

slowly, following. By special means, such as vaccination, and by general sanitary means, such as cleanliness, ventilation, and drainage, not only these special diseases, but a large number of other ailments have been rendered less frequent, and, when they do occur, less fatal.

In the matter of diet, and more especially in that of drink, the inhabitants of civilized countries, guided by medical science, have of late years made vast strides towards a more rational and more healthy life; thus it is now demonstrated that alcohol is always injurious when taken as an habitual article of consumption. This knowledge, now gradually permeating the masses everywhere, is unquestionably destined to lead at last to the total disuse of alcoholic stimulants.

Some idea of the value of general hygienic knowledge may be gathered from the single fact that whereas early in the eighteenth century *three* out of every four children born in London, England, died under the age of five years, at present only *one* out of every four dies during those years. Or to put it another way: one hundred and seventy-five years ago, of all the children born in London, only one-quarter lived to be five years old; at present, of all the children born in that city, three-quarters live to be five years old.

What has already been done in the way of prevention of disease, great as it is, is probably trifling compared with what will be done in the immediate future, since this branch of medicine is advancing with gigantic and ever-quickenng strides. As the exact nature and cause of the various diseases are discovered, means will be found, not dreamed of yet, to prevent their occurrence. Already medical science is beginning to point out how such common and terrible scourges as consumption and insanity should be attacked, and I have no doubt myself that in the course of another century the acute specific fevers, such as scarlet fever, measles, typhus, typhoid, and the rest, will be stamped out of all civilized countries. In fact, it is impossible to overestimate the good that medical science has already done or may yet do for mankind in the ways mentioned; in the ways, namely, of relieving suffering, curing disease, and, above all, preventing disease. I be-

lieve that it was well that man, being in all other respects constituted as he was, was created liable to accidents and diseases that he might be stimulated by these to the study of his own body and mind and of nature, in order that he might gain some knowledge of these diseases and the means by which they might be prevented, cured, or relieved. For man is naturally indolent, and, unless he had been driven as he was by the pain of disease and the fear of death, it is certain that he would have remained until to-day as ignorant of his own structure and nature as he was ten thousand years ago.

As I understand it, then, disease and death, and especially the *fear* of disease and death, have been and are good friends to man, and not enemies, as generally supposed; for by them man has been driven to investigate the laws which govern his own life, as well as those which preside over universal nature. The immediate purpose of his study has been and is to defeat disease, and in this purpose he has been, as we have seen, largely successful. But by and through this same study he has achieved something far more valuable than that which he sought. He has achieved, namely, or is in process of achieving, the liberation of the human mind. For what does the study of medicine, after all, mean? It means the study of *man*. But in order to understand man we must first understand his surroundings; that is, the world in which he lives. The study of medicine, therefore, means the study of man and of all his surroundings, that is, of all things with which he is in relation; in other words, the study of himself and all things which do or may affect him prejudicially or beneficently. This study is, therefore, universal, and the following instances will show how it comes to be so. We want, for example, to understand the eye in order that we may treat its diseases and remedy its various defects, but the first thing we discover about it is that it is an optical instrument, and that nothing can be thoroughly understood about it until the laws of optics are mastered; so we had to and did study light. So we want to understand the ear in order to treat its diseases, and in the same way we find that it is an acoustic instrument, and that nothing can be satisfactorily understood about it until the general laws of sound have been elucidated;