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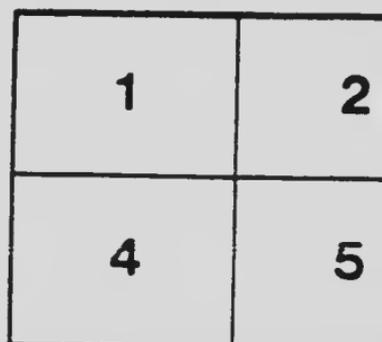
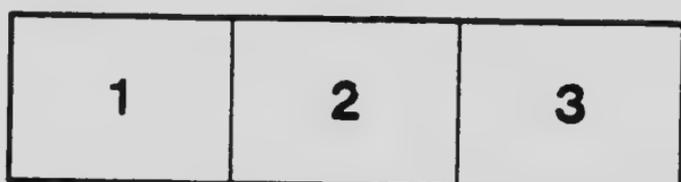
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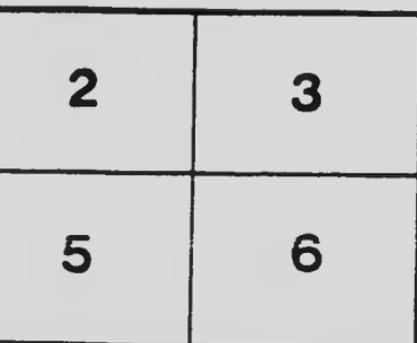
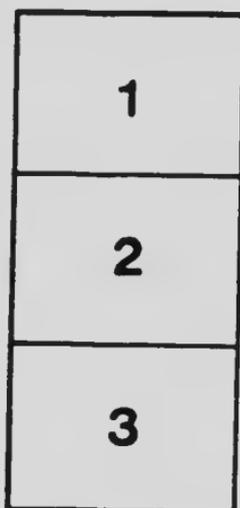
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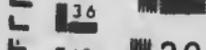
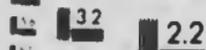
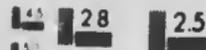
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## THE RELATION OF "SANITATION" TO DEATH AND DISEASE

By H. W. HILL, B.A., M.D., D.P.H.

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**T**HE subject of this communication forms the root of many questions modern public health has been trying so hard to answer of late years; first, what are the economic, efficient, procedures of real public health; second, what can we discard with profit from our old armamentarium; third, what new public health procedures should be adopted? I intend to discuss here chiefly the second, i.e., what can we discard?

The earlier conceptions of public health identified dirt with disease, holding that one made, or included in some way, the other. But as we go deeper and deeper into the real causes of disease, direct or indirect, dirt loses significance more and more, and we recognize that the saying, "Dirt causes disease," is one of those glittering generalities that really mean nothing or is even false.

We repeat, some of us often and as a public health maxim, "Cleanliness is next to godliness." But is it? In what public health sense is that saying true? This phrase on the surface seems to mean, is certainly usually used to mean, that cleanliness protects against disease; and that the protection is so good as to rank below nothing but godliness. But who would dare to claim godliness protects against sickness at all? Does the unvaccinated bishop escape smallpox or the vaccinated burglar succumb?

Are the ninety per cent. of our people who suffer from measles all godless? We average by the time we reach adult life over three infections apiece, counting only the accepted children's diseases! Are children more godless than adults? Godliness is no protection provided infection can reach us. Ungodliness does not produce disease, provided infection is excluded. It was not the heathen who suffered syphilis, tuberculosis; they were free until Christian nations, wallowing in both diseases, brought both to them. Then if godliness is no protection, why is cleanliness lauded as being almost as good, since that merely means cleanliness is almost as good as zero!

These remarks are mere introductory generalities; my real object is to present the findings of an Ontario health officer, Dr. G. A. Dickinson. He prepared very admirable statistics of the infractions of the sanitary code in his town, Port Hope, and at my suggestion divided the deaths and diseases of his town according to the condition of the premises where they occurred, putting together in one group all premises showing infractions of the sanitary laws, and in the other all premises showing obedience.\*

If it is essential to health and long life that all manure piles should be covered, all garbage collected, all privies kept in a sanitary condition (whatever that means), no water in the cellar and so on, surely the deaths and disease amongst the law-breakers should be higher than amongst the law-keepers. If our sanitary code is really sacred, as it is often regarded; if it has the real weight of ripe years of well-checked-up experience; if it is truly physically harmful to break its injunctions, if it is really protective to keep them; then the distribution of death and disease should show some relation to the two groups, the law-keepers on one side, the law-breakers on the other.

We are not disappointed; a relation, at least on the surface does appear; it is this: The law-keepers have in proportion about one third more deaths than the law-breakers, and over twice as many cases of infection! The actual figures were as follows: From 303 dwellings showing various infractions there were 13 deaths and 13 cases of communicable diseases; while from 901 dwellings showing no infractions there were 52 deaths and 89 cases of communicable diseases. In other words for every 100 deaths and every 100 cases amongst the law-breakers there would be, in proportion, 135 deaths and 232 cases amongst the law-keepers!

