

## SUPERSTITION IN MEDICINE.\*

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TITLE as lacking in connotative qualities as is "Superstition in Medicine," demands at least a few words of explanation in order to start us off on common ground, and with a common understanding. Superstition does not embrace merely the innumerable instances of the ludicrous in medicine, resting on a false basis of deduction, nor does it consist merely in a large store of folk-lore, with its numerous mystic side lights on the art of medicine. The term is a broader, a more comprehensive one. Lehmann, in his "Aberglaube and Zauberei," attempts to express this breadth when he coins the definition, "Superstition represents the overflow of the mind along religious or scientific paths." These overflows course along the natural road of advancement, for they all lead to error. Truth ultimately results only from the correction of error, and by truth alone are we advanced. We need call to mind only the one fact that our modern, highly scientific chemistry unquestionably takes its origin from the magic and superstition of old-time alchemy. Superstition, then, is for us the assertion of, and belief in doctrines not possessing the necessary and rational basis on which to rest. It is not claimed, either by statement or by inference, that these false conceptions have absolutely *no* basis; such an assertion would deny to superstition its genesis. The present-day disciple of Swedenborg and Andrew Jackson Davis does not develop his ghosts and spooks from absolute nothingness. Countless ages back the idea of ghost may have originated in the mind of one of our forest-roaming progenitors as the result of seeing a moon-illuminated, somewhat human-shaped tree stump. The present-day doctrine of our Christian Science brethren may have had its tiniest beginning in a mental derangement of this self-same progenitor, who so clothed his delusions that they assumed the form of truth. At all events, *somewhere* will be found a basis on which to rest the error. Faulty observation, or faulty deduction from a correctly observed fact, are the bases on which superstition rests. Astrology, for instance, with its veritable maze of medical highways and byways, received

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its death-blow only when, by correct observation and deduction, the facts of the planetary system were developed.

Truth absolute has never reigned; alluring theories, vain reasonings, inconclusive deductions have constantly shifted the magnetic needle from the north. There is in the very nature of man a vague something, a mystic reverence for the so-called unknowable, an inherent perverseness to lose his course, that has constantly led him astray, even in his wisest moments of clearest thought. Let us, then, this evening point out these wanderings of all times, and show that by frequent boxings of the compass the true course is gradually found, but that the needle never remains true.

It is but natural to suppose that superstition, in its essence, could be best studied in the earliest primitive races. Unfortunately, however, historical records do not extend back far enough to give us trustworthy data concerning the habits of life and thought of the world's earliest tribal communities. Historians have extricated themselves from this dilemma by studying aboriginal tribes living to-day. They tell us that in Africa and Asia, in Australia and America human beings may be found so thoroughly isolated from the influence of modern civilization as to be models of the earliest primitive races. Some historians, indeed, have taken our own North American Indian as a type of the world's primitive peoples; and this fact, in itself, proves the thesis that these earliest people were in the highest degree superstitious. All of us are more or less acquainted with the superstitious vagaries, medical and non-medical, of our North American Indian. Max Bartels, in his medico-historical classic, "Die Medicin der Naturvölker," tells us that in all primitive peoples the idea of demoniacal influences, spirit powers, and the hatred of the gods are interspersed only here and there with a rational thought. In all of these aboriginal tribes there exists the idea that the power to heal is a divine right, granted by the gods only to certain individuals. In the spiritual as well as in the scientific life of these early peoples, superstition runs riot, and the absolute lack of a rational basis of thought permits us to characterize their mental processes as fantasies, rather than as attempts to correlate facts, and to deduce even falsely therefrom.

