The Scientific Quest for Physical Culture and the Persistent Appeal of Quackery

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Now, reader, tell me . . . just where the line of scientific practice ends, and the line of quackery practice begins.

—James C. Jackson, 1861

It was with completely unintended irony that James C. Jackson, the noted health reformer who believed that diet “cured” masturbation, scorned men who prescribed drugs for illnesses as “quacks.” Genuine physicians, Jackson asserted in *The Sexual Organism and Its Healthful Management* (1861), were the ardent and enduring enemies of patent medicines. Indeed, Jackson emerged rather as a categorical enemy of drugs themselves, seeing them as a block to natural processes and as a destroyer of natural self-healing. Although he accepted surgery as a means of restoring the proper structure of the body so that natural healing could take place, he doubted that introducing chemical substances could ever be beneficial—the very notion that one might “heal” a “disease” struck him as self-contradictory.

“Genuine” medicine and faddish quackery are often remarkably close and disturbingly similar. Moreover, neither institutional sanction, scientific method, nor the validity of medical claims and procedures seems sufficient to establish a substantive difference between accepted medicine and dubious fad. As an arbitrary matter of definition, one might argue that true medicine is whatever the organized medical professionals say it is at any specific time. Yet authoritative endorsements do not automatically sway the public mind; and, amid the extraordinary medical advancements of the twentieth century, unproven schemes promising health, strength, and renewal still abound. In a way, the prospects for quackery may have increased because of the great scope of scientific advancement rather than lessened.

The persistence of sweeping health schemes has depended greatly on the asymmetry between the nature of scientific medicine and the psychological inclinations of modern American culture. However broad the reach of medi-

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cine, its ultimate grasp depends on testing and verification, often in small and tedious degrees. But the reach of quackery is complete, much like the sweep of the American vision of perfectability. Rather like a Puritan conversion experience, commitment to a health regimen popular in the past implied sudden virtue, producing instant rectitude and uncomplicated zeal for burning away the traces of earlier sin. Whether for soul or body, the miracle of faith was that the cure was total. Obedience to the regimen allowed one to fulfill the nineteenth century quest for “character,” even as the promise of perfect health fed the twentieth-century hunger for “personality.” As genuine medical achievements such as those in anesthesia made pain seem abnormal, the expectation of total comfort was bolstered. And as medicine attended to the details of proof, fads and cure-alls catered to the warped notion that Americans had not only a right to pursue happiness but a right to possess it-all at once, all complete.

Ultimately, such ways of thinking affected physical culture and sport-how one trained for it and through it, what one expected from it, what one claimed it had achieved, and how much it seemed to promise for a better future. To some degree, the interest in sport was explicitly linked to concern for personal and public health. Physical culture thus had clear potential for impact on society. But it also meant that society had enormous impact on sport and physical culture-as in the transference of medical and scientific information from one field to another.

The scientific impulse held sway in sport in certain periods, promising predictable social “pay-offs” for executing carefully prescribed regimens. The last decades of the nineteenth century especially bore the marks of this view. Yet, as the goals of sport altered and increasingly centered on the individual’s own satisfaction as the object of one’s efforts, the scientific impulse was to falter. If the goal of sport became the service of the invidual and if the individual was by definition unique, then one could not truly test and verify results nor predictively reproduce them. To this degree, science became impossible. And to this extent, quackery was merely a state of mind.

Examples abound showing the American preference for total solutions to health risks and degeneration. These same examples necessarily testify to the elusiveness of the border between science and quackery. Some devotees of remedies which were offered for serious ailments showed great personal eccentricity and even clear madness, and they risked associating enthusiasm for physical culture with sheer derangement. While the eminent “muscular Christian” Thomas Wentworth Higginson was merely a bit odd and remained socially engaged and productive, there were far different and less reputable devotees of

