"I just can't seem to stop my mind," Linda told me. "I try to relax, but after a few moments my brain starts to buzz again with a jumble of thoughts and feelings. I can't seem to turn them off." As she spoke to me during our second visit, Linda was visibly distressed. She had the pinched, drawn face and hunched shoulders of someone who felt at once threatened and helpless.

"Lots of times it's the same old thing, just the same old negative thoughts and worries and blaming myself," she went on. "Sometimes I try to head them off by going out for a run, but they come back later. When they really get hold of me, I get kind of shaky, dizzy, and sick to my stomach. If they go on long enough, I actually get a stiff neck, and eventually a headache."

A client’s negative, intrusive thoughts—they’re a therapist’s stock and trade. Ditto the accompanying roster of bodily complaints, from stomach pains and neck tightness to headaches and back problems. In my 20 years as medical director of a multidisciplinary chronic pain program, I have found these body/mind intrusions to be a sort of generic marker for significant emotional disorders, including depression, anxiety, PTSD, and adjustment disorder.

But if Linda’s distress seems familiar, it’s not just because we see this kind of client so frequently in our offices. It’s also because her complaint rings true for “healthy” people like ourselves. All of us ruminate, bringing up the cud of memories of an old, unresolved problem, in the process experiencing a sinking feeling in the stomach, or perhaps a tightening in the throat. As we well know, these experiences usually arise unbidden and often at inopportune times, such as when we’re reading a book, eating a meal, or even, God forbid, making love! And when we’re interrupted this way, we basically lose it: We forget why we went into the bedroom, we lose track of our place in the book, and, if the intrusion is upsetting enough, we may even lose the wherewithal to continue with the what-we-want. We have
experienced that most insidious of insults to our mind--the corruption of the present moment by emotion-linked memory.

When we catch ourselves in this state of non-presence, we’re likely to chalk it up to “mind chatter.” When a client reports these repetitive intrusions, we may wonder about a tendency toward obsessiveness, or the possibility of depression and/or anxiety. While all of these interpretations may have some validity, I believe that much more is at stake. I propose that in many of these moments of body/mind intrusion, our brain is trying to protect us from mortal danger arising from memories of old, unresolved threats. In short, we’re in survival mode.

“Ordinary” Trauma
To understand the meaning of these everyday emergency responses, and to transform them into opportunities for healing, we first need to rethink our fundamental assumptions about trauma. I propose that the sources of trauma are far more complex than the standard DSM-IV definitions. Under Criterion A, the DSM-IV defines trauma as the result of having “…experienced, witnessed or been confronted with…actual or threatened death or serious injury…to self or others.” and, importantly, responding to that event with “…intense fear, helplessness or horror.”

This definition isn’t wrong; it is simply woefully incomplete. In fact, any negative life event occurring in a state of relative helplessness—a car accident, the sudden death of a loved one, a frightening medical procedure, a significant experience of rejection—can produce the same neurophysiological changes in the brain as combat, rape or abuse. What makes a negative life event traumatizing is not the literal life-threatening nature of the event, but rather 1) the degree of helplessness it engenders and 2) one’s history of prior trauma.

Let’s look at the first criteria—the person’s relative state of helplessness in the face of a threat. We can often avoid being traumatized by an actual life threat if we remain in control of the situation, either by effectively fighting back or escaping the situation. If we’ve adequately defended ourselves, our survival brain doesn’t need to store the body/mind messages of a trauma as an ongoing warning of danger. But if we have not prevailed—if we could
not avoid the oncoming car, if we could not fend off the mugger—the brain remembers that experience as mortally threatening.

