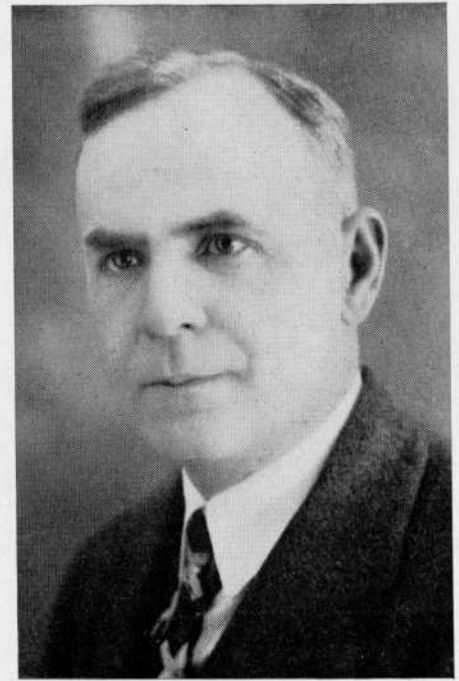


That dread disease, tuberculosis, seems to reward its victim even as it drives him to a premature death, and compensates the wasting away of the body with a spiritual fire which in many of the world's great has resulted in a genius enriching our civilization. Dr. Lewis J. Moorman (right), dean of the medical school, in the sixth of the public lectures series of the university, has brilliantly recounted how tuberculosis has fed genius



## Tuberculosis and genius

BY LEWIS J. MOORMAN

IN many individuals suffering from tuberculosis there seems to be a strange psychological flare, a phenomenon not fully accounted for, not of established scientific lineage, yet quite evident to the student of clinical tuberculosis. Everyone who deals with tuberculous individuals in institutions for the treatment of this disease knows how patiently they bear their lengthening burdens; how courageously they are, often in the face of insurmountable obstacles; how optimistic they may be when life is literally being cut down by the inevitable sweep of the Great Reaper. What a precious paradox, this, with death so near and life so abundant. Thus we see, while tuberculosis may literally demand its pound of flesh, the demand is peculiarly tempered with mercy. This unusual display of courage and optimism has been termed *spes phthisica*.

Charles Dickens must have recognized the subtle power of this intangible fraction of the tubercle bacillus when he wrote as follows:

There is a dread disease which so prepares its victim, as it were, for death; which so refines it of its grosser aspect, and throws around familiar looks, unearthly indications of the coming change—a dread disease, in which the struggle between soul and body is so gradual, quiet, and solemn, and the result so sure, that day by day, and grain by grain, the mortal part wastes and withers away, so that the spirit grows light and sanguine with its lightning load, and, feeling immortality at hand, deems it but a new term of mortal life—a disease in which death takes the glow and hue of life, and life the gaunt and grisly form of death.

In the first chapter of his book on the *Development of Our Knowledge of Tuberculosis*, Dr. Lawrence F. Flick says:

In individuals in whom the tubercle bacillus grows meagerly, in whom it has produced but

slight toxemia and in whom it has set up no serious changes in the tissues, it not only may give no discomfort but may stimulate the functional activity of those organs of the body which have to do with the enjoyment of life. In this way the tubercle bacillus may make life more pleasant and make the individual more profitable to society than he otherwise would be.

John B. Huber, in his work on *Consumption and Civilization*, makes the following statement:

It appears to me that the quality of the genius of a great man, if he be consumptive, may be, in some cases at least, affected by his disease.

The incomparable Aretaeus, Cappadocian anatomist and physician, who lived in the first century A. D., in describing death from the "pouring out of blood" said:

Really, this is not much to be wondered at; but what is most wonderful is that in a case where the blood comes from the lung, in which the disease is the most serious of all, patients, even when it is about to come to the end, do not give up hope.

We also find the following reference to chronic lung conditions:

Such patients are hoarse; they are short of breath; they speak in a weak voice; their chest walls are dilated yet they do not seem to be broad enough, because a great deal of humor is pent up within them; the black part of the eye flashes; in such cases it is simply wonderful how the strength of the body holds out; the strength of the mind even surpasses that of the body.

