

THE PEOPLE'S MISERY:  
Mother of Diseases

AN ADDRESS DELIVERED IN 1790

BY

JOHANN PETER FRANK

*Translated from the Latin, with an Introduction*

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## *Introduction*

There can be no doubt that Johann Peter Frank was one of the most outstanding figures in the great public health movement that took place in the second half of the 18th century.<sup>1</sup> In 1784 he was still physician-in-ordinary to the Prince-Bishop of Spires in Bruchsal. The publication of the first three volumes of his epoch-making *System einer vollständigen medicinischen Polizey*, however, had attracted so much attention that in the year 1784 he was offered simultaneously three chairs, that of physiology and public health at the University of Mainz and the chairs of clinical medicine in Göttingen and Pavia. He turned down Mainz and decided on Pavia, but when the diploma of his nomination was late in arriving he became impatient and accepted the chair in Göttingen.

The University of Göttingen was under the sovereignty of the King of England. Its medical school was one of the great research centers of the period, made famous by Haller. In addition to clinical

<sup>1</sup>.About Frank see: K. Doll, *Dr. J. P. Frank*, Karlsruhe, 1909; K. E. F. Schmitz. *Die Bedeutung Johann Peter Franks für die Entwicklung der sozialen Hygiene*. Berlin, 1917; Leona Baumgartner and Elizabeth Mapelsden Ramsey, Johann Peter Frank and His "System einer vollständigen medicinischen Polizey," *Annals of Medical History*, 1933, New Series, Vol.5. pp. 525-532 and 1934, Vol.6, pp. 69-90; Henry E. Sigerist, *The Great Doctors*, New York, 1933. The most important source for his life is his autobiography: *Biographie des D. Johann Peter Frank* Von ihm selbst geschrieben, Vienna, 1802.

courses Frank gave lectures on physiology, pathology, forensic medicine and public health. But the rough climate of Göttingen affected his health. He did not like the hospital and saw no chance of changing it at the time. The chair in Pavia was still vacant and so, after only one year in Göttingen, he left, went to Vienna and from there to Italy. He arrived in Pavia on May 18, 1785.

The University of Pavia was an old mediaeval foundation, chartered in 1361 as *Studium generale*.<sup>2</sup> Famous physicians had taught there, such as Antonio Guainerio and Ferrari da Grado in the 15th, Girolamo Cardano in the 16th centuries. In the 18th century after the War of the Spanish Succession the Duchy of Milan with the Principality of Pavia and the Duchy of Mantua became Austrian. The University of Pavia, having run down during the Spanish regime, flourished again under the reign of Maria Theresa and still more under Joseph II.

Frank had hardly arrived when a few weeks later the emperor Himself, Joseph II, visited the University on one of his tours of inspection. He insisted on seeing everything, went into the contagious wards, was critical, ordered and encouraged reforms. Backed by the emperor's authority, Frank reorganized the medical school from the bottom. He doubled the number of lectures, abolished the free Thursdays, founded new chairs, made new appointments, raised the professors' salaries, created a pathological museum. Clinical instruction was given by himself in the hospital wards where he had 22 beds available for the purpose. He established a surgical clinic and required that medical students attend surgical courses and students of surgery medical courses. The medical curriculum was to last five years and the surgical curriculum four. A model pharmacy was established for the training of pharmacy students who were required to attend clinical courses for 2 years; and since Frank found a great deal of waste in the dispensing of drugs, he called all the physicians and surgeons of the hospital together and held weekly meetings with them during which they compiled a new pharmacopoeia.

As a result of all these reforms the number of students, Italian and foreign, increased very rapidly. And in order to give them

<sup>2</sup> *Cenno Storico sulla R. Università di Pavia*, 1873.

an opportunity to gain additional experience during the long summer vacation, he made it possible for them to attend ward rounds, operations and autopsies at the Ospedale Maggiore in Milan.

Frank took his academic duties very seriously. Every morning, from eight to nine o'clock he gave a clinical lecture which was followed from nine to ten and often to eleven by clinical instruction at the bedside of patients. From four to six and often until seven o'clock he made a second ward round with the students. It is no wonder that the school of Pavia flourished.

Less than one year after he had joined the faculty of the University of Pavia, on February 7, 1786, Frank was, in addition to his chair, appointed Protophysicus and Director General of Public Health of Austrian Lombardy and the Duchy of Mantua. He now had the position best suited to his ability and interests. The chair kept him in touch with clinical medicine and the administrative post gave him a great opportunity of developing his statesmanship.

