

“Memes” as Infectious Agents in Psychosomatic Illness

Can a mere idea cause medical pathology? Many authors would say yes. It has been claimed, for instance, that fibromyalgia, the irritable bowel syndrome, and the chronic fatigue syndrome are iatrogenic—that these are not simply methods for classifying illness, but that these nosologic constructions actually induce and sustain illness in susceptible persons (1). The contagiousness of eating disorders has also been remarked upon (2). This contagion is not the result of any classic pathogen (a microbe or a toxin)—instead, a socially constructed script of anorexia nervosa or bulimia is transmitted from person to person. Intangible disease constructions also appear to be the communicable pathogens in several contemporary epidemics, from “repetition strain injury” in mid-1980s Australia (3, 4) to instances of “mass psychogenic illness” or “epidemic hysteria” (5–9), such as the recent outbreak of colitis-associated illness in Belgium (10, 11).

Thus, it has been asserted that a virulent idea, a maladaptive social construction of disease, can be found at the core of these diverse disorders. In this essay I explore how such disease conceptions, which I term *psychosomatic memes*, act as transmissible templates. They are analyzed as infectious agents that, like microbes, have virulence factors, affect hosts with particular vulnerabilities, are disseminated through a variety of vectors, and are promoted or inhibited by various components of the social ecology.

Memes—Elements of Cultural Evolution

Put simply, a “meme” is an idea that evolves to spread and to endure. Richard Dawkins coined the term in *The Selfish Gene* (12), explicitly drawing an analogy between genes and certain ideas. Because ideas can replicate (through communication) and mutate (as they are altered by their hosts) and are subject to selective pressures (enduring only if they are useful or compelling), they, like genes, are subject to Darwinian evolution. Urban legends are everyday examples of such prolific and captivating ideas.

“Meme” is a particularly apt term for disease conceptions that induce psychosomatic illness. It is notable that the term “mimesis,” which is the root word of meme, is already commonly used in this context. While the primary definition of mimesis is

“copying” or “mimicry,” an alternate definition is “the appearance . . . of symptoms of a disease not actually present” (13). Psychosomatic contagion has been described as a “mimetic” condition (2, 14): that is, one that involves imitative behavior. The likening of ideas to genes is also appropriate. Disease conceptions, or psychosomatic memes, can be thought of as narrative fragments that are akin to the genetic fragments that compose viruses. Both integrate into their hosts, provide “instructions” that promote replication, may direct the energy of their hosts to unproductive ends, can be transmitted to others, and evolve over time.

It should be noted, however, that considering a disease conception a “meme” does not necessarily imply that it is arbitrary, unrelated to biology, or harmful. The medical concept of “alcoholism” is a psychosomatic meme, yet it seems to be quite beneficial. It transforms the self-identity of problem drinkers, enabling them to view dependence on alcohol not as a token of depravity but as an extrinsic affliction to overcome. It promotes the formation of groups like Alcoholics Anonymous that provide support and treatment. These groups reinforce the meme—the medical concept of alcoholism—among their members and disseminate it to the community at large. These processes of identity transformation, group reinforcement, and community dissemination are identical to those that occur in harmful psychosomatic memes. Thus, the crucial question is not whether a particular disease conception, such as attention deficit disorder, is or is not a psychosomatic meme. The question should be, instead, whether the transformations promoted by the disease conception-meme are predominantly adaptive or maladaptive.

The following section focuses on the natural history of the more maladaptive psychosomatic memes, discussing the processes of meme acquisition, consolidation, and dissemination.

Meme Acquisition and Consolidation

A host becomes vulnerable to psychosomatic memes when he or she experiences distress. This distress can be both internal (psychodynamic) and external (interpersonal or social). The anguish of distress compels the sufferer to give it a name, a voice, and a meaning, all of which are conveniently

Table 1. Latent Meanings of Some Psychosomatic Memes

Psychosomatic Meme	Latent Meaning
Anorexia nervosa	By rejecting corporeal pleasures, I will achieve a self-mastery that will restore my purity and innocence
Repressed memory and multiple personality disorder	The occult cause of my inscrutable distress is the violation of my childhood innocence. It has left me shattered.
Multiple chemical sensitivity disorder (18)	I am a sensitive victim of modern society. I am fed up. I reject everything synthetic, industrial, and consumerist.
Silicone breast implant illness (19)	Nature has exacted its revenge for the vain attempt to incorporate artificial notions of feminine beauty.

supplied by psychosomatic memes. Like a virus that incorporates into a cell by fitting a forged protein into a cell receptor, a psychosomatic meme incorporates into a host by providing the “key” to the suffering.

Psychosomatic memes give voice to distress through culturally understood behaviors and symptoms. Memes that are purely psychiatric give distress a voice through stereotypical behaviors, such as food refusal. Other memes exploit the process of somatization, a social accommodation that allows people to express distress passively through physical symptoms when direct expression, such as to a supervisor or a loved one, would be too threatening (15). This use of behaviors and physical symptoms as a language of distress is a universal human propensity, with distinct regional dialects. Mass psychogenic illnesses in Singapore factories, for instance, have involved convulsions and combative behavior (16), while in western workplaces dizziness, fainting, headache, and nausea predominate (17).

