

Dishonour to the Duck

by

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The ducks they are a noble breed,
within the pantheon of gorgeous birds
If not rated first, then no less than third;

Amphibious, fleet of wing, royalty of the marsh,
Capable divers, feeders, masters of the air
Admittedly on land, waddling with great care.

But no creature we know is without flaw;
While duck has no defects on its feathery back
It has the great misfortune of its raucous "quack."

And there, my friends, lies the basis of my talk:
Disrespecting the duck, we apply its hapless sound
To naming fake healers, who persistently abound.

I sense a stirring in the room, an unease
Could this doggerel signify an hour of pain,
Could these triplets repeat again and again?

No, dear friends, bear with me now:
Things will get better, though they could get worse
If I dared to present this lecture entirely in verse.

Surely anyone knowing that a medical doctor was to give a talk entitled, "Dishonour to the duck," should have guessed what was coming!

My topic for this evening is medical quackery. At first, I thought to focus on quackery in late 19th century England, because what I knew of it was so colorful and bizarre. However, as I began to explore the topic, I found the subject to be much older and broader than I thought. In fact, the very definition and roots of quackery have changed dramatically over the last two centuries, and practices that one might expect to have been extinguished by the advent of scientifically based medicine survive until today. Medical or health quackery is not in decline-- it is thriving in modern America.

By necessity, I shall focus on Western medical practices and the rise of quackery rather than a history of medicine *per se*. In my admittedly superficial look into

medical practices in ancient times, I was unable to find references to quacks, but as will become clear later, surely they were there!

What is the origin of the term “quackery,” and how is it defined?

An online etymologic source [www.etymonline.com] defines “quack” simply as a “medical charlatan.” It gives the origin of the term as an obsolete Dutch word, “quacksalver,” meaning literally a hawker of salves. The Middle Dutch root is “quacken,” to brag, boast, or literally, to croak. “Salven” meant to rub with an ointment. The source reports that the oldest use of the term in English was in the 1620s, “to play the quack.”

For 1700s-1800s England, Roy Porter [Quacks. Fakers and Charlatans in Medicine, 1989] says that “He... was a called a quack who transgressed what those in the saddle defined as true, orthodox, regular, ‘good’ medicine.”

In the late 1930s, the American Medical Association’s “Bureau of Investigation” tried to ferret out allegedly fraudulent approaches to treatments. The definition they used was “(noun): a boastful pretender to medical skill; (adjective) pertaining to, or characterized by, boasting and pretension, as, a quack medicine, a quack doctor; (verb transitive) to make extravagant claims or to advertise boastfully; to treat or manage as a quack would.” This definition did not exclude the quack’s having legitimate medical training or skill. Cramp wrote that “Quackery is rampant in many fields—in religion, in politics, in literature, in economics, and in medicine.” I agree.

Wikipedia—the all-knowing source that most of us turn to first, even if shamefacedly—defines “quackery” as “the promotion of fraudulent or ignorant medical practices,” and a quack as a “fraudulent or ignorant pretender to medical skill,” or “a person who pretends, professionally or publicly, to have skill, knowledge, or qualifications he or she does not possess; a charlatan.”

The common threads of these definitions are ignorance, fraud, false claims of skill or knowledge, and erroneous or exaggerated claims of benefit. A quack treatment, then, is fraudulent, mistakenly believed, misrepresented, or based on ignorance and credulity. Not mentioned in the definitions above, but very important, is that the safety and efficacy of such treatments are unproven. Notably, the concept of quackery seems to have arisen almost simultaneously with the rise of organized “regular doctors.”

It’s a bit startling to realize that prior to the last 100 years or so, all medical practitioners, whether “degreed” or formally trained or recognized by officialdom, were essentially quacks. Ancient Greeks believed that health was determined by the balance of the four humors: blood, phlegm, yellow bile, and black bile. Their knowledge of internal anatomy was limited, and their knowledge of what the

various organs did quite mistaken. They simply had no rational basis for choosing or rejecting any proposed treatment for illness or injury. Pliny the Elder, writing in the first century A.D., recognized their limitations, saying that “Physicians acquire their knowledge from our dangers, making experiments at the cost of our lives. Only a physician can commit homicide with impunity.” Despite such skepticism, the beliefs and practices of the ancient Greek and Roman physicians were taken almost as holy writ, and taught for centuries after their origin.