The second precondition for the development of trauma is one’s storehouse of prior trauma. If you endure a relatively minor negative life event that somehow reminds you of a prior event in which you were helpless, trauma can result. Let’s say you’re facing surgery of a fairly safe and common sort—say, a cataract removal. For many people, the procedure would be relegated to the category of “unpleasant but bearable.” But for you, this situation brings back memories of having your tonsils out when you were six. Your parents weren’t allowed in the operating room with you, and you briefly saw a scary, sharp instrument, and all in all, you felt helpless and terrified. (You may be conscious of these memories, or you may simply be aware of a tightening in your throat, or the desire to scream, when you think of the upcoming cataract procedure.) Because your survival brain still thinks it’s in danger from that tonsillectomy, it will store this new, similar experience as dangerous by association. Not only will you experience the cataract operation as traumatic, but you’ll also be even more vulnerable to trauma during the next medical procedure you undergo.

All of us—clients and professionals alike—will continue to set ourselves up to be re-traumatized until we recognize that many of our negative intrusive thoughts and sensations are, in fact, symptoms of trauma. They may not be identified as such in the DSM-IV. But these more commonplace body/mind invasions assume the same meaning, if not the intensity, as the trauma-related thoughts and flashbacks of full-fledged PTSD. In both PTSD and what we might call “ordinary” trauma, both conscious and unconscious memories brutally intrude upon and corrupt the present moment. Not everyone suffers from PTSD. But each one of us has sustained many of these smaller traumas, setting us up to be continually shoved out of the present moment into a frightening, helpless past.

**Who Cares about the Present?**

In psychiatrist Daniel Stern's model, the "present moment" is a brief period—lasting perhaps one to ten seconds--that represents our conscious
experience of the here and now. Only in the present moment can we fully live. If our “nows” are perpetually interrupted by intrusive memories, we're essentially stuck in a time warp formed by those stored perceptions. We can't problem solve, we can’t experience a daffodil or a sunset, we can't relate to other people, resolve old conflicts, or form new attachments. Only in the here-and-now can we directly experience, and move ahead with, our lives. The present is indeed a precious commodity.

Yet, we repeatedly squander it. Therapists most readily witness this dissipation of the present moment with certain clients, the ones who focus obsessively on ancient complaints and worries to the exclusion of creative or productive ideas that might help to move them forward. Many of these clients also complain of various aches and pains, most commonly gut symptoms such as acid reflux or irritable bowel, or chronic pain in the head, neck or back.

But if we’re honest, we also recognize this corruption of the present in our own lives. How often do we find ourselves ruminating about this or that familiar resentment or well-worn worry? How often do we truly notice where we are, whom we’re with, or what is actually happening—that is, experience our own precious moments? It’s as though some dark, implacable entity invades our minds and bodies and fills them to the brim, leaving little space for pleasure in our aliveness, much less for growth or healing. That entity, I believe, is the total body/mind experience of a past trauma.

**Remembered Horrors**

Let’s take a moment to look at the two primary types of memory that contribute to trauma. One type is emotion-linked conscious memory, which gives rise to the intrusive, troubling thoughts we keep experiencing. These thoughts arise from some little cue in the environment that reminds us of an unresolved conflict. For example, you may be balancing your checkbook when your mind suddenly jumps to the letter you received years ago from your ex-wife’s lawyer demanding an accounting of your income and threatening to haul you into court if you did not comply.
At other times, intrusive thoughts may pop up from a purely internal cue. You may be thinking about vacation plans for a trip to Hawaii when you flip to the memory of losing your luggage, including all of your money, in the Honolulu airport on a prior trip. Since you often don’t consciously notice these cues—they can flit through the mind in a millisecond—you often find yourself bewildered by a sudden change in mood. You’d been feeling perfectly fine; why, now, do you feel so scared, or so oddly dispirited?

