , Martin-Santos, R. , de Lima Osório F. ; The Associations Between Oxytocin and Trauma in Humans: A Systematic Review in Front Pharmacol. (2018). Published online 2018 Mar. doi: 10.3389/fphar.2018.00154 PMCID: PMC5838009, PMID: 29545749

10 Yehuda, Rachel. Advances in understanding neuroendocrine alterations in PTSD and their therapeutic implications. Ann N Y Acad Sci. (2006)

11 Shaily Jain, in Psychology Today; Cortisol and PTSD; An interview with Dr. Rachel Yehuda (2016)

12 Mason John W..; Giller, Earl L.; Kosten, Thomas R..; Ostroff, Robert B.; Podd, Linda ; Urinary Free-Cortisol Levels in Posttraumatic Stress Disorder Patients; The Journal of Nervous and Mental Disease: (1986)

13 Van Zuiden, M, Kavelaars, M. A, , E Geuze E., Olff, M, CJ Heijnen, CJ. Predicting PTSD: pre-existing vulnerabilities in glucocorticoid-signaling and implications for preventive interventions, in Brain, Behavior, and Immunity 30 (2013)

prevent PTSD just after a traumatic incident, within the timeframe of the 'Golden hours' (0-8 hrs) when the person may be supported to deal with the trauma or before a potential traumatic incidence like in surgery. Cortisol level and the HPA history might setting the stage for subsequent trauma reactions, Yehuda suspects. It is relevant to note that there are glucocorticoid receptors in almost every cell in the body and cortisol affects many vital processes.

There are many ways and levels where and how a therapist or psychiatrist (or priest, shaman etc.) could deal with the psyche, the personality or the soul. The enormous array of therapeutic methods and theories illustrates this, there are libraries full of books and therapeutic institutes and methods galore, these days even using psychedelics is taken seriously. The problems is that no therapy is effective for all and that most therapies only work for some people.
This is not so surprising, therapies (apart from medication, chip implants, lobotomy etc.) are human interventions, and they usually do work, the therapist is the main factor anyway. The person of the therapist and his empathic qualities and experience are at least as important as the method used, as Carl Rodgers and many others have argued.

Psychedelic therapy

Psychedelics as the new wave in PTSD therapy receives a lot of attention these days, with more legal experiments with LSD, psilocybin, MDMA and also the less legal but widespread use in the popular underground. This revival uses once-forbidden psychoactive substances to bring back hidden unconscious memories and integrate the experiences of the past. Some researchers and practitioners also hope that there are long lasting positive effects at the epigenetic level to help fight a wider range of psychological and somatic problems.[14]
There has been serious research on this topic dating back many decades. For example after WW-2 psychiatrists dealing with post-concentration camp syndrome like the Dutch psychiatrist Jan Bastiaans worked with LSD to help people process their traumatic experiences.[15]

14 Krippner, Stanley; The Effects of Psychedelic Experience on Language Functioning, in PSYCHEDELICS, The Uses and Implications of Hallucinogenic Drugs (1970)

15 Bullet in of the Multidisciplinary Association for Psychedelic Studies, MAPS - Volume 9 Number 2 Summer 1999 -The Bastiaans Method of Drug-Assisted Therapy (1999)

The psychedelic therapy that briefly became popular in the sixties, became illegal and went underground, is rebounding. Organizations like MAPS (Multidisciplinary Association for Psychedelic Studies) in the USA and The Beckley Foundation in the UK are actively promoting and sponsoring such research. Maybe out of despair that conventional approaches didn't work very well, the government in the USA and elsewhere has allowed more and larger scale experiments.

The MDMA (ecstasy/XTC) and psilocybin experiments yield promising results as a tool to assist psychotherapy for the treatment of depression and post-traumatic stress disorder (PTSD). Preliminary studies with veterans have confirmed that MDMA in conjunction with psychotherapy can help people to alleviate their PTSD symptoms and even overcome PTSD. MDMA has now been approved by the Food and Drug Administration for use in large-scale (level 3) clinical trials[16]. Institutes like the John Hopkins Hospital (in cooperation with MAPS) are now expanding from medium sized experiments to larger groups, including double blinds controls, to establish evidence based positive results. Psilocybin, MDMA are now the test substances, there have been a number of marihuana trials[17].
Studies at Yale[18] have confirmed earlier reports that ketamine[19] (Ketalar) offers remarkable, nearly instantaneous relief for people who suffer from forms of major depression impervious to other treatment methods and may work for PTSD. Interpreting depression as a hardware problem largely caused by the loss of synaptic connections, the researchers argue that ketamine works by encouraging neural growth in brain regions correlated with memory and mood.

The hope of the present trials is that specific diagnosis/treatment protocols will lead to acceptance of psychedelic therapy as a 'normal' choice in a few years. The results so far are not very different from what people like Claudio Naranjo, Alexander Shulgin, Leo Zeff (the so-called „secret chief"), and many others have described, based on their experiments with

16 https://maps.org/research/mdma/ptsd/phase3

17 Wentling, Nikki: Marijuana-PTSD study concludes after 10 years of planning, research, in Stars And Stripes (2019)

18 Torrice, Michael; Ketamine is revolutionizing antidepressant research, but we still don't know how it works, in C&EN (2020)

19 Krystal, John, Abdallah, Chadi, Sanacora, G. a.o. ; Ketamine: A Paradigm Shift for Depression Research and Treatment, J.Neuron. (2019), doi: 10.1016/.02.005

MDA and MDMA in the 60's and 70's, but these new experiments are more scientifically rigid and under DEA control.

The problem I see is that the focus has been narrowed down to a limited number of medical problems, like PTSD and includes attempts at legalization of supervised psychedelic psychotherapy for those. The medical establishment obviously sees interesting possibilities to establish diagnose/treatment protocols. But these are expensive and probably not for those at the bottom layers of society. The interest in professional circles is growing, a new breed of psychedelic therapists is waiting in the wings, awaiting licensing and good fees! This attitude may limit the wider research into the effects of psychedelics.

The underground experiments and research has a much broader perspective and there is a lot of experience there, but alas not showing up much in the scientific literature. Millions of people have taken such substances to better themselves and seek relief of complaints, or have helped as „sitters".

There is and has been much going on below the radar in this field, there is a whole underground movement of people trying things out. People with PTSD are experimenting themselves or with the help of underground therapists or shamans, often involving travel to countries like Mexico, Brazil, Peru or Ecuador to participate in psychedelic sessions and rituals, notably with Ayahuasca or go to Equatorial Africa (Gabon) for Iboga tabernanthe rituals. But these substances also have found a welcome amongst Western practitioners and would-be shamans, and it has become quite commercial, although some, like the Santo Daime church stick to the tradition.

There are many, many herbs and plants with psycho-active qualities, there is even a psychoactive toad, Bufo alvarius. Nearly every culture has found their local alternative, their teacher plants and has appropriate rituals.

The institutional test projects also don't really take into account what psychedelics may do to our creativity and sense of privacy, as these substances allow us to enlarge our inner world, explore new perspectives and free us from cultural constraints. Our inner autonomy, our freedom to face whatever, is definitely enlarged when taking these substances. Some (actually many artists and increasingly students) claim this enlarges their concentration, creativity and learning potential (allowing us to make mistakes), so limited by the stress and lack of privacy of modern life. Our inner autonomy, our freedom to face whatever, is definitely enlarged when

taking these substances. Also these substances might be more promising in combination with other kinds of therapies than the ones currently under consideration, like with immersive technologies like VR, massage, body work, expression therapy, polarity therapy, EMDR, or using neurotransmitter substances and adrenal hormones like for instance cortisol.

Of course there is the recreational use and abuse, but people like Albert Hofmann (LSD discoverer) stipulated that using these substances should honor the sacredness. A ritual setting is how older cultures used this, like in the Vedic soma rituals, the Greek mystery schools, and the peyote traditions. Psychedelics can be used to break one's mask(s) (the therapeutic way) or fortify them (most recreational use). Chemically, individuals with PTSD show decreased levels of paroxetine binding, suggesting that levels of the serotonin (5-HT) transporter (5-HTT) are attenuated in PTSD and also involved in the manifestation of arousal and avoidance symptoms[20]. Psychedelics affect the 5-HT receptor.

The potential of psychedelics in dealing with identity conflicts like PTSD is that is can help to dissolve the borders between identities (including substitute multiples), the cognitive unity and even the sense of cognitive continuity (temporal integration) diminishes or disappears; the glue that holds our sense of a single self together evaporates. One can get in touch with hidden, deeper parts of the psyche, like trauma memories, that are normally contained in the subconscious parts of a specific identity.
Psychedelics profoundly alter cognitive unity, our sense of self. One could say the identity complex (matrix) breaks down, sometimes described as going back to the core identity, as the place or state where the assumed self (or selves) disappear. The separation between the self and the world dissolves; people begin to feel at one with everything. Perceptions from the inside become hard to disentangle from those from the outside, inner and outer worlds mix, time becomes fluid, each frame of the visual and sensory experience slows down or accelerates. The now expands, includes the past, we can experience memories as happening right now. Global brain activity, especially the visual, is profoundly affected and sensorimotor control may get out of sync. All this is very personal, people experience a „trip" in their own way, sometimes with ups, downs, loops, varying intensity levels, very negative (bad) or positive. The most general outcome of a psychedelic trip

20 Michopoulos, Vasiliki, Davin Norrholm, Seth and Jovanovic, Tanja; Diagnostic Biomarkers for PTSD; Promising Horizons from Translational Neuroscience Research, Biol Psychiatry. (Sept 2015)

is enhanced awareness of self and nature, an increased tolerance for being different (in self or others) and often an increased level of spirituality.
Note: the above descriptions are more or less the experience of the author.

Deep level healing, and this is where psychedelic therapy is so promising, is when the patient or tripper start to see that whatever happens to them is part of a lifelong process of growth and learning. This fundamentally changes the perspective, the traumatic experience is then retrospectively seen as a necessary step in a process of self-realization.

The psychedelic approach (but there are other therapies that achieve this like holotropic breathing) can be seen as a pressure-cooker accelerating the diagnostic and therapeutic process. It helps bringing to the surface memories (also body memories), reliving them and changing the perspective, which can lead to integration and mitigation or even disappearance of symptoms.
A critical note here. The idea that one could uncover repressed[21] memories, which goes back to Freud, is more or less outdated, based on research by Elizabeth Loftus and others. It has never been verified as a major etiology. Memories are now more seen as made up all the time, not necessarily resonating with what really happened. We remember what fits our (or the therapist's) narrative.

In a good and safe 'set and setting, dose, process', with reliable and adequate doses of substances, a proper purpose and some preparation to create a positive environment and proper aftercare the risks of psychedelic sessions are minimal, but not negligible. A ritual approach with a clear 'agenda' helps to limit these. Monitoring, evaluation and aftercare should be part of the setting. For PTSD cases psychedelic therapy is more risky, hidden (pre-existing) pathological mental problems like psychosis or schizophrenia may become manifest. Pre-selection and vetting of patients is therefore necessary and a safe setting is necessary where unexpected outbreaks of aggression, suicidal tendencies can be adequately dealt with[22].