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physical culture, too. A chilling example was Charles J. Guiteau, who assassinated President James A. Garfield in 1881 and was convicted of murder the next year. For Guiteau, bodily development appears to have been but one of many truly strange enthusiasms—vehicles of personal transformation, testimonies of his belief in salvation, and signs of his impulse toward perfectionism which was highly developed despite a life of compounded failures. His experience with the Oneida Community from 1860 to 1865 added to his belief that perfection on earth was possible, even though he finally rejected the Community’s leadership. The philosophical and medical views of his age bolstered the understanding of mind and body as inseparably fused—indeed, as an indivisible entity. Hence, such moral accomplishments as Guiteau imagined to be within his grasp required physical training to maintain the requisite moral force. And so, in 1859, at the age of 28, he took up gymnastics and weight lifting. As Charles Rosenberg has noted, after three months of his new regimen, Guiteau had become “a convert” to “the utopian health enthusiasms of the day,” temporarily confirmed in his faith by rapid increase of his chest from 29 to 33 inches. Meanwhile, he became an “avid reader” of W. W. Hall’s Journal of Health and closely followed the phrenological writings of Orson and Lorenzo Fowler. He raided across the range of schemes for health and physical improvement with little discrimination, lusting after a single and simple solution to his complex of difficulties. When he finally set upon the murder of Garfield, Guiteau thought himself in direct personal communication with God, whose orders he was merely carrying out. Thus, Guiteau was outraged when lawyers sought to defend him by a plea of insanity—a plea which violated his own immense sense of self-esteem and which impeached his claim to divine guidance. For Guiteau, then, physical development, physical education, and health reform were hardly the full or final answer to his own problem or the world’s. Instead of bringing Guiteau to a new day of stability and respect, they formed just one in a wretched series of false dawns.

Despite Guiteau’s sorry example, nineteenth-century notions of what medicine might encompass were broad enough to include much in physical education and physical culture. Physical culturists and health reformers outside the established medical societies made claims for their efforts which were often as sweeping as those of arrant quacks. The claims of some physical educators were not always much better. So the endorsement which later generations have given to such respected physical educators as Dudley Sargent obscures the kinship

8. Concerning Guiteau’s interest in schemes for his physical improvement, see Rosenberg, The Trial of the Assassin Guiteau. 16-17.
9. There is a special irony in this interest in phrenology, since phrenologists played some role at Guiteau’s murder trial. By that time, however, Guiteau proclaimed himself uninterested in such physical measurements, claiming that “spiritology” and a man’s spiritual dimensions were all that mattered. Since Guiteau asserted that his shooting of Garfield was done on direct orders from God, the precise shape of his own skull struck him as a supreme irrelevance. Concerning phrenology, see John D. Davies, Phrenology. Fad and Science: A 19th-Century Crusade (New Haven: Yale University Press, 1955).
which many of his ideas had with more eccentric views. Born in 1849 in Belfast, Maine, Sargent had a brief flirtation with cigars and card-playing when he was 14, but he later dismissed these as “fads.” He was ever more attracted to sports and organized exercise, which he later described as having “moral” force. In 1866, he became interested in gymnastics, influenced by an article on the subject written by Charles Caldwell and also under the spell of Thomas Wentworth Higginson. For all the later talk of science in Sargent’s study of the body, his views were founded in the intertwining of physical and moral dimensions.

In September 1879, Sargent went to Harvard as Director of the Gymnasium and Assistant Professor of Physical Training. His emphasis on “corrective gymnastics” in order to achieve a “symmetrical” body was hailed as a triumphant step for scientific method in physical education, in which tasks were clearly tailored to well defined goals and in which each such task was seen as part of a comprehensive whole. Yet the insistence on symmetry itself paralleled the view of neurologists and many psychiatrists that physical asymmetry was a sign of insanity, an opinion which clearly put a high premium on balance and order. It also recalled the theories of phrenology, which were widely discredited by Sargent’s time. Still more, the concern for symmetry pointed down the same path which led toward chiropractic and overblown posture reform. Even the emphasis on physical development-so often assumed to be a virtue by observers in the latter decades of the twentieth century-was often seen as an eccentricity during the middle and even later decades of the nineteenth.

Health reformers concerned with diet faced a similar confusion of identity. For example, although the reputation of a health reformer such as Sylvester Graham has retrospectively prospered due to his emphasis on raw natural foods, it must be remembered that the source of his inspiration lay more in faith than in science. Even a scientist such as Horace Fletcher, who even won some governmental support in the early twentieth century, frequently erred, although he was taken seriously due to his insistence on careful method in studying the chemistry of foods. One example was his advocacy of the “all potato” diet. Other diets advocated by WASP Americans would surely have contributed to a serious surge in such ailments as rickets and scurvy had they been followed.