The beloved physician, Dr. John Brown of Edinburgh, author of *Rab and His Friends*, also observed this mental exuberance as he studied the psychology of his patients. In the latter part of the nineteenth century he recorded the results of his observations in a beautiful tribute to his young friend and colleague, Dr. William Henry Scott, who died at the early age of twenty four. The conclusions of this careful observer are quite obvious as shown by the following:

He died of consumption and had that vivid life and brightness—as his eyes showed—which so often attend that sad malady, in which the body and soul, as if knowing their time here was short—burn as if in oxygen gas—and have "Hope the Charmer" with them to the last—putting into these twenty years the energy, the enjoyment, the mental capital and raptures of a long life.

Of the same "marvelous boy, whose sun went down in the sweet hour of prime, Mr George Sim said: "It is difficult to imagine how it was possible in so short a life to acquire so varied an amount of knowledge as Doctor Scott possessed, especially when we consider his delicate constitution and toilsome course of education." Nevinson said of Schiller, "it is possible that the disease served in some way to increase his eager activity, and fan his intellect into keener flame." It would be easy to place on record here many testimonials to the unusual manifestations of genius in those who have suffered from active tuberculosis. In many cases the mental activity and creative powers seem to vary directly with the progress of the disease. As striking examples of this we might mention Voltaire, Robert Louis Stevenson, Marie Bashkirtsev, Keats, Shelley and Sidney Lanier.

As Dickens has suggested, even after the body becomes a mere mummied crucible, the fires of genius may be observed to burn with an effulgence not often seen in the nontuberculous. On this point it would be interesting to let some of the sufferers speak for themselves. Robert Louis Stevenson, while suffering from an exacerbation of his disease says:

There is nothing more difficult to communicate on paper than this baseless ardour, this stimulation of the brain, this sterile joyousness of spirits. Yet, it is noticeable that you are hard to

root out of your bed; that you start forth singing, indeed, on your walk, yet are usually ready to return home again; that the best of you is volatile; and that although the restlessness remains till night, the strength is early at an end.

To continue, we find the following references to this same puzzling exuberance. After enumerating all that Heaven and Earth can do to accentuate the beauties of an enchanted landscape, Stevenson exclaims: "And yet you have gone no nearer to explain or even to qualify the delicate exhilaration that you may feel—delicate you may say and yet excessive, greater than can be said in prose, almost greater than an invalid can bear. Is it a return to youth, or is it a congestion of the brain?"

Sidney Lanier, lyric poet and psychic counterpart of Poe, furnishes a striking example. His creative powers were not in evidence until after his disease was well under-way and his capacity for mental work increased as the disease advanced. He well expressed the peculiar psychology of the tuberculous when, in 1873, he wrote as follows:

Were it not for some circumstances which make such a proposition seem absurd in the highest degree, I would think that I am shortly to die, and that my spirit hath been singing its swan-song before dissolution. All day my soul hath been cutting swiftly into the great spaces of the subtle, unspeakable deep, driven by wind after wind of heavenly melody. The very inner spirit and essence of all wind-songs, sex-songs, soul-songs and body-songs hath blown upon me in quick gusts like the breath of passion and sailed me into a sea of vast dreams, whereof each wave is at once a vision and a melody.

These lines were addressed to his wife when she and her children were in want of food and clothing. Under such circumstances, one can be charitable toward the writer only when the pathological excitation of the mind is taken into consideration. Again he writes:

Know, then, that disappointments are inevitable, and will still come until I have fought the battle which every great artist has had to fight since time began. This—dimly felt while I was doubtful of my own vocation and powers—is clear as the sun to me now that I know, through the fiercest tests of life, that I am in soul, and shall be in life and utterance, a great poet.

Marie Bashkirtsev, whose frail young body was constantly overtaxed by the sheer exhilaration of her exceptional mind, when only twenty four, exclaimed that art alone was the sustaining factor in her life. Though her most promising career in art was cut short by the ravages of her disease, her remarkable *Journal* was pronounced by Gladstone as "unparalleled in literature."