Psychosomatic memes also give meaning to distress by weaving these symptoms into a rich narrative (14). The narrative may include a plausible biological etiologic framework, and may incorporate a latent theme that reflects social anxieties (**Table 1**). In multiple chemical sensitivity syndrome, for instance, disabling “allergic” responses to synthetic substances reflect valid cultural concerns about pollution and the artificiality of the modern world. The plausibility of the biological explanation and the allegorical truth of the latent theme make the meme more compelling. These may in turn obscure other social and psychological processes that are more pertinent in a patient’s ongoing distress.

Symptom amplification (20) plays a key role in the acquisition and consolidation of psychosomatic memes. Factors such as increasing workplace demands (5) and major life stresses make commonplace somatic symptoms (palpitations, muscle soreness, abdominal discomfort) more troubling and insistent (21). These symptoms may prompt the sufferer to ascribe the distress to a physical illness. The

psychosomatic meme provides an attractive etiologic framework, suggesting to the sufferer that she has been hurt, poisoned, or infected. Once integrated, this framework can induce a somatic preoccupation that becomes self-validating and self-reinforcing. For instance, a worker who develops back pain on the job may become convinced that he has suffered a workplace injury. He may become hypervigilant to muscular soreness, believing it to represent ongoing trauma. If returning to work worsens the back pain, this may further confirm his belief that work caused the “injury.”

Biological traits may also modulate meme acquisition and consolidation. The fact that biological and epidemiologic commonalties can be found between the chronic fatigue syndrome and depression (22), and multiple chemical sensitivity disorder and panic disorder (23), suggests that these disorders may share a common biological predisposition. Gender may play a role. Mass psychogenic illnesses (17); eating disorders; and functional disorders such as fibromyalgia, the irritable bowel syndrome, and the chronic fatigue syndrome all show a striking preponderance of female sufferers. This may reflect differences in somatic sensitivity (24), socialization, or exposure to social environments that promote these ailments.

Memes can also induce secondary physiologic changes that consolidate illness. In the chronic fatigue syndrome and fibromyalgia, ongoing lassitude induces deconditioning that exacerbates myalgia and fatigue (25). Anorexia nervosa induces neuroendocrine and gastroenterologic changes that enhance susceptibility to nausea and regurgitation (26, 27).

Social, economic, and legal factors may further promote consolidation. Those who suffer from psychosomatic memes may be relieved of social obligations and may be provided with sympathy and support. Patients may qualify for income through worker’s compensation or disability programs. An overly indulgent compensation system may provide an economic incentive to remain ill. The Australian epidemic of repetition strain injury was due in part to the generous awards that were granted for those who suffered workplace injuries (4). On the other hand, an adversarial disability system can also promote recalcitrant illness. Once patients apply for disability, they are thrust into a conundrum: “If you have to prove you are ill, you can’t get well” (28).

Meme Dissemination

Psychosomatic memes are acquired because they give distress a cathartic voice. This same voice gives them a means to spread. Social factors affect the rapidity and scope of dissemination. Person-to-

person spread has been demonstrated in mass psychogenic illnesses, first through social channels and then through a “crowd effect” (5). Symptoms are exacerbated by congregation of affected individuals. This has been noted both in mass psychogenic illnesses (6) and more persistent illnesses: A neurology textbook at the turn of the century noted neurasthenia patients in sanitariums to be “spreading the mental infection by constant conversation and comparison of their complaints” (25). Although they provide helpful camaraderie for the sufferer, support groups may similarly consolidate and disseminate psychosomatic memes.

Mass media provide a mechanism for disseminating memes to the community at large, recruiting vulnerable patients. The spread of pseudohypoglycemia in the 1970s was undoubtedly fostered by articles in popular magazines, which suggested that “if you’re not really sick but you don’t really feel great either, maybe you have hypoglycemia” (29). The Internet may prove to be an even more effective meme promoter. At the same time, mass media can also disseminate critical appraisals of psychosomatic memes that neutralize them.

The Challenge of Legitimacy

Psychosomatic memes strive to become “legitimate.” They cannot thrive if they are illegitimate, if they have no social value. The legitimacy of diseases with objective, quantifiable abnormality is rarely disputed. The legitimacy of diseases based on psychological conditions or purely subjective phenomena such as pain or fatigue is more likely to be contested.

For many psychosomatic memes, a putative biological mechanism provides that legitimacy. Attempts to redefine the illness without the etiologic mechanism (for example, “chronic fatigue syndrome” rather than “myalgic encephalitis” or “chronic Epstein–Barr virus infection”) are therefore resisted as a threat to that legitimacy (30).