A notorious example of the dangers posed by an error-prone science came in the diet peddled by the New England Kitchen in the 1880s, a reform enterprise run largely under the inspiration of Edward Atkinson. Thinking that immigrants’ heavy use of spices in cooking caused them to be sexually hyperactive, Atkinson and his colleagues sought to reduce the non-WASP population by putting immigrants on a bland diet. Although the promotion of Atkinson’s own Aladdin stove as the slow cooker of choice provides an amusing sidelight to this.

12. Ibid., 35—36.
dietary escapade, the more important fact is that the recommended diet would surely have produced massive deficiencies and spawned disease including rickets and scurvy if it had been followed. 14 Such were the limits even of well-intentioned science, let alone scientific notions infected with self-interest such as Atkinson’s personal business prospects. For example, the chemist W.O. Atwater, who worked for the U.S. Department of Agriculture and pioneered in analyzing the energy-value of food, knew nothing of vitamins. Here, too, the food intake deemed ideal was vitamin-deficient; and “science” would have fostered disease. 15

The career of physical culturist Bernarr MacFadden extended the tradition of Atwater, Atkinson, and Horace Fletcher—whose work MacFadden admired. Even more than many others, MacFadden’s life confuses personal eccentricity with professional quackery, even if he was at least manifestly less lethal than Charles Guiteau. 16 MacFadden’s advocacy of dietary reform had some measure of popular appeal and substantial medical support. Yet some specific measures were couched in such extreme terms as to threaten their acceptance. MacFadden’s rejection of inherited customs in food preparation reflected an insistence on scientific method in determining the nutritional properties of foods and the means of maximizing them in preparation. But his claims for “chewing your way to health” seemed extreme; and one can only speculate on reaction to his defense of the “nut and fruit diet” as the way of eating most suited to “our nearest animal relatives, the anthropoid apes. . . .”17 In an age when Darwinian ideas remained the subject of lively controversy, the merit in showing family ties with the ape remained moot. So, too, he opened a string of “physical culture restaurants” in New York City, extending his gospel of health—yet opening himself to charges of mere huckstering.

Even more, though, MacFadden’s career ranged broadly from the serious through the frivolous—from the mainstream to the outer fringes. He worked briefly as a circus acrobat, competed as a wrestler, and claimed to be a “kinesitherapist”—that is, a “healer of disease, by use of movements.”18 He published Physical Culture, beginning in 1898, and True Story Magazine, founded in 1919. He boosted sales of the Graphic, established in 1924, with vivid pictures that led critics to nickname it the Pornographic. His prescription for health, too, was couched in extremes—all ailments were really variations on

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the one and only disease besetting humankind, impurity of the blood. Specific ailments which doctors called diseases were Nature’s way of removing the impurities. Thus, MacFadden railed against the “medical trust” and opposed the use of drugs. Even the term he gave to his method of cure—“physculturopathy,” or healing by use of physical culture—hinted at his distance from conventional medicine. In addition, he was unabashedly in love with his own body, let alone the body as an abstraction. “I freely admit I love my body,” he said. “I respect and reverence it.” As his “court biographer” indicated, few of MacFadden’s conventional contemporaries could quite make sense of his stance on major issues. He opposed the use of alcohol but also opposed the Volstead Act. He attacked prudery and public governance of morals but demanded that sexual contact be strictly limited. By his own lights, MacFadden was a miracle of consistency. But where those lights faded into society’s glare, he seemed an arbitrary eccentric.

MacFadden’s thoughts on dress suitable for athletic competition made for conflict when he first revealed them—such as his advocacy of swimming suits for playing tennis. He denounced hats, explaining that hair was the natural and sufficient insulation provided by Nature. He insisted on the reform of shoes, altering their design to meet the design of each foot rather than the sway of fashion. Getting outside for exercise and engaging in sport, competitive or otherwise, appealed to MacFadden. These would revitalize the spirit, almost as if they could build more energy than they required. He also urged that sunlight bathe the body as fully as possible to allow “sunrays an opportunity to revivify the body.” When he argued for the use of scant clothing at the beach, MacFadden violated social custom and prevailing thought. Yet these views were later to be taken as common sense. Still later, they became suspect due to fears of skin cancer. Common sense might no longer be common, and it might not even be sense. The question of whether MacFadden was a quack requires knowing when the question was asked.