He immediately undertook a survey of the region. In the autumn of 1786 he inspected the provinces of Milan, Varese, Como, Lodi and Pavia. The following year he visited the provinces of Cremona, Casalmaggiore and the Duchy of Mantua. Accompanied by several members of the Board of Health, he inspected pharmacies and hospitals, interviewed physicians, surgeons and midwives, studied living and labor conditions of the people. He was delighted with the beauty of the landscape that exerts such a strong fascination on every visitor. But he found medical conditions far from satisfactory.

From then on Frank spent every vacation travelling, not only in his own region but in the neighboring states as well. A clinician of renown, a recognized expert in hospital matters and public health administration, he was frequently called in consultation by influential patients and governments. Thus, within a few years he visited Venice, Ferrara and Turin, Genoa, Nice and the Provence, Parma, Pisa, Florence and Piacenza. He crossed the Alps to visit Switzerland. And everywhere he studied health conditions and medical facilities.

At home, he initiated without delay a program of reforms. He reorganized the Board of Health. He endeavored to raise the standard of the medical personnel. The reorganization of medical, sur-

gical and pharmaceutical education would soon supply the country with better physicians, surgeons and pharmacists. Midwifery was a sore spot, and so he worked out a plan for the training of obstetricians and midwives. He improved hospital conditions all over the region.

In all his activities, from whatever angle he attacked a problem. Frank invariably encountered one unsurmountable barrier: the extreme poverty of the people. All over the territory he found the population rotten with poverty, ignorance and disease. And this extremely low standard of living defeated the best public health measures. The land was fertile enough, yielding rich crops of corn, rice, vegetables and grapes, but the land did not belong to the people who produced the wealth. It belonged mostly to patrician families who owned large farms as fiefs.<sup>3</sup> The peasant was crushed with feudal obligations and was starving in the midst of plenty. To Frank it was clear that the chief cause of disease was poverty and that health conditions would not improve until the standard of living was raised.

When Frank came to Pavia it was customary on graduation day for the professor who granted the degrees to give a short eulogy on every candidate. Frank changed the custom and instead of eulogies the professor delivered a formal address on some scientific subject. At the graduation exercise held on May 5, 1790 Frank was presiding, and he devoted his address to the discussion of the subject that he had so much at heart. He spoke *De populorum miseria: morborum genitrice*.

The time was well chosen, for 1790 was a portentous year. Joseph II had just died on February 20, a few weeks after having withdrawn his reforms. He was succeeded by his brother Leopold II who upon his arrival in Vienna on March 12 found the empire in chaotic conditions, with the Netherlands in revolt and war with Prussia threatening. What was the future going to be?

Joseph II, following in the footsteps of his mother, Maria Theresa, was one of the most outstanding representatives of the political philosophy of enlightened despotism. He did not believe

<sup>3</sup> About conditions in Lombardy see: Franco Valsecchi, *L'assolutismo illuminato in Austria e in Lombardia*, Bologna, 1931-1934, 2 vol.

in self-administration of the people or in participation of the estates in government. To him the monarch was to the subject what the father is to the family, head of a social group who is responsible for the welfare of every single member. The monarch should promulgate the laws that will benefit the people and should have them carried out through his administrative organs. Joseph II was aware of his responsibility toward the common people and instituted far-reaching reforms to alleviate their hard lot. In 1781 he abolished serfdom in Austria and the Slavic provinces without relieving the peasants, however, of many feudal burdens. He created many institutions of welfare, hospitals, almshouses, asylums for the blind, the deaf-mutes and foundling. He was deeply interested in the promotion of public health, and the fact that he attracted men like Frank and put them in the right place demonstrates this unmistakably. He had no regard for the inherited privileges of groups but tried to establish impartial justice for all, equitable taxation, freedom of thought and religious tolerance.

These reforms were violently opposed by the nobility and clergy who felt threatened in their privileges. And finally the pressure on the emperor became so strong that after only nine years Joseph II, while on his death bed, revoked most of his reforms. His brother, Leopold, shared his philosophy. As second-born son he was Grand-Duke of Tuscany and had resided for 25 years in Florence where he had reorganized the state most successfully. But when he succeeded his brother on the throne of Austria, the reaction had set in and could not be stopped.