Llewelyn Powys, whose capacity for work has coincided with the progress of his tuberculous condition, claims that he, "by a slight excess in the malignity of nature toward him, has attained an intenser sense than most men of the conditions, which nevertheless, confront and encompass us all. We—the rest of us—dance before a pictured curtain masking a bottomless abyss. For him, the veil has been rent—that is all; he dances with a wilder

elation because he sees where the last figure ends."

Ralph Waldo Emerson, who suffered from a less acute form of tuberculosis, seemed to be quite aware of his dual personality. In his own words, the one "toiled, compared, contrived, added, argued"; the other "never reasoned, never proved; it simply perceived; it was vision; it was the highest faculty." He adds, "in writing my thoughts, I seek no order, or harmony, or results."

Before leaving this phase of our discussion we again turn to Robert Louis Stevenson and permit him to speak for scores of fellow-sufferers, who, though bed-ridden, were driven by this strange psychological urge. In 1893, just one year before his death, he wrote to his friend George Meredith as follows:

For fourteen years I have not had a day's real health; I have wakened sick and gone to bed weary; and I have done my work unflinchingly. I have written in bed, and written out of it, written in hemorrhage, written in sickness, written torn by cough, written when my head swam for weakness; and for so long, it seems to me I have won my wager and recovered my glove. I am better now, have been rightly speaking, since first I came to the Pacific; and still, few are the days when I am not in some physical distress. And the battle goes on—ill or well, it is a trifle; so as it goes. I was made for a contest, and the Powers have so willed that my battlefield should be this dingy, inglorious one of the bed and the physic bottle.

Think what a sacrifice this, for one whose forebears were builders of lighthouses, toiling in "the surfy haunts of seals and cormorants." Certainly the spirit of the sea was in his soul and, in all probability, it was this hereditary urge that unfurled psychological sails which were ultimately to carry him across the limitless stretches of southern seas to his beloved Samoan Islands, placing the breadth of two seas and a continent between him and his native land. He once said he would be willing to give up fame and all its emoluments "for a seventy ton schooner and the coin to keep her on." He proudly said of his father, "he loved a ship as a man loves Burgundy or daybreak"; also, "it was that old gentleman's blood that brought me to Samoa."

We revere the soul so tried by disease, so fired by Celtic emotions, so driven by an impetuous genius, yet kept in its course by an abiding sense of equity. In his own words: "It is to keep a man awake, to keep him alive to his own soul and its fixed design of righteousness, that the better part of moral and religious education is directed; not only that of words and doctors, but the sharp ferule of calamity under which we are God's scholars till we die."

If we accept the teaching that there is a dual personality in every individual, the two personal entities being designated as primary and secondary, and the primary personality as that part which conforms to the usual conventions of life, constantly being restricted by established habits and customs, and the secondary personality as

that part which under ordinary conditions is kept in leash, but occasionally released through the influence of some subtle force to over-ride all conventions and restraints, we can readily see how the world may be cursed or blessed by the unconventional sway of this secondary personality. In those of superior intellect this release of the secondary personality may paralyze restraining inhibitions and cause a flare of genius with power to open the doors leading to the magic fields of creative achievement, doors otherwise closed by the imperious prohibitions of intellectual, moral and social locksmiths.

On the other hand, in those of inferior mental qualities the primary personality may be submerged by the reign of the secondary personality with the danger of irrational behavior. It is in this low mentality group that we usually find the so-called medium, claiming supernatural communications. There is also a tendency toward vagabondage, while those of exceptional mentality rise on the wings of genius. How unhappy many of the pious prohibiting souls might be if they really knew through what questionable avenues the most beautiful and significant creations of genius have traveled. Fortunately our archives contain no recorded finger prints for the detection of psychic derelicts. How surprised these same prohibiting individuals might be if they knew what a frightful price has been paid for many of the literary, artistic and scientific treasures in which we are permitted to revel without peril and without thought of their laborious birth. Only a literary alienist or pathologist could approach an understanding of this problem. Certainly we must admit the intimate relationship of many of these treasures with disease, drugs and alcohol. As contributing factors, we should also consider poverty, persecution, imprisonment, and often the consciousness of approaching death, and for the scientist, not infrequently, the voluntary or conscious risk of life.

