

The Science of Trauma and Recovery,
written for
Survivors of Sexual Assault

by
Boyd M. Patterson, Jr. M.A., J.D.

The first thing you need to know:

You are not alone.

Every survivor of sexual violence has had their most personal boundaries violated. Their former self-image and sense of security, destroyed.

You are not alone.

Survivors of sexual violence commonly experience sudden, intrusive memories that disrupt their daily life. Flooding emotions that wash them out of the present, back into their painful past. Desperate, often self-destructive, urges to dissociate from the reality of their trauma, no matter what the cost of escape.

You are not alone.

At least one out of six women in the United States will suffer some form of sexual assault. In a country of almost 300 million, this means that literally millions of women feel (or will feel) the same feelings you do. Accordingly:

You are not alone.

As a former counselor and current prosecutor, I have dealt with several survivors of sexual violence and have seen first-hand its aftermath. Even when the perpetrator gets sent to prison for decades, the survivor never regains the life that was taken from her. The survivor's life story will always include the experience of sexual violence and,

unfortunately, the overwhelming magnitude of the violation often prevents the survivor from processing through it completely. Consequently, the flash-floods of unresolved feelings come unchecked, suddenly activated by subtle environmental triggers reminiscent of the assault. Truly, the experience of sexual assault lasts far longer than the criminal act.

Yet, those disruptive thoughts and feelings have a biological source and a cellular-level purpose to keep you alive, a mission so deeply imbedded within your being that it supersedes all rationality. Accordingly, intense survival-related feelings may flare up during seemingly non-threatening situations, often causing survivors to question their very sanity. Survivors wonder why they cannot just “think through” their overwhelming feelings of distress. They often erroneously conclude that their coping skills must be poor. Finally, their lack of understanding about the biological aspect of survival-related feelings exacerbates the viciousness of a cycle already brutal. Enough.

Numerous existing therapies address the Post-Traumatic Stress Disorder (PTSD) issues specific to sexual violence. Cognitive-behavioral therapeutic models have measurably proven their effectiveness. The approach outlined in this publication is in no way intended to replace any therapeutic method. This approach is in no way intended for all survivors. This approach provides just one more angle that easily fits into a survivor’s treatment plan to further help them address an issue that has long affected them. This approach incorporates the power of therapeutic experience and begins with a biology lesson.

OUR BIOLOGICAL CORE

Astrophysics. Shakespeare’s writings. Modern opera. Penicillin. Democracy. Mankind’s capacity for abstract thought has fueled its ascendancy throughout history. The cerebral cortex constitutes the part of our brain involved in all such high-level intellectual activity. Developmentally, areas of the cortex continue growing and changing structure for decades after we are born. It serves as the outermost layer of brain tissue and appears as a group of wrinkles and ridges on the brain surface. However, as limitless as our creative potential may be within supportive circumstances, the core of the human organism remains basic, with a single, fundamental goal: the survival of our genes.

The limbic system dwells in a deeper, more primitive area of your brain. Developing far earlier than the brain's higher functioning aspects, some structures of your limbic system were completely formed within your first 50 days in your mother's womb. The amygdala, hippocampus and hypothalamus are three components of the limbic system that deal with survival and memory. They are parts of your brain that automatically, instantly and fully respond to danger. Any human being exposed to a life-threatening situation automatically, instantly and fully reacts with their deepest, hard-wired reactions, which biologically emanate from the limbic system. When we touch a hot stove, we do not need to ponder our options of response. When the Nazis crossed the border, philosophers stopped debating the meaning of life and started scrounging for bread. If your primal ancestors (whose physical/mental/emotional structures you share today) looked over their shoulders and saw a tiger bounding toward them, they did not need to form an action committee. When any organism is threatened, it automatically reacts to survive. The resulting electrochemical signals that automatically fire in your brain from exposure to a threatening situation jolt you to react immediately. Rational decision making processes get bypassed, a reaction you share with every other person on the planet. The 40,000-year evolution of this survival-related quality also makes sense when you consider how quickly organisms without it get weeded out of the gene pool.