In one important respect, MacFadden may even be considered a pioneer on behalf of new views about the body and its proper treatment. The unabashed love of his own body which made MacFadden more notorious than famous with his critics was very much in tune with new ideas about culture and popular behavior in twentieth-century America. Less and less did it seem necessary to explain care for the individual body by the gain society would reap from its health. Ever more, it sufficed simply to say that individuals won enjoyment from their bodies and experienced personal well-being. One might still talk of winning protection against disease and a host of ailments, and one might still see widespread illness and debilitation as a threat to society. Beneath it all, however, the pleasure of the individual gained importance as a critical standard of behavior and personal care.

19. Ibid., 99.
20. Ibid., 98.
21. Ibid., 97.
22. Ibid., 216
During the first half of the twentieth century, a highly orchestrated movement to improve the posture of America’s young people developed, also linking concerns for the individual with care for the society at large. The posture movement won substantial institutional support from federal agencies and from the American Medical Association (AMA). In fact, it was the AMA which in 1923 founded *Hygeia*, a journal which gave much space to medical discussion of posture. “Posture workers” claimed that bad posture caused “organic problems such as backache, vomiting, colitis, constipation, menstrual irregularity, heart disease, tuberculosis and mental impairment.” In addition, they regarded bad posture as the visual symbol of an underlying moral weakness and cultural decline. Although the preachings of posture workers were amply published in the *Hygeia* and despite the advocates’ substantial presence at the White House Conference on Child Health in 1932, their work lacked appropriate “scientific rigor” - they failed to define good posture in ways which could allow comparison and independent verification of experimental results. Nonetheless, the posture workers had one quite important feature in their favor - the great popular appeal of anything that smacked of a panacea. So many ills and ailments could be remedied merely by sitting and standing “properly.”

During the 1920s and 1930s— the heyday of publication concerning posture— *Hygeia* offered plays for classroom use, poems, photographs, and purportedly scientific articles. A matter which had once seemed aesthetic and temperamental was thus transformed into an issue of public health. The *American Physical Education Review* and *Research Quarterly* also devoted substantial space to the dangers of bad posture. Here, too, the actual experimental evidence was scant, reflecting the continuing dominance of predetermined belief over dispassionately acquired data and inductive reasoning. Between 1923 and 1962, only 10 percent of the 108 papers on posture appearing in the two journals even attempted to ground claims on experimentally acquired information. Nor was there much to be said for the three papers using experimentation to back up assertions of a positive correlation between bad posture and pathological effects. Several of the claims appear to have been largely psychological, having only the most tenuous possible tie to the specifics of posture and, for that matter, a tie which might have been either cause or effect if it existed at all. One researcher claimed that bad posture produced self-consciousness and timidity (as well as an array of physical problems such as heart disease and hearing defects), while another suggested that good posture led to capable scholarship. Criteria were lacking, control groups were absent; but conclusions prospered nonetheless.

That the posture workers should have received cooperation from some
popular and lay constituencies may not be surprising. But why they also gained support from professional quarters is quite another matter. The answer may have to do with the second of their judgments about bad posture—namely, that it was a visible, physical emblem of underlying failings in what can only be called temperament and character. In this respect, they echoed an older pattern of commitment, particularly a belief in absolute criteria for behavior which were external to the individual and which had to be internalized by voluntary action and discipline. The “neutrality” of medicine as generally understood in the twentieth century aimed in a different direction, one which tended to discard the element of personal choice and commitment. “Absolute criteria,” if they existed in “genuine” or “modern” medicine, had to do with narrowly defined physical and physiological specifics. The aspect of character fell out of favor. Still, in the earlier decades of the twentieth century, the residue of ways of thinking often ascribed to the nineteenth century remained considerable and powerful.