As mentioned above, among the factors and forces which seem to destroy inhibition and temporarily set free the secondary personality, are alcohol, opium and the toxins of tuberculosis. While scientific proofs may be wanting, it is easy to build up the clinical evidence by the enumeration of many cases which have been influenced by these agencies. We are now concerned with the cases apparently influenced by the toxins of the tubercle bacillus. After allowing for the increased mental activity, which is apt to follow enforced physical rest, there seems to be in many cases of tuberculosis a decided excitation of the mind with increased capacity for creative accomplishments.

To mention even briefly the work of all the creative minds influenced by tuberculosis would mean the accumulation of sufficient data to fill a series of thick volumes. The following list of names, chosen from the field of literature alone, will

immediately bring to you a realization of the close relationship of this disease with creative effort and accomplishment:

Milton, Pope, Shelley, Hood, Keats, Elizabeth Barrett Browning, Francis Thompson, Goethe, Schiller, Molière, Channing, Mérimée, Thoreau, Descartes, Locke, Kant, Spinoza, Mozart, Beaumont, Samuel Johnson, Sterne, DeQuincey, Scott, Jane Austen, Charlotte, Emily and Ann Bronte, Stevenson, Balzac, Voltaire, Rousseau, Washington Irving, Hawthorne, Gibbon, Kingsley, Ruskin, Emerson, Cardinal Manning, Lanier, Marie Bashkirtsev, Robert Southey, Westcott, Georges de Guerin, David Gray, Amiel, John R. Green, Robert Pollok, Hannah More, James Ryder Randall, N. P. Willis, John Addington Symonds, Stephen Crane, Katherine Mansfield, Paul Lawrence Dunbar, Eugene O'Neill.

Cicero, Demosthenes and Marcus Aurelius might be added to the above list. It would be possible to add a large number of artists, sculptors, actors, statesmen, scientists and representatives from the professions who have suffered from tuberculosis and manifested unusual mental qualities.

Just how far back we are justified in carrying our speculations is difficult to say, however your attention is called to the fact that when the search for the Golden Fleece was barely launched, Peleus held up the good ship Argo and climbed Mount Pelion, not alone in order that he might have the blessing of his Master Chiron, but we find him soon making this request of the Master: "And now let me see my son for it is not often I shall see him upon earth; famous he will be, but short-lived, and die in the flower of youth."

From the above description of the son it is reasonable to assume that he was suffering from tuberculosis, and that Peleus, while presumably stopping because of his love of the dear old hill and his desire for Chiron's blessing, was in reality seeking another glimpse, perhaps he feared the last, of this favorite son whom Thetis, "the silver footed lady of the sea," had borne him, and upon whom the Gods had imposed physical frailty.

Though this may be justly considered mere speculation, we at least know that tuberculosis had its origin as a disease before the time of recorded history. Hippocrates, in the fifth century B. C. said: "The most dangerous disease, and the one that proved fatal to the greatest number, was consumption." This being the case, may we not be excused for wondering whether or not the toxins of the tubercle bacillus had anything to do with the great awakening of Greek genius in that marvelous period initiated on Ægean shores in the fifth century B. C.

It would place no serious strain upon the imagination to go beyond the period of the Dark Ages for an example of this subtle power of disease over mind, how-

ever we have chosen to present medieval evidence in the person of St. Francis of Assisi.<sup>1</sup> We might easily come nearer our own times and offer a more typical example by recounting the creative accomplishments of any one of the following: Keats, Shelley, Schiller, Sidney Lanier, Robert Louis Stevenson or Francis Thompson. However it seems fitting to portray the life of one who stands between darkness and light, who has been called "the morning star of the Renaissance" and "the soul of medieval civilization."

St. Francis was born of Italian parents within the walls of Assisi, in the year 1182. This child, according to quaint medieval stories, was dedicated to the life of the spirit and the service of mankind. At his baptism his mother gave him the name of John, perhaps thinking of the gentle saint who lived so near his Master, or that less saintly and less sensitive John the Baptist. However, his father, returning from the gay land of France, was delighted with the lively boy and would have "no John the Baptist dressed in camel's hair," but would make of him a Frenchman in character and name, so he called him Francis. No doubt these divergent desires had little to do with the spontaneous flow of his indomitable spirit. While attempting to bring children up in the way they should go, parents should never lose sight of that "divinity that shapes our ends, rough-hew them as we may." Many fond parental hopes fade before the sweep of this invisible Captain who sits at the helm and directs the course of human life.