On into the late 19th century, European and American doctors were trained by studying with active practitioners as apprentices—much as were attorneys such as Abe Lincoln. What schools of medicine as existed up until 1910-1915 were small, profit-making institutions organized by entrepreneurial physicians, sometimes with a faculty of only 2 or 3. They proliferated in 19th century America; for example, around the turn of the last century, there were reportedly 12 medical schools in Ft. Worth, Texas alone. As best I am aware, none provided a rigorous, scientifically based medical education.

Abraham Flexner conducted an exhaustive evaluation of US medical schools, reported in 1910. This impactful study began a weeding out and closing of most medical schools, and initiated association of the best ones with universities—today’s Johns Hopkins, Yale, Harvard, and Washington University schools are outstanding modern examples. Only after the scientifically based medical schools had set root in mid-century was it possible to say that most medical graduates possessed a body of verifiable knowledge about the body and knew how to manage some diseases. Between the 15th century and the middle of the 20th century, medical knowledge was fragmentary and treatments generally empirical. Perhaps only after WWII, with exponentially improving diagnostic and therapeutic methods, did it become true that the average patient seeing an average physician had a better than even chance of benefitting from the encounter.

In the absence of rational and scientifically-supported therapies, then, over millennia even the medical practitioners who had some kind of training in and followed the medical orthodoxy of their day had flawed, limited understanding of human biology and disease, and used unproven treatments handed down from one generation to the next. Make note that throughout history, surgical practices, while not scientifically based, were often well-supported by experience—setting of fractures and lancing abscesses, for example. The battlefield from ancient times to the present has been a major platform for improved surgical technique.

Creative literature is an often-amusing source of information about how people saw physicians and surgeons before the advent of scientific medicine. People were not blind to the limitations of medical knowledge. I have quoted Pliny the Elder, above.

In 1666, Moliere’s great play, *Le medicin malgre lui* (the doctor in spite of himself) presented an alcoholic woodcutter, Sganarelle, who becomes known as a healer

through a malicious plot of his wife. Much of the play's humor comes out in Sganarelle's monologues, and I'll quote parts of one.

"No, I tell you; they made me a doctor in spite of myself. I had never dreamt of being so learned as that, and all my studies came to end in lowest form.... But when I saw that they were resolved to force me to be a doctor, I made up my mind to be one at the expense of those I might have to do with.... I find it the best of trades; for whether we are right or wrong, we are paid equally well.... We can spoil a man without paying one farthing for the damage done. The blunders are not ours, and the fault is always that of the dead man. In short, the best part of this profession is, that there exists among the dead an honesty, a discretion that nothing can surpass; and never as yet has one been known to complain of the doctor who killed him."

In the 1700s, Voltaire wrote, "the art of medicine consists in amusing the patient while nature cures the disease." He also wrote tellingly that "doctors are men who prescribe medicines of which they know little, to cure diseases of which they know less, in human beings of whom they know nothing." Oliver Goldsmith wrote, "There is scarcely a disorder incident to humanity against which our advertising doctors are not possessed with a most infallible antidote." And John Armstrong said, "Many more Englishmen die by the lancet at home, than by the sword abroad."

Later, Anton Chekov wrote that "Doctors are just the same as lawyers; the only difference is that the lawyers merely rob you, whereas the doctors rob you and kill you, too." Later still, George Bernard Shaw said, "A doctor's reputation is made by the number of eminent men who die under his care."

Medical care from the 1500s into the early 1900s was based on firmly held irrational or uninformed expert opinion. You are familiar with bloodletting—bleeding-- as a therapy, often accompanied by potions intended to cause vomiting or diarrhea. The common thread seems to have been "get rid of the bad stuff" (humors?). As you might imagine, there were situations in which removal of blood was the last thing the patient needed. No one knows how many people went to early graves because of aggressive and repeated bloodletting by physicians. George Washington was an eminent victim of misguided bloodletting. The origin of bloodletting goes back to the ancient Greeks, so this ineffective practice survived well over 1000 years.

Other therapies of questionable benefit or outright harm in latter years included arsenic, lead, chloroform, narcotic drugs in many forms, later including heroin, and potent herbs such as foxglove. Only in the 20th century did the doctor's armamentarium begin to include mostly specific chemical agents rather than plant derivatives, although some plant-derived medicines were still used until recently. The only active ingredient in many 19th and 20th century nostrums was alcohol. Such potions often had names such as "The homemaker's friend." It is not hard to imagine the results of these treatments when taken chronically. A list of the many ineffective

therapies offered by “regular doctors” would run for pages, and the therapies offered by the quacks would take up a good-sized book.