In fact, perhaps they are not best described as “nineteenth century” ways at all but rather as dispositions and inclinations which may recur in any era, even if they did seem to dominate the attention of American social elites in the nineteenth century. This would help to explain how chiropractic experienced a parallel rise to eminence among the American public at much the same time as did the posture movement. Although it promised results as wide-ranging as did the posture movement with which it had a certain obvious kinship, chiropractic was nettlesome for the traditional medical professionals, whose organizational and disciplinary authority chiropractic challenged and upon whose economic interests they infringed. Moreover, traditional medical professionals were becoming ever more deeply committed to specialization at precisely the time that the chiropractors reasserted a simple and single explanation for a constellation of ills. Here, clearly, was a bastion of quackery—clearly, at least, from the vantage of those who stood to lose fees and prestige if chiropractic held sway. Yet its scientific basis was scarcely less firm than that of the posture movement, which enjoyed substantial favor within the mainline medical establishment. 26

One of America’s sharpest satirists, H.L. Mencken, saw chiropractic as a leap of faith. In his more biting remarks, Mencken approved of chiropractors, suggesting that the inefficacy in their treatment favored a kind of “survival of the intelligent.” To end the “coddling of the half-witted,” he asserted, “nothing operates more cheaply and effectively than the prosperity of quacks.” Mencken’s underlying criticism, however, resembled that which the medical establishment lodged against the chiropractors. “What is needed,” Mencken argued, “is a scientific inquiry into the matter, under rigid test conditions . . . .” 27

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26. It is also possible that the chiropractor’s suspicion of synthesized chemicals contributed to his poor repute with a medical establishment which was eagerly advancing their use. The insistence on “natural” solutions which became a part of chiropractic, in this way, extended the tradition of which James C. Jackson was also a part.

27. See H. L. Mencken, “Chiropractic,” in H.L. Mencken, Prejudices. A Selection, ed. James T. Farrell (New York: Vintage Books, 1947), 253. Far from limiting his criticism to quacks, Mencken had no high regard for the “Medical Trust,” as he referred to the traditional medical establishment. However, it is all the more telling that he regarded them as capable of delivering on much that they promised, precisely because they conformed to the
lavished irony on those who trusted a “shaved and fumigated longshoreman” to treat a diseased appendix by “balancing him on McBurney’s spot and playing on his vertebrae as on a concertina. . . .” 28 Yet in doing so he confirmed the growing bias which conventionally educated Americans held in favor of specialization—a trend which threatened to make virtually any regimen which offered sweeping remedies seem close to quackery.

Something in the expansiveness of claims made for a regimen or a cure defied—or at least inhibited—careful experiment and syllogistic proof. Unlike specific measures which might be tested according to established scientific procedures, a cure which claimed general and sweeping impact was awash in a sea of variables, isolated from the rescue and social comfort which scientific testing might procure. Yet the sweeping claims of cure-alls and quackery survived the lack of scientific verification, since failure could always be blamed on apostates fallen from faith.

Such words are more than mere rhetorical flourishes. Physical regimens, much like religious creeds, have many purposes. By its very nature, scientific assessment focuses on one claim at a time. The true believer may claim that his “physical faith,” much like a religious one, is only made to appear false when its tenets are taken out of context. For those faithful to a physical regimen, each tenet can survive rigorous scrutiny by arguing that the value of each specific remedy or routine comes only when practiced holistically. Poking at the skin of belief may cause the believer some irritation, but its heart goes on beating. In addition, the scientific assessment of schemes concerning physical culture suffers from a special confusion as to their purpose. For example, the scientific appraisal of sport and its risks to the participant commonly presupposes that the purpose of sport is to enhance personal health. There is no reason why this should be so, and quite often it is not. When the purpose to which a regimen is put by its adherent is so little understood by the scientifically disposed investigator, the results of scientific study are likely to be accurate but quite irrelevant.