The child Francis was not robust, and his mother watched over him with anxiety. One of his biographers has given us this suggestive picture: "He was a slender boy, delicate of limb and feature, with the straight nose, smooth low brow, and thin tapering fingers of the idealist."

No doubt the toxins of the tubercle bacillus were shaping his body at this early date and exerting their so-called selective action on the sensitive nervous system, inflaming the young mind with dreams of romantic adventure and chivalric deeds, thus unfitting him for the drab business of cloth merchant. He was the ringleader of his crowd, living a joyous buoyant life, going bravely and blithely into battle against Assisi's rival city, Perugia, to be captured and imprisoned. In the dank, dark dungeon his disease progressed with dissipation of flesh and strength, but there was no dampening of the spirit. The dungeon rang with his merry songs, his mirthful chatter and his ready wit, until his gloomy companions were forced to join in the fun.

After a year had elapsed the prison doors were opened and Francis came forth with wasted form, having lost the outward habiliments of the troubadour. How-

ever, neither the body nor the soul of this chivalrous young poet could long resist the alluring charm of the Umbrian plains and Italian skies.

Long before his body was ready for the fray, his dreams of horse and arms and deeds of chivalry carried him clattering through the gates of Assisi with the hope of a triumphant return to be received like a great Prince. While still on the road to the battlefield of his dreams, the old war between body and disease was raging, with disease in the ascendancy. When, prostrated with fever and weakness, he knew his impetuous spirit had carried him too far. Under the cloud of defeat and humiliation, another dream ultimately carried him back to his beloved Assisi. While groping in the valley of disappointment where all things beautiful were concealed by the veil of uncertainty, he met his leper; his spiritual genius was released and he fell on the leper's neck. He had dissipated all fear; he had proven himself master on the "field of valor." The ministry of love was launched and the valley of disappointment was gradually transformed into a place of beauty with certainty of purpose, flanked by mountains of opportunity.

Soon after this, in answer to a voice from heaven, came the rebuilding of the Church of St. Damion. The mysterious driving force behind his sensitive nature carried Francis precipitately into every undertaking. On this occasion he committed a sin, in the eyes of the world, by overriding convention and making his father an unconscious participant in the building process. After first selling his own horse, he took goods from his father's shop in order to secure funds with which to rebuild the church. These goods, however, were not employed for this purpose until after he had made the sign of the cross over them. His father, being thus forewarned of what he considered inevitable disaster, decided to disinherit him. Being apprised of this, Francis threw his clothes at his father's feet with this retort, "I can now say 'Our Father which art in Heaven,' " and he went away with only a hair shirt on his body and a song on his lips.

He apparently courted poverty and was content to go about in rags begging for food. It is said that he exchanged clothes with a beggar, discarding the girdle for a piece of rope which chanced to be near. "Ten years later that make-shift costume was the uniform of five thousand men; and a hundred years later, in that, for a pontifical panoply, they laid great Dante in his grave."

Through his debasement of self, his devotion to spiritual things, and his unstinted service to his fellow men, he succeeded in founding the Franciscan Order and became the immortal St. Francis.

With the same urge which carried him furiously into battle, making it impossible

(TURN TO PAGE 215, PLEASE)

1. From Moorman's "Tuberculosis and Genius as Manifested in St. Francis of Assisi," *Annals of Medical History*, New Series Vol. 2, No. 5, Published by Paul B. Hoeber, Inc., New York.

vania; George W. Russler, '26, research petroleum engineer for the Mellon Institute, Pittsburgh, Pennsylvania; H. B. Prewitt, jr., '27, sales engineer for the American Blower Corporation, Flint, Michigan; L. L. Gray, '28, district engineer, Gypsy Oil Company, Hobbs, New Mexico; R. L. Mallory, '28, sales engineer for the Foxboro Company, Tulsa; W. K. Ritter, '29, research engineer for the United States government, Langley Field, Virginia; and C. W. Armstrong, '32, engineering accountant for General Mills, Inc., Minneapolis, Minnesota.

