

**A. (By Bessel van der Kolk, 2014)**

‘Shortly after the birth of her third child, Nancy underwent what is usually routine outpatient surgery, a laparoscopic tubal ligation in which the fallopian tubes are cauterized to prevent future pregnancies. However, because she was given insufficient anesthesia, she awakened after the operation began and remained aware nearly to the end, at times falling into what she called “a light sleep” or “dream,” at times experiencing the full horror of her situation. She was unable to alert the OR team by moving or crying out because she had been given a standard muscle relaxant to prevent muscle contractions during surgery. Some degree of “anesthesia awareness” is now estimated to occur in approximately thirty thousand surgical patients.....

Her entire focus was on bringing the reality of her trauma to consciousness so that she could free herself from its intrusions into her everyday life. I’d like to end this chapter by sharing several passages from a remarkable series of e-mails in which she described her grueling journey to recovery. Initially Nancy did not know what had happened to her. “When we went home I was still in a daze, doing the typical things of running a household, yet not really feeling that I was alive or that I was real. I had trouble sleeping that night. For days, I remained in my own little disconnected world. I could not use a hair dryer, toaster, stove or anything that warmed up. I could not concentrate on what people were doing or telling me. I just didn’t care. I was increasingly anxious. I slept less and less. I knew I was behaving strangely and kept trying to understand what was frightening me so. “On the fourth night after the surgery, around 3 AM, I started to realize that the dream I had been living all this time related to conversations I had heard in the operating room. I was suddenly transported back into the OR and could feel my paralyzed body being burned. I was engulfed in a world of terror and horror.” From then on, Nancy says, memories and flashbacks erupted into her life. “It was as if the door was pushed open slightly, allowing the intrusion. There was a mixture of curiosity and avoidance. I continued to have irrational fears. I was deathly afraid of sleep; I experienced a sense of terror when seeing the color blue..... I remained chronically hyperalert, feeling threatened by my own thoughts and wanting to escape them. I lost 23 pounds in 3 weeks. People kept commenting on how great I looked. “I began to think about dying. I developed a very distorted view of my life in which all my successes diminished and old failures were amplified.....

“Three weeks after the surgery I went back to work at the hospital. The first time I saw somebody in a surgical scrub suit was in the elevator. I wanted to get out immediately, but of course I could not. I then had this irrational urge to clobber him, which I contained with considerable effort. This episode triggered increasing flashbacks, terror and dissociation. I cried all the way home from work. After that, I became adept at avoidance. I never set foot in an elevator, I never went to the cafeteria, I avoided the surgical floors.”

Gradually Nancy was able to piece together her flashbacks and create an understandable, if horrifying, memory of her surgery. She recalled the reassurances of the OR nurses and a brief period of sleep after the anesthesia was started. Then she remembered how she began to awaken. “The entire team was laughing about an affair one of the nurses was having. This coincided with the first surgical incision. I felt the

stab of the scalpel, then the cutting, then the warm blood flowing over my skin. I tried desperately to move, to speak, but my body didn't work. I couldn't understand this. I felt a deeper pain as the layers of muscle pulled apart under their own tension. I knew I wasn't supposed to feel this." Nancy next recalls someone "rummaging around" in her belly and identified this as the laparoscopic instruments being placed. She felt her left tube being clamped. "Then suddenly there was an intense searing, burning pain. I tried to escape, but the cauterizing tip pursued me, relentlessly burning through.

