

The Natural History and Suggested Management of Psychosomaticism

When I was 12 years old, and a skinny kid, my mother started pleading with our family doctor to do something about my extreme snoring. She described it as listening to a drunken sailor.

This is where Pat, now 52, begins the “Health biography” required to receive Supplemental Security Income. She is instructed to chronicle and explain the multiple illnesses that ultimately led to her being disabled. From reading the first line of Pat’s essay, you might think that the rest of the biography would come together as a nice little story, rifled with humorous anecdotes and vivid imagery. But after the first paragraph Pat gives up on editorializing and begins to simply list the facts that would otherwise not fit on the two allotted pages.

“In my late twenties and thirties I had 5-6 cases of bronchitis each year that always progressed into pneumonia.”

“In 1984, a doctor found a mass on my left ovary. It was a stress-induced ovarian cancer.”

“I developed carpal tunnel syndrome in both hands.”

“Chronic Back Pain.”

“Chronic Pelvic Pain.”

“Vertigo.”

Vertigo is Pat’s newest unresolved complaint. In May 2010 she presented to the Emergency Room with vertigo so severe that she had cyclical vomiting. She was unable to lie flat and could rest only with the head of the bed elevated. She complained of blurred vision and double vision. She reported then that this process seemed to be brewing for some time, as she had noticed that she would get occasional vertigo and blurred vision in the past which she mistook for dehydration or hypoglycemia. For a while she had noticed that she would list to the right as she walked and that her dizziness would be most prominent in the mornings. Pat’s brain was scanned for any signs of tumor, swelling, infection or nerve damage but nothing was found and she was sent home.

Since last May, Pat has seen a number of specialists that she keeps hoping will find an explanation or a palliation for this problem. To no avail. It is important to note that Pat is also a survivor of abuse, has a strained relationship with her siblings, has never been married or had children, and has been unemployed for many years. She lives with a woman whom she interchangeably calls, “my sister, my friend, my partner” depending on who is asking.

Pat’s vertigo and chronic pain have a unifying diagnosis. The modern medical community labels them psychosomatic disorders. *Psychosomatic* is a problematic term to define. In the most general terms, the medical community has agreed to believe that psychosomatic disorders are ones which do not arise from a genetic mistake, an infection or a breakdown in the normal function of an organ. They have eluded our ability to find any reproducible abnormality in the sufferers. But we acknowledge that the symptoms are real. We see our patients battle bouts of diarrhea, be crippled by migraines or chest pains, unable to find a

comfortable position to sit in or too weak to get out of bed. Their stories are unique but, overwhelmingly, patients with psychosomatic illnesses have some degree of mental anguish. They are battling depression or are living with anxiety. They have a history of one major trauma or have lived lives of daily trauma. They have unresolved conflicts with others or unfulfilled aspirations; they may need validation about the choices they have made. In an era in which we have functional MRI's to help us study every neuron of the brain and in which we know so much about the molecular mechanisms of our bodies, how can we reconcile the normal results of our scans and lab tests with the tired eyes, weak gait, and crippled spirit of the patient before us? Psychosomatic disorders challenges us to sit with the uncomfortable question of whether we believe our mind and body are two separate entities or one whole organism.

For as long as human beings have been recording their thoughts, we have been conflicted on this question. Plato, in his writing about the transcendence of the "psyche," was the first to describe mind-body dualism and every subsequent Western religious movement incorporates this idea of a transcendent spirit and a separate body. But at the same time, the Greeks wrote about a "soma," a word they used to mean not just a physical body, but the social and ethical weight of that body. The Greeks wrote that the soma was more than a body the way that something which casts a shadow is more than the shadow itself.ⁱ Only that which casts a shadow can interact with its environment, is three-dimensional and dense, is transcendent in time and has a self-determined will. The Greeks could envision an understanding of the human being in which the spiritual, social and emotional state of the human being was integrated into his body. But their writings and their practice of medicine didn't always reflect this holistic view of the body.