And so the spring of 1790 was indeed an ominous moment in the history of the Austrian empire. The great reforms that promised better social conditions were shattered. The future was dark. Peasant uprisings had broken out in various parts of the country. And the French Revolution was on the march. When Frank at this very moment was called upon to deliver a public address, he did not choose a clinical subject as he had done previously on similar occasions, but very courageously attacked the basic problem of public health: poverty. He was addressing the faculty and students of a university, but he hoped that his voice would carry far enough to be heard by the men in power.

Frank was by no means a revolutionary. He accepted social disparity as inevitable. He did not believe in violent changes of the social order. On the contrary, he dreaded them and his recommendations tended to avoid them. He was a loyal servant of Joseph II, whose political philosophy, that of enlightened despotism, he fully shared and whose reforms he had greatly welcomed. In repeatedly calling the oppressed rural masses, the most useful citizens of the state, he remained completely in line with Joseph's views. Joseph himself had considered the laboring masses the most important part of the population, and his policy had been not to give them a share in government but to protect them against exploitation by the nobility and clergy and thus to improve their condition.

As a public health officer Frank was in close touch with the population. He saw their abject poverty, their starvation, their miserable huts, their lack of clothing and fuel. Daily he saw the results of such poverty: crime and disease. He recognized that where there is poverty, there can be no freedom. He was well aware of the causes of such a condition. The social and economic structure of society was responsible for it, a system that kept the rural masses in feudal bondage and made it impossible for them to own any property; a system that permitted a few to display boundless luxury for which the masses had to pay in starvation.

What was the remedy? Frank believed that the people had a "natural right" to a decent life. The peasant must be liberated. He must own the soil that he tills. He must have enough land to feed his family and to produce a surplus. Prices of agricultural products and industrial commodities must be so balanced that the farmer can buy the commodities and the city worker the food he needs. The salt tax must be kept low.

Frank believed that this could be achieved through reforms. He underestimated the power of the vested interests of the nobility and clergy. But he knew that unless reforms came forth, the people would rise. Delivered in a year of reaction, his address sounded a warning.

Frank approached the problem as a physician. He gave such a vivid description of conditions in order to explain the high incidence of illness, the high mortality and the decrease in population observed

in rural districts. But as a public health officer of vision, he was a statesman also and saw very clearly that the health problem was merely one aspect of a much broader social and economic problem.

One hundred and fifty years have passed since Frank delivered his address. A great deal has changed since then, and yet his words still sound incredibly modern. Poverty is still the chief cause of disease and the chief source of crime. And it is as true today as it was in the 18th century that there is bound to be unrest unless the social and economic conditions of the masses are improved.

Frank's address was published in: *Delectus opusculorum medicorum antehac in Germaniae diversis academiis editorum, quae in auditorum commodum collegit, et cum notis hinc inde aucta recudi curavit*, Joannes Petrus Frank; Ticini, 1790, Vol. IX, pp. 302-324.<sup>4</sup> The address was translated twice into German by J. L. Doering in 1794<sup>5</sup> and by H. Reinfried in 1928.<sup>6</sup>

The reader must remember that the address was a formal academic oration which always calls for a certain amount of rhetoric. He must, moreover, keep in mind that it was delivered in Latin, and you cannot speak Latin without remembering Cicero. Otherwise, Frank's language is plain enough.<sup>7</sup>

<sup>4</sup> A copy is in the Army Medical Library, Photostats at the Institute of the History of Medicine, The Johns Hopkins University.

<sup>5</sup> *Archiv für den praktischen Arzt*, 1794, Stück 1.

<sup>6</sup> *Sozialhygienische Mitteilungen*, 1928, p. 101 ff. I could not find either translation in this country.

<sup>7</sup> I am greatly indebted to Dr. Ludwig Edelstein for checking and revising my translation.

## ACADEMIC ADDRESS

ON

## THE PEOPLE'S MISERY : MOTHER OF DISEASES

DELIVERED IN PUBLIC ON MAY THE 5TH, 1790

BY

JOHANN PETER FRANK

Member of the Royal and Imperial Council in Milan, Director-General of Public Health of Austrian Lombardy, Professor Publicus et Ordinarius of Practical and Clinical Medicine, Member of the Royal Academy of Science of Göttingen, of the Academy of Mantua, of the Patriotic Society of Milan, and of the Electoral Academy of Mainz.

