John Snow's bookplate carried his motto—"Vive, ut vivam!" He lived a hundred years ago: his fame is higher and more widespread today than it has ever been: and his name will be revered as long as there is a science of Public Health and as long as there is an art of sanitarian administration.

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John Snow and the Enlightenment

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At the centenary of John Snow's death, we realize that his achievement is recognized great, even when placed beside the vast knowledge of medicine which has since accumulated; it appears even greater when placed in its true setting—the work and ideas of the era in which he lived.

Snow, born in 1813, was a child of the period which is called the "Enlightenment", which may be considered to have begun in 1754 with the presentation, by Joseph Black, of his doctrine thesis, "On Magnesia Alba and Other Alkaline Substances"; and which came to an end on October 16, 1846, when Morton demonstrated that anesthesia with ether was a practical reality.

The advocates of the "Enlightenment" were not often obvious medical improvement. The work of Newton, Lavater, Kanther, and Laennec did little at the time to improve the lot of the patient, while the discovery of vaccination, important as it was, did not lead to any understanding of the processes of disease. At the time of Snow's birth, the only specific curative drugs known were quinine (malaria), pepsin and pepsinates (digestory) and mercury (syphilis). The many other drugs in the pharmacopoeia were of symptomatic benefit only, if of no use at all.

The doctors were ignorant of the causes of disease. Fuscanton, in 1546, had laid down the causes of contagion and infection, and Kircher, in 1658, had attributed plague to an invasion of the body by micro-organisms, but all this had been forgotten. With the overthrow of the classical ideas by such men as Galileo and Newton, the humoral theory of disease was also discarded, but there was nothing to put in its place.

The doctors of John Snow's period were too materialistic, to lay the blame for disease upon God, and they were forced, therefore, to admit their ignorance. Consequently, the patients lost faith in their doctors, and the doctors lost faith in themselves. Nicotine doctors in a position to investigate the cause of disease scientifically, for each branch of learning was cut off from its fellows by an almost complete lack of societies and scientific journals. With communications depending on the horse and the sailing-ship, the doctor was separated by an increasing gulf from advances, not only in general science, but also in its own particular subject. The doctor, therefore, had to look for the cause of disease within the small horizons which his own eye commanded, and in this, he was often misled by his ignorance of statistics. These were first successfully employed in the cause of medicine by Louis, when, in 1853, he demolished the theory of Brenezianism, that breathing was a suitable remedy for pneumonitis.

Naturally, therefore, many doctors continued for themselves their own "systems of medicine" as Brenezians, who decided that "enervatio" was the cause of all disease. Croceblasto, who blamed phlebitis, and Cullen with his theory of nervous irritation. John
Brown claimed that diseases were either astatic or asthetic; for the former he prescribed a sedative, and, for the latter, a stimulant. Benjamin Rush of Philadelphia went even further, and developed a theory that all fevers ought to be treated by rupture of the excretory vessels of the blood vessels, which he did by strong purges and bleeding to the point of syncope. It was this attitude that led Rush to set up the doctrine of sweating, a theory that held that all fever was due to the use of the treatment of fever, would itself produce fever, if in adequate quantity. Snow himself was troubled, if only nightly, by the same urge, for, like his friend S. W. Richardson, he came to believe, if not that alcohol was the sole cause of disease, yet that it was responsible for a good many of the ills to which he was heir.

These, and other, systematic aid great damage to medicine, and their squabbles became the laughing-stock of the public, who at least had knowledge enough to realize that the empty vapourings of the professors had lost all vestige of scientific base, saw a jargon of meaningless words of Greek derivation.

It was to this atmosphere that Snow must have been introduced when, in 1827, at the age of 24, he became the apprentice of Mr. William Hardcastle of Boston, near Newcastle upon Tyne. His duties at first would be confined to the tasks of rolling pills, washing bottles and delivering medicines. Later, he would have been allowed to accompany his master on his visits, and, in time, he would even be permitted to advise the "chronic" patients. The treatment given would be the usual purges, venison, plasters, blood-lettings and draughts, the latter being composed of many different and useless galenicals. Every patient who recovered would be claimed as proof that the treatment was correct; but the failures would be forgotten; and, of them, it would be said that, if only treatment had begun sooner and had been more drastic, they would have recovered. Nor would Snow have learned anything very different from these accepted methods when he attended the new Medical School in 1822, for this was a very modest undertaking, and by no means a seat of vast learning and research.

When, in [83], the epidemic of Asiatic cholera broke out, Snow seems to have been given charge of a branch emergency at Kirtlington. If it be true that it was during this period that Snow first realized the importance of the water supply is the transmission of cholera, we must account the intellect of this youth of 19, who could make such hypotheses against the background of a medical science such as we have described. Nevertheless, the period was not without its more interesting aspects. Like John Snow, as the practitioners of the time, Buttonman led his work on dietetics; Henry Hill Hickman and his simple-minded attack against pain; Richard Bright, whose "Reports of Medical Cases" in 1827 first drew attention to the connection between disease of the kidneys and dropsy; C. B. Spurgeon and his quantitative examination of the blood in sputum in cholera; M'Herishall and his discovery of the reflex arc; those were all men who were on the right track, and even were overwhelmed by the advances which, in Snow's case, were taking place in another field. What was it that Snow saw? In the right track went his interests in the modern development of the art of nursing, that he was acquainted with the work of Florence Nightingale and others, and that he was deeply interested in the possibilities of preventive medicine. All these are mentioned in the work of Snow's time, 1832, described by the medical professional, for which his name is remembered. He is the same who asked that his eulogy might be, "He was the last, and ...", and in this, we, a century later, know him to have been right. At the time, however, he was not another sanitarian, and perhaps this great idea was nothing more than a new treatment, as different as possible from all other, dictated, not by scientific reasoning, but by the wish to find a new disease, and to set us a following of his own.

Let us now take another look at John Snow: read his three great books and compare them, with the wealth of literature of the time, but the criticism published in the Lancet in Snow's own day: the discipline will reveal the astonishing grasp of that great man. I refer, in particular, to his work "On the Inhibition of the Vapour of Ether", in which the results of physiological experiments on gases and vapour, and of medical behaviour under these influences, were comprehensively studied and the conclusions of new apparatus. All this, and yet the book was on sale within a year of the first administration of anesthetic.

The year 1858 which saw the death of Snow at the age of 45, also saw new life appear in the medical profession, for, in that year, the Act of Parliament was passed which established the central Medical Council, and which has led to the benevolent direction of medical education in path with which, if not perfect, has at least served the victims of disease better than could ever have been achieved by the method of apprenticeship to which he himself had to submit.

"A John Snow book display was arranged by Dr. Bryn Thomas."