Additionally, our capacity for learning new information vastly improves the chances that our genes will survive, a capacity which also has a biological basis. As the most advanced organisms on the entire planet, our brains contain approximately 100 billion cells, called **neurons**. Every one of our life-experiences causes certain patterns of these neurons to fire. New experiences cause new patterns of neurons to fire. Intense experiences instantly create lasting neural patterns.

Repeated exposure to particular experiences cause the neurons in a particular pattern to fire more frequently, strengthening the connections between them. Scientists believe that the neurons connected by intense or repeated experience undergo metabolic change, with their connecting structures actually growing closer together. Simply put, *the neurons that fire together wire together*. Overall, the billions of neurons in your brain can form trillions of these connections, which are the physical, biochemical structures that result from your many experiences. Scientists have named such biochemical

structures engrams. Engrams physically represent the memory traces created from learning. Experiences that threaten the survival of your genes create extremely powerful neural connections and, thankfully, your limbic system encodes the aspects of threatening situations deeply into your memory. In fact, traumatic experiences forge some of the strongest neural networks of all.

THE BIOCHEMISTRY OF TRAUMA

A traumatic situation involving “fight, flee or freeze” circumstances activates the brain structure called the amygdala. The amygdala subsequently causes the release of epinephrine and cortisol, a hormonal combination which focuses your attention, increases your pain threshold and dumps sugar into your blood for instant energy. Significantly, the amygdala and hippocampus also create indelible memories from life-threatening experiences.

Specifically, the amygdala and the hippocampus neurologically associate environmental elements of the life-threatening experience with the powerful emotions designed to keep you alive. If your assault happened in a small room, or when it was raining, or by a perpetrator with a tattoo, those (and all other) aspects of the life-threatening experience get neurologically linked with the primal survival-related feelings of rage, fear and/or numbing. This happens automatically, without the assistance or permission of your conscious wishes to the contrary. Later, if you find yourself in an environment that resembles in any way that of the assault, those deep feelings become active again, also triggered without the assistance or permission of your conscious wishes to the contrary. As you know, the sudden resurfacing of such feelings can cause distress and disrupt your life.

However, consider how this deep, biologically-based learning from traumatic experience evolved over time. One of your distant ancestors might have been picking blackberries when he got ambushed by a grizzly bear. If he survives, he will have a neurological connection between the perception of blackberries (via sight, smell, taste, memory, etc.) and his powerful survival emotions. He may never see another bear, but his physiological state will instinctively gear up as if one is about to charge, when he sees a blackberry bush. The neurological pattern has automatically become imbedded into his brain, just as your own life-threatening experience has been. Accordingly, even in

situations that have absolutely no discernable threat, you too may find yourself inexplicably geared up to fight, flee or freeze. Not understanding the biological basis of this instinctive response causes many assault survivors to feel confused, helpless and even ashamed.

POST-TRAUMATIC STRESS DISORDER (PTSD)

Survivors of combat situations, natural disasters, horrific car crashes and, of course, sexual assaults all are at risk of developing PTSD. Experiencing an intentionally violent act by another human being increases the psychological trauma of that experience. Although the reasons are not completely clear, some people possess a predisposition for developing PTSD.

Clearly, experiencing sexual violence activated the primal sections of your brain tasked solely with keeping you alive. Getting blindsided at such a basic level makes your post-assault thinking more immediate, even perhaps animalistic. Your concerns become less about thriving and more about merely surviving. Your current feelings of insecurity pertain more to others' perceptions of you. You may fear that you seem less appealing to a mate. As earlier discussed, this anxious emotional state evolved from the harsh realities of the tribal, hunter-gatherer societies of your ancestors, whose fundamental psychological makeup you share. As primitive as all this may seem, understanding your post-assault mindset in the evolutionary, survival-related context from which it developed, explains all of your seemingly crazy feelings, extreme thoughts and impulsive actions.

Your experience of sexual assault created those survival-related biochemical constructs that have lasted long after the assault. Again, the trauma has forged a neural connection between certain triggering aspects of the environment and your core brain functions that involve self-survival. So: what if that same self-survival engram, which so often disrupts your conscious awareness, could work instead for your benefit?