All of us whom nature has condemned to live in exile on this earth admit that mortal people's lot is unhappy enough, so that men should not of their own contribute to their miseries. Yet thus it is, Rector Magnificus, Most Learned Fathers, Most Worthy Listeners! The great majority of all evils from which we suffer derives from man himself. It is as if nature thus had wished to conceal its own harshness and had wished to convert the mourners' tears into their own mistakes. Truly, the fabric of all things - of which we make only a small part - and the order of the universe have not permitted that human beings be assigned a happier place than that in which they live. And yet we must admit that a man to whom the Author of life has graciously given a healthy mind in a healthy body is greatly unjust toward creation if, dissatisfied with such a rich patrimony he ungratefully grumbles. In such matters we have been accustomed to offend from childhood on. Other animals preserve their heritage undiminished, but we waste ours wantonly in innumerable ventures. Although people fall dead all around us, we are not scared of the abyss to the brink of which our own mistakes are leading us, ere projected into it, we tumble to the depths.

A legion of diseases already comes forth from the individuals own vagaries - why is it then that foreign mistakes also drive mortal men into considerable troubles? Why is it that a vast amount of illness originates in the very society that men of old

inaugurated in order to enjoy a safer life, after having lived primitively in the woods? The people who roved through endless forests, deprived of permanent homes, undoubtedly suffered many discomforts, but I am convinced that their diseases were very different and considerably fewer than ours.

The medical officer's main task is to investigate assiduously the origin and chief causes of the various diseases that befall the states, but I shall briefly examine before this distinguished assembly only one, namely, *the misery of the people as the most fertile mother of diseases*.

I am well aware that this common source of evils is not unknown to most people in the state. I am also conscious of the objection that could be made, namely, that my oration should be addressed to rulers rather than to others because help can be expected from them alone. But perhaps I shall tell you things that cannot be said often enough. And after having been for so many years an active observer of the people's diseases and miseries, I may be able to give truer colors to the picture that I shall draw for you. In teaching the truth and the humane sciences to future magistrates, you, Very Learned Fathers, instruct the rulers themselves, and in addressing you I feel as if I were talking to them. Speaking to the public once on similar problems I reached among many people also the ear of highest personalities, and they did not scorn to follow my advise in many matters, although it came from a humble citizen. Some day perhaps it will prove helpful that I spoke about these problems, and I am convinced that nobody will ever contend that the investigation of so genuine a cause of disease can be expected from someone other than a physician.

How easy would it be to protect society through wise legislation against the attack of the most serious diseases. It would be easy to keep society safe and free from even those evils against which physicians themselves have very little authority and power. I have discussed this in detail on some other occasion.\* But concerning the fact that the extreme misery of the people saps the stamina of

Dissertatio de Magistratu, Medico felicissimo. Göttingen, 1784. Reprinted in *Delectus Opusculorum Medicorum*, Vol. V, p. 70. See also *System einer vollstandigen medicinischen Polizey*, Vols. I and IV. [Author.]

the most useful citizens and prostrates them with poisonous breath—who will not willingly admit that in these matters some plans are futile while others are better? Let the rulers, if they can, keep away from the borders the deadly contagion of threatening diseases! Let them place all over the provinces men distinguished in the science of medicine and surgery! Let them build hospitals and administer them more auspiciously! Let them pass regulations for the inspection of pharmacies and let them apply many other measures for the citizens' health - but let them overlook only one thing, namely, the necessity of removing or of making more tolerable the richest source of diseases, *the extreme misery of the people*, and you will hardly see any benefits from public health legislation. There is in every state a necessary social order among the citizens, inseparable from any form of government. The inequality in the distribution of wealth determines the different social classes. Even the highest sovereign, the Roman People, under the very empire of virtue and liberty had to put up with counting very many whose domestic lot was poverty.

Since every social class must have its own diseases determined by the different mode of living, we must expect that under any form of government the rich and the poor will have diseases peculiar to them. I shall certainly not devote my address to those diseases which take their origin in the inevitable law of social disparity but shall rather consider the tremendous consequences for the public health of the extreme poverty from which the greater and most useful section of the population is being crushed.

I shall not rest - the words are those of Henry IV, King of France - I shall not rest and shall not pride myself on having been Lord of the People, unless the farmer is able to have a *chicken* on his table and is able to restore the forces spent in labors with praiseworthy food! The divine ruler's intention would have been carried out but - Oh ruthless fate that strikes the best kings! - fanatic raving came over the very people whose table he had prepared. The murderer's hand pushed sacrilegious steel into the fatherly, king's body. Jealousy of the nobility and hatred of religion wiped out the magnanimous king's wish and piety in regard to his subjects, leaving it to posterity to pay tribute to his virtue. To what purpose

do I mention this, Gentlemen? In order to convince all of you that this most Christian king had seen with penetrating eye what the real point in public welfare is. And I wish to show you how empty the high - sounding devices of our contemporaries are about uplifting and elevating the citizens, unless they are based on this very principle, the true foundation of public welfare.