Thus, for millennia, an objective viewer might struggle to discriminate the quacks from the “real healers.” One useless or harmful therapy might seem as good as another. Quackery, then, became a term used by self-styled “regular doctors” (believers in the current, orthodox concepts of health and healing) to limit competition from what we might call today “alternative” or “complementary” medicine. However, there were valid points of distinction. The “regular doctors” had at least some kind of training, and I believe for the most part honestly applied their limited knowledge in hopes of helping people. Again for the most part, most of those deemed quacks had limited qualifications or none whatsoever, and often were outright frauds, selling potions, devices, and procedures that they knew well to be bogus. Their potions generally were called “patent medicines” because they were often patented or trademarked, and named after the quack himself. The quacks were notoriously cagey about the actual ingredients of their medicines.

Here is an example of outright fraudulent quackery.

In the early 1800s, the English quack John Gardner—picture framer, Methodist minister—who completely lacked medical training, began to sell pills for gout, and dabble in electrical medicine— advertising, “the poor electrified gratis.” But he hit his sweet spot as “the worm doctor.” He created a museum of horrors, with jars containing what he claimed were various long worms his treatments had gotten from patients who were cured by his worm remedies. The material in the jars, however, was bogus—chicken guts, vermicelli, reptiles, and insects posed to look wormlike. His treatments were violent purgatives. Quoting Caroline Rance [The Quack Doctor. Historical Remedies for All Your Ills, 2013], “Above the window display of these man-made monsters, a sign proclaimed Gardner’s medicine to be ‘The Universal Remedy Under God.’” Gardner himself, however, chose “regular doctors” for management of his own ailments. This reminds me of a line from Shakespeare’s *Pericles*:

“Thou speak’st like a physician, Helicanus, that minister’st a potion unto me that thou would’st tremble to receive thyself.”

In the 1890s, there was a boom in the advertising of arsenicals for feminine beauty and youth. Rance writes that a women’s journal article proposed, “when the nerves are good and the complexion not all it might be, a decided improvement in the latter might follow a course of the small Homeopathic Complexion Wafers prepared by Mr. S. Harvey....” The brand name of the product was “Dr. MacKenzie’s Harmless Arsenic Complexion Wafers.” Whether or not the arsenic was present in “homeopathic” (very low) quantities is unclear. It is likely, however, that many similar preparations of the era were very toxic.

I must insert a Hoosier reference. The Fall/Winter 2016 issue of *Connections: the Hoosier Genealogist*, described the late 1800s medical fraud of Benjamin F. Pritchard's "Western Medical Works" here in Indianapolis. A former employee said the Works' products "would not do a man any good... it was not put up according to any formula... It was made in wash-boilers." Pritchard was a promiscuous, lifelong fraudster who finally hightailed it to California when things got too hot in Ohio and Indiana. His son became an M.D. in California, and judging from one of his advertisements, may not have been much less of a quack than his father.

The number of quack medicines and devices sold in the late 1800s and early 1900s is staggering. Here are colorful examples: Balsam of Boneset (which, oddly, was for sore throats), Dr. Ayer's Pectoral Plaster, Bloxam's Electric Hair Restorer, Dr. Marshall's Catarrh Cure, and Piso's Consumption Cure. Modern-day quack remedies have less colorful but more scientific-sounding names.

There is a strong relationship between quackery and emerging knowledge. Quackery is greatly influenced by new discoveries in science: as electricity became widely known, quacks developed electrical devices and claimed magical powers for them. The same happened for magnetism. With the discovery of radioactivity, quacks began to tout stays in caves full of radon or x-ray treatment for all manner of disorders. Some of these beliefs lasted well into the 20th century. In the '50s, a seemingly qualified dermatologist treated my athlete's foot with x-rays. This tendency to distort and exploit scientific knowledge extends to today's quackery, using bogus claims about bacteria, viruses, alleged toxins in food, adverse effects of vaccines, nuclear power, high-voltage electrical lines, etc. to drive sales.

The promoters of unproven remedies have achieved dismayingly victories in modern America, including passage by Congress of the misguided 1994 "Dietary Supplement Health and Education Act," which prevents the U.S. Food and Drug Administration—the FDA—from regulating the marketing of anything defined as a "dietary supplement." Vitamins, minerals, herbs, plant extracts, and so forth can be and are marketed essentially without restraint. The FDA and Federal Trade Commission have limited authority over these products. Regrettably, these so-called dietary supplements have not been put through rigorous trials and FDA scrutiny, and therefore are of uncertain benefit and harm. There is clear evidence, however, that some of them interact unfavorably with some prescription drugs, and some can harm on their own. Some preparations claimed to be "natural" herbs have been proved to contain undeclared active drugs. Some herbal preparations have been shown not to contain any of the claimed active ingredients. *Caveat emptor.*

Even misguided wealthy people can get into the act. In the late 1950s, a successful Wall St. financier named Jack Dreyfuss got the notion that an approved anti-seizure drug, phenytoin—brand name Dilantin, was the cure for almost every ailment of mankind. He spent the rest of his life touting this "Story of a Remarkable Medicine," even sending his book of that title to every physician in the country. He lived to an

advanced age—probably believing it was because he took Dilantin—and died a believer. There is still an active website promoting his mistaken ideas.