And why, for that matter, are you clenching your teeth so hard your jaw hurts? Another kind of memory is at work here: the hardwired recollection of what the body experienced in trauma. Acquired in a flash and stored for a lifetime, these unconscious, procedural memories serve as survival mechanisms, ready to be unleashed instantly in the face of present, perceived danger. The clenched teeth that kept you from crying when you lost all your luggage now sets in whenever you plan a vacation; the spasm in your neck that started after a long-ago car accident now occurs whenever you’re stuck in traffic; the cramping you felt in your gut whenever your father harshly scolded you now hits whenever your boss gives you feedback about your work performance. All of these bodily reactions serve as warnings from your survival brain that an old danger has resurfaced. It signals: Watch out! You’re in big trouble! Right now! In these everyday circumstances, we experience a terrifying past exactly as though it were the present.

The Trauma Capsule

It’s vital to recognize that our memories of a traumatic event reflect that event precisely. So what we've got is a sharply defined and bounded state, or capsule, containing all of the pertinent stored memories for each traumatic experience we’ve endured. My patient, Linda, for example, can’t stop the loop of negative memories of the gender discrimination she experienced on the job last year. Although she came to the job with management experience, she was assigned menial tasks such as running errands to the office supply store. Worse, Linda was repeatedly the target sexual innuendos from her older male boss. When she complained, the harassment ceased; briefly, she felt empowered. But not for long: Linda was passed over for her next
promotion, one she’d worked hard for and knew she deserved. Because she was paying back a college loan and had minimal savings, she couldn’t quit—at least not right away. She felt trapped and helpless.

Now, memories of the experience intrude on Linda’s consciousness in a host of situations—whenever she is short of money, whenever she gets into an argument with her boyfriend, whenever she has to deal with any male authority figure. She experiences intrusion on the present moment by a kind of internal “capsule” reflecting all of the conscious and unconscious memories of her job experience—cognitive, emotional and bodily. Simultaneously, she is assaulted by thoughts of her mistreatment, feelings of shame and anger, and a host of unpleasant physical sensations—the same tight neck and gut cramps she experienced at the time of the original trauma.

When these kinds of memories arise, they literally corrupt the present moment by inserting past events into present perception. If the original trauma was severe enough, such as assault, it can feel as though one is literally reliving a horrifying past event, as in a flashback. For “ordinary” trauma, such as repeated job discrimination, it can ignite the volatile compound of distressing thoughts, emotions, and autonomic states that Linda experienced. Because I view dissociation as the perception of past as present, I call this phenomenon the dissociative capsule.

The Body Under Siege

We often misunderstand the physical symptoms of the dissociative capsule as Somatization Disorder, which is defined as the intrusion of persistent somatic symptoms that do not reflect an actual physical disorder. But the symptoms I’ve been describing are genuine physiological disorders. The more clearly we understand this reality, the better able we will be to help our clients in distress. Let’s look at how these physical symptoms are produced.

In the traumatized person, the muscle spasm that causes the neck pain, and the abnormal motility of the gut that causes the cramps, are actual physical
phenomena triggered by the somatosensory and autonomic procedural memories of the original traumatic experience. *(Somatosensory)* memories include all of the sensations and the exact pattern of muscle activity the accompanied the trauma, such as the tightening of neck and jaw muscles. *(Autonomic)* memories, both sympathetic and parasympathetic, are often experienced as visceral sensations—a pounding heartbeat, cold sweaty hands, and pressure in the chest. Initially transient, these bodily changes can eventually lead to chronic disease. Numerous studies suggest links between early trauma and the development of fibromyalgia, Chronic Fatigue Syndrome, Irritable Bowel Syndrome, chronic back pain, and a variety of autoimmune diseases. The body remembers, and keeps on remembering.

**Dissociation by Degrees**

Each of us has our own, distinctive cache of dissociative capsules. The number of life traumas one has sustained will determine the number of capsules stored in procedural memory: there may be a few, or there may be dozens. Many factors determine the size and intensity of each. A large, complex capsule created by severe and repetitive childhood trauma may intrude on the present moment repeatedly. In such cases, the present moment may be obliterated most of the time, causing maturational arrest at the age of the most severe trauma. This situation may explain the remarkable maturational suspension seen in such syndromes as Borderline Personality Disorder and other severe attachment disorders in which the “self” may be stuck in the first decade of life.