The extreme poverty of the people, just as it is the most fertile mother of crimes, in the same way corrupts the product of generation at the root. It causes in the citizens a physical disposition for innumerable diseases and makes it very difficult or impossible to cure them, even with still better medical equipment. I shall clarify both parts of this proposition with a few arguments. I trust that any one of you is already sufficiently convinced of so great a truth so that it will be easy to bring the discussion of the whole subject briefly to an end without display of oratory - a gift of which I am deprived. The purpose thereby will be to enforce the case for alleviating the misery of the common people by adding medical considerations to the many others. This will give us a renewed opportunity to rejoice that we too are governed by a Ruler in whom the happy population of Tuscany recognizes a rival of Henry, and whose fatherly affection for even the lowest class of his subjects will drive away the causes of disease that I am examining here, just as the sun drives away the rain.

It is not a fairy tale that virtue has deserted the courts and has chosen to take abode in the peasants' huts. But the divine simplicity that took leave from the sumptuous palaces of the ambitious is rarely cultivated under roofs where dire hunger has taken refuge and where desperation houses. When a man's only tie with the society in which he must live is his appeal to compassion - so many times refused - then, in despair, under the influence of the involuntary convulsions of poverty he easily disrupts the very thin thread that hardly connects him any more with the fellow citizens he hates. Solicitous about nothing but his own survival, he curses laws which for him alone have no provisions. Although he too is a son of the common Father of all men, yet he is estranged from the world and struggles in any way he can, in secret or openly, to reclaim his part of the natural heritage he lost. In one, malice produces violence. In

another, misery has blunted any feeling of kindness, and ignorance and stupidity make him the fiercer. Thus virtue, the most solid and only pillar of public security, breaks down and every kind of vice insinuates itself into society threatening destruction, a fatal omen for the state. Warning examples are already seen in various countries of Europe. After all the land has been divided among the powerful and rich, there is hardly any difference left between the common people and the very beasts of burden except that the beasts precede and pull the plow, while men guide and follow. When the people live in such a slavish condition and are excluded from any property right of citizens, shall we perhaps expect them to be more attached to the country than domestic animals which, as they see, are hardly less esteemed? Shall we expect them to raise their emaciated arms with equal power in defense of a hearth that holds no fire for them? Shall we expect them to be eager to procreate children and thus still augment the impossibility of their own subsistence? To bring up children when the only warmth they can give them is that of their love? To save them when they are dangerously ill for the still greater miseries of life, equal to those of their parents? Shall we expect them to teach their sons assiduously to respect laws which deprive their fathers of their natural citizens' right? To teach them respect of the law as a virtue when it bids them to accept patiently from others nothing but insults, blame, the slavery of starvation and finally even death?

These are the deplorable conditions that drive the poor inhabitants of Africa to sell their children into dire slavery. They are responsible for the sacrifice of so many innocent boys. Cruel parents in Asia sacrifice them with nefarious knife to the harems of voluptuous tyrants. And, mind you, various provinces of this very Italy sacrifice them in the same way to the theatres of all European countries. This is the source from which hundreds of hands are driven to any kind of horrible crime and murder, prepared for nothing but the grasping of gold. It is this extreme lack of all things necessary to life, finally, that makes people ready for any vile action, that weakens their minds and drives them mad. It extinguishes the mutual love of parents to children and children to parents. It destroys and throttles respect for the Ruler, for the laws and even for religion.

If extreme poverty has such a strong influence on the citizens' minds, it is not difficult to conclude that all kinds of physical ailments must originate from the same source. How much does not man's physical condition depend upon his state of mind?

Every social group has its own type of health and diseases, determined by the mode of living. They are different for the courtiers and noblemen, for the soldiers and scholars. The artisans have various diseases peculiar to them, some of which have been specially investigated by physicians. The diseases caused by the poverty of the people and by the lack of all goods of life, however, are so exceedingly numerous that in a brief address they can be discussed only in outline.

The writers who have tried to indicate summarily the general causes of man's dying have said that the rich are killed by over-eating, the poor by starving. Such a statement, however, is more clever than true, because indigents too can suffer from over-filling, namely, with indigestible materials and the cause of death is not so simple in either class.