One of the insights from the 60's in how psychedelic experiences develop might help to recognize levels in not only psychedelic therapy, but also in

21 Freud called memories that are easily available "preconscious." He used the term "unconscious" for repressed memories.

22 Sala, Luc; Sacred Journeys, tripguide for psychonauts ISBN 9789492079091 (2017)

other forms of dealing with hidden (or anchored in the body) memories of trauma. Masters and Houston[23] (in 1966, reprint 2000) recognized 4 levels of psychedelic experience:

- enhanced sensory awareness, feeling the body, hallucinations
- recollective/analytic, becoming aware of mental and emotional processes, recognizing self-masks and behavioral patterns
- symbolic level; aware of primal, archetypal and recurring themes in human experience, accepting life and experience as a lesson.
- the integral/mystical level, feeling one with all.

Not everybody will reach all these levels. Transpersonal psychiatrist and holotropic breath-work initiator Stanislav Grof also recognized these 4 levels, but labeled the third the "perinatal" and the fourth the "transpersonal". When we look at what the various therapeutic PTSD models try to achieve, these levels can also be identified. For instance prolonged exposure obviously falls in the sensory awareness level, the patient becomes aware of his fears and bodily reactions, and learns to deal with it, in a desensitizing process.

One of the approaches in psychedelic usage, often the preferred way in older cultures using them, is the **group session** or ritual. The underground psychedelic movement, working with iboga, ayahuasca, yopo and many more plant based substances (and even toads like Bufo alvarius, some fish and fungi) has explored this group-approach much more than the scientific world in their more limited individual symptomatic quest. Substance-assisted group therapy might be very effective and efficient, as many reports from participants suggest.

Microdosing[24] is the use of psychedelic substances in low doses, for a longer period of time. It is quite a popular, even fashionable subject. It is claimed to effect creativity, depression, mood problems, but the research so far is mostly anecdotal (James Fadiman). It may be that such use of substances is more affecting the gut biome than directly addressing the brain and the neural transmitters there. This may also be the case for psychedelics in general. In many ancient traditions, like those of the ayahuasceros of the Amazon, there is much emphasis on a diet as preparation for a psychedelic

23 Masters, Robert and Houston, Jean: The Varieties of Psychedelic Experience: The Classic Guide to the Effects of LSD on the Human Psyche (1966)

24 Fadiman, James and Korb, Sophia. 2019. Might Microdosing Psychedelics Be Safe and Beneficial? An Initial Exploration. Journal of Psychoactive Drugs, (2019)

Hypnotherapy-guided meditation-trance therapy

including hypnose-assisted therapy

Cue-sheet; an overview of hypnotic process options can be used as a menu or to record sessions

CLIENT INTAKE

hypnotizability
visual cue type (A/V/K)
complaint - medical history
purpose: healing / self exploration
complaint - medical history
type: character - drives
multi-personality

FEEDBACK-DIRECTIVES

agreement frame
motions and gestures
yes/no
voice
unilateral - reciprocal
music,drumming
pointing
touching
body language
conversational hypnosis
script model
process model

CONTAINER

set and setting
clear purpose
safe location
safe process
empathy
respect
integrity

INDUCTION

suggestion
resistance removal
compliance set
relaxing (body - mental)
muscle tension on/off
pendulum
counting down
client or therapist
convincing - deepening
fractionation (in/out)
testing relaxation
visual regression
numbers vanish, staircase
exit option; safety and re-entry

the psychedelic option

REALM

Happy - Upperworld

heavens, sky, nature setting
separation, ties cutting, safe box
altar, temple construction
ancestors, deities, spirits
anger reversal, life's purpose
forgiving, thanking
rituals, panels, guides

Water world

play, swimming
cleansing
freedom, oceanic,
relaxation, personality
splitting and re-uniting

Dark - Underworld

the cellar, confronting fear, lust
exploring desires, power plays
exposing helping, revenge,
sex, gender issues
responsibility, self forgiving

Regression (time travel)

back to youth, trauma frames,
other lives, other identities
position perspective, other lives
reincarnation, life's purpose

Body - Somatic

body scan, blockages
chakra work
pain focus
chi/ breath (re-)focus
anchor detection
root cause search
organ, cell, DNA repair

TOOLS

interventions

encourage - empower
nudging
mirroring
stimulating
provocation
questioning
semantic analysis
Ericksonian narrative
breathwork
desensitizing
reframing (situation - beliefs)
association - dissociation
panel(voice)dialogue
systemic constellation
family constellation
touch, sing, blow
symmetry tools EFT - EMDR - psych-K
dreamwork
abreaction
revivification
role reversal (shamanistic)
talent search
time line fix
planting affirmations

deepening

see induction

BRIDGES

affect (emotional) bridge
language bridge
cinema bridge (anonimity)
time jumps (framing)
inner child - higher self

RE-ENTRY

post hypnotic suggestions
bringing back
chill-out
insights recap
feedback
after-care
follow-up

balance- billing

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ritual, and maybe this has to do with preparing an adequate biome status. There is little known about the use of microdosing as a therapy approach for PTSD, even as there is a lot of private experimenting going on.

Substance abuse and PTSD

The overlap is quite common. Many clients who are admitted for substance abuse treatment who have significant, extensive and often complex and untreated trauma histories. Trauma specific treatment models can be incorporated into a comprehensive dual diagnosis treatment program.[25] Van Der Kolk[26], Najavits, Brown and Elliot, as well as many others have created multiple group and individual treatment modalities to address co-occurring PTSD and substance abuse such as Seeking Safety, the TREM model, Accelerated Experiential Dynamic Psychotherapy (ADEP) etc. In addition to these modalities, Lawrence Heller has created the Neuro Affective Relational Model (NARM), Francine Shapiro has created eye movement desensitization and reprocessing (EMDR), Dr. Schmidt has created the Developmental Needs Meeting Strategy (DNMS), Peter Levine has contributed groundbreaking work in the area of trauma treatment using the body and nervous system with Somatic Experiencing; these modalities are designed to treat trauma in all of its forms.

Hypnotherapy

Not totally new, but as the basis for the eclectic use of many therapy forms it deserves a fresh look and a more detailed description. This doesn't concern stage hypnosis, although better understanding of placebo and nocebo effects makes clear that the belief system of a person plays a far greater role than previously assumed and suggestion can be a great tool in therapy.

There is more or less pure hypnotherapy, only using the core principles of induction and suggestion, but there is a lot of hypnosis assisted therapy forms. Many therapists don't follow a strict protocol, but will use whatever seems appropriate and in their toolbox, to customize the therapy.

This means that isolating hypnotherapy as a special way to treat PTSD is not a very practical approach, rather the methods and approaches in hypnotherapy are part and parcel of the whole therapeutic offering.

The illustration gives an idea how broad such a combined and integrated approach can be.

25 Lana Seiler , Kristy Quaka; 2016; https://www.academia.edu/29400522/Trauma_manuel_11_works_cited_added_10_

26 Van der Kolk, B. A. (2015). The Body Keeps Score: brain, mind, and body in the healing of trauma.

Group therapy and support structures

The social identity and group mind effects on how a trauma situation is experienced and how it may be processed may be more important than is commonly recognized. It is criticized for failure to provide evidence of successes that can stand up to peer-reviewable scrutiny in the medical research community.

Group training and that comes close to group therapy is probably as old as humanity, just think about schooling and the need to have effective teams when hunting and in war. Ritual, a fundamental part of culture, is mostly a group experience and aiming at improving situations, healing, and thus therapeutic effects. Even as just sitting in a circle and sharing experiences or insights may look like a simple approach, the ritual aspects and creating of a safe and even sacred circle, a set and setting that helps people to enter a group mind (identity) space has very deep and old roots in our collective unconscious.

Ritual offers participants access to their deeper psychological, social but also spiritual issues, where for instance aspects of their substitute identities may surface, bringing awareness and potential healing. The mirror mechanisms in a (safe) group, where projection of one's own problems and inclination in others can bring realization and introspection, may resemble individual talk therapy, but the absence of hierarchical or transference processes and being with peers (socially, as victims, patients, without rank) can be very beneficial. Group therapy in institutional settings for psychiatric problems and in the pop-psychology and self-discovery world is commonplace.

Many veterans do join AA-type groups or set up informal circles and do benefit from this. They do have regular group meetings and appreciate what it brings to them, there are many examples of such efforts like Seeking Safety (SS).

The experience of veteran groups, but also the much wider experience in addiction therapy (where trauma processing is often a factor) support the notion that participating in groups can be beneficial. Not necessarily as a therapeutic tool, but as a way to provide a social network, meaning, structure and discipline. Support groups play a significant role in many agencies and institutions that serve trauma survivors.They can help members with sleep and nightmare issues and help distill meaning from the experiences.

Ritual and community support

Concerning what we can learn from older cultures, there is much; war and trauma are not new. There are ancient ways to prepare for war, deal with

trauma, help the homecoming soldiers. There are rituals to help ease the ruptures experienced by those traumatized by warfare, which we could learn from today, like having a dance after a battle or hunt, not only to part and boast, but to dance and rebalance the body. Odysseus's travels after the battle of Troy (as analyzed by Jonathan Shay) is a case in point.

Just copying old customs in some way is, however, not always the right approach. Psychological debriefing (talking about the event, for instance was, in the past, the most often used preventive measure, directly following an event with counseling and interviews that are meant to allow individuals to directly confront the event and share their feelings and to help structure their memories of the traumatic experience. This treatment has since been found to be potentially harmful.

These questions, how can we learn to deal with trauma from other cultures have been asked and here and there we see relevant work, like using age-old psychedelic healing formats applied to PTSD or references to "Ancient Warrior Rituals" like Karen O'Donnell[27].

Ritual has been a traditional form to deal with stressors and trauma in society on a personal level and in the community. Prayer, grieving, penance, forgiveness and absolution, many ritual aim at bringing deep and maybe repressed emotions to the surface, create a group mind environment where this can be shared. Group therapy and 12 step programs are maybe a poor substitute, but can be a basis for contemplation, release and support. In the case of soldiers before and after missions, when there are disasters involving groups of victims, a ritual approach may be a first step to alleviate the trauma impact. Martial arts, a ritualized form of combat, may be a treatment modus. And homecoming parades, re-accepting the victorious veterans were a good tradition, but as the moral justification of wars is fading, who welcomes the braves home?

Ritual cleansing, bathing or otherwise purification of body and mind, is also a very old practice. Coming back from a battle there are feelings of guilt, of inferiority (not having been brave enough, not having saved the next guy, fear of being labeled a coward) and rituals like doing penance, purging, confessing one's fears help to deal with the trauma. Giving thanks to the spirits, remembering those who were left behind, singing victory songs, telling, even creating stories and myths about the heroic acts (also from the enemy or of the hunted and killed animals), all was part of how older traditions dealt with war and trauma.

27 O'Donnell, Karen: How PTSD Treatment Can Learn from Ancient Warrior Rituals. (theconversation.com) (2016)

The whole military apparatus and its identity of course relies on ritual, from the training procedures to the haircut to the saluting and ranking rituals. Ritual is what holds an army together.