The answer to the question of fragmented versus whole is important because it guides us in the management of patients with these illnesses. As we will see in the brief history of psychosomaticism that follows, over the centuries great minds have noticed the dual input into psychosomatic illnesses but have chosen to assume the side of fragmentation, focusing either on the mind or the body as the endpoint of treatment. As we arrive into the 21st century, we are poised to repeat this mistake as we search for immune modulators, hormonal therapies and genetic epitopes. I would argue that we should take a moment to consider that not all illness is disease. That some disorders fit nicely into our model of organic abnormalities, earning themselves the title of disease, while other disorders will never bend to the will of our microarrays and ELISAs but cause suffering nonetheless. We can start by thinking of the term psycho-somatic as similar to the term socio-economic. Not that the first half causes the second but rather that the two ideas are correlated in some murky mixture; undefined parts both ingredients, each part infusing the other in a repetitive cycle whose beginning can't be easily identified. But first, a history lesson:

What we now call psychosomaticism was a rose by many other names. Hysteria, the first of many unfortunate labels for this set of illnesses, was introduced by Hippocrates around 400 BC.ⁱⁱ It made its way into popular European literature and culture by the 17th century, when physicians, spiritual leaders and laypersons eagerly labeled any complaints of severe pains, numbness, unilateral blindness or paralysis - hysteria. The word itself comes from the greek "hystera," meaning uterus. These sudden and inexplicable physical disabilities were attributed primarily to women, primarily in times of stress, such as after a miscarriage or the death of a lover. It was thought that women, in their emotional and physical weakness, lost control over their bodies during times of intense psychological conflict and fear. Since not all women reached moments of hysteria, men hypothesized that the peculiar affliction was due to a wandering uterus which migrated around the woman's body. Pregnancy, therefore, was thought to cure her of her inexplicable ailments. When pregnancy failed to reverse a particular woman's paralysis or blindness, she

was brought to physicians for genital massage and vibration.ⁱⁱⁱ In spite of such aggressive physical intervention, or in light of it, the ailments persisted and even rose in incidence.

In 1869, George Beard, a neurologist, expanded the definition of hysteria to include fatigue, anxiety, headache, impotence, neuralgia and depression. He called this new constellation of symptoms, “neurasthenia.” Beard wrote that the rise of these illnesses could be linked to the explosion of modern civilization – that the stresses of transitioning from agrarian to commercial life made people anxious about the unstable economy and the constant pressure of efficiency against time.^{iv} However, while these social stressors primarily afflicted men, neurasthenia still predominated in women. He explained that the discrepancy was due to different types of stress experienced by these two groups. Urbanization shackled women into the stress of idle time. Women whose mothers had tilled fields or cleaned the chicken coop or spent all day sewing garments for the family could now buy their produce and dairy at the town store and choose from dozens of styles of clothing in a city now accessible by train. As just one measure of this phenomenon, if we use Google Ngram to look at the usage of the word “boredom” in English literature from 1840-1900, we see that before 1850 the word was hardly used but that in 1864 it started to appear in written works and that by 1872 it had quadrupled in use!^v With idle time, a person turns their attention to the minute variations and fluctuations in their body and this becomes an obsession, Beard argued. The boredom caused so much anxiety that people began to experience fatigue, bodily pains, headaches, and depressed mood, in epidemic waves. On this point, Beard may have been ahead of his time. The concept that idle time produces hyper vigilance regarding the body has since been verified by multiple studies with irritable bowel syndrome patients.^{vi}

Neurasthenia was prevalent, even popular, amongst the upper class at the end of the 19th century. It shortly became known as “Americanitis.”^{vii} For some time, the primary treatment was the rest cure – a counterintuitive treatment in which people who were hysterically anxious about their overindulgent, idle lifestyle were sent to the countryside to rest for months on porch-swings. This was known as the “Doctor Diet, Doctor Quiet” prescription and was followed shortly by another form of Americanitis – the marketing of psychoactive elixirs like Coca-Cola and Dr. Pepper – that claimed to cure one of depression and fatigue.^{viii}

The cures of the 17-19th centuries unapologetically reflect the values and knowledge of the physicians of those days. In an era in which a woman’s social status and thus her happiness were tied to her fertility, it is understandable why pregnancy could be promoted as a cure for depressive symptoms like fatigue and bodily pains. Likewise, if the pollution, noise, pace and confinement of urban, modern living could induce neurologic symptoms, it is reasonable to send persons to the countryside to breath fresh air and engage in physical activity. Unfortunately, these treatments were usually insufficient because they intervened on a complex mind-body interaction with a purely physical solution. The mind, with all its layers of consciousness, memory and emotion were left untouched by physicians, until Freud complicated things.