The National Center for Health Statistics reported last year that “Americans spend \$30.2 billion out-of-pocket on complementary health approaches annually, a substantial percentage of the \$328.8 billion spent in total out-of-pocket health care” spending. They included among the so-called complementary approaches massage therapy, hypnosis, tai chi, chiropractic manipulation, homeopathic treatment, and energy healing therapy. Dozens of other unproven approaches could have been listed. Surely, you have seen the incredible growth in vitamin, mineral, and herbal stocks at local pharmacies, cashing in on the market set by stores specializing in the sale of unproven remedies—what one might call current day “patent medicines.”. Thus, the modern practices of what most responsible medical scientists and practitioners believe is quackery have gone corporate and mainstream, with fortunes being made, investors buying stock, and the public wasting its money in futile efforts at what Oliver Wendell Holmes called in the late 1800s “the bewitching cup of self-quackery.”

I want to make a few important points before closing.

First, there are many reasons why people believe in quack approaches to health. Before the last century, conventional medical and surgical practices were often harsh and painful; people often sought allegedly safer approaches in patent medicines. Fear of conventional medicine and surgery still motivate some people to seek alternatives on the vitamin shelves.

The cost of conventional care can be a factor. I overheard a haggard-looking woman talking to a pharmacist about some supplement for her husband’s illness. The pharmacist said the man really needed to see a doctor, but the woman said they would try the supplement first as they could not afford to see a doctor. So cost can be a major issue. It is true, however, that many alternative unproven remedies are far from cheap, and it could be a false economy if the remedy is harmful or there is delay in receiving appropriate treatment.

Resort to quack medicines and treatments may result from ignorance, although millions of educated but perhaps scientifically naive people also use such unproven remedies. The placebo effect is very important—if one believes a treatment will make one feel better, it is likely to do so. Since most common ailments and symptoms ultimately resolve on their own, the user may mistakenly attribute the “cure” to the treatment, when he would have done just as well without it. Fear of drug side effects, which are genuine issues in medicine, can be a powerful driver. And of course, some people simply believe in magic.

Conspiracy theories are rampant, especially claims that doctors or drug companies are hiding or suppressing highly effective therapies. My rejoinder to such claims is to ask, if there were such miracle cures, why would physicians not demand the

treatments for themselves and their patients? Why would drug companies not want to commercialize them?

Desperation after failure of conventional treatments—or the absence of any proven treatment-- is another factor. When my grandmother was dying of colon cancer back in the '50s, when there was no known effective treatment, my grandfather spent a lot of money on bottles of murky brown liquid claimed to be a Mexican cancer cure. My grandmother didn't believe in it, but choked down the foul-tasting stuff to humor her husband. Needless to say, she died anyway. While some who offer such quack drugs or treatments believe in them, many are outright cynical frauds, promoted with superficially convincing phony "studies" and such vague claims as "clinically proven" benefit.

Practices and treatments that most medical experts believe to represent quackery are numerous today. Crystal healing, naturopathy, homeopathy, herbal therapies, miracle natural foods, massage therapy, are just a few. Modern chiropractic began with the mistaken beliefs of a medical doctor in the late 1800s. Similarly, early osteopathy was not based on valid knowledge, but today osteopathic physicians are trained along the same lines as medical doctors, and they are hard to distinguish from each other. Osteopathic doctors serve admirably in major medical centers all over the country.

Some irrational practices are being "regularized" by getting legislatures to recognize their schools and creating licensing procedures. Chiropractors have been notably successful in this approach. In some places, I understand, even naturopaths and homeopaths are licensed. Many decry this regularization of irrational and unproven methods of treatment, but of course, the practitioners respond that the "medical establishment" is prejudiced against their marvelous methods.