Ruptures

The memories of traumatic experiences are sometimes stored in the unconscious, but may come to the surface later, haunting the person. Initially however, there is dissociation, we break away from what happened, we don't want to feel (in the body and emotional) and we don't want to know or understand what we did or saw. This breaking away is sometimes called rupture. Karen O'Donnell lists identity as one of the three major ruptures of PTSD:

"Trauma ruptures a person's sense of identity. They no longer know who they are. They struggle to identify with the person they were before they experienced the trauma...."

The other ruptures are time as an invasion of the past (as in flashbacks) and disrupted cognition. O'Donnell does not mention existential crises but they often involve a challenge to "personal myths" such as "life is fair and just".

Computer assisted diagnostics and therapy

Modern technology can certainly help to improve the known therapy forms and even spawn whole new forms, like one can use brain imaging scans and all kinds of sensors not only during therapy sessions, but to monitor progress and processing afterwards. Online therapy with visual interaction is commonplace and the CoVid situation helped this to become widely accepted. Biofeedback, neurofeedback and frequency following therapy with visual or auditive devices is already a practical option.

In interactive and immersive simulations the patient is exposed to relevant environments en experiences in a very engaging and immersive form. This works well for many phobias. No doubt new forms of such computer aided therapy will emerge, maybe even without a human therapist present.

Virtual reality therapy

Virtual reality involves creating immersive situations, mostly of a visual kind, with goggles or headsets but also using controls and biofeedbak to enhance the feeling of being in a different environment (reality). Such a virtual reality offers the potential to create situations, which are not physically dangerous and are experienced as similar to for instance traumatic

situations. The technology is increasingly used to help people with for instance phobias but has potential for dealing with traumatized patients. Although people like Timothy Leary[28] and many of the VR pioneers already in the early 90's pointed at the potential of VR as an electronic (hallucinative) drug and its use in psychotherapy, only recently this application of VR has become fashionable again. Better and cheaper equipment, better monitoring of effects with new bio-sensors opened up a new realm of psychotherapeutic intervention. Games, engaging and immersive environments offer opportunities to relive specific situation (exposure) or even allow actions that may help to learn to express the thwarted and self-directed emotions in an more healthy way. Combination with medication could help this process, notable psycho-active substances may help to enhance the immerse effect of virtual reality experiences. There are many experiments with VR concerning PTSD like in VRET exposure therapy[29]. There are a number of companies like VirtualPsychedelics[30], Enosis[31], Trip/PsyAssist, Entheo Digital, Klarsana, Incannex Healthcare, Resurgent Biosciences busy expanding the academic work in VR to applications in combination with various psychedelics.

Even more immersive is Sensory Reality, where even more senses are engaged to bring the person back to the trauma incident memories. A Dutch company, Sensiks,[32] has multi-sensory cabins which includes smell. Sensory reality pods are used for PTSD, healthcare, improving quality of life, addiction, virtual tourism, storytelling, experiential learning, employee wellbeing, research, and training.

Implants, electrostimulation, chips, lobotomy 2.0

These days we can use all kind of technologies to temporarily block certain nervous pathways. Not the rather drastic way lobotomy was used, but by using stimulation, medication or anesthetics for certain parts of the brain or the nervous system. The U.S. Army is researching an anesthetic injection (with Naropin) called a stellate ganglion block, that could relieve symptoms of post-traumatic stress disorder. There are a number of therapies using

28 John Perry Barlow, Luc Sala with a.o. Timothy Leary; Virtual Reality, De metafysische kermisattractie (1990) (in Dutch only)

29 Tull, Matthew; Virtual Reality Exposure Therapy Can Help PTSD (2020)

30 https://www.virtualpsychedelics.com/

31 Agnieszka D. Sekula, Luke Downey and Prashanth Puspanathan; Virtual Reality as a Moderator of Psychedelic-Assisted Psychotherapy; Front. Psychol. 04, 2022; https://doi.org/10.3389/fpsyg.2022.813746

32 https://www.sensiks.com/

stimulation of the skull with electric pulsing, infrared light and other means, trying to activate specific regions. rTMS (repetitive Transcranial magnetic stimulation) is a noninvasive procedure that uses magnetic fields (repetitive pulsing) to stimulate nerve cells in relative small areas of the brain involved in mood control and depression. Used when other methods fail.

In the past, severe pathological symptoms in psychiatric patients were sometimes solved with surgical methods like lobotomy (of the left/right connection) or with electroshock, which is still used in some cases and in moderate (and anaesthetized) forms as electro-convulsive therapy (ECT).

For PTSD there are experiments with electro-stimulation, not only on the surface, but with inserted electrodes (inserted by way of stents so no need to open the skull) touching deeper regions of the brain,. to anaesthetize or stimulate. The DARPA SUBNETS program (The program, called Systems-Based Neurotechnology for Emerging Therapies (SUBNETS), goes a step further and inserts chips in certain locations to monitor and eventually influence brain operation, down to the neuron level. It means implanting electrodes in different regions of the brain along with a tiny chip placed between the brain and the skull, which monitors electrical signals in the brain and send data wirelessly back and could be used to trigger electrical impulses in order to relieve symptoms. This “trans-diagnostic” approach tries to isolate elements that are common to psychiatric and neurologic diseases.

SIM and therapy

It is relevant to see all the therapy forms mentioned here in the perspective of multiple identities. In the substitute identity model presented in

this monograph, a person may have more identities as the result of dissociation and trauma processing. In the diagnostic phase and in therapy then a distinction is necessary between the various identities (personalities are what we express and what we think we are, our subjective identities, while our complete identities are when we include the sub- and unconscious aspects).

Holistic perspective

Is the goal of therapy to soften the symptoms or is it aiming at complete healing. Fixing or healing, two approaches, but the Western allopathic approach favors the symptomatic; just make the patient able to function more or less normally, if necessary supported by medication, but don't worry about root causes and true healing. To achieve complete healing a broad and holistic view of PTSD as a body-mind phenomenon is necessary. This could help in understanding how a trauma is anchored in the body, not only remembered (or suppressed). As mentioned before, the holistic insights of the Eastern traditions like Ayurveda have yet to find their way into Western medicine and psychology approach of PTSD.

One of the Eastern insights is the importance of polarity, the difference between left and right, front and back. Hemispheric polarity is acknowledged in the brain, but it is less accepted that most of the body shows such polarity and this should be honored in diagnosis and therapy. Yet methods considered therapeutically effective for PTSD like EMDR and PSYCH-K do use this polarity in some way. Helping PTSD patients to better feel what's happening in the body with interoceptive exposure (IE) can help to trigger trauma memories.

Do people change at all?

One of the important issues in understanding PTSD therapy is the question whether people can change in the first place. Can we repair the damage or can we just patch up some of the symptoms? There are approaches that say that our fundamental traits do not change; in the nomothetic (traits) approach to personality we see that the typology people have a similar claim, we essentially are what we are, our profile doesn't change. That may be true, but the expression of that profile does change, we are and remain never the same.

There is, obviously, some adaptation and wizening in our identity and thus personality (even as the fundamental traits and fixations remain the same), we grow and develop over time, alas not always in a positive direction.

Of course the question of treating people becomes a bit absurd, if we assume we cannot change them at all. That implies that even the traumatizing

events have no effect, which makes the whole discussion senseless. So we have to assume that people change, they age, mature and develop, and this affects not only the body, but also the emotional and the cognitive state of being. The various development models give more information about how such change is possible and in what direction and that in some cases, with the formation of substitute identities.we develop a whole new identity, which is certainly different and has different traits as the old one.

Cultural bias

The incidence of PTSD is more prominent in the USA than elsewhere, and culture and lifestyle are relevant in understanding this difference. E. Fuller Torrey[33] looked at four basic components that make therapy successful across cultures. He compared indigenous practices with the rather "dry" and ethnocentric Western approach that was more or less seen (in 1986) as universal and pointed at ritual similarities. Torrey's four 'transcultural' therapy components are:

- a shared worldview,
- the personal qualities of the therapist,
- the expectations of the client, and
- an emerging sense of mastery.

So the client and therapist agree on the problem to be addressed; the client believes that the therapy will work; the relationship between therapist and client is conducive to making the therapy work; and finally the therapy itself is to be seen as effective, the client identifies with it and obtains a sense of mastery.

There is a catch. In many cases, only one of those four factors is necessary for the therapy to be effective. The client-therapist relationship, for example, can make even a flawed therapy work. Sometimes it is the final factor. Antibiotics might restore a client to health, even if she does not agree with the diagnosis, even thought she hates the therapist, and even though she has no confidence that the antibiotic will be helpful. Placebo and expectancy run through all four of these factors.

Torrey's views are widely appreciated, but his worldview notion is somewhat contested. According to Carl Rodgers (1987) the worldview is not so important (the client may not even know it), what matters as the crux of successful therapies are the therapeutic relationship and the client's resources. To cater for the differences in background and the cultural diver-

33 Fuller Torrey, E. Witchdoctors and Psychiatrists: The Common Roots of Psychotherapy. (1986)

Questions and suggestions

In the context of PTSD a number of questions comes up, not necessarily because there are answers, but because they contain suggestions and maybe help to get a new perspective.

- Why do we only look at symptoms and not at the root mechanisms, notably identity changes and identity substitution.
- Would a subdivision of PTSD not based on symptoms, but causes and personality type, help in focusing treatment.
- Are the dynamics of the trauma-process, how the perspective can change over time, part of the treatment model; there are victims and perpetrators, in retrospect this distinction and the guilt perspective can shift.
- Why is trauma only seen in a negative context. Some dramatic events in our lives are very positive, or turn out positive even after an initial negative impact (post traumatic growth and spiritual emergence)? Why do some emerge out of trauma situations a better person, a hero, leader, saint, a great 'Mensch'.
- How important is moral injury (apart from physical, emotional and mental) and do shame and guilt play a role.
- The individual's capability to deal with trauma plays a role, what is the influence of education, training, supportive environment, health, psychic structure and yes, genetics, family history, faith, culture, moral stance. Are there DNA- or RNA or in general biomarkers to identify problems or predisposition, as recent research suggest.
- In a transpersonal psychological perspective, are traumatic experiences not part of our human development towards self-realization. Our personality is the result of dealing with conditions, many adverse, starting with pre- and peri-natal trauma. The division in intentional and unintentional trauma is an issue here.
- Could we use techniques of older and indigenous cultures to deal with PTSD, notably ritual, as a way to cope with individual issues and trauma but also a social group mind phenomenon, could be a fruitful avenue for dealing with PTSD.
- PTSD is mostly seen as an individual thing, but what role do group mind phenomena play, in smaller groups during an incident, in the treatment and as the process of giving up individual morality to the group, which may lead to moral injury later.
- How does the background of PTSD-patients, not only what type they are, but the social milieu, education, gang history, religion, etc. and thus the level of 'understanding' or wisdom, relate to potential excessive anger and

aggressive behavior like the Baton Rouge and Dallas shootings by veterans. Could such behavior be predicted and prevented?
- Why and when does symptom reactivation, defined as early symptoms followed by a period of 25-30 years without symptoms, followed by renewed symptoms (in 11% of the case), occurs?