Shortly thereafter, in the early part of the 20th century, the field of psychosomatic medicine reached its renaissance. It grew in reaction to two movements: the emergence of germ theory as the singular unifying belief of medicine and the importation of German psychoanalytic principles to the United States via Franz Alexander.^{ix} In 1882, when Robert Koch published his principles of germ theory, definitively linking diseases to bacterial or viral infections, he neglected to address one important question: if all disease stems

from microbes, how do we understand chronic diseases like hypertension, hyperthyroidism, diabetes or asthma, which we cannot correlate to an infection and which don't improve with antibiotics?

The answer came from Franz Alexander, a Hungarian physician who moved to Germany to study with Freud in the acclaimed Berlin Psychoanalytic Institute, and was then invited to the University of Chicago in 1930 as a visiting professor of psychoanalytics. Building off the concept that microbes had specific targets within our bodies, Alexander, distributed the theory that psychological conflicts (the germs of our psyche) had specific targets within us as well. In some of our psychological conflicts, we prepare to act but never do while in other conflicts, we plan to retreat. (If we have a conflict and act on it to resolve it, then we have banished the germ from our bodies and it should not lead to psychosomatic symptoms.) To Alexander, this sounded a lot like our "fight or flight" response, regulated by the autonomic nervous system. Therefore, he hypothesized that the consequences of the "fight" reaction and its sympathetic nervous discharges, led to hypertension, rheumatoid arthritis, diabetes and hyperthyroidism. On the other hand, our parasympathetic discharges stemming from psychological retreat produced asthma and ulcerative colitis.^x Therefore, when seeing patients for asthma, Alexander would urge them to dig up the repressed stories which they had given up on dealing with and tell these stories aloud while under hypnosis. He claimed that many patients emerged freed of their asthma.

Alexander's training in psychoanalysis popularized another aspect of psychosomaticism in America – an aspect which has maintained its hold on the American imagination much longer than Alexander's other theories and has contributed to the stigma surrounding these disorders: gain. Alexander, a student of Freudian psychoanalytic theory believed that hysterical symptoms were the subconscious mind's attempt to protect the patient from psychic stress. Subconscious motives include primary gain, in which the symptom directly relieves the stress (as when a patient coughs to release energy pent up from keeping a secret), and secondary gain, in which the symptom provides an independent advantage, such as staying home from a hated job. The seed that Freud planted about the possibility of malingering for secondary gains among sufferers of psychosomatic illnesses persisted throughout the 20th century. Dr. Holland, in an editorial to the Canadian Medical Post in 1988 wrote, "The seasoned clinician will recognize the current epidemic in diagnosis of [Epstein Barr Syndrome] to be a manifestation of the current hedonistic and narcissistic society in that there is an ever increasing tendency for people to blame someone or something rather than look at themselves."^{xi} This viewpoint is unfortunately still not uncommon today among clinicians who resent the feeling of stumbling uncertainty that psychosomatic complaints instill in them.

In the 1960's, as far Eastern cultural and religious traditions began to influence American culture, psychosomatic medicine had an opportunity to redefine itself in more holistic terms. When J.A. Winter published his book, *The Origins of Illness and Anxiety* in 1963, he still listed coronary heart disease, colitis, asthma, goiter, and paroxysmal tachycardia as diseases of psychogenic origin according to Alexander's autonomic discharge theory.^{xii} However, he also offered a new system of nomenclature that defines illnesses by two intersecting categories: structural and functional origin. Winter argues that every part of the human body can be seen as having both a structure and a function and that a doctor can examine a patient, find no structural changes and conclude that their suffering is due to a disorder in function. To explain the distinction between the two qualities he relates this parable:

“Suppose that you went into a room where there was a steel shaft protruding from one wall and the shaft was rotating steadily. You could observe this rotation; you could

count the number of revolutions per minute which the shaft made; you could attach weights to see if the r.p.m.s increased or decreased; you could try to stop it and see if it would start again. You could do all of these things without having the least idea of what was causing the rotation, whether the shaft was turned by an electric motor, a steam engine, a squirrel in a cage or by the same agency which turned Joshua's wheel. We could, in other words, study the functions of the rotating shaft without knowing anything about its underlying structure."^{xiii}

This kind of partial understanding was typical of Winter's time in which scientists could appreciate that patients were coughing or having diarrhea, but did not yet know enough about the structure of the lungs or the gut. Therefore, it is understandable why Winter referred to asthma and ulcerative colitis as functional disorders, or psychosomatic illnesses. Winter wrote that a psychosomatic illness is one in which changes in function predominate over changes in structure.