In many universities, in practically every industry employing engineers, Sooner engineers are found, contributing to the building of the nation with their technical foundation laid in Norman.



## TUBERCULOSIS AND GENIUS

(CONTINUED FROM PAGE 203)

for him to recognize his physical deficiencies, he now flung himself into the pursuit of divine love, accepting poverty, fasting and suffering as stepping-stones to higher plains of living, ever marching forward with songs of praise in his heart until in his death agony he wished to lie bare on the bare ground to show that he had nothing and was nothing. Without attempting to catalogue his thoughts and deeds, it is easy to see that the life of St. Francis was consistently inconsistent, conventionally unconventional. Evidently his secondary personality was in the foreground and his genius was at large.

St. Francis was only forty-six when he died, but he was prematurely old. Between disease, fasting and fighting, his energy was spent, but his spirit still gave off sparks when exposed to the hammer. Though his life was now saddened by physical debility and his failure to "end the crusades by the conversion of Islam," imagine his disappointment when he was told that he was going blind and only the cautery could give him some promise of relief. Think what this must have meant to this brother of all living creatures and all things beautiful in the world! But his seeming inconsistency was constant. When the moment for cauterization arrived and the iron was taken from the furnace, he said: "Brother Fire, God made you beautiful and strong and useful; I pray you be courteous with me."

After a period of fasting on Mount Alverno it is said that he was no longer able to walk and it was apparent that his strength was spent and that life could not last much longer. Evidently tuberculosis had done its work and no doubt at that very moment "his eyes glowed with the fire that fretted him night and day." Like many other fellow-sufferers, as death approached, he was carried from place to place; even Cortona, by the Lake of Perugia, did not satisfy him, and finally he was stung by the pathetic sense of his homelessness, even though homelessness

had been a part of his gospel, and he turned his face toward Assisi; and, if he did not see, with his seared eyes, the Portiuncula, his soul rejoiced when its pillars first appeared to those who were with him and he must have experienced all the glory of homecoming when they placed his dying body in the little room just outside the Portiuncula. With the strange psychic energy which often accompanies the tuberculous into the depths of the valley of death, he emphasized this final sense of place and possession by saying to those about him, "Never give up this place. If you would go anywhere or make any pilgrimage, return always to your home; for this is the holy house of God." After having the brethren sing canticles and psalms in which he joined, he requested that his body be laid on the bare ground in order that his soul might mount unhampered to its source. With the silencing of song and the lowering of the frail body from its couch, there must have been a penetrating stillness punctuated by every footstep on the porches of the Portiuncula, as the brown figures suddenly saddened, moved cautiously and aimlessly about.

It was the third of October, 1226, when tuberculosis won the final victory and forced the separation of spirit and body. Just what the toxins of tuberculosis had to do with the creative energy of this impetuous mind and to what extent it was influenced by the restraining effects of disease upon his physical activities, we can never know, but it is certain that tuberculosis played a part in this unprecedented expression of genius.

St. Francis was chief pathologist at the death of the Dark Ages. With the accuracy which could come only through a fine dissection, he discovered the maladies which had dragged humanity down, and set about to free society from their ravages—as a consequence, he has been called "the morning star of the Renaissance." In the words of Gilbert K. Chesterton:

From him came a whole awakening of the world and a dawn in which all shapes and colors could be seen anew. The mighty men of genius who made the Christian civilization that we know, appear in history almost as his servants and imitators. Before Dante was, he had given poetry to Italy; before St. Louis ruled, he had risen as a tribune of the poor; and before Giotto had painted the pictures, he had enacted the scenes . . . . He was the spiritual essence and substance that walked the world before anyone had seen these things in visible forms derived from it: a wandering fire as if from nowhere, at which men, more material, could light both torches and tapers. He was the soul of medieval civilization before it even found a body.

His charity was as spontaneous, as far reaching, as godlike as the blue heaven vaulting the plains of Umbria—as refreshing as a perpetual fountain in an ancient market place. A spiritual genius walking in the shadow of the Dark Ages, yet delicately attuned to all the needs of modern mankind. We bow our heads in humble recognition of his influence in the world today.

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