There are a few fundamentals questions like:
- Can people change?
- Is therapy aiming at symptomatic fixing or fundamental healing?
- How does the developmental history of a patients influences disorder incidence and treatment outcome?
- Do we need to relive trauma in order to heal?
- What is the relationship between identity markers like history, predisposition and treatment options.

Do snapshot test results like obtained with medical and psychological test give us a reliable image of the dynamic processes and do they account for the multiplicity of identities?

sity, however, seems to be accepted more and more as a factor in the success of PTSD therapy.

Therapeutic action fields: fixing or healing

The notion of multiple subjective self images (which are how the multiple substitute identities (SIM) are experienced), offers also a possibility of classification the various kinds of therapy, concerning healing and analysis of the separate identities (used here is the term selfs, as the narrative about who one is, the conscious part of the identity). The work (therapy) on those substitute multiples can be separated in three main groups, one covering the shown self and assumed self (or selves), one covering the assumed self im-

age and a third, concentrating on the relationship between assumed self and inner me (core self). The illustrations outline these approaches.

Western medicine is basically a symptomatic approach, in Eastern tradition the doctor is sometimes paid for keeping you healthy, in understanding of the differences noticed in the body balance. In the modern allopathic medicine paradigm we cure and heal when symptoms indicate something is wrong. There is preventive medicine, looking at food, exercise, predisposition etc. but a regular doctor or hospital deals with symptoms. This is a choice and in many cases an easy one. A patient who comes in with a problem often needs immediate care, and the consequences of not treating are obvious. In psychotherapy the choices are often less clear, because not treating, using a placebo, promising participation in a program, etc. may yield positive results too.

It's an old discussion, is dealing with symptoms enough or do we need to go to the root of complaints and diseases and aim at fundamental changes at that (identity) level? Fundamental healing or just symptom fixing, why bother, if it works? The medical world is all about remedy, about fixing symptoms. Before we knew about epigenetics this issue was more of an academic or philosophical question, but now we know that just superficial fixing may cause later damage. For instance the damage caused by unresolved trauma (and notably substitute identity emergence) does have an effect on our health at the deeper level and can even be transferred to the next generations.

By just coping or dealing with symptoms and fixing with medication, the underlying fundamental epigenetic processes may NOT or only temporarily be affected, and the improvements are short-lived. The core identity, where nature and nurture both have influenced the development, may not have changed and eventually will take charge again, in conflict with the substitute, and the condition comes back.

The need for adequate and more complete datasets

What is missed in most studies and projects is more specific (biographical and health) information about the victims. Things like age, race, diet, blood type, adverse condition in childhood, education and previous mental problems are relevant and for instance have revealed that lower income, lower education and early childhood abuse and in general less than optimal situations do cause a higher incidence of PTSD later. But is that news? We live in a world of haves and have-nots and those at the lower end of the spectrum live shorter, have less chances and face more health problems. We don't need DNA/RNA research to prove that!

Specificity (customizing) is very relevant, there are no snake-oil cure-alls. Treating all PTSD patients the same way is not very effective. Even the VA and the NIMH admits that different therapies work for different people. There is, however, little research and data gathering concerning the fundamental questions and root mechanisms. Most research is concerned with proving specific approaches to be effective or not, using samples of cases. The problem is that the patient-specific data from those samples and case-histories in the medical world seldom go beyond the superficial, not separated according to blood type, diet, personality, history, DNA mapping.

Sometimes more or less accidentally important resonances come to the light, like in the case of shortened life-expectancy already mentioned before, based on DNA degradation in PTSD sufferers (the VA[34] came out with this pointing at pretty solid research). But imagine that veterans would take the government to court because they want to be compensated for the missing years of their lives?

For the moment, limited research projects with limited data are what is available, and apart from proving efficacy of certain approaches they may and hopefully can help to come up with explanatory models.

There seems to be a lack of good tools to help establish effective diagnose-treatment indications. For instance character/personality typology is missing in the research relating PTSD to the personality (character/trait/identity) type of the patient. Here more appreciation of the various typology tools like MBTI, Big Five, Enneagram, etc. etc. and their limitations and qualities also in relation to the multiple substitute identity model (SIM) could help.

Thwarted expression; substitute multiples

The notion developed in previous chapters, maybe suggested is a better word, concerning PTSD (and maybe many other disorders) is that in the substitute identities (triggered by specific situations related to the original event) people are unable to express (or feel) the normal reaction appropriate to the situation. They find another way of expressing this, turn it onto themselves, become stressed, ill, develop tics, use drugs or other escapes, they harm themselves and sometimes others.

This concept has consequences, one being that when a person suffering from serious PTSD (the type with the substitute personality conflicts) finally comes to some kind of catharsis or abreaction (and may start hitting

34 VA PTSD newsletters

on others, go on a killing spree, etc.) is the moment the identity conflict is resolved and the person direct the anger, frustration, hate to the outside.
The question that comes to mind then is, how can we help people to reach such a catharsis without the devastating effects we see when a veteran starts using his M-16 on innocent people? What therapy might be effective, and under what conditions?

The lack of meaning

What might be relevant in order to see how we can prevent and cure disorders like PTSD is to know how for instance meaning, the sense of being of some value, impacts the occurrence and development of this disorder.Meaning has to do with ethics and morality, one's worldview, but also the situation one is in. It's a tricky issue. For instance, can we expect the military to admit that most veterans developed serious doubts about the morality of their missions and suffer from moral injury? Is it not the lack of meaning in our modern world, the sense of disenfranchisement, the utter emptiness of a life that leads not only to addiction, but to many other symptoms we now rank as PTSD? This disorder is not the prerogative of veterans, it's a telltale of a divided and increasingly unstable society devoid of existential perspective.
We can spend lots of money on trying to deal with the results of this, like in what we do to help PTSD victims, but the root problems lie in whole generations growing up in the slums, facing gang terror, malnourishment, domestic violence, lack of medical care and the resulting lack of self-worth. This is true for generations as the conditions are passed on from one generation to the next and may have become part of the (epi-)genetic profile. When they join the army to escape from this and seek some career and an opportunity to make a living or study, they are already victims and PTSD from combat or just being in the service is a symptom.

Effectiveness, self healing

There are standardized ways to measure healing like the Global Assessment Functioning Score used to determine treatment effectiveness. But is that more than a generalized statistical estimate? Effectiveness is relative, in many cases we provide band-aids and maybe hope to prevent further degradation. It's unlikely that for instance we will be able to repair the damage to our DNA like the telomere (disposable buffers at the ends of chromosomes) degradation caused by prior experiences and trauma situations.
Is real healing not a process of becoming aware and thus self-healing? Recent studies in psycho-neuro-immunology underline the role played by self-healing, long advocated by shamans and indigenous healers.

Can the mind control the body without physical intervention, like we see in the effectiveness of placebo? We know now that brain structure and function can be permanently changed (neuroplasticity) by any number of factors ranging from meditation to psychotherapy, blurring the line between the Western constructs of “mind” and “body.” and what real ‘healing’ means.

Outside in or inside out

When we talk about healing, there is usually the question whether this should start from the outside, meaning a treatment at the biological level, an intervention, operation, drug or food regime, exercise, etc. or should it start from the inside, looking at the psychological state of the patient. Is the body or the mind the director? Both are obviously interrelated and we should not forget the influence of our emotions and the otherworld, a holistic approach looks at the whole.

It is a pity, that the normal allopathic medical care usually starts with looking at the hard facts, measuring and testing, first looking for things to fix, symptoms rather than deep causes that usually lie deep within our psyche or the body. Even as our means to test and diagnose have improved enormously, most testing and scanning is no more than a snapshot, a momentum. It shows the actual situation, but not how it came to be, how it evolves, where it is heading. Of course one can do more tests, look how things have developed in the interval, try to calculate the dynamics, but the emphasis on scanning and lab-results is strong; those are the hard data, the facts.

As argued before, these hard data might apply to only one of our identities, there may be substitute identities; something, which in the case of PTSD is more than likely. Are the tests, lab results, scans referring to the same person (identity or self state) or has the patient shifted to another? Here it is important to note, that many of the physical markers lag behind, it is the psychological identity (which includes the unconscious) that shifts first. The body follows and many things change immediately, but there is a time delay, a trailing before the blood values, the neurotransmitter concentrations, etc. are really corresponding to the newly dominant identity. For instance a cancer cell, related to a specific identity and active or aggressive (only) in that identity, is of course still present (and shows up in scans) when an identity shift happens, but maybe not in that active state.

Life-expectancy effects

PTSD can linger on and really affect one’s life-span and expectation concerning a normal life. The processes that are at play here have to do with

epigenomic influences and gees related to aging[35] but mostly the degradation of the telomeres (end-codes of DNA), which the VA research has shown is increased in PTSD victims. This means gradual accumulation of DNA damage and epigenetic changes in the methylation patterns that affect correct gene expression and this then leads to altered cell function and eventually disease and premature death. Recent research of the Maastricht University (de Nijs, 2017) also showed mRNA changes because of PTSD.
This problem is very fundamental, and modern DNA and mRNA degradation research increasingly shows that these processes are very influential, can indicate the probable life-expectancy, the effects of traumatic incidents like birth, or what was experienced in the womb and maybe distinguish between the effects of fixing or healing; this may become a central issue in the medical world. What are the practical, ethical and eventually legal consequences? What are the consequences of for instance a caesarean birth, organ transplants or blood transfusion. Can we really heal or is all therapy nothing but fixing? In the previous paragraph this was already mentioned, but it becomes a real issue if a 'hard' difference could be established, like in the methylation patterns and degradation levels of our DNA.
Think about these ethical complications. Suppose we can relate the outcome of a certain therapy to life-expectancy data, then how and who could make a rational and responsible choice? Doctors already face the dilemma that certain therapies like those for terminal patients can be translated in longer life expectancy, but with sometimes decreased quality of life and at a cost that eventually limits the care for others. They tend to present these choices now to the patient, as if these have any insight in what for instance chemo-therapy, radiation or organ removal would entail (and there may be financial, insurance coverage or other interests at stake too).
Ethical dilemmas abound, and with more insight in the causality or even retro-causality (as we see in immunity processes) With deliberate manipulation of certain processes, also in how we deal with trauma and trauma processing, these will become more important. This goes beyond the effects of genetic manipulation, it is now clear that things like childbirth, operations and even initiations have an effect on how we epigenetically express our genetic imprint; how this influences our identity formation and development. With the increased understanding of these deeper mechanisms of life, the microscopic processes, which have such an effect on how and how

35 like the DAF-2 and DAF-16 (Adams, J. Genetic Control of Aging and Life Span. Nature Education (2008) and the sirtuins, mTOR, insulin/IGF-1 pathway (National Institute on Aging: www.nia.nih.gov),

long we live, still the age old questions, like why we are what we are, have not found better answers.