The embryo has hardly been conceived for future misery in the mother's womb, when it soon is exposed to how many calamities! Its only good luck in life is that it remains unconscious of the evil lot for which it is being prepared. Sowed in exhausted soil, the fetus has hardly drawn the first juices through the animal roots of the placenta when, without resistance, it already is shaken and torn as a result of the awful physical labor imposed upon the ill-nourished mother. Or frustrated of the necessary food, it wastes away under the mother's laments and sighs before it had a chance to develop. How often does it not happen that the dire necessity of supporting the family compels pregnant women to undertake work that far exceeds their strength! Bent to the earth, they dig the soil relentlessly, make ditches, cut the grain under the burning rays of the southern sun, and are crushed by the enormous weights they carry with their arms and head. In the cultivation of rice how often do they not stand in stagnant water up to the knees, in any weather, bent over and almost crawling, tearing out weeds from the soil and, mind you, all too often tearing out at the same time their own offspring from the womb! For many years the midwives of the

Principality of Spire submitted to me accurate reports on abortions and premature births. In comparing figures I was struck by the fact that in certain districts their incidence was every year much higher than in other localities of the same jurisdiction. Investigating the cause of such an unfortunate condition I soon found that it lay in servitude. The husbands are very often kept busy with statute labor and are thus forced to leave not only household duties but also the agricultural work in the fields and meadows-rather difficult and abundant in those districts-to their wives until the last months of pregnancy. And yet pregnant animals are kept away from hard work entirely, lest the horses bring forth the foals and the cows the calf prematurely, to the detriment of the owner. The human females, however, who carry the germ of a citizen must die from gruesome starvation or submit their fertile bodies to the yoke.

Still greater evils the woman in childbirth expects. Exhausted from lack of food and hard work, wearily she gets ready for the great task. In the hands of a drunken or ignorant midwife she has no advice, no assistance of friends, no sympathy. Animals have at least a solitary corner where they can deposit their fetus protected against the weather. The human female, however, a citizen of the Fatherland, must often undergo childbirth in a very cold and almost open place or among the cattle. And if in the course of labor the slightest accidents occur which can not be overcome by nature alone, she falls a victim and dies with her child still rosy before he had a chance to breathe.

Let us assume that she was delivered safely. How many different dangers still threaten the woman in childbed if she cannot have more care than a poor citizen usually gets. How many cases of hemorrhage and lipothymia do not result from a retention of the afterbirth, or from a bold attempt of midwives to extract it violently, from atony of the genital organ, from convulsions! And the fevers with the dreaded name puerperal fevers, caused by lack of towels and necessary cleanliness, by cooling of the parts or corruption of the air! And getting out of bed unreasonably for the duties of the household-how often does it not leave prolapsus of vagina and uterus behind!

Now you will tell me that misery will prevent a woman at least

from one thing, namely, from refusing her breasts to the child, as rich women do with such evil consequences. She will present them indeed-but look at the mother's tears falling over the child: the breasts have collapsed, the source of life has dried up, the channels are exhausted! What can the mother's will do, her love for the child, the thirsty infant's hoarse cries, his vain suction? A young and as yet less exhausted woman's breasts may secrete some snowy liquid, but how soon does that secretion stop as a result of continuous sweating caused by immoderate work undertaken soon after birth! Or, how often does it not develop into the so-called milky consumption of the whole maternal organism!

In other cases a lady from the city steps in, anxious to substitute foreign milk for her own and looking for a richer diet, she tears the child from the nursing mother's breasts and puts in his place a foreign infant who is quite often contaminated with gruesome contagion. The mother's unfortunate child is weaned and condemned to coarser food than his delicate stomach can bear. He is growing weak and wastes away miserably. The mother's heart is moved and surreptitiously she gives him the breast again. And then, she instils into her child the poison that she has already transmitted to her husband and deprives the other child of promised nourishment. Or, feeding both infants, she is exhausted in a short time.

If the mother does not sell her breasts to foreign mouths, the scarcity of milk - consumed by excessive labor - her own frequent separation from the child will force her after a few months to prepare coarser food for the babe. In Germany women use a pap made from milk and wheat flour, while our women use a much thicker mush made from water and corn flour. This is an indigestible substance that a delicate stomach can hardly bear. It therefore cannot but turn into exceedingly sticky, fermenting and sour glue and, eaten continuously, it often causes innumerable ailments to the little ones, such as: flatulence, tension of the abdomen, colic, copious development of worms, insuperable obstruction of the mesenteric glands, atrophy, rickets, hydrops, convulsions, finally even death.