There simply are no words to describe the terror of this experience. This pain was not in the same realm as other pain I had known and conquered, like a broken bone or natural childbirth. It begins as extreme pain, then continues relentlessly as it slowly burns through the tube. The pain of being cut with the scalpel pales beside this giant." "Then, abruptly, the right tube felt the initial impact of the burning tip. When I heard them laugh, I briefly lost track of where I was. I believed I was in a torture chamber, and I could not understand why they were torturing me without even asking for information. ... My world narrowed to a small sphere around the operating table. There was no sense of time, no past, and no future. There was only pain, terror, and horror. I felt isolated from all humanity, profoundly alone in spite of the people surrounding me. The sphere was closing in on me. "In my agony, I must have made some movement. I heard the nurse anesthetist tell the anesthesiologist that I was 'light.' He ordered more meds and then quietly said, 'There is no need to put any of this in the chart.' That is the last memory I recalled." In her later e-mails to me, Nancy struggled to capture the existential reality of trauma. "I want to tell you what a flashback is like. It is as if time is folded or warped, so that the past and present merge, as if I were physically transported into the past. Symbols related to the original trauma, however benign in reality, are thoroughly contaminated and so become objects to be hated, feared, destroyed if possible, avoided if not. For example, an iron in any form— a toy, a clothes iron, a curling iron, came to be seen as an instrument of torture. Each encounter with a scrub suit left me disassociated, confused, physically ill and at times consciously angry..... "There is a strangeness, bizarreness to this dual existence. I tire of it. Yet I cannot give up on life, and I cannot delude myself into believing that if I ignore the beast it will go away. I've thought many times that I had recalled all the events around the surgery, only to find a new one. "There are so many pieces of that 45 minutes of my life that remain unknown. My memories are still incomplete and fragmented, but I no longer think that I need to know everything in order to understand what happened. ....

Two years later I wrote Nancy asking her permission to use her account of anesthesia awareness in this chapter. In her reply she updated me on the progress of her recovery: "I wish I could say that the surgery to which you were so kind to accompany me ended my suffering. That sadly was not the case. After about six more months I made two choices that proved provident. I left my CBT therapist to work with a psychodynamic psychiatrist and I joined a Pilates class. "In our last month of therapy, I asked my psychiatrist why he did not try to fix me as all other therapists had attempted, yet had failed. He told me that he assumed, given what I had been able to accomplish with my children and career, that I had sufficient resiliency to heal myself, if he created a holding environment for me to do so. This was an hour each week that became a refuge where I could unravel the mystery of how I had become so damaged and then re-construct a sense of myself that was whole, not fragmented, peaceful, not tormented. Through Pilates, I found a stronger physical core, as well as a

community of women who willingly gave acceptance and social support that had been distant in my life since the trauma. This combination of core strengthening— psychological, social, and physical— created a sense of personal safety and mastery, relegating my memories to the distant past, allowing the present and future to emerge.”

### **B. (By Peter Levine)**

‘The same consequences are sadly true when children are frightened and abruptly separated from their parents before surgery. If they go into the surgery in an agitated state, are held down and then surrounded by gowned and “masked monsters,” they come out of the anesthesia frightened and drastically disoriented. David Levy, in 1945, studied hospitalized children, many of them being treated for injuries requiring immobilization, such as splints, casts and braces. He found that these unfortunate children developed shell-shock symptoms similar to those of the soldiers returning from the war fronts in Europe and North Africa. Some sixty-five years later, a troubled father recounts *“an all-too ordinary” story about his son Robbie’s “minor” knee surgery, a virtual guarantee for trauma. The doctor tells me that everything is okay. The knee is fine, but everything is not okay for the boy waking up in a drug-induced nightmare, thrashing around on his hospital bed— a sweet boy who never hurt anybody, staring out from his anesthetic haze with the eyes of a wild animal, striking the nurse, screaming “Am I alive?” and forcing me to grab his arms ... staring right into my eyes and not knowing who I am’.*

The immobilization effects Levy observed in children also occur in adult patients. In a recent medical study, more than 52% of orthopedic patients being treated for broken bones were shown to develop full-blown posttraumatic stress disorder, with a majority not recovering and worsening over time.....

Indeed, some of those ill-fated individuals partially “awaken” during anesthesia and many develop some of the most horrific and complex PTSD symptoms. In the words of one survivor (a surgical nurse herself), “I feel a cosmic hollowness, as if my soul has left my body and can’t return ... horrifying nightmares are my companion ... often shocking me wide awake. When my eyes pop open, there is still no respite because the walls and ceiling turn blood red.” This riveting description illustrates the horror of enduring the combination of terror, extreme pain, and being unable to move or to communicate one’s situation. Biologically, the orthopedic patients, soldiers, rape victims and hospitalized children are reacting like wild animals fighting for their life after being frightened and captured. Their impulse to attack in an “aggravated rage” or to flee in frantic desperation is not only biologically appropriate; in fact, it is a frequent biological outcome’