Diminished health and lost years of (healthy) life

We cannot diagnose PTSD (yet) by way of clear and easy biomarkers, but there is quite some research in what the effects are, the comorbidity and the negative impact on life and health. This means that PTSD negatively affects one's potential life-span and not only because of the suicide risk. Suicide in PTSD is much higher than in the general population. Aging (as showing in telomere length degradation and inflammation incidence) of the DNA[36] is now one of the more substantial biomarkers to predict life-expectancy. DNA methylation (DNAm) research, looking into the epigenetic expression of certain genes, yielded evidence of a superior metric of cellular age. We can now predict or at least estimate the chronological age of certain genes, their epigenetical biological clock and assess potential damage.

The research[37] suggests that post traumatic stress disorder seriously reduces life-expectancy, not only because of telomere shortening, but because of a multi-tissue DNAm age algorithm. A study of U.S. Department of Veterans Affairs (VA) healthcare users also found that veterans with PTSD had more than twice the risk of developing dementia as those without the disorder and also there is increased risk of heart diseases and even fatal traffic accidents.

In the substitute identity model (SIM) one of the assumptions is that more substitute identities increase the risk of identity conflicts with resulting unbalances and diseases and thus shorten life-expectancy, which seems to be confirmed with the DNA findings concerning aging and telomere length effects.

There is of course real value in symptomatic therapy, it can improve the quality of life, help to re-integrate with family and society, help people to normalize their situation. We all need to align us with what the world requires, in order to live with others. This 'fixing' of the symptoms, offering a way to cope with them, is, however, not healing the root causes.

36 Vijg, Hans; Aging of the Genome: The Dual Role of DNA in life and Death (2007)

37 Wolf, Erica, Logue, Logue, Mark et al. Acelerated DNA Methylation Age: Associations with PTSD and Neural Integrity, in Psychoneuroendocrinology (2016)

Predisposition, resilience and prior trauma

What must be mentioned here is that in veterans, PTSD may be the result of other situations than being engaged in combat. The traumatizing and insane situation leading to PTSD symptoms might be located in the past and the war situation just refreshes and triggers it. In military PTSD, only a minority of survivors actually saw combat. What traumatized the others? Earlier mini-traumas or repeated traumatic incidents in their home environment, their school, their gang, maybe moving from a chaotic living situation to a regimented living situation, then leaving that stable and safe regimented living situation for a civilian living situation in which they could no longer function, etc. There is a stereotype about the "wounded warrior" but most of the PTSD survivors were never warriors. Many of the wounds came from "moral injury" discovering that the government had lied about the dangers to the country, their motivation for which they joined the armed forces. And can moral trauma be treated just like PTSD?

In this monograph the perspective is seeing PTSD as an identity disorder with identity discontinuity symptoms and classifying therapies accordingly. The perspectives and deconstructions from the previous chapters, like a separation in physical, emotional and moral (cognitive) injury and the level of peri-traumatic dissociation are relevant, but hard to identify as many therapies, even as they have distinct labels and goals, in practice are often combined with other methods of a mostly eclectic nature and very much depending on the therapist, their experience and their training.

A critical view of the many studies and meta-studies reveals that the too general DSM-V label of PTSD, even with the dissociation subcategory, in the literature and research is not really honoring the differences in background, predisposition, actual trauma incident circumstances, trauma category and identity markers of the patients, like IQ, EQ, social-economic perspectives, etc. etc.
The politically correctness of not classifying patients in these respects is not really helping to identify the difference between effective, non-effective and damaging approaches. There are studies into specific cultures and groups, like gangs, emergency workers and of course veterans and even subgroups of veterans, but the individual differences are seldom specified to a level, that for instance would help to recognize the predisposition in relation to therapy outcome. Even double-blind experiments are seldom specific, and as the recent crisis in psycho-physiological experiments and observations that fail to replicate illustrates, So many 'classic' experiments are

now being discredited or deemed unrepeatable. It feels that approaches like self-reporting (the usual in PTSD diagnostics) are risky and prone to malingering or undue therapist influence, to say the least.

Placebo, suggestion and expectancy

The imagination plays a major role in how we see the past but in therapy, also how we see the future and the outcome of what will happen. This factor is more and more recognized as important for the outcome of the whole therapeutic and healing process. The notion of the self-fulfilling prophecy and the placebo effect have been used and recognized in psychotherapy for quite some time, it is even acknowledged that the placebo effect works even when patients know they are receiving a placebo. Torrey[38] points at the importance of arousal, of using ritual techniques and what some would call 'magic' to prepare the client, raising expectations. There are states of consciousness, where we are more open to suggestions. These states can be reached by various means, like (psychoactive) drugs, hypnosis, holotropic breath work, regression therapy and creating an atmosphere of trust.

Summary

Looking at all the variations in therapy, as also can be seen in the appendix, a critical stance remains. Deconstruction of the causes and symptoms has led to many angles, many approaches, but then in practice these converge again, therapists combine the various methods in how patients are dealt with, often without specifying them or realizing they do so, as they base their interventions on experience or intuition. Focused attention and placebo effects may be what unites all the approaches and makes them more or less effective.PTSD is a very broad label, so far diagnosed with limited means, covering what is quite a range of symptoms and disorders related to traumatic and traumatic experiences and recovery processes; the diagnosis is in need of a re-evaluation. PTSD is linked to negative emotionality, neuroticism, trait hostility/anger and trait anxiety and harm avoidance, but also to novelty-seeking and self-transcendence.

The range and number of people affected, the environments that induce the disorder like terrorism, wars, refugee movements and prisons, and the subsequent impact on society all make further research necessary.

An important step could be to categorize PTSD in a forthcoming DSM as an identity disorder, relate the diagnosis to the pre-existing identity structure and typology of the patient and classify the various forms and poten-

38 Fuller Torrey, E. Witchdoctors and Psychiatrist\: The Common Roots of Psychotherapy. (1986)

tial therapies accordingly. Normal or even extended trauma processing is different from PTSD. and needs a different treatment approach.

There is a tendency to look at PTSD in a broader context, acknowledging that trauma processing may actually lead to improvements in one's outlook and in many cases, to facilitating potential posttraumatic growth.
As Jakovljevic[39] et al. argue, in a transdisciplinary multiperspective:

> *PTSD is a complex highly disabling and suffering disorder where the past is always present in people haunted by the dread frozen in memory of the traumatic events. However, PTSD also represents an opportunity for psychological and spiritual growth due to the human ability to adapt and thrive despite experiencing adversity and tough times.*

In this chapter a number of new approaches concerning PTSD is mentioned (more about more standard ones in the appendix). However, the variety of therapeutic approaches, the relative small samples used to demonstrate effectiveness, the lack of adequate identification of cases and samples concerning identity (typology), the lack of understanding identity formation and substitute identity effects, the mostly symptomatic approach, all in the context of a market and cost driven medical culture does not signal that there will be a simple, effective way to deal with PTSD any time soon.
The positive is that new avenues are explored, some very promising and that in general there is a more holistic attitude, accepting that disorders are not isolated incidents, but part of a whole life story.

39 Jakovljevic, M , Brajkoviæ L, Jakšiæ N; Posttraumatic stress disorders (PTSD) from different perspectives: a transdisciplinary integrative approach. in Psychiatr. Danub. (2012)

8 Past life trauma

The traumas from one's past are mostly related to situations in early childhood or due to experiences later that have emerged from severe dissociation.

There are, however, also many stoties about past life trauma. These can beidentified as real recollections, or seen as picked up from a collective consciousness, depending on the worldview of the therapist, but for the subject that doesn't matter much. They are real in the sense that they have left traces in one's psyche, can be accessed as memories and just as present life traumas can cause all kind of PTSD complaints.

Not all people experience or even notice these past life phenomena, sometimes they only show up in therapy situations like regression, holistic breath exercises, hypnosis or when using psychoactive substances like psychedelics or prescription drugs. This has led to an attitude among scientific and rational researchers, that they are only the result of such interventions and have no ground in any rational reality. Again, that's a rational perspective and quite common in "modern" psychological and psychiatric circles, but the patient couldn't care less.

In older cultures the notion of past lives, reincarnation, karma and a more or less spiritual "otherworld" has survived the ages and is more part of the therapeutic inventory of shamen, faith healers, medicine men/women and priests. In case of complaints or diseases one will look at the possibility of past life effects and address the problems in that perspective.

The techniques used for present life PTSD interventions are, in general, also valid for past life trauma. This includes relatively modern approaches like EMDR and other polarity treatments, while the use of psychedelic substances has been part of many older cultures in many forms. The use of group phenomena, less common in modern therapy approaches, in traditional initiations, rituals, festivals, pilgrimage, prayers and masses, even orgies and carnavals is part of this. Individual therapy and interventions do exist too, often in the context of magic and witchcraft.

Many of these old intervention approaches are now studied in a modern perspective, like in the work of the Russian biofysicist and molecular biologist Pjotr Garjajev who looked, since 1990, into the effect of suggestions, thoughts, electromagnetic stimulation and on DNA or the epigenetic expression of DNA.[1] have been carrying out cutting-edge but of course dis-

1 Pjotr Garajajev [Peter Gariaev] & Vladimir Poponin, DNA BioComputer Reprogramming, see http://www.rexresearch.com/gajarev/gajarev.htm

puted research into the more esoteric nature of DNA. They simply did not believe that 90% of our DNA is ‘Junk DNA’ and looked at the effects of manipulation of the DNA in various ways like the reprogramming of the DNA codon sequences using modulated laser light. Their research indicated that the supposed junk DNA was no redundant leftover of evolution at all. Linguistic studies revealed that the sequencing of the codons of the non-coding DNA follow the rules of some basic syntax. There is a definite structure and logic in the sequence of these triplets, like some biological language. Research further revealed that the codons actually form words and sentences just like our ordinary human language follows grammar rules.
They did not go as far as stating that “thinking” is a DNA tuning process (as I suspect) but their approach sheds light on phenomena like clairvoyance, intuition, spontaneous and remote acts of healing, self healing, affirmation techniques, unusual light-auras around people, the mind’s influence in magical practice and much more.

9 Conclusion and suggestions

In the preceding chapters many views on what PTSD is, its causes, and what can be done about it have been covered, making this monograph also a good introduction for those who like to be up-to-date on recent developments. It is also a tour of the present PTSD landscape, but it needs to be remarked that even as there are many new therapy paths and research perspectives, no substantial progress has been made in dealing with the disorder at a fundamental level. This while CoVid may force us to deal with larger numbers of traumatized people and even the whole society can be perceived as traumatized by the pandemic.
We are, as far as effective PTSD therapy goes, still at the band-aid level, dealing with symptoms with some success, but no single approach seems to cover the whole spectrum of complaints and lead to recovery for all.

In this monograph, you will find no solution or cure, just propositions like the trauma-immunity perspective and the substitute identity model (SIM) as a different way to look at the complex of factors that cause PTSD. This model helps to understand multiple identity situations and the dissociation mechanism but doesn't provide the relative easy practicality of for instance EMDR. For the moment, until technology develops that identifies the identity matrix of a person, the model can be and is used by experienced therapists, but not at a large scale. To develop such technology is more a matter of software than of hardware sensors, things like face recognition software and modern sensor technology provide adequate datasets, but what is lacking is the insight that we are not a constant self, that many of us have multiple identity states, and that we should differentiate these. Things like polarity analysis and the insights of older face and body recognition traditions like the Chinese Mien Shiang and the Ayurvedic traditions could help here. The fact that EMDR basically is a polarity technique supports this, and that it works with animals indicates that PTSD is not entirely mental.