MODIFYING SELF-SURVIVAL INTO SELF-STRENGTHENING

Fear: moves you away from a dangerous situation. Resentment: drives you to demand something better. Sadness: confirms the unsatisfactory nature of your circumstances. Anger: gives you the strength to shape your reality into a more satisfying form. All of the negative feelings that flow from your experience of being assaulted can

operate to serve your best interests. They help you avoid future threats by pushing you to become stronger. To grow in ways that carry you beyond the reach of the threat. To move toward an improved life-space where you are less likely to suffer another violent experience.

The recurring mental images that trigger those emotions also serve the purpose of keeping you away from similar threats. The intense focus upon the feelings and images associated with the assault naturally shift your focus toward interests related to growing away from the threat, away from your usual interests. When you think “this sucks” or “life sucks” or “I want more,” know that those are all indicators that you, truly, DO want more. That you do NOT accept or belong in that negative space. The fact that your feelings associated with the assaultive experience are negative, confirms that you are NOT the type of person that should accept remaining in the victim’s role. The negative feelings exist for your greater purposes, to drive you toward something better. You were meant for more and you know this at a cellular, subconscious, core-emotional level.

Now: consider those trauma-related neural connections in your brain. The assault that created them was bad. Yet, the biochemical engrams themselves and the associated feelings are all distinct from the actual assault. Engrams resulting from an assaultive experience are neither categorically “good” or categorically “bad.” They are just “things.” They are just biological structures that were created to help you survive. And like every “thing,” they have valuable applications in certain contexts.

Before moving on, you may be asking “Are you saying I should be glad this happened to me?” No. Again, the assault itself was bad. However, you can be glad that this reality has truly positive things woven into the fabric of truly negative experiences. Understandably, you have avoided feeling the negative emotions associated with the assault. However, acknowledging those authentic negative feelings naturally flows into an authentic positive drive to grow stronger. The fact that this drive flows from a threat to your survival makes it the most powerful drive to succeed that you can possibly imagine.

So imagine: channeling the pure energy of your limbic system into whatever goal you choose. Changing the consuming drive for self-preservation. . . into a consuming drive for self-strengthening. To be terrified of. . . missing opportunities. To

feel aggressive toward. . . the obstacles to your plans. To feel irrationally insecure about. . . settling for too little. As a survivor, building such “self-strengthening” engrams requires only modification of your existing “self-survival” engrams that have caused you so many problems. This modification occurs via the same process that manufactured the survival-related engrams: actual experience.

EXPERIENTIAL THERAPY

We learn the most, the best, the deepest, through personal experience. We vividly remember every detail, every texture of every feeling, of significant experiences. Our individual collections of experiences vividly illustrate our lives and, in fact, experiences constitute our entire psychological landscape. Powerful experiences create lasting impressions upon us, as survivors of assault know all too well. Yet, a counseling approach exists that utilizes the unmatched power of experience as a therapeutic tool.

Typical psychotherapy revolves around a one-on-one relationship between therapist and patient. Within a completely confidential setting, the patient builds trust and engages in open discussion, thus generating insight into her issues. From the insights, the patient builds healthier perspectives, coping strategies, etc., that can transfer beyond the one-on-one relationship into the patient’s daily life and greater experiences. Most therapists utilize this model or a version of it with great success.

Experiential therapy involves creating actual, personal experiences that help the patient grow beyond their issues. In most cases, it involves crafting an actual experience that will 1) safely cause the patient’s issues to flare up and 2) allow the patient to effectively handle their issue within the context of that experience. The experience typically involves some form of a physical challenge. The experience has a clear goal and/or clear beginning and ending points. Significantly, within the safety and security of that experience, repressed feelings can start flowing again.

The stress of any challenging experience tests our self-control and pushes our core-level feelings closer to the surface. The manufactured stress of a therapeutic experience operates to evoke anxiety, moving a survivor closer to the emotional space related to her assault. The basic goal: to safely draw out the feelings connected with the traumatic experience. So, the therapeutically designed experience brings a survivor’s negative feelings and some physical action *into the same moment*. As the experience

continues, the feelings naturally begin flowing. The feelings get channeled into the physical action. The feelings get expressed and processed, all within the context of a physical, real-world activity.