But it is important to remember that these dissociative states may form even in cases of “ordinary” trauma. Recall Linda’s experience of gender-based job discrimination: Because she suffered not merely shame, but shame *in the context of helplessness* due to her low rank in the corporate pecking order, her experience was genuinely traumatic.

Viewed from this perspective, one can see how many of the “little” conflicts associated with cultural and institutional bias can assume the dimensions of traumatic stress. In my own medical practice, many female patients who have struggled with persistent job discrimination have developed Chronic
Fatigue Syndrome, physical collapse, and even PTSD. Other patients have developed PTSD following their experience with an adversarial justice system during a plaintiff lawsuit following an auto accident.

For those who bear an existing burden of childhood trauma, even more “trivial” incidents can cause new trauma. I have treated hundreds of patients with full-blown PTSD following auto accidents occurring at speeds under 5 miles per hour. For these highly sensitized individuals, it is not the accident per se that caused trauma, but the triggering of a dissociative capsule of earlier, unresolved trauma that transformed an unpleasant hassle into a genuine catastrophe.

**Treatment: Mere Words are Not Enough**

Trauma healing, in essence, is the recovery of the purity of the present moment. This concept has vital implications for trauma therapy (which, from here on in, should encompass treatment for “ordinary” as well as extraordinary trauma). The bottom line: Therapy must adequately address the body-based procedural memories that form a large part of the trauma structure.

Unless we can expunge the somatic contents of the dissociative capsule, they’ll continue to emerge with every triggering event, contaminating the present moment and promoting further sensitization to trauma. But if we can find a way to extinguish these somatic cues, the accompanying emotions and autonomic feelings will also be neutralized, *(Q: Why does extinguishing one neutralize the others?)* rendering the capsule inoperative. *(A: Because emotions and autonomic states are inevitably associated with "feelings"- the body sensations directly linked to those states: without the "feelings" the emotions and autonomic state have lost their threatening meaning for survival.)* The declarative memories of the event will remain, but in the absence of sensations and emotions, they will be experienced as past events—period. The present moment will be liberated.

So, how do we get from here to there? The royal road to the present moment, I believe, is through the emotional brain. We know that the limbic nucleus, the right amygdala, evaluates the emotional content of incoming sensory stimuli. If stimuli imply threat, the amygdala triggers arousal—unless,
somehow, it can be persuaded to go off duty. In his book, *The Feeling of What Happens*, noted neurologist Antonio Damasio describes a woman with bilateral injury to the amygdala. Via personality and psychometric tests, Damasio discovered that while she remained functionally normal, she had lost the capacity to experience fear or rage. Is it possible, then, that someone without a functioning amygdala would be incapable of being traumatized?

This hypothesis seems well worth exploring. If we can find a way to temporarily shut down the right amygdala while a client is exposed to the contents of the dissociative capsule, we should be able to extinguish its contents. With the amygdala "off-line," the traumatic memory would no longer be associated with the somatic cues of arousal—the tight chest, the pounding heart, the constricted throat. These symptoms, then, would no longer intrude on the present moment. Procedural memories of the trauma—both bodily sensations and emotionally-linked memories—would no longer convey threat in the here-and-now, because they would now accurately perceived as *old* memories. We would find ourselves restored to the present moment, in all of its richness and possibility.

**Retraining the Brain**

So, what therapeutic processes might convince the amygdale to “down-regulate?” I am not touting any specific approach. But what we know about the neurophysiology of trauma suggests that some of the so-called somatic and energy therapies, such as Somatic Experiencing, EMDR, Emotionally Focused Therapy (EFT), and Thought Field Therapy (TFT), may be particularly well equipped to escort a traumatized person from the past back to the present. Let’s look at how these approaches might fulfill some fundamental needs of trauma healing.