I believe that efforts to suppress or eliminate quacks and quack therapies are ultimately futile. There will always be reasons for many people to seek treatments independent of the "medical establishment" or in addition to regular treatments. There will always be self-deceiving believers in irrational therapies and unscrupulous or credulous persons to make and promote them. Parenthetically, I offer a confession of sorts. I recognize that there are quacks among my colleagues. Medical and osteopathic doctors can fool themselves into believing some very strange things. I might even be a quack myself and not know it! Let me distinguish quackery from what might be called the shamanistic part of medicine. Many nonconventional practitioners are very good at this. When seeing patients, eye contact, careful listening, seeking the patient's beliefs about his or her health, offering clear explanations, and physical touch are key to giving patients the most we can. Some think the regular physical examination is worthless and should be discarded, but I think the intimacy of touch plays an important role in gaining the patient's trust and feeling of being cared about as well as cared for. My own physicians often spend more time looking at their computers than at me, so I speak from both sides of the desk.

Finally, how do we recognize quacks and quack therapies, and protect our money and our health from useless or even harmful remedies? Just as centuries ago, one should avoid those touting miracle cures, and suspect remedies claimed to have no harmful side effects. Run from treatments allegedly being suppressed by the “medical establishment,” and practitioners having oddball qualifications (like being a board-certified crystal healer, if there were such a thing). Conventional medicine and surgery are far from perfect, and constantly bump up against human failings and the limits of scientific knowledge. Still, one is far more likely to benefit from the ministrations of conventional physicians, surgeons, and nurses than from those on the periphery of rationality. Even in drug stores with many yards of shelving devoted to patent medicines, vitamins, herbs, and so on, the pharmacists are professionals who will generally give you the straight scoop, if you ask. The most important thing is to be a skeptic; ask questions, and get 2nd or 3rd or fourth opinions. Above all, if you use the internet to get health information, stick with reliable sources. Be on alert for websites claiming to offer health information that are really selling potions, pills, or devices. The National Institutes of Health, the Mayo Clinic, Harvard Medical School, and many other fine medical institutions offer extensive, well-vetted online information to inform and guide you.

In closing, I revert to verse, this time from Ogden Nash:

Behold the duck
It does not cluck.
A cluck it lacks.
It quacks.
It is especially fond
Of a puddle or a pond.
When it dives or sups,
It bottoms up.

Sources of Information on Medical/Health Quackery

Used for this Essay

Quacks, Fakers & Charlatans in Medicine. Roy Porter, pp 383, Tempus Publishing Ltd, Stroud, Gloucestershire, UK, 2001 (Dr. Schneider informs me that Porter wrote the *magnum opus* on medical history)

The Quack Doctor. Historical Remedies for All Your Ills. Caroline Rance, pp 223, The History Press, Stroud, Gloucestershire, UK, 2013 (This book is rich in colorful anecdotes of quacks and quack practices in 1800s England)

Quack Medicine. A History of Combating Health Fraud in Twentieth-Century America. Eric W. Boyle, pp 239, Praeger/ABC/CLIO, LLC, Santa Barbara, CA, 2013

The Health Robbers. A Close Look at Quackery in America. Stephen Barrett & William T. Jarvis, eds., pp 526, Prometheus Books, Buffalo, NY, 1993 (Massive, multiauthored collection of articles treating many aspects of the subject)

Nature Cures. The History of Alternative Medicine in America. James C. Whorton, pp368, Oxford University Press, Oxford/New York, 2002 (“Alternative medicine” is the *au courant* term for methods of healing that are not part of conventional medicine, and are generally of unproven benefit and uncertain risk of harm)

Innumeracy. Mathematical Illiteracy and Its Consequences. John Allen Paulos, pp 135, Hill and Wang, New York, 1988 (This classic analysis includes material on how innumeracy hinders people from proper understanding of risk, the nature of verified information, and the invalidity of most unconventional health measures)

Quackwatch.com is subtitled “Your Guide to Quackery, Health Fraud, and Intelligent Decisions.” It is an entertaining and very informative, if rather impassioned, website devoted to systematic identification of and education about quack medical and health practices. There are multiple subsections and an evening spent with the site provides an excellent orientation to the subject.

Lessons from the History of Medical Delusions. Worthington Hooker, M.D., 1850. This is labeled as the “Fiske Fund Prize [winner] Dissertation of the Rhode Island Medical Society. I only had access to it online, and quote from the Introduction: “It is the opinion of some physicians that quackery had better be left alone, and that no attempt should be made to enlighten its victims, and to deliver them from the consequences of their errors.... The grounds on which they object to attacks on quackery are, that its victims... cannot be convinced of their error... [and] any attack upon their delusion is useless....” The more things change, the more they remain the same!