Furthermore, as you know, a stressful experience works as a forge, producing deeply imbedded engrams. Accordingly, mastering the controlled stress that exists within a brief therapeutic experience creates self-strengthening engrams. These engrams connect the “self-survival” engram from the assault to a physical, “self-strengthening” activity, which you can master. This produces a larger engram that channels the seething power of your survival-related feelings into physical action and a drive to master some aspect of the real world. As this self-strengthening engram incorporates the self-survival engram created from the trauma, the drive to build yourself up is just as powerful and deeply rooted as the self-survival engram ever was.

EXAMPLES OF THERAPEUTIC EXPERIENCE

There are innumerable types of experiences and, accordingly, a therapeutic experience can take many forms. A common therapeutic experience involves a climbing wall, usually between 30-50 feet high, with gripping points interspersed throughout. Ideally, the client should have no experience in rock-climbing or any similar activity. Reaching the top should be achievable, but only after considerable difficulty.

The physical stress of the climb pulls the client’s issues, whatever they are, to the surface. For example, the depressive patient’s psychological issues will flare up at the beginning of the climb, as soon as she experiences how difficult it is to merely hang onto the wall, much less advance to the top. She feels overwhelmed, inadequate and wants to quit. In that moment, the experiential therapist communicates with her, acknowledging the patient’s feelings and giving her support. The client feels that support, becomes less overwhelmed and more willing to struggle with the obstacle. In that moment, the client can move from stressing out about having to climb a 50-foot wall to realizing that all she has to do is reach for the next handhold. She experiences mastering a once-overwhelming task by taking it one step at a time, an insight about handling life’s problems that carries far beyond the climbing wall. For just like all stressful experiences, the convergence of the physical/mental/emotional aspects of her climb has created a durable biological engram from which she can always benefit.

Identical therapeutic experiences can cause different individuals' issues to flare up. The anti-social patient usually does not need help climbing the wall, for his mistrust of others has made him quite self-reliant. His issues start gushing after he has successfully climbed the wall and then has to trust the belay team below to lower him safely back to the ground. In that moment, the experiential therapist communicates with the anti-social patient, reminding him of the other climbers that went before him and were returned safely. His therapeutic experience constructs engrams related to trusting others, which can help him develop social connections with, and even gratitude for, other people. Through similar therapeutic experiences, perfectionists, obsessive-compulsives, substance abusers, i.e., every type of person with any manner of issue, can start feeling through their issues by channeling their particular intense feelings into physical action.

Immediately after the therapeutic experience, the clients process through it with the therapist, often in a group setting. They identify the stressful points during the experience where their core feelings erupted. They review negative situations from their past when the feelings were first and/or repeatedly felt. They discuss what actions they typically take to cope with those feelings, along with the more healthy action they took during the therapeutic experience. Through this processing, subsequent therapeutic experiences can build off the prior ones and, eventually, through repeated experiences of mastery, the client grows into who they want to be.

Next step: creating your own therapeutic experience.

YOUR EXPERIENTIAL ACTIVITY

Any activity is an experience. Dealing with nightmarish traffic. Selling your boss on a new professional direction. Mowing grass. We all have hundreds of experiences every day. The important point to realize is that *the entirety of your psychological landscape, all of your emotional baggage, every component of your complete personhood, exists within each of those momentary experiences.* Every experience holds the opportunity for all facets of your personality to be touched and stirred into expression.

Physical exercise provides an ideal context for creating therapeutic experiences. Exercise easily becomes a regular activity. It involves self-strengthening. It makes you healthy. It creates intense, yet manageable, levels of stress. The person exercising

retains complete control of the experience. The physical effort hearkens back to more primitive days and can stir you at your psychological core. This deep experience resonates with the fundamental level upon which you experienced the assault. Finally, almost any physical exercise can work for experiential therapy. Select whatever manner of physical exercise you wish to master, with the goal of converting it into therapeutic experience. To further explain, we will utilize a single type of exercise (running) as an example and you will then be able to apply the precepts involved to the particular activity you select.

RUNNING

The human race has engaged in the fundamental activity of running for tens of thousands of years. Its intense stress can (and will) easily tear away the thin cover you keep over your seething emotions. Relatively monotonous, running involves fewer distractions from whatever roils inside you. The fundamental character strengthening from such a basic activity smoothly transfers to the other facets of your life. Knowing that the activity has clear beginning and ending points, via time or distance, allows the participant to feel safer about letting her emotions flow freely within those confines.