The second component of Winter's theory of psychosomaticism is an open discussion of the inextricable web of mind and body. Psychosomaticism, he writes, is the result of an inappropriate response to an inadequate stimulus. Suppose that you were outside in the winter without gloves for hours, shoveling snow. You may have frostbite on your fingers and for some time they may feel numb, tingly and weak. This would be an appropriate response to the stimulus. Now, imagine that someone said to you, "you're a disgrace to this family," and your fingers became weak and numb. This would seemingly be an inappropriate response to this stimulus, which, in a structural model of disease, is inadequate to produce a physical deficit. Winter argues that at one time in your life, these two things did happen simultaneously. Perhaps not the exact words uttered and the shoveling of snow, but rather the feeling of being degraded while cold and numb. The brain confuses and links the two incidents, subsequently producing a physical response to the emotion – a functional problem. Though Winter's simplified understanding of the complexity of brain-body neural circuits was limited by the data available in his time, his book was the first of its kind. Written for a general audience, it sought to empower persons suffering from psychosomatic illnesses to re-conceptualize their illnesses and understand how their stressors were contributing to physical symptoms. It also urged readers who were too proud to admit to psychosomatic symptoms to search for these subtle mind-body connections within themselves.

Unfortunately it also claimed that asthma was a functional disorder... In the decade after Winter published his book medicine was injected with steroids. Assimilated widely into medical practice in the 1960's, corticosteroids threatened the end of the psychosomatic theory of disease. Found to melt away the symptoms of rheumatoid arthritis, ulcerative colitis and asthma, steroids heralded the era of the autoimmune hypothesis. As a bold gesture towards this new wave of reasoning, the third revision of the Diagnostic and Statistical Manual of Mental Disorders, published in 1980, replaced the term "psychophysiological disorder" with "psychological factors affecting physical conditions."

Not all psychosomatic disorders were redeemed by the revolution in science. In fact, each disorder remained guilty of psychogenesis until proven genetic. Therefore, while hospitals built departments and labs dedicated to colitis, asthma and arthritis, disorders like chronic fatigue, fibromyalgia and irritable bowel syndrome were left behind. But not for long. As the tsunami of cellular and molecular biology took over medicine in the 1980's, new theories about the pathophysiology of these psychosomatic disorders emerged. As Robbie Aronowitz chronicles in his book, *Making Sense of Illness*, in 1985 the CDC launched

an investigation into a string of case reports that suggested that a prolonged viral illness, most likely Epstein-Barr Virus, the same virus that causes mononucleosis, was causing an outbreak of chronic fatigue in patients in the Lake Tahoe area.^{xiv} The theory was that EBV can reside in persons for years, chronically activating the immune system and leading to fatigue that, unlike mono, doesn't resolve in a few months. The investigations were inconclusive and the patients found to have chronic fatigue were not different from the control groups studied in terms of serologic evidence of EBV. Nonetheless, as the incident became publicized, patients started to appear across the country, noting that they had symptoms similar to those reported in Lake Tahoe. Laboratories were inundated with requests for EBV tests. But in the medical literature there was always skepticism. Aronowitz writes: "one study notes excessive risk for 'educated adult white women,' a wry comment given the implausibility of a biological explanation for this susceptibility."^{xv} So, as the evidence failed to prove that chronic EBV could be isolated, chronic fatigue syndrome was found guilty as charged, a psychosomatic illness.

Since the 1980's an overwhelming amount of research has emerged on the mechanisms by which the brain communicates via the immune system with our bodies. In one study, students were given two identical minor wounds, the first during summer vacation and the second during a major exam period in the school semester. They discovered that the second wound took an average of three days longer to heal than the first. This led researchers to conclude that "even something as transient, predictable, and relatively benign as examination stress can have significant consequences for wound healing!"^{xvi} Our research has led us to a better approximation of the regions of the brain responsible for anxiety, depression, fear and love. We have learned how to modulate our emotions with psychotropic drugs. We are even going so far as to look for biologic markers of somatization itself. Dr. Maes in Belgium recently published an article in which he claims that somatization can be correlated to the production of neurotoxic proteins like kynurenine, and a decrease in neuroprotective proteins like kynurenic acid in the body's tryptophan catabolism pathway.^{xvii}