The earliest written records that have come down to us concern the Egyptians of about 6000 B. C. From the early hieroglyphics we learn that Egyptian medicine was largely a God

medicine, with Isis presiding, and a range of lesser sacred medical dignitaries, running all the way down to Ibis, the God of Enemata, an office which he was well able to fulfil, owing to his long canula-shaped beak. Theurgy, astrology and alchemy had their earliest beginning under Egyptian regime. The history of the Chaldeans dates back almost as far as does that of the Egyptians. We have writings concerning them that go back 5,000 years B. C. From their clay tablets we learn that they also were largely governed by the idea of the divine influence on man. Diseases were regarded as the impersonations of evil spirits that could be banished only through imploring the aid of the gods, who in their turn advised the method of riddance, be it by a bath in water from an uncontaminated stream, or by wrapping the head of the patient in one-fourteenth of the hide of a female camel who had never borne young, or by some other equally fantastic procedure. Exorcism, prayers, and incantations played an important part in Chaldean medicine, different prayers being used to suit different occasions. Pregnant women, for example, always prayed, "Oh, God Bitnur, drive my pains far into the distance, strengthen my foetus and see that its head develops fully." Under these same Chaldeans, 2,000 years later, during the rule of Sargon I., astrology first began to assume a prominent place; and hand in hand with the worship of the heavenly bodies there developed the peculiar superstition of attaching significance to animal life—a yellow dog boded ill, a reddish one signified health and good luck. This same people it was who first developed the idea of unraveling dreams and of weaving a veritable system of prognostics about them.

The superstition of the Egyptians and Chaldeans, although it unquestionably is less fantastic than that of the primitive races, and, although it contains the nucleus of at least a bit more scientific thought, is nevertheless rank superstition; superstition, moreover, of rather serious import, since it spread by direct contact to the early Persians. The Græco-Persian wars served as an outlet for many of these beliefs to start new growth on a fallow soil; so that when finally Alexander the Great conquered Persia, Greece was fairly overrun with the old brand of Chaldean superstition. It is a confirmed fact that up to the time of Hippocrates medicine in Greece consisted largely in prayers and oracles, exorcisms and incantations.

The old Jews were freer from superstition than any other



ancient people; they recognized no good and no bad spirits, and no gods, save Jehovah. The laws of Moses specifically prohibit the commoner forms of superstitious belief and magic. Despite these checks, however, there is no lack of evidence to show that superstition played no small part in the life of the early Jews. Demons, it is true, they did not consider, but they placed almost a blind faith in the so-called cabalistic writings. These writings were made up of words representing numbers, each word possessing a charmed significance, the system having supposedly originated with the angels. We should naturally expect that from their close contact with the Babylonians and Assyrians the Jews must have absorbed some of the general tendency and leaning toward superstition, all the Mosaic laws to the contrary notwithstanding; and such a supposition, if we are to believe Lehmann, is correct, for he tells us that during the era of Babylonian captivity the mind, manners, customs and daily life of the Jews were fairly honeycombed with superstitious beliefs; even the Talmud itself, a book regarded as one of the most rational of medical compends, mirrors here and there a tendency distinctly superstitious in nature, as may be seen by reading the treatment prescribed for vesical stone and atresia ani.

The Jews, Egyptians, Chaldeans, Persians, Chinese and Japanese constitute a set of races whose history is not directly linked with the progressive modern-day advancement of medical science. The beginning of the true march of medical progress dates with the Greeks.

We have already considered primitive and ancient people, and have attempted to show that their spiritual life, as a whole, was little less than a maze of superstitions. There remains, then, the task of tracing tendencies from the early Greeks down to modern days. The exigencies of time and space absolutely demand that our considerations be along broad lines; details, however interesting, may not detain us in our object to search for superstition, to note it when found, and then to pass to other times in other lands. Let us not forget in our search, however, that we have agreed to consider superstition as deduction resting on grounds that we in our times regard as irrational and unwarranted, and that the basis of all superstition is false observation or false deduction, or both.

In dealing with early Greek medicine, our avowed object is not to point out its excellencies (for they are admitted), not to

detail its forestalling of modern ideas, and not to practice critique on its rational doctrines; but solely to show that medicine is indissolubly bound up with general culture, that since the general culture preceding the Greek period was fairly riddled with superstition, and that since the decadence of Greece was also characterized by a similar tendency, we may expect evidences of superstition, mysticism and speculation to be scattered through the whole of Greek medicine, even during its most robust era.

The direct forerunners of Hippocrates were the caste of Asklepiades, direct descendants of the god Aesculapius. In their honor temples were built; to these temples patients repaired and were attended by priests. So great was the faith of these patients in the gods, that they brought—in fact, were forced to bring them, gifts of gold and ivory. These gifts the priests furtively secreted and disposed of for their own gain. Here we have, in almost the earliest of times, superstition as the basis of the rankest quackery.