There are new approaches, like looking at the use of psycho-active substances (notably psychedelics) but the experiments in that direction feel too much clinical, ignoring the lessons early pioneers with such substances learned in the seventies. Angles like looking at the gut-biome, so important in the whole immunity perspective, and the neurotransmitters are promising, but still in an experimental phase. Specifically, the adrenal neurotransmitters/hormones are of interest, as they are related to what is so important in PTSD situations, the fight/freeze/flight mechanism.

The search for bio- or psychomarkers, as a much-needed indication to help PTSD diagnosis, may find relevant pointers in studying neurotransmitters, DNA, and mRNA sequences, but there are maybe more simple and less invasive ways. The Chinese art of face-reading could help and modern face recognition and micro-expression interpretation are developing fast, but things like analyzing the voice of a person or noting the deficiencies in the audiogram might yield interesting results.

The whole idea of trauma-immunity may help to find out why some people have less damage from traumatizing experiences, less PTSD or DID. But this requires studying the way trauma develops at more levels, and for instance looking at how animals deal with traumatic experiences. The whole issue of animal PTSD could be a door to better understanding the basic physiological mechanisms and how trauma works out at deeper, more evolutionary primitive levels of the brain and the neurological structures. The most logical groups to study are primates, domestic animals, and dolphins but why not look at how the amazingly „clever“ octopuses deal with adverse situations.

The question, why not all adverse and traumatizing experiences lead to PTSD (in whatever form) remains unanswered, although it is clear that more understanding of the set and setting of incidents deserves attention. For instance how the group interaction, the culture, and the ritual matrix are important, and here again we could learn from older cultures and how for instance basic military training is less traumatic than real combat, even as the situation might be equally challenging. Dealing with the trauma, for those boot camp situations are traumatic, is obviously embedded in such a way that no long-lasting PTSD-like effects emerge. This is not all psychological, all this may cause biochemical conditions in the body of the participants, that help them to cope with the trauma in a ‘healthy’ way, not leading to PTSD-type complaints later.
This is not only a matter of making it just safe and prepare. It also matters how such challenges are, upon completion, rewarded with honors, insignia, rank but also with rituals, parties and group festivities. The lack of meaning (of the war effort or of individual sacrifices) is often cited as one of the factors in PTSD in veterans.

It is clear that set and setting are part of what influences the outcome of a potentially traumatizing experience, and this includes not only PTSD but also a more ‘normal’ dealing with the adversity or challenge. A combina-

Where therapy could go

Following the concept of multiple identity conflicts as the root of complex PTSD-problems, here is a suggestion as to how therapy could develop. There are stages in the process and at present the technology and tools for each stage need development:

- finding out what substitute identities a person has developed (at present an intuitive guess, new tools and sensors could help here)
- access to the memories related to specific substitute identities and the traumatizing event that caused them
- to allow expressing the original (normal) reactions (emotions, body acts) in a safe environment, replacing the thwarted and self-directed expressions (symptoms of the disorder).

These stages and especially the last one requires a safe environment, we don't want for instance veterans to start emptying their guns on innocents or start kicking and attacking the therapist. And yet, those were the normal reactions aimed a the perpetrator or fitting the situation at the time, but impossible then. So can we create safe environments where such expressions is possible or at least experienced as real. New technology like virtual reality may offer solutions here, with specific drugs (psycho-active hallucinogens) to increase the immersion and sense of reality. Such environments and experiments to validate the suggested therapy model will slowly emerge as the technology and legality improves.

tion of factors seems to be at work here and that we could maybe learn to include them also in situations of 'real' trauma, in prevention and preparation, but also in the aftercare and for those who are not actually in the combat zone or dangerous situation, but in the direct environment. Many veterans, suffering from PTSD, were not in the actual combat situation, but sympathized with the victims or turned guilt-feelings towards themselves.

Concerning prenatal, perinatal (birth) trauma, this is a field where we could also learn how trauma-immunity develops. Birth trauma is a subject covered by Stanislav Grof at length, but this is not part of the regular PTSD approach (yet). But it deserves attention, a birth can be seen as the first serious trauma training for the baby. What makes some babies emerge without lasting trauma effects, while others suffer all their lives. There seems to be a mechanism, involving adrenal hormones (like oxytocin) to prepare mother and child for the experience but making sure that the child (and mother) deals with the traumatic circumstances in a normal way, not result-

ing in lasting birth trauma. What is the role of these and other neurotransmitters in the birth process, what effects have the pheromones or the lack of pheromones, the presence of midwives, the father, the place of birth, the transfer of the vaginal and other fluids (containing the mother's immune biome), etc.?
Here the genetics and health of the mother are important, but culture plays a role too, just think about the growing numbers of C-sections and the use of anesthetics and how the general cultural context concerning birthing is a factor. These birth traumas, which obviously indicates something didn't work well, do occur, but more so in our modern society with all its medical ritual and treatments. A „healthy"birth probably better prepares the baby for later traumatic experiences, which will always happen. The baby, child, or adult will have some experience to deal with them, without reverting to the extreme dissociation that will lead to substitute identity formation and potentially PTSD-type identity conflicts later in life. Here the millennials are an interesting group to study, as some claim they lack initiative, tenacity because of the lack of a proper birthing challenge. Maybe less industrialization of pregnancy and birth may be the way to go.

This perspective, looking at the wider context of what caused PTSD, deserves more attention and maybe nasty questions need to be asked. There are no studies about the level of intoxication (in action situations) of PTSD victims, even as it is well known that in the field drugs were everywhere, some even provided by the army for medical or operational purposes. This is not new, the Viking Berserkers were using psychoactive substances in their battle frenzy. More attention to expectations, preparation, the cultural context, music, the ritualistic set and setting, as this at present is not part of the regular protocols.

A special issue in this is the spiritual angle, not all trauma leads to negative outcomes, there is Posttraumatic Growth too. The notion of rebirth (or dying to oneself) is not only part of many indigenous initiation rituals, but quite accepted in modern psychotherapy. Does this require a new perspective on what PTSD really is, a disease or one of life's deeper lessons?

We hope this study will help in better understanding what PTSD is and in developing effective therapy forms.

Appendix: existing PTSD Therapy options

In this appendix a selection of the current PTSD therapy approaches. There are, also because of the lack of a single generally accepted therapy protocol, apart from the EBT (experience based and approved) ones, scores of other therapies, with or without supporting medication, concentrating on the cognitive or the somatic and everything in between. In this appendix a selection of more or less accepted therapy forms is given.
For the moment, hesitation to follow institutional advice, practical considerations like the cost of treatment and also the lack of a clear and deep understanding of the root mechanisms have led to a multitude of experiments with therapies, specific for PTSD or borrowed from adjacent fields. Some work, in specific situations, for specific people, but it is hard to predict the results and some might even have negative effects, while the placebo effect cannot be ignored. The field is divided. As an example, some therapies center on reliving the actual trauma and digging into the past, others refrain from self-disclosure. To pick the right tree in the forest of PTSD therapies is, as yet, a matter of trial and error, and as one should hope, the domain of experienced and critical specialists.

There is nightmare resolution therapy and present-centered therapy, group therapy, sleep therapy, psychodynamic therapy, hypnotherapy, trauma desensitization and beyond that alternative therapies like bio-energetics, mindfulness-based stress reduction, regression, breath-work, acupuncture, and including diets, injecting or snorting oxytocine, smoking marihuana, relaxation training, biofeedback, transcranial magnetic stimulation (Colin Holbrook), neurofeedback, systemic constellation, even animal intervention/interaction, emotional expression (artistic, musical, storytelling) meditation, all kinds of exposure therapy like narrative exposure therapy, imaginal exposure therapy, virtual reality exposure therapy and much more, even playing Tetris computer games has been suggested as a treatment (Emily Holmes). Most approaches are claiming some success, and in individual cases could be preferred over the standard methods but are not (yet) listed as evidence based (and paid for) by insurers, the VA, etc.
There are many experiments and even a willingness to look beyond existing therapy models, like into the effects of psychedelics, as the costs and risks of PTSD (like in the quite common substance addiction, in suicide, but also in extreme aggression and even terrorism) are substantial. Treatment can be symptomatic, helping people to cope with the condition, but it would be

better if the root causes, like the trapped emotions related to the trauma, could be addressed and released effectively.

Considering the various options for treatment, let's start with what the VA sees as one of the proven (EBT) ways to deal with PTSD, together with EMDR.

CBT: Cognitive Behavioral Therapy

Cognitive Therapy (CT), or Cognitive Behavior Therapy (CBT) was pioneered by Aaron T. Beck[1] in the 1960s but emerged in stages from work by Eysenk, Wolpe, and Skinner and even earlier by Ellis. It addresses the (often irrational) thoughts and associations related to an incident. Steven Hayes developed it further in ACT (acceptance and commitment therapy).

Beck found that depressed patients experienced more or less automatic streams of negative thoughts that seemed to arise spontaneously. These 'automatic thoughts' fell into three categories. The patients had negative ideas about themselves, the world and/or the future. By helping patients identify and evaluate these automatic thoughts, he found patients were able to think more realistically, feel better emotionally and behave more functionally. The changes in underlying beliefs about themselves, their world and other people because of the therapy resulted in long-lasting change.

Cognitive behavior therapy is based on the cognitive model: the way we perceive situations and stimuli influences how we feel emotionally, and what we then think of the situation; in distress this perspective can be inaccurate and unrealistic. This approach, however, kind of ignores the somatoform (in the body) anchoring of experiences and how these influence behavior and symptoms in an often unconscious, and not cognitive way.

Cognitive behavior therapy helps people identify their distressing thoughts and evaluate how realistic the thoughts are. Then they learn to change their distorted thinking. The emphasis is consistently on solving problems and initiating behavioral changes in an approach optimized for specific disorders and the individual patient, aiming at a sound therapeutic relationship, setting goals, planning treatment, and selecting interventions. An important part of every therapy session is helping patients respond to inaccurate or unhelpful ideas. The basic question to ask when a patient is reporting a distressing situation, emotion, or dysfunctional be-

1 Beck, Aaron T. Depression: Causes and Treatment 1967. Cognitive Therapy and the Emotional Disorders (1976)

havior is: “What is going through your mind right now?” in order to help them gain more adaptive and accurate perspectives, and examine the validity and usefulness of their thoughts. The CBT approach set clear goals and monitors these evaluating clients’ symptoms, measuring the occurrence of specific target behaviors and assessing progress toward specific goals, also using symptom checklists and action plans. An “action plan”, collaboratively designed with their therapist, usually includes reading “therapy notes” of the most important things they learned in session and engaging in specific activities that are linked to the accomplishment of their goals. This means homework for patients to implement solutions to problems or to make changes in their thinking and actions. This process gets clients actively involved in their own treatment; they begin to recognize that the way to get better is to make small changes in how they think and what they do every day.