So if we insist on any relation at all, if we claim that the sanitary code affects death and disease, we must on this showing admit its relation to be that of increasing, not diminishing, both; and increasing both very markedly! Where lies the fallacy? Dr. Dickenson has searched for it carefully and found none, nor any explanation for the figures at all. The premises showing infections were scattered at random all over the town, not grouped in any one "unsanitary" neighbourhood. The people who lived in those premises were the average citizens, no better or worse or richer or poorer than the others. The reporting of deaths and disease was equally good for both groups. I know of no similar

\* Dr. G. A. Dickinson presented his results at the Ontario Medical Officers Health Convention, May 7th and 8th, 1913, Toronto.

figures, because health officers generally do not ask themselves if their work means anything; do not try to figure profit and loss.

Once as a boy of eighteen I taught in a private school which the principal kept up year by year because he believed it to be the chief source of his living. I also assumed that it paid, and taught on, blandly confident; never questioning that the school was financially sound and yielded a very good income.

One day, merely to occupy time, I figured the actual difference of income and outgo. I found, to the principal's dumbstruck amazement and horror, and mine also, that he lost just one dollar a month every month that this school ran!

Let me say in all earnestness, that public health work, too often, is in much that exact situation.

We are making expenditures, working hard, fining our people for breaking the sanitary code, preaching cleanliness, fighting dirt. It all sounds so good, so heroic, so righteous, so self-sacrificing. As a matter of fact, is not much of our teaching, not righteous but rather self-righteous? Does our much vaunted cleaning up really accomplish the only real end we can have; does it really reduce death and disease? Are we not exactly in the position of a business man who never takes stock of his business? He inherits, let us say, certain customers, goodwill, traditions. He always has goods on his shelf, people buying, bills being paid. He ranks with his neighbours as solvent; he thinks he is so himself. Yet enquiry, checking up, cold-blooded figuring, may show it is really much cheaper for him to stop buying and selling; cheaper to do nothing at all!

That cold-blooded taking of stock is just what we need now in public health, and I would here urge two things to this end; first the use by all health boards of the financial scheme of accounting put forth by M. N. Baker, the noted engineer, publicist, and member of the committee of financial accounting of the Massachusetts Association of Boards of Health. This is the first step; it determines what boards expend for each item of what we call public health service. This form of accounting is wise from the mere standpoint of good business; if adopted widely it would make cost comparisons in different places more easy. Above all it would call attention to what we waste for æsthetics or preventing nuisance, as against what we spend for the real reduction of death and disease.

My second suggestion is this; in addition to this uniform financial accounting, every department of health, every health officer, should so keep his records as to yield a uniform *technical*

accounting; thus showing not only what each branch of his work costs in cash, but what it returns, not in cash of course, but in saving of death and disease. I suggest for this form of accounting, but merely as a beginning, the tabulation of death and disease in the community against the infractions of the sanitary code, following in this the plan followed in Port Hope. For the technical accounting all that is essential at present is listing all infractions of the sanitary code found on dwelling premises; listing the deaths and diseases found on the same premises; dividing the total deaths on those premises by the total of those premises; doing the same with the diseases reported; and comparing these figures with similar figures from the rest of the community, the law-keeping portion.

Other methods for studying such figures will quickly suggest themselves; each individual death or case of disease may be tabulated against the individual infraction of the code which occurred on the premises concerned, and so on. But in any case do as is here suggested for a beginning.

Let me say that I am not indicting the requirements of the Sanitary code; they are good rules for community living; not do I deny that, at times, some of the things they forbid are factors in the spread of disease. What I insist on is this; having limited time, money and energy for public health service in most places, it is the acme of folly to spend most of that little upon the least paying procedures instead of the best. If you were in a burning building trying to help the poor inmates, what folly to throw the baby out of the window and carry an old can of garbage carefully down in your arms!

Just that in essence, nothing better, makes up one-half of our present day health work.

Nuisances, unæsthetic conditions, even such matters as really at times may be factors in the spread of disease, should be classed in police work, so long as they constitute simple infractions of simple and definite civil laws.\* Public health men have their hands quite enough filled in searching for, dealing with, the infractions of Nature's laws which they encounter. The tracing of disease through its routes to its sources, the care of those sources to prevent further spread of disease; the study of health in the human, the securing thus of health for the race, — these are far more well worth our doing than fussing with untidy backyards or forcing

\* Amongst those which have some bearing on the reduction of death and disease, I would class prevention of fly-carriage of infection, by screening all outdoor toilets, or better, by substituting for them toilets connected with a sewer.

unwanted aesthetics on people, who are dying for lack of real care.

The public health man is investigating something or somebody always. Let us take time to investigate ourselves. If we find our old methods are efficient in reducing death and disease, then let us go on with old methods; but if we find they are traditions, meaningless old wives' fables or worse, let us drop them and do something useful; or let us go out of the business.