Parents afflicted with misery are by no means greatly upset by the death of their children. This is evidenced by the rather sad experi-

ence that the greatest part of all children turned over to foundling asylums have been exposed by legitimate parents. Hence, the help of nature is the only treatment of infantile diseases you can expect the common people to use in order to preserve their offspring's life. Death, they say, sets an end to their suffering. No statement could be more true or more fatal to the state unless the limitation of the number of children is a still greater and more common disgrace. These poorest people are brought up among the cattle and like the cattle they are not taught the principles of humanity, of reading and writing, or religion. They feel that their own existence is threatened every day. Can they possibly think of protecting their offspring before it is able to take care of itself? In this terrible truth lies the chief cause for the incredible infantile mortality of our provinces. This explains why our physicians are helpless in the protection of children and explains the slaughter of children caused regularly every year even by a rather light epidemic.

These facts alone, however, do not sufficiently explain the devastation of otherwise very fertile provinces, or the decrease in population or its sluggishness. There are other factors which, however, are derived always from the same basic cause, namely, the extreme misery and the type of servitude of the most useful citizens.

The sons of destitution have hardly reached boyhood when they are compelled by their parents' poverty to get ready for too hard labors. They are forced to lose in perspiration the nutritional juices destined for the future development of the body. Hence the lack of slenderness, symmetry and natural perfection. Hence the deterioration of the human race conspicuous in that class of society just as in domestic animals. Bodies forced to premature labors remain small and are denied grace, strength and natural excellence. This is why you often take an adolescent farm boy for an adult, judging from the face and stiffness of limbs. Forced as child to do man's work, his body becomes a heavy mass unable to extend and more rigid than the age would vouch. Dire necessity does not spare the fair sex either, but puts the girls with their brothers under the same yoke, even those already condemned to rather late matrimones. It renders their bodies inflexible and prepares them for most difficult deliveries.

Labor is inseparable from the life of the people who are in charge

of the noble task of cultivating the fields. It is so far from being adverse to health in itself that it could on the contrary help to make the bodies robust and to avoid the legion of diseases which idleness, passions and gluttony produce in the cities. Wherever the farmers are permitted some property and some possession of goods, where some reward compensates for the labors and helps to support the growing family, there you will find the people's health flourishing no less than the land they cultivate. Everybody must admit from his own experience that the human machine must break down in a very short time if food of the right kind and quantity does not replace what labor has used up every day and sweats have consumed. *Slave people are cachectic people.* Starvation and sickness are pictured on the face of the entire laboring class. You recognize it at first sight. And whoever has seen it will certainly not call any one of these people a free man. The word has become meaningless.

Before sunrise, after having eaten a little and always the same unfermented bread that appeases his hunger only half-way, the farmer gets ready for hard work. With emaciated body under the hot rays of the sun he plows a soil that is not his and cultivates a vine that for him alone has no reward. His arms fall down, his dry tongue sticks to the palate, hunger is consuming him. The poor man can look forward to only a few grains of rice and a few beans soaked in water. And to this he can add only very sparingly the condiment with which nature has provided mankind in such a liberal way-covering with it by far the greatest part of the surface of the globe and endowing with it also the interior of the earth in abundance. Few animals are known that would not enjoy *salt* in their diet and would not crave for it violently. This natural instinct is not without purpose because this condiment promotes animal digestion in an extraordinary way. Many cattle diseases are prevented by adding from time to time salt in moderate quantity to their food. In man such a strong need of salt is being observed that populations that abstain from it are believed to be extremely rare, and it is quite possible that they roast their meat in ashes or boil it in sea water or drink some of it thereafter, or that they eat pickled fish. The use of salt is the more urgent, the more tough, sticky and indigestible food is, for salt keeps back a too early fermentation of food in the

stomach and helps in dissolving the pasty mass. It stimulates the gastric fibers and nerves to their natural functions and also stimulates the openings of the glandular ducts to increased excretion of gastric juice. Hence we can easily see, Gentlemen, that the price of a so necessary condiment cannot be increased under any circumstance and that the moderate use of salt cannot be denied to the poor. Otherwise, their health will be obviously threatened and the slight profit resulting from an increased price of salt will be wiped out by increased mortality of the best citizens and, I may add, of the domestic animals too - obviously to the detriment of the state.\* Scarcity of food, however, and a quality of food that has no nutritional value make the citizens physically unfit for any sustained effort and predispose them for catching any matter of diseases. The weaker the organism and the more exhausted from troubles the human machine is, the sooner miasmas and contagions penetrate it like a dry sponge. Hence famine-sterility of the fields increased under an unfortunate constellation-is immediately followed by epidemics in the provinces. They are to be attributed not so much to the poor quality of food as to the fatal readiness of the body to absorb germs of diseases.