Cognitive behavioral treatments typically include a number of components, including psycho-education, anxiety management, exposure, and cognitive restructuring. CBT can thus include:

- Exposure therapy to help people face and control their fear. It gradually exposes them to the trauma they experienced in a safe way. It uses imagining, writing, or visiting the place where the event happened, a modern form is using virtual reality for increased immersion into the situation.
- Cognitive restructuring to help people make sense of the bad memories, change their perspective. Sometimes people remember the event differently than how it happened. They may feel guilt or shame about something that is not their fault.
- Talk therapy, allowing patient to express their feelings, explain to them how trauma processing works, what phases and symptoms to expects, help people identify and deal with guilt, shame, flashback, recurring memories and other feelings, but also tell them about relaxation and anger-control methods, provide tips for lifestyle changes, to improve sleep, change a diet, and exercise habits.

Often the choice for a therapy is more based on the symptoms than on the root causes. This may (temporarily) be an effective way to alleviate the symptoms, like depression, flashbacks, sleeplessness (insomnia), but will not deal with the root cause. The success, just as in general psychotherapy, is often the result of an effective patient-therapist relation than of the methodology used.

Online therapy

CBT has been studied and demonstrated to be effective in treating a wide variety of disorders. It is possible to use online support and supervision to complement the treatment, this is called guided internet-based cognitive behavior therapy (ICBT). These day, with CoVid lockdowns, the online therapy forms, either by phone or full video and with apps like Zoom even in group settings, have developed in a serious alternative for physical presence. There are limitations, the bandwidth of interaction is limited, but the advantages are clear, and it makes therapy less costly, therefore accessible for more people, there is no need for transport etc. The whole medical profession is using online access more and more, and using modern sensor and testing technology, even complex diagnostic procedures can now be done online. The equipment used in intensive care hospitals setups is moving towards the home, smaller, more efficient and cheaper and offering 24/7 monitoring via specialized services. Tools like voice analysis, video processing of facial expressions, monitoring reaction patterns can be used online and in real time. This all will have serious impact on the whole hospital, laboratory and institutional medical establishment.

EMDR, a polarity tool

Eye Movement Desensitization Reprocessing therapy (EMDR) is a popular and effective tool (it comes from a much wider tool set in NLP). It is an intervention that allows an individual to reset and reprocess memories and events and might be a key to understanding PTSD as a mind-body dissociation. It is developed by Francine Shapiro, is approved (in DoD/VA guidelines and by the US Substance Abuse and Mental Health Services Administration (SAMHSA)) and can be combined with cognitive (usually verbal) therapy.

It is a controversial because the mechanisms addressed are not well understood but brings usually good results. Reprocessing means accessing the relevant memory (in the specific substitute identity/trauma state associated with it) and uses dual awareness with bilateral stimulation (eye/ear) to kind of shock and rock the memory. Understanding this as cross-hemispheric integration of emotional and cognitive imprints that persist after traumatic events is a perspective that has roots in the ayurvedic tradition, where body polarity is taken far more serious than in the Western approach, where usually only brain hemispheric differences are acknowledged. The left kidney, lung, adrenal, etc. are different from the left one, a very general way to look at is to see the left as the female (mother) part, versus the male (father) on the right side. Now, in a way through the back

door, EMDR uses polarity and notably sensory overload as a tool to unhinge the trauma memories..

In the EMDR and similar (EFT) forms of therapy patients recall and describe their trauma memories, while the therapist makes movements with their finger or an object in front of the patients face, asking the patient to hold their head still, but following the movement with their eyes (and synchronous with a sound signal). By recalling images, thoughts, emotions and body sensations one is suggested and even seduced to go back to the traumatic moments and to move through the experiences that aren't resolved. It creates like an overload, the polarity switching between hemispheres (left/right) is too much for the mind to handle; this affects the memory impact, so desensitization can be the result with a reset of the memories and beliefs underlying an identity. The going back to the trauma state, feeling the impact is an essential part of EMDR, in the context of substitute identity formation this means switching to an identity state related to the trauma, for not always can one remember the actual events. This is helping to reprogram and desensitize the traumatic nature of these memories. The technique then 'shakes loose' the connection, is one explanation.

It looks like a kind of exposure therapy, going back to the memories and the trauma related identity state, but the EMDR techniques are then used to integrate, at a deeper 'embodied' cognitive level. The non-organized memories, assumed to cause the symptoms, are transformed and stored in the more organized way like normal memories. There are phases of treatment in EMDR, starting with skills-building and resourcing in preparation for the processing phases with bilateral stimulation. This approach incorporates imaginal and thus some bodily exposure to traumatic memories, and this might be why the therapy works. EMDR is recommended for individuals who have developmental or complex trauma, but also has evidence-based protocols for single incident trauma.
A criticism of EMDR, similar to other NLP approaches, is that it is very effective for symptomatic treatment, but not always healing at the deeper levels. The overload may shake up or even distort the identity related to the trauma.
Using EMDR in connection with other approaches, like psychedelics, may be dangerous. EMDR seems to shake up specific identity states, and when those are the ones causing PTSD that may be beneficial, but in a psychedelic state all identities are kind of open to manipulation, and using EMDR might shake up all of them, with negative effects. One could even consider

the possibility, that EMDR-like situations or visual effects in the trip are the cause of lasting 'bad trip' effects that are observed in some people. EMDR is already more body oriented than mere talk therapy and assumes some kind of interaction between information processing and storage and perception. There are other similar therapy approaches (like EFT, Emotional Freedom Techniques) and PSYCH-K honoring how our body stores and 'memorizes' trauma.

Exposure therapies

The VA recommends **Prolonged Exposure** therapy to have the individual talk through the traumatic experiences over and over until the event is no longer activating. There are many ways to go back to the traumatic experience, these days even virtual reality can be used, and body-mind techniques, hypnosis, breath-work, etc. It doesn't really matter if the memory is about what really happened, or a projection, it is the subjective experience that matters. Trauma narratives can be done verbally, or with images or other forms of art, the underlying personal mythology and how it is damaged may then show up. Also, Cognitive Trauma Processing can sometimes include a trauma narrative. An evidence-based practice for children and adolescents is **Trauma Focussed Cognitive Behavioral Therapy**, which uses a trauma narrative to expose the individual to their trauma, in order to slowly make it part of one's 'normal' history.

The exposure, bringing back the memories and the emotions associated with them can be done all at once, called "flooding," or gradually to build up tolerance, called "desensitization".

These exposure therapies, reliving the memories, are mostly recommended for individuals who have experienced a single incident, or perhaps experienced several incidents but don't have any other mental health complications. Not in all cases exposure therapy works well, sometimes it aggravates the symptoms.

For situations, where there is no accessible material as the memories are less clear or adapted to the situation and one's narrative, and this might be the case when the experience led to the formation of a substitute identity, more forceful approaches might be necessary. Using psychedelics or regression hypnotherapy may help to access those deeper layers. Often a specific trauma situation recurs (is triggered) and those later incidents can be accessed, then a "peeling off" going backward may work, trying to find the root experience. These may even be a birth trauma or some situation the foetus experienced in the womb, like an abortion attempt or the dying of a twin.

The potentially traumatic impact of birth is well known. Why does a 'normal' birth not lead to traumatic stress complaints later in life, what is the mechanism that helps the baby survive without this burden? Is the mechanism comparable to what occurs in initiation rites in older cultures or what happens in boot-camp situations?
No doubt the answers to such questions have a psychological but also a biochemical component, and that might also provide some answers. In the birth situation we can trace what neurotransmitters are at play, in initiation rites or during boot camp challenges this is not easy to monitor.

Risk of exposure, trauma reliving

One of the issues concerning trauma therapy is whether it is necessary to go back to the traumatizing event, by whatever technique. Some alternative therapeutic approaches, like NLP (Neuro-linguistic programming) and PSYCH-K advise against exposure therapy. They ask; can't we deal with the symptoms alone, without having to bring back those awful moments, opening the subconscious memories? Some therapy approaches claim this elimination of the recall is not only possible, but it's a better way to deal with PTSD. The idea is that what we created (as negative emotions) we can also dis-create and there is no need for what is called 'Self-Disclosure', going back to the old traumatic experiences.
This is of course a strictly symptomatic approach, and the proponents claim that for some people the other approach, exposure therapy, talking about our problems, reliving them again and again can often make things worse and has no therapeutic value.
There is a tendency to try whatever, but this is not always without danger. The notion, that not all therapy is beneficial is expressed well by Bessel van der Kolk[2] concerning exposure:

„When people develop PTSD, the replaying of the trauma leads to sensitization: With every replay of the trauma there is an increasing level of distress. In those individuals, the traumatic event, which started out as a social and interpersonal process, develops secondary biological consequences that are hard to reverse once they become entrenched."

This may not be valid for all people, there is much variation in how this sensitization happens and is stored in mind and body, but the warning is important. This also has to do with the difference between fixing and heal-

2 Bessel van der Kolk; The Body Keeps the Score: Brain, Mind, and Body in the Healing of Trauma, 2014 also Robert Scaer: The Body Bears the Burden, quoting Bessel van Der Kolk (2014)

ing, or symptomatic versus fundamental cures. Fixing may make one's life easier, but the deeper damage may show up at a later stage.

Limited Veterans Administration perspective

Acknowledging the good work and intentions of the VA and their support for new and alternative therapies, their approach is criticized as being too limited and strict. Even as their recommended therapies are effective, they are limited, don't work for everybody, finding the right therapy is often guesswork, trial and error. For instance group treatment for PTSD is not recognized as evidence-based by the VA. A more open approach is suggested, validating the experience of many with groups. We have to look at a broader range than just the approved approaches and appreciate the bonding and social network effects of groups. When we want to achieve change or healing, empowering the patient in some way is necessary, not only by the therapist but by a group of „buddies".

Complex trauma therapy

Complex PTSD is similar to complex trauma. Courtois[3] and Ford's (2013) relationship model based on the prototypes of combat, disaster, and rape is recognized as a standard treatment for the treatment of complex trauma. Treatment guidelines recently compiled by the Complex Trauma Task Force (Cloitre[4] et al.) outline broadly a three phase approach where the first phase of treatment involves creating and ensuring safety, symptom reduction, and increasing psychosocial competencies. Phase two focuses on processing aspects of the unresolved trauma experience and phase three centers around consolidating treatment gains and enhancing connection with other aspects of the individual's life.

Judith Herman described complex PTSD as typically resulting from exposure to repeated or prolonged instances or multiple forms of interpersonal trauma, often occurring under circumstances where escape is not possible due to physical, psychological, maturational, family or environmental, or social constraints. The core symptoms of (complex) PTSD are re-experiencing, avoidance/numbing, and hyper-arousal in conjunction with five broad domains of disturbed self-regulatory capacities: a) emotion-regulation difficulties, b) disturbances in relational capacities, c) alterations in

3 Courtois, C. A., & Ford, J. D. Treatment of Complex Trauma: A Sequenced, Relationship-Based Approach, (2013).

4 Cloitre, Marylène, Garvert, D. W., Weiss, B., Carlson, E. B., & Bryant, R. A. Distinguishing PTSD, Complex PTSD, and Borderline Personality Disorder: A latent class analysis. European Journal of Psychotraumatology, (2014). https://doi.org/10.3402/ejpt.v5.25097

attention and consciousness, d) adversely affected belief systems, and e) somatic distress or disorganization.