Hippocrates, himself, lived during the height of the culture of Greece; Thucydides, Herodotus, Pericles, Aeschylus, Sophocles and Euripides were his contemporaries. His writings ought to be, and are, free from almost all traces of the mystic and superstitious. But are they entirely free? The very foundation of his system rests on the crassest humoralistic basis. The body is made up entirely of watery elements. These must conform to the established four elements of nature, therefore he creates four special fluids: blood, representing heat; mucus, cold; black bile, dryness; and yellow bile, wetness. The mucus was secreted by the brain, trickled through the cribriform plate of the nose, and was thence distributed through all parts of the body; sneezing, therefore, was a most healthful act, hence our present day "God bless you." The black bile was secreted by the spleen, which poured it into the stomach. Health consisted in an absolutely correct proportion of these four elements, disease in a disturbed balance. View this conception as we may, it is difficult to divorce ourselves from the idea that, resting on an entirely false basis of observation and deduction as it does, it must be classed among the superstitions. Hippocratic medicine was not great and sound and practical because of these theoretical conceptions. Hippocrates' keenness of clinical observation was so extraordinarily great that his system was practical, despite the hampering influence of falsely dogmatic assumptions. In spite of the fact that Hippo-

crates was followed by Aristotle, the founder of the deductive system of reasoning, and forerunner of the Alexandrian school of medicine, despite the fact that the Alexandrians were even closer students of nature and natural laws than Hippocrates himself, and despite the fact that this was an era of an extraordinarily high type of practical medicine, we still see, during this whole period, the enunciation of medical doctrines that we to-day should class as the crudest imaginings. The Methodists, Empiricists, Encyclopædists, Pneumatics and Eclectics, were schools that varied often only in hair-splitting sophistic details concerning humoral and solid pathology. These were the days of the development of cure-all drinks—the so-called Theriaca—and of the dilettante preparation of cosmetics, no less a person than Cleopatra herself engaging in the art of describing their preparation and their influence on the diseases of women; days, in short, characterized by Pagel as evidencing an absolute absence of anything scientific pertaining to the practice or science of medicine.

This decadence of medicine in Greece is only one of the weak links in the steadily forged chain of medical advancement. It is no more possible for heresy and superstition to maintain a permanent dominancy than it is for a noxious drug to serve as a steady article of diet. One narrows and withers the mind and spirit, the other incapacitates the body. Either the race dies, heresy perishing with it, or it wakens and by its very awaking crowds superstition once again into the background. The death-bed scene of medicine we just saw in Athens. Let us turn to Rome for resurrection. One hundred years before Christ, medicine in Rome was in the hands of bathing attendants, slaves and recently freed men. The elder Marcus Porcius Cato himself states that there was no place for the science of medicine, since all diseases could be cured by a draught of wine with a lump of coal in it. This was a larval stage. Two hundred years later the fully equipped imago, in the shape of a new medicine, begins its life cycle and we enter the Galenic era, an era lasting nearly fourteen centuries. Here, again, it is not the spirit of Galenic medicine that is under discussion. Its excellencies are not the subject of the critique. The question is: granting a high tone and a rational basis to this Galenic era, do we nevertheless not find evidences of the ever-present superstitions?

Pagel states that we should not allow ourselves to become too enamored of the high lights of Galen's doctrines and their influ-



ences lest we overlook the shadows. Many of the expected good results of his medicine, we are told, were nullified by his serious attempt to stimulate pure speculation by leaguering medicine with philosophy. Pure speculation at the very outset—on guard for superstition! A combination of Plato's idealism and Aristotle's rationalism led Galen into a maze of dialectic. To him nothing in medicine was unsolvable. Dialectic reasoning was the nutcracker that he used on all hard facts. All questions of medicine he not only answered with ease, but with an unwavering authority, and in this fact lies the magic of his influence, extending through so many centuries. Many of the speculative fetiches that Galen set up served as doctrinal theses on which rested much of the superstition of the Middle Ages. Let us merely call to mind that Galenic physiology firmly established the belief that the body's only function was to serve the soul, and for this purpose the various organs must be regarded as tools. We see the same sort of speculation in his pathology; he developed the humoral idea by adding the so-called dyscrasie, and the limiting factors of age, residence and mode of life, diluting and rediluting the doctrine until it was a veritable mosaic of fancy.