**Integration of the cerebral hemispheres.** The functioning of the left cerebral hemisphere is a brain state that is normally inhibited during arousal. Theoretically, bringing the left brain back “online” and integrating the left and right hemispheres would interfere with, and inhibit, the independent function of the right amygdala. Alternating visual, tactile and auditory stimulation might well integrate the two sides of the brain and down-regulate the right amygdala while the patient imagines the traumatic event, thereby removing the arousal charge.

Brain integration may explain why some of the seemingly bizarre repetitive behaviors of energy therapies seem to produce dramatic results for some...
patients. The alternating sensory stimulation of EMDR, as well as the eye-rolling, counting (left hemisphere) and singing (right hemisphere) employed by EFT, may help to integrate the brain hemispheres and thereby relegate traumatic memories to the past. The EFT practice of repetitively tapping acupuncture meridian points, which promotes autonomic homeostasis, may also put the brakes on brain arousal.

**Rituals** are often part of the healing process in non-Western and especially indigenous societies, where it is often practiced by tribal healers or shamans. Such rituals often involve repetitive behaviors such as drumming, dancing or singing, and frequently induce hypnotic trance states. The use of hypnosis in healing trauma may have its roots in this process. In addition, social rituals may activate the anterior cingulate, the part of the cortex that is known to powerfully inhibit the amygdala. **We know that the anterior cingulate plays an important role in maternal/infant and social bonding, a state that may be replicated by social ritual.** The potency of ritual also may explain the impact of the eye movements of EMDR, the tapping procedures of EFT and TFT, and the repetitive affirmative statements of the latter two approaches.

**Empowerment** is the ultimate goal of all trauma therapy. To heal, an individual must recover from the state of helplessness that defines the trauma experience. During a traumatic event, a person experiences physical helplessness and effectively freezes into that state, leading to all manner of pain and illness. To recover, one needs a way to thaw out the body.

This “melting” process is at the heart of Somatic Experiencing, a body-based therapy in which one accesses the felt sense of the trauma and allows the failed motor defense to emerge in the form of a “freeze discharge,” wherein the individual moves out of immobility into an effective fight or flight response. This ability to achieve discharge can be facilitated via a number of other somatic approaches, including dance, balance, equestrian and art therapies. What these approaches have in common is their capacity to access the freeze discharge and extinguish somatic procedural memories through completion of the bodily act of defense or escape. This completion at once permits and celebrates re-empowerment.

**Making meaning.** Talk does play an important role in trauma therapy—it’s just not the first order of business. Once the contents of the dissociative capsule are extinguished, client-therapist conversations can help to provide
the client with conscious, cognitive meaning and perspective. Importantly, talk can empower a client with the knowledge that the occasional recurrence of residual somatic symptoms—a sudden bout of nausea, a strangled feeling in the throat—actually represent an event from the past, and not an imminent threat that wipes out the here and now.

All in all, perhaps this is the most important lesson of trauma recovery: We never do quite fully recover. After all, our trauma memory capsules are nothing less than survival mechanisms, working in tandem with the amygdala to try to keep us alive. As one would expect from a primitive survival mechanism, it can never be totally extinguished. (Recall that after many years, Pavlov's dogs were reconditioned to the bell with just one trial.) Our stored memories of personal danger are fierce, focused and motivated in the extreme.

Of course, we can make enormous strides in discharging the contents of our trauma capsules, especially via approaches that address our body-based memories. But as we make our vital journeys back to the present, we would do well to cultivate an attitude of gentle acceptance. For it’s quite possible that all the body-based therapy in the world, plus regular infusions of meditation, running, yoga and other mindfulness practices, won’t be enough to keep us permanently anchored in the here-and-now. It seems we’re just not wired to live there fulltime. But we can make extended visits. And when we do, we can explore the lush landscape of the present moment with more wonder, wisdom, and pleasure than ever before.

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