The symptomology of complex PTSD revolves around the loss of emotional, psychological, social, and cognitive capacities that were either halted and failed to develop properly or deteriorated due to exposure to complex trauma.[5]

There is a high incidence of complex childhood trauma and posttraumatic stress disorder (PTSD) in individuals with schizophrenia/psychosis.

Sleep and nightmare therapy

Among the most common symptoms of PTSD are sleep problems; sleeplessness, nightmares, with resulting deterioration of physical wellness, the tendency to use escapes like alcohol or drugs. While sleep problems are symptoms of PTSD, they tend to become independent problems over time, warranting sleep-focused assessment and treatment.

If the person is unable to adequately process the memories of the traumatic experience, it later creates a log jam in the REM processing of day to day emotional memories (where emotional memories are replayed in metaphorical dream sequences and so have their emotional content neutralized so that they can be stored as narrative memories) and this causes a build-up of unresolved emotional memories stored in the hippocampus. Over a period of weeks the pressure to process builds, and if the trauma is not cleared the individual will start to show the symptoms of PTSD.

The preferred treatment approach for insomnia is cognitive behavioral treatment for insomnia (CBT-I), a series of strategies focused on stimulus control, sleep restriction, de-arousal techniques, sleep hygiene, and cognitive restructuring. The NLP Rewind method, which can be useful in treating trauma and PTSD, mimics the workings of REM. Once the traumatic memory is processed the hippocampus can go back to processing the day to day unresolved emotional memories in REM as normal and the individual can regain emotional balance and normal Pre-frontal Cortex functioning. The hippocampus is also key in the processing of all memory; people who suffer from trauma have a hippocampus filled with backed up emotionally unresolved memories so are less capable of processing new memory.

Planned dream interventions, imagery rehearsal therapy

It is estimated that at least 90% of individuals who have a diagnosis of PTSD report nightmares related to the traumatic experience, with a frequency than can be up to 6 nights a week, and may continue for decades. Sleep laboratory studies of individuals with PTSD consistently show frag-

5 Vandekar, Lillie; Trauma Therapy in Treatment of Psychosis (2019)

mented but increased Rapid Eye Movement (REM) sleep. A psychotherapeutic (CBT) approach to treating nightmares is imagery rehearsal therapy (IR), which is also referred to as nightmare re-scripting because it entails choosing a recurrent nightmare and finding a way to change the content in a way that makes it less intense or distressing. The differences in sleep amongst those with PTSD related nightmares (compared with those who do not have PTSD) are tangible, they report decreased total sleep time, increased number and duration of nocturnal awakenings, decreased slow wave sleep and increased periodic leg movements. Fragmented REM sleep could in fact be the core of PTSD.

Learning to stop nightmares using reframing or rerouting the dream content has been reported as an effective way to deal with the negative impact. The approach, also termed Planned Dream Intervention by Dr. Beverly Dexter[6] and successfully used with larger groups of British war veterans will help individuals who do not remember dream content, but wake up often, despite otherwise good health. The core concept of this approach is that dream content can be influenced by conscious thoughts and imagery. If the individual learns Planned Dream Intervention they usually experience an immediate release from the nightmares and start sleeping peacefully through the night.

The concept of rehearsing a desired ending for a nightmare is mentioned in works by Marks and Barry Krakow who have developed this approach further into Image(ry) Rehearsal Therapy with clinical trials.

Body work, yoga, bio-energetics, breathwork

Stress can develop in a mind, but the body is part of the process. Understanding the body-mind or even better the body-emotion-mind relation is essential in treating PTSD. Some would add spirit to this triad. Identity involves all realms, the ways we act, feel and think (and pray) are based on who we are, in a total perspective. In this broad perspective, our identity is not the result of the biological situation, it is the force that shapes our brains (and the way we use them), emotions and body. Our state of being and eventually our traits and disorders are thus, in this perspective, not the result of chance and biochemical processes, but originate in the identity and identity conflicts. Our identity, as expressed in our body, our consciousness and our emotions then shape our lives, not so much the rational mind. We mostly make decisions based on emotions and intuition, as people like Nobelist Daniel Kahneman made clear.

6 Dexter, Beverly, No More Nigtmares: How to Use Planned Dream Intervention to End Nightmares (2008)

Those emotions and the memories of them, especially the ones related to trauma, are stored, our body is a repository of a different kind of memories. Body focus, somatic interaction (apart from sedating pills), is mostly missing in the academic approaches concerning PTSD therapy, where cognitive therapy is the dominant approach, even as the VA accepts EMDR, much more of a body mind technique, as an effective approach. But if we see, as is suggested before, the symptoms of PTSD as thwarted (self-directed and self-damaging) expressions of the normal reactions to the original trauma situation, those reactions would in many cases be physical. Expressing anger, fight or flight, the normal sympathetic reactions that were impossible at the time of the trauma, are physical and the parasympathetic effects on digestion and sleep can't be ignored either.

The body-mind complex and how they interact has been studied and therapy models have been developed (somewhat less prominent than Freud's and Jung's cognitive approach) by people like Wilhelm Reich, Alexander Lowen, Peter Levine and Jack Painter, among many others. Some inspiration comes from Eastern sources, other approaches were more or less independently developed.

Outside of academia and the official medical world there has been and is a large following concerning body oriented or body-mind oriented approaches. Many of them, even as they are seen as alternative, have been tried and are deemed effective by those involved for PTSD. We can mention meditation and body concentration, like yoga, bio-energetics, body-work, massage therapy, martial arts training, physical exercises of all kinds, chakra healing; the number of body oriented therapy and health methods is amazing. The beneficial effect of concentrating on bodily functions and positions like in yoga has been known for thousands of years. There are many techniques to meditate, to calm the mind (like mindfulness training) and therefore the body. Many of those are ways to dissociate in a controlled way, stepping away from the stress and pressure of daily life. Mind-body dissociation is at the root of many disorders. To restore a normal mind-body (association) interaction is important, and many approaches emphasize this "*mens sana in corpore sano*".

Controlling the breathing can bring a sense of calm, while taking a few deep breaths can lower rage. Those effects and the calming results of meditation, mindfulness etc. have been shown in EEG-scans and are generally accepted as beneficial to a healthy and balanced state of mind, something PTSD therapy also tries to achieve. The effect of breath control is, thanks to modern scanning and technology, a phenomenon that can be related to specific brain regions and even specific brain cells. Breathwork, especially as used in regression and therapy as in holotropic breath-work, can also be

part of an integrative PTSD therapy approach and as a relaxation tool to fight panic attacks.

Because the therapies recommended by the VA are not available to everyone, because of affordability or because of disbelief in their effectiveness, many therapies from the general repertoire of counseling, transpersonal, artistic creativity stimulation, psychodrama, bodywork, mind-body therapy, mind-body dissociation therapy, chakra healing. systemic (family-)constellations are tried and are often successful), much of course depending on the therapist. Progressive Muscle Relaxation, Storytelling, working with animals (notably horses), there is little in the arsenal of modern psychology that has not been tried and might wordk, but most lack the research that would make it acceptable as evidence based method.

The notion that trauma processing is not only a cognitive, but also a somatic process is well recognized and researched, but somatic healing of trauma is less accepted. The effects of the many beneficial case-histories, where new body experiences, returning the body by physical exercises, etc. etc. are, however, not showing up in the recommendations of the 'regular' medicinal world or seen as proven effective by the authorities or insurance companies. Yet most PTSD victims will, at some time, combine a kind of body oriented therapy or just physical exercise with other therapies and feel the beneficial result of it.

Physical environment, diet, exercise

Our identity adapts to the environment and as healing in essence means that our original genetic and epigenetic identity is restored, environmental factor play a role in therapy. This is a complex field, for to what extent does our living situation, our work, our clothing, sports, food, communication possibilities, exposure to environmental hazards etc. play a role in the healing process? It's obvious that substandard conditions should be avoided, living in slums, eating bad, being cold, dirty etc. But to what extend is healing affected by special conditions, a nice environment, absence of stress etc. etc.? Or just the opposite, exposure to extreme conditions like deep freezing, whole body cryotherapy? This is not deeply researched, but we all have some idea of what a beneficial and healthy situation should be.

Classic psychotherapy

There are of course many therapy forms that can be used to help with PTSD. From the Freudian and Jungian psychoanalytic approach with a myriad of sub-schools to the Rodgerian client-centered therapy to the Gestalt approach of Perls and Assagioli's psychosynthesis. There are

many adaptations and improvements, all kind of psychotherapeutic schools have developed and many therapist combine what they feel the most appropriate for their client in an eclectic approach.

Accelerated Resolution Therapy

Accelerated Resolution Therapy or ART combines parts of cognitive therapy and uses solution-focused emotional control to minimize the effect of traumatic life events. The therapy IncludesEMDR (Eye Movement Desensitization and Reprocessing), voluntary memory replacement, guided imagery, and hypnotherapy, ART works for individuals with PTSD, depression, and emotional problems.

Alternative approaches, NLP

There are and always have been people willing to try something new, different, something encountered by accident or borrowed from other cultures. Healing by drumming, dancing, bathing, why not try something different from drugs and talk-therapy? When observed in indigenous or shamanic cultures these healing practices were often 'scientifically' deemed primitive, irrespective of the effectiveness or results.

Often these now rediscovered approaches are initially sees as quasi-science, unproven and even forbidden by the regular medical world, but find their way anyway like homeopathy, radionics, kinesiology, music therapy, biome probiotics, adrenal fatigue, even hypnosis and now, after a long time banishment, psychedelic therapy and microdosing.

Neuro Linguistic Programming is an approach created or better discovered in the late 70's by Richard Bandler and John Grinder[7]. Their position was extremely pragmatic, the found out some techniques worked well in releasing hidden problems and getting rid of symptoms. They used observations of what famous therapists like Milton H. Erickson and Virginia Satir actually did, the modeled it, like turning the interventions into a kind of expert-systems. The basis of NLP is the subjective experience, it studies the structure of those experiences to see if certain programs can be identified as effective in rewiring or reprogramming the brain (hence neuro) and can be activated by certain words (linguistic). They found out, that indeed there were effective ways to reprogram the subjective interpretations of the reality, and these could be anchored to achieve behavioral changes. They were, in a way, using the plasticity of the brain to remove or change certain circuits, but it is not totally clear how this actually works. NPL and EMDR is one of the more successful tools of it, is an approach with often quick and

7 Richard Bandler and John Grinder; Frogs into Princes. 1979

effective results, there is a large following, many therapist use it, and now by tha VA broadly accepted as evidence based. Criticisms are that it is basically symptomatic treatment only, and it seems that only a small portion of the clients is indeed fundamentally healed, the majority however got rid of the symptoms and in PTSD this can be very helpful to regain a normal life.

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