Virulence Factors

Virulence factors for psychosomatic memes include an association with ritual, a sense of injury, and a vivid etiologic mechanism. Memes associated with ritual include pseudohypoglycemia, anorexia nervosa, and multiple chemical sensitivity syndrome. Ritual reinforces illness behavior through conditioning. In the case of pseudohypoglycemia, this effect has some charm, providing “the promise of a relatively inexpensive and successful self-help program” in which “indulgent patients may gratify themselves with snacks each time symptoms occurs, and ascetic

patients may impose severe dietary restrictions” (31). In the case of anorexia nervosa and multiple chemical sensitivity syndrome, however, the search for self-mastery is ultimately self-defeating. The complicated rituals used to evade food or artificial goods ultimately lead only to further isolation and distress.

A sense of injury—of having been wronged—and a vivid etiologic mechanism are also features of many psychosomatic memes. These features create dependency and resentment, and a conviction that any critical analysis of the illness is naïve or even duplicitous. Those who are convinced that multiple personality disorder is the result of repressed sexual abuse have implied that critics are in denial of, or even in collusion with, a widespread network of pederasts. Similarly, those who are critical of the concept of repetition strain injury, in which “micro-trauma” is presumed to fray joints, tendons, and nerves (32), may be regarded as dupes of a negligent industry.

The lack of such virulence factors may render fibromyalgia and the irritable bowel syndrome benign or even beneficial memes. Some have argued that these labels should be resisted because, like other psychosomatic memes, they enhance somatic preoccupation (33). It is equally plausible, however, that providing labels for symptom complexes can also be therapeutic, putting a halt to endless diagnostic tests in pursuit of each symptom (34). In fact, insofar as these illnesses are understood to reflect somatic hypersensitivity and not a vivid, emotionally charged underlying abnormality, they may even be protective. Like weakened strains of pathologic viruses, memes that have been drained of a vivid etiologic narrative may “inoculate” their distressed hosts against more pathologic psychosomatic memes.

Iatrogenic Factors

Psychosomatic memes may be promoted by medical professionals. These disease advocates “inoculate” their patients with a meme and sustain their patients’ beliefs that they are ill. Treatment of multiple personality disorder provides a bold example. Many psychologists have recently been alleged in lawsuits to have prompted their patients to develop a multitude of bizarre personalities, and inadvertently to have planted false memories of sexual and ritual abuse during hypnosis (35).

More troubling for the typical clinician is that everyday interactions may subtly sensitize patients to psychosomatic memes. Patients who present with disturbing functional symptoms may develop a somatic preoccupation when subject to exhaustive questioning, examination, and testing (33). The

challenge of working with such patients is to be thorough but reassuring, to avoid promoting specious conceptions of illness without dismissing the validity of the patient's illness experience.

Meme Neutralization

The duration of psychosomatic outbreaks varies. Mass psychogenic illnesses tend to disseminate and resolve rapidly. The memes of neurasthenia and pseudohypoglycemia persisted longer but ultimately declined. The neutralization of these and other memes probably results from the erosion of social legitimacy (25). Investigation may render the meme's etiologic principle less and less tenable. Shifts in social anxieties may make the meme's narrative framework less compelling. Media interest may wane as the meme's novelty evaporates.

A vivid etiologic mechanism may involve a trade-off for psychosomatic memes. The presence of such a mechanism initially helps the meme spread and consolidate more rapidly. The fact that the mechanism can become untenable, however, ultimately renders the meme vulnerable to delegitimation. Psychiatric memes that lack such a mechanism (for example, anorexia nervosa) may be better adapted to endure.

The fate of patients who develop psychosomatic memes varies with the particular syndrome. Patients with mass psychogenic illnesses report poorer health and higher neuroticism on follow-up surveys but have not been shown to be more likely to acquire other psychosomatic memes (36). Patients with psychosomatic memes characterized as functional somatic syndromes (such as repetition strain injury and fibromyalgia) tend to have chronic, refractory illness and may simultaneously acquire several different psychosomatic memes (21). The long-term fate of hosts of popular memes such as pseudohypoglycemia is unknown.

Conclusion

Some disease conceptions appear to induce illness in the absence of any classic pathogen. These psychosomatic memes induce biological, psychological, and social changes in their hosts and can be transmitted to others. Like prions that induce native proteins to adopt a conformation that is chemically more stable but biologically inert, these memes provide a template that reorganizes the host's cognitive framework. They organize mental and physical distress into a meaningful narrative but render life less vital. The term meme, which straddles the realms of the biological and the cognitive, is particularly ap-

propriate for describing these complex biopsychosocial phenomena.

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Somehow Charlie had thought the operating room would be a white amphitheater, blazingly bright, with a large oval floor and a white wall six or seven feet high around the oval and, above the wall, high banked theater seats where doctors in white coats would sit to observe this important operation, or *procedure*. . . . Instead, it looked like one of those small leftover pieces of modern office space where office machines on casters are stored. . . . There seemed to be numerous tubes, some of which came out of him and some of which went into him . . . [S]uch insults to his status . . . proceeded from the hospital patient's role as a frightened organism upon which superior beings practiced their medical arts. . . . He felt deceived. [His doctor] had always described the operation as if it were a piece of carpentry.

Tom Wolfe
A Man in Full
New York: Farrar Straus & Giroux; 1998:618-31

Submitted by:
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