This marked theoretical tendency contrasts sharply with the eminent practicability of Hippocrates. Galen's autocratic establishment of irrational doctrines—in other words, of doctrines which flavored strongly of superstition, has been said by the great clinician of Holland, Boerhaave, to have worked more harm than good for medicine. So summary a charge against Galen might well be conceived to have its genesis in a preconceived purpose of the author to search for evidences of superstition and disclose them, at all cost, rather than in a desire to furnish a correct interpretation of Galenic doctrines. Those of us, however, who do read questionable elements into Galen's work are not alone in our interpretations. Dr. Osler, in his address, "Teaching and Thinking," refers to "Thaumaturgic and Galenic superstition." Pagel's and Boerhaave's opinions have already been quoted, and Haeser voices the same sentiments.

Galen's autocracy maintained itself throughout the entire period of the Middle Ages, and served as a hull to which innumerable barnacles attached themselves. It is hardly necessary to confirm the statement that medicine during the Middle Ages was fairly crusted over with superstitions. In no branch of science is the general tone and culture of a people more accurately mir-

rored than in medicine. No gap is more quickly sought out as a point of support by the tentacles of superstition than is a hiatus in medical knowledge; therefore, instead of citing specific false doctrines and theories, we need only call to mind the general tone of the Middle Ages, with their crusades, feudal barbarities and witchcraft, with their neoplatonic philosophy leading us to magic, sorcery and exorcisms, with their theological struggles allying terrorism with credulity, in short, with their everything that goes to make them merit the title of the "Dark Ages." In the very midst of this darkness Arabian medicine arose, and with such lights as Avicenna, Avenzoar, Averroes, Rhazes and Maimonides it made a clearing. But by the twelfth century the light failed. Arabic religious doctrines clashed with the idea of investigative research, dogma won out, and ever-present superstition again raised its head.

Roger Bacon, Englishman, philosopher and politician; Arnold de Villanova, Spaniard, scientist; Henry de Mondeville, Frenchman, physician, and Francesco Petrarca, Italian poet, ushered in the so-called prerenaissance, a period extending from the thirteenth to the fifteenth centuries, characterized by the remains of many of the viciously superstitious doctrines of the Middle Ages, rapidly giving way to enlightenment, reason and investigation. Errors of such magnitude as those that honeycombed the Middle Ages could not disappear at once, even under the onslaughts of a Bacon, a de Mondeville or a Guy de Chauliac. The atmosphere cleared only with the advent of the true renaissance. The fifteenth and early part of the sixteenth century are accorded the position of honor in the world's history. This was the era of Columbus and his American discoveries, Guttenberg and his printing press, Luther and his protestations, the era of the introduction of gunpowder, the founding of universities, and the complete revolution of ideas, social, political and religious. During these times there lived three of the most noted men in medical history, men who gave color to their own and all succeeding ages. Andreas Vesalius, the anatomist; Ambroise Paré, the surgeon, and Philippus Theophrastus Paracelsus, the physician. Truly, we are again in times of the whitest high lights, with seemingly no place for the shadows of irrational dogma or doctrine. Let us see, then, if medicine, even in these advanced times, is truly free from superstition.

It is a matter of history that in the newly founded Italian



universities Plato was revived and studied most assiduously. With this study came to life again the same neoplatonism which was the basis of so much false belief during the Middle Ages. Now, as then, neoplatonism assumed the right of citizenship in medicine; as a result, at no time did astrology, alchemy, necromancy and witchcraft flourish more luxuriantly than during the early sixteenth century. This was the time of the wide spread of the three of the greatest plagues in history—syphilis, the English sweat, and typhus exanthematicus. Haeser tells us that none of the greatest thinkers of the time, Luther included, doubted for a moment that these plagues were the manifestations of demons. Thomas Erastus, one of the greatest thinkers of all times, openly preached his belief in demons and ghosts. The medical representative of the times, Paracelsus, himself has been judged a mystic, a deceiver and a quack, owing to the influence of the times on his doctrines and teaching. Even the sixteenth century then, the close of our much-vaunted renaissance, not only ended what has been a veritable inundation of new thought, but also marked an era of innumerable mental overflows far away from the direct channel.