Just like any other experience, you carry everything about you into a 30-minute run. Just like any other intense experience, a challenging 30-minute run can shape a person's life. A sufficiently intense run can define your life. So ask yourself: how do you want to live your life? Run with that same attitude. Who do you want to be for the rest of your life? Be that person during the run. How do you want to handle the obstacles in your life? By considering the distance, hills, heat, cold and every other difficult thing about the run as "obstacles," the experience forms lasting engrams about how you handle adversity. With an open mind, every intense run can virtually provide a lifetime of personal growth experience.

During the run, the mental difficulties associated with your trauma will swirl together with the mental difficulties associated with finishing the run. You will not just remember, but will relive, your painful experiences. Let the stress of running shake that shattered part of yourself out of the darkness, where you have kept it hidden for so long. Embrace and value and become again the person that you never wanted to be again.

Accept that reintegrating that beautiful piece of yourself back into your psychic puzzle involves sorting through the negative feelings associated with your assault.

Intensified by the stress of the run, the negative feelings will recreate the emotional circumstances of the assault in the present moment, where you can finally deal with it however you want. Recognize that those feelings originally operated for your best interests, to physically help you keep living. Let them flow easily and completely, like water, the way they have needed to flow for so long. Let that shattered part of yourself begin resonating with the sights you see on the run. Embrace its hypersensitivity, which makes the beauty around you that much more striking. Let it start rebuilding tenuous connections with the world around you, thus increasing its/your confidence. Become the self-confident person you truly want to be during the stress of the run and then imagine yourself as that person in the other areas of your life.

Like the distressing survival-related feelings, self-strengthening action also satisfies the fundamental goal of your limbic system. Know that building up your strengths returns you to the psychological level you existed on before the assault and, if continued, can move you beyond it. This growth results from allowing the old, negative “self-survival” feelings to exist in the same moment as your “self-strengthening” activity. In that moment, through the forge of stressful activity, they merge. The resulting new engram integrates the driving intensity of your self-survival feelings with positive, self-strengthening action. Action that opens the flow of the feelings, then channels them toward your continued growth. Positive images start forming again about yourself, your world and your future. You will not complete any run perfectly, but you do not have to. All you need from the intense experience is a single moment of determination, or inspiration, or even gratitude for this great challenge. For that single moment has infinite depth. Any positive spark will be fanned and fed into a larger, abiding energy. Feel through your deepest pain and recognize that in mastering the run, you master your trauma. Master the run and you will master this life.

PROCESSING THE EXPERIENCE THROUGH JOURNALING

The drill is simple. Obtain a journal, to utilize only for this adventure. Run 2-3 days a week for 30 minutes a session. Make sure it’s stressful enough to bring your

insecurities to the surface. Open your mind and consider each run to be an entire lifetime; your entire lifetime. During that 30-minute lifetime, pay attention to:

- 1) Who the old feelings try to make you, in relation to the obstacles in that lifetime.
- 2) Who you want to be instead, in relation to the obstacles in that lifetime.
- 3) Who you actually are, in relation to the obstacles in that lifetime.

Or, you could use the following format:

- 1) What kind of world for you do your old feelings create?
- 2) In what kind of world would you prefer to live?
- 3) What kind of world do you actually see around you?

After each lifetime (run), write down the answers in your running journal. Include the emotionally significant images and memories that surfaced. Process through the feelings stirred up by those images and memories by writing about them. Capture the moments when the old feelings flow into new, positive core-feelings. Read your most recent answers to the three questions right before your next run. Keep the answers in mind during that run, in order to continue building upon all of the progress you have already made. Journaling itself and the reading of your journal entries further strengthen the engrams created from the runs. The fiery stress of multiple runs will test your mental gains. Flawed insights will burn away. Whatever remains consistent with your truest strengths will survive and emerge from the forge even stronger.

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You do not have to rebuild your entire life all at once. Instead, you can master a 30-minute lifetime which, if stressful enough, will become the format for the way you will live your life. Within the therapeutic experience, you can be exactly who you want to be and the biological engrams created from that experience will carry over into the rest of your life.