The confusion over motives showed itself unmistakably in the 1960s and after during the rise of interest in running and “jogging.” The confusion was suggested by the very need to use two words—“running” and “jogging”—which some inaccurately thought to be synonyms. Interest in “jogging” grew directly from a doctor’s prescription of aerobic exercise as a means of improving cardiovascular fitness. But running had appeal for many other people with quite different concerns. For example, Thaddeus Kostrubala proclaimed running a form of “Western Zen.” Coupling physical, psychological, and spiritual benefits, Kostrubala wrote of a “refreshment of the soul” experienced “by those who practice meditation and by long-distance runners.” 29 In Holistic Running (1978), Joel Henning claimed that running was “a form of worship, an attempt rules of scientific study and practice.


to find God, a means to the transcendant.”30 Henning offered a new clarification of health itself. “Holistic health,” he noted, “means the integration of mind, body, and spirit for the attainment of whole health.” In turn, “holistic running” was his way of “helping to integrate our physical and spiritual selves”—incorporating “aspects of exercise physiology along with Western religion, biochemistry, biofeedback, yoga, and Zen.”31

The claims for running and, even more, the intense focus which some of its practitioners gave it brought on a sometimes playful reaction. Perhaps the most obvious and literal was The Non-Runner’s Book by Vic Ziegel and Lewis Grossberger, a deliberate take-off on an enormously popular book by runner and writer James F. Fixx.32 Twitting people for taking their running too seriously, Ziegel and Grossberger kidded instead that “non-running is life itself,” assuring the reader that doctors guarantee that one could go on “non-running” for years.33 But the most prevalent reaction to writings which tapped running as a form of meditation were those which saw it almost exclusively as a means to improve cardiovascular fitness. Even Jim Fixx, the butt of much humor, produced a book centered on enhancing athletic performance by practical development of strength and skill. In Maximum Sports Performance (1985), Fixx cooperated with the Nike Sports Laboratory; and poetic flights in praise of running as a “lifestyle” were kept to a minimum.34 So, too, The Running Book (1978), produced by the editors of Consumer Guide, allowed that some runners claimed a psychological “high” from their activity but concentrated on practical, measurable cardiovascular benefits.35 The pseudonymous “Leo Diporta” made an explicit link between Zen and running in the very title of his work Zen Running (1977).36 But Jim Ferstle offered a simple and health-focused alternative in Contemporary Jogging (1978).37 Which was fad, and which was healthful practice? Who was to judge? And by what standards? Clearly, different runners—or joggers—had many different purposes for doing what they did. For some it was sport, for others a form of competition, for still another group a means to health, and at least for some special group a means of spiritual self-discovery. If the individual case was the true test, then what was the relevance of scientific study?38

Not all investigators miss this problem entirely. At the risk of substituting rhetoric for logic, some observers have often seen “madness in sport,” as surely

33. Ibid., xi.
34. James F. Fixx, Maximum Sports Performance, with the Nike Sport Research Laboratory (New York: Random House, 1985). It was perhaps inevitable that critics would pounce on the circumstances of Fixx’s death, while out running, as a case against the activity which he had long advocated. However, such critics assumed that perpetual health was both the goal and the result of running, something which Fixx himself would not have claimed. In fact, even temporary physical health could not be assured by running or other forms of sport and exercise. It all depended on how the activity was pursued rather than just what the activity was.
38. Such concerns were repeated when Norman Cousins chose to use video-cassettes of Marx Brothers comedies to overcome seemingly incurable illness for which his medical doctors had no remedy.
as there was a form of madness in Charles Guiteau. The sportsman has the advantage over the assassin, however, in that his pursuit pretends to the divine but makes no claim to begin there. Psychiatrists such as Arnold Beisser have begun to enumerate cases in which sport has become the refuge of obsessive and otherwise troubled personality. In such instances, sport loses its neutrality and, within the context of individual obsession and compulsiveness, becomes a manifestation of disease. Whether one may properly call sport a form of quackery when it is warped to the purposes of mental affliction, it is clearly not healthy in the common sense of the word. Still, the passionate commitment to sport shares with true madness an insistence upon personally generated criteria for respectability and success. So, too, they are alike in putting individual fulfillment over an externally developed standard of social benefit.

The final presumption that what is good for the individual and suits the individual’s tastes and instincts must benefit society is perhaps the ultimate in presumptuousness. But it is an integral element in sport as it has been carried on, especially since the mid-twentieth century. With so high an emphasis on the individual as the unique point of reference and criterion, external standards fall to unimportance. External verification can not be undertaken, since exploration of the internal mind and personality by the external examiner must always remain impeachable. Results thus can not be reproduced to the satisfaction of the tests of science, since one can never be sure whether they have been reproduced at all. And sport itself-clearly a fad in some of its forms during certain eras-begins to look uncomfortably like a kind of quackery.