The seventeenth century gives birth again to a deep and earnest attempt at a serious interpretation of facts and phenomena. Mysticism and superstition, such as we have described during the sixteenth century, palls before the philosophy of Francis Bacon, Descartes and Spinoza—a philosophy and development for which the time was ripe, and which absolutely forced itself on men's minds. Never was better exemplified Huxley's terse epigram, "Knowledge is brought, not sought." Bacon, with his inductive method; Descartes, with his "*cogito, ergo sum*," Spinoza, with his doctrine of pantheism. We may well listen sharp for so much as the tone of a false ring during such times. Robert Boyle, Johann van Helmont, Glauber, von Leuwenhoek, Harvey, Steno, Malpighi, Lower, Cooper, Wirsung, Glisson, Wharton, Silvius, Willis, Highmore, Sydenham, all these and many more should serve as effectual checks to the searcher for evidences of the spurious and false in medicine during the seventeenth century era. Yet, according to Baas, there existed during this very era of progress and enlightenment, two sets of physicians; one, the so-called regular set, made up of court, field, hospital and pest physicians, wound doctors, apothecaries, midwives and nurses; and the other, a set of quacks, made up of old women, village min-

isters, dispensers of quack salves, urine prophets, peripatetic Jews, crystal gazers, gypsy fortune tellers, demon and devil banishers, soothsayers and rat catchers—a motley crowd to be leagued with the preceding illustrious names, if only by the slight bond of consanguinity of time. We are almost up to modern days, and we have not as yet been able to shake our science free from some form of superstition, a superstition at times only too patent and yet never so concealed as to require diligent search.

Yet it must have struck some of us that we have really had to do with two distinct varieties; the one based purely on faulty observation and deduction, originating in no desire to deceive and resulting in nothing more than the growth of an intricate maze of fantasy and delusion; the other based on the gullible in human nature, intent on deception and personal gain, and resulting in a set of vicious and debasing practices. The latter half of the eighteenth century really marks the crowning point of this crass variety. Friedrich Anton Mesmer, with his tinkling bells, liveried attendants and magnetic passes; Samuel Hahnemann, with his (so aptly termed by the Germans) "Blödsinn"; Franz Joseph Gall, with his cranioscopy or phrenology, all thrived side by side with such men as Hoffman, Stahl, Boerhaave, van Swieten, Auenbrugger, Haller, Morgagni, Hunter, Jenner, Pott, Petit and Bell. Still room for superstition! And need I mention that in our very own times, despite our Spencers and Huxleys, our Darwins and Weissmans, our Virchows and Pasteurs and Kochs, we are still obliged to wear armor against spiritualism and Christian Science, against osteopathy and Dowieism, against theosophy and the miracles of Lourdes and St. Anne?

Does not, after all, the ever-present spirit of superstition, as we have traced it from the earliest times, serve as a stimulus to scientific medicine to strengthen her defenses? Is it not after all the same old battle of shell against armor? Are not false doctrines the surest sign posts of whither not to stray, and do they eventually point out with certainty the right way? My task has surely been one of love's labor lost were I to view the situation with a pessimistic air of doubt. Medicine, let us never forget, is not an exact science, and its very inexactness is the spring and fountain head of false theorizing, leading to superstitions. New trails are blazed by each new Messiah, and nothing is surer than that there are Hippocrateses and Aristotles, Virchows and Darwins yet to come. If the underbrush is disturbing, let us,

with Dr. Osler, at least contemplate the disturbance with the spirit of "*aequanimitas!*" The days of incantation and witchcraft are passed, demons and gods have been relegated to their proper places, and as more and more light is shed we shall see verified Tennyson's prophecy:

"Yet I doubt not through the ages one increasing purpose runs,  
And the thoughts of men are widened with the process of the suns."  
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