Physicians, surgeons, military commanders, or priests may be living in the corrupt atmosphere of the sick, coming in close touch with them, and yet they are less frequently affected by contagion than the poor, emaciated and depressed citizens and soldiers. In the plague which in this century visited Marseilles there was a tremendous mortality and therefore a lack of people for removing and burying the cadavers that lay all over the streets. Criminals previously sentenced to the galleys were used and prepared for this new job with better food and pay. Although they even adorned themselves with the clothes of the dead, nothing fatal happened to them. Thus any epidemic or contagious disease generally takes its origin in the poorer class of the population, dominates there in a most severe way and is stamped out late. Even a light infection, localized in a small spot, soon develops into a deadly disease similar to jail or hospital fever and spreads among relatives and friends who are exhausted by misery and predisposed for it. This happens par-

\* See Medicinische Polizey, vol. III, chapter V, § 3. [Author.]

ticularly in the winter time when people are anxious to keep out the frost and thus keep also the fresh air out. I can touch only with one word the many troubles peculiar to the poor that arise from insufficient clothing, lack of fuel, bitter frost, sooty and unclean habitations, or the filthy skin diseases due to neglect of cleanliness of the body and sluggish perspiration resulting from continuous distress. Burdened already by so many causes of disease, the poor is exposed to numerous misfortunes to which he succumbs all too soon. Already shaking with fever he staggers to his still harder work in order to support wife and children until his shrunken body breaks down under the weight of so much misery. Perhaps he calls a physician and when he comes implores his help. Indigence denies him medicine, more appropriate food, assistance. Days are lost and the chance of saving him. He enters a hospital if there is one, but he is hardly there before the funeral separates him from his family. He may possibly seek this refuge sooner, but in most hospitals you find so much danger of contagion and a so cruel neglect of the poor that the hospital mortality rate is considerably higher than the general rate. Loss of citizens - the most deplorable loss - is thus added to the tremendous loss in public money.

Just as many hazards threaten convalescents among the poor. They have no choice of food of any kind. They cannot possibly restore their forces as they wish, and there is no relaxation of mind and body for them. As a result, patients who just seem to have recovered from an acute disease now languish from starvation and are slowly tortured to death by chronic ailments.

This is the influence of extreme misery on the people. This is the influence of luxury collected from everywhere, of officials who do not care enough for the welfare of the most useful citizens. If the government really wishes an increase in population, it must see to it that parents and children feel secure of their subsistence. It must not let prices of vital commodities rise beyond what labor and sweat can pay. It must abolish *servitude* which is a disgrace to mankind and must get rid of - what comes closest to it - the system under which farmers are deprived of any property and possession, either legally or as a result of insuperable poverty. In one word, it must fulfil the pledge of King Henry to his subjects.

Let the government expel from our provinces *the people's misery, most powerful mother of diseases!* Then, the mother's fertile womb will produce strong and numerous children. The fields cultivated by sinewy arms will thrive. The diseases will return to the cities that are rotten with debauchery. Joy, virtue, patriotism and the former health of the citizens, secured by labor, will be restored.

And now I call on you, young men, on thee, Aloisio Mazzoni, thee, Pietro Bandiera, thee, Giacomo Trovati, that on this happy day you may receive in the presence of all from my hands the insignia of the highest honor as a reward for your conduct and diligence! Step forward, my friends! Adorn your learned head with the *Laurel of Apollo* and try to deserve the *Civic Crown!* One without the other soon withers and fades. Put the *Rings* on your fingers and, as the bridegroom through this symbol promises faithfulness, help and protection to his beloved wife, so you recognize yourself pledged to help and assistance to the class of the poor which everywhere is the most numerous. Finally, I *open* the *Book*, to entreat you not to abandon learned endeavors after you have left the University. I *close* it: when nature teaches you differently, trust nature more than books! And now let me who loves you take you for the last time in my arms. What sons owe to their fathers, you owe to me who has assumed this title and has for years taken your father's place. Give me this consolation: *Be useful to the state!* *Be happy!*