But it seems that the more we learn about the unity of mind and body, the less satisfied we are with allowing this complex interaction lead us to make individualized healing plans for our patients. The closer we get to the sun, the stronger its magnetic pull becomes. We want a unifying answer. We want to find the organic cause. It must be there – we just don't have the tools to see it yet, we tell ourselves. This is the scientist's own version of psychosomaticism. We are so emotionally tied to the idea of a molecular answer that it manifests in our test tubes – our very own functional disorder. In 2009, Lombardi and colleagues published a report in *Science* describing a correlation between xenotropic murine leukemia virus-related virus (XMRV) with chronic fatigue syndrome.^{xviii} They postulated that the infection and prolonged convalescent phase from this virus spawned a cycle of chronic immune activation, de-conditioning and weakness. Unfortunately, their results too could not be reproduced by further studies and in 2011, *Science* published a follow-up paper in which a different group of researchers reported that they could not detect the XMR virus in the same subset of patients that were studied in the pioneer trial. The controversy concluded when evidence strongly suggested that XMRV had contaminated the laboratory reagents rather than the patients. The news came as an unfortunate blow of false hope to an already marginalized and vulnerable community.^{xix}

At this point, it is important to note that physicians and scientists are not alone in wanting a molecular answer. In chat rooms and advocacy meetings across the country, patients are asking for more funding for molecular research into their illnesses and praying for some results that validate their suffering as equal to

those with “structural” diseases. This is not their fault. We have made it clear that to make their case in our courtroom they must use our witnesses and experts. Until then, they can continue to plead insanity.

Marginalized in such a way, many patients looking for solutions to their psychosomatic complaints go in search of alternative practitioners and medicines. Some of these are legitimately curative. Others are marketed to a desperate population. Our friend Pat had bounced around many emergency rooms and specialty clinics until she decided to try her own cocktail: glucosamine chondroitin, FlaxFishBorage capsules, red yeast rice extract, ligamendon, phyto-matrix and Ambrotose, the most outrageous supplement of them all. This only inspired more eye-rolling from her physicians.

It’s time for the doctor-patient relationship to evolve. We have moved beyond believing that psychosomaticism is a disease of women’s uteri. We have grown to understand that the physical symptoms are real but cannot be so simply undone as with Dr. Pepper. We know that psychotherapy is beneficial, but that Freudian psychoanalysis underestimates the complexity of the mind and that pain medications, nerve stabilizers and bowel regimens are also necessary to break the cycle. To paraphrase Aronowitz: “the inconclusive and incomplete biomedical literature on the psychogenesis of [psychosomatic illnesses] has not been a simple narrative of true ideas replacing false ones. Rather, this history more directly results from continuous contradictions and tensions in our underlying conceptions of chronic disease, shaped in our era by changes in the social context in which patients and doctors try to find meaning in disease.”^{xx}

If we believe in the supreme rule of evidence-based medicine, then we must acknowledge that it has led us to some powerful conclusions about how our memories, emotions, stress level and social supports can inflict physical pains. So now we must allow our humanity to catch up with our research. Physicians must insist on acquiring a deeper understanding of their patients’ emotional health and patients, for their part, must recognize the hard work involved in healing rather than expect more pills. We can, and should, continue to investigate the amazing workings of our bodies, but we should consider that we may never know more than we do now. What if in 30 years of research we still cannot find a structural change to explain Chronic Fatigue Syndrome or Fibromyalgia? If science never has another great breakthrough, how will we deal with suffering knowing what we know now? We will deal with it by being honest about what makes us humans. We are not cars, our hearts are not engines, our lungs are not exhausts and physicians are not mechanics... despite what I was taught in physiology lecture. Our humanity derives from our ability to sublimate stressful thoughts into physical pains so that they stop us in our tracks and force us to heal ourselves. Our humanity derives from our ability to turn happiness and laughter into analgesia. We have been dancing around this truth for centuries, perhaps looking for a more complicated answer. But the truth, as I see it, is simple: our outermost selves are our innermost. When our search for diagnoses has exhausted the list of known culprits, we must look inward for the answers to our pain.

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^v<http://ngrams.googlelabs.com/graph?content=boredom&yearstart=1800&yearend=1900&corpus=0&smoothing=3>

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