**Doctor’s Dilemma — a postscript**

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Hesba Stretton, a little-known authoress, wrote *Jessica’s First Prayer*. The title of one of her stories was ‘Doctor’s dilemma’, which Bernard Shaw immortalized by borrowing it for the title of his play. Shaw wrote the play eighty years ago.

Shaw prided himself on the didactic content and purpose of his plays and poured scorn on critics who claimed that art is for art’s sake or for entertainment alone. His interest in the social aspect of medicine was stimulated by the discovery by Sir Almroth Wright, in the early years of this century, of opsonins and by Wright’s theory that antibody administration in the treatment of bacterial diseases would be beneficial only when opsonin production rate in the organism was on the increase; if the rate was in the downward phase, Wright claimed, the vaccine could kill. Wright also believed that the opsonin level could be estimated in his laboratory, but felt unhappy that practising doctors took no notice of his discovery. Shaw used the experience of Wright and his polemics with the renowned doctors of his time for creating the theme of *Doctor’s Dilemma*.

The story of *Doctor’s Dilemma* is simple. Rudgeon, a famous physician, makes the discovery that opsonin level is critical to the success of vaccine therapy, for which he is knighted. Patients rush to him for consultation even as colleagues descend on him for offering their congratulations. In this triumphant moment, Mrs Doubtedt begs Rudgeon to treat her husband Louis, who is a genius of an artist. Her entreaties are refused by Rudgeon, who is too busy and whose ward has little room for an extra patient. Finally Rudgeon almost yields and is on the point of accepting Louis for treatment because of his growing passion for Mrs Doubtedt, when he is forced to offer the solitary vacant bed in his ward to his old friend Dr Blenkinshop. Mrs Doubtedt becomes desperate and appeals to Rudgeon and his friends again and again.

Among them are Walpole, the surgeon who believes that all ill health is due to blood poisoning from the nuciform sac which must be removed; and Sir Ralph Bonnington, who believes that phagocytes must be stimulated for any illness and that the type of vaccine used is irrelevant. As a last recourse, Sir Ralph gives three injections of Rudgeon’s vaccine to the artist, who, however, dies. Dr Blenkinshop, who is treated by Rudgeon according to the latter’s regimen, lives.

Rudgeon meets Mrs Doubtedt after her husband’s death and finds that she has been transfigured by the death of her husband. The death in Shavian drama is no more than a transformation, a natural thing, bereft of tragedy and tears. Shaw used the content of his play to develop a powerful attack on the medical profession and, in that process, anticipated most of the modern critics of the medical profession, including Ivan Illich. I summarize the views of Shaw and attempt to deal with his criticism as seen after the passage of eighty years. His criticism was based on three grounds — scientific, economic and ethical.

**The scientific ground**

Shaw claimed that medicine is not science and that doctors are not scientists — they are no more than practitioners of the art of healing. They attribute diseases to whatever is fashionable at the time — bacteria, environment, personal habits, heredity and so on. They introduce therapies — operations, drugs and even prophylactic therapies — without scientific evidence of their effectiveness or value. They also steal the credit that should really belong to civilization, such as the credit for the disappearance of typhus, cholera and so on.

Was Shaw really off the mark? Medicine indeed got along with very little science for hundreds of years and the doctor’s role was ‘doing something’ in the face of illness. The public expected this of him and received no less. This ‘something’ took the form of bleeding, cupping, incantations and even physical torture in the olden days. In our own century we had equivalents of such remedies, and the examples constitute a long and depressing list — turpentine stupes, throat paints, tonsillectomies, total dental extractions, colectomies, ligation of internal mammary artery for angina, cooling or freezing of stomach, leucotomy operations, and a whole variety of drugs — all of which have been proved to be totally without value or even harmful in actual clinical experience.

Many of these techniques involved high cost and established a tradition in medical practice of not counting the cost. Whereas one would carefully estimate the market size, feasibility, economics, public utility and so on before setting up an industry, it was not unusual to introduce a drug or treatment modality at the cost of many industries without counting its cost or even critically looking at its beneficial claims. Shaw’s attack on the scientific ground was therefore not off the mark.
even though his medical contemporaries repudiated his views. It can no longer be doubted that science entered medical practice in full force only with the advent of antibiotics. For the first time, and to the pleasant surprise of everyone, including doctors, antibiotics did cure diseases. To understand the full significance of this revolutionary change in medical practice, one need only look back to the thirties, and even the forties in our country, when lobar pneumonia and typhoid fever used to claim entire wards and kill thousands of patients. Penicillin and chloramphenicol changed the picture dramatically and the dread diseases of yesteryears no longer came to hold any terror. One must, however, remember that penicillin and chloramphenicol did not suddenly appear from nowhere or come as a serendipitous discovery. They were the outcome of long years of quiet, painstaking and fundamental research in microbiology during the latter part of the nineteenth century and the first few decades of the twentieth. The numerous unknown scientists who devoted their entire lives to the study of biological characteristics of gram-positive and gram-negative cocci could never have dreamt that their endeavour would one day usher in the antibiotic era.

The growth of science and technology since the advent of antibiotics has been so spectacular and pervasive that it has spared no aspect of our life and civilization. Knowledge that biological, physical, chemical and engineering sciences have accumulated in the last thirty years hold such power over medicine that many species of treatment, as scientific as antibiotics but more potent, are already with us and will continue to grow in number and efficacy. As biological examples one can cite biochemicals or vaccines produced by human cells or hybridomas, interferons, and recombinant-DNA techniques for producing human insulin and similar molecules. As physical examples one need only look at a few candidates from materials science, electronics and lasers. Materials science has given us heart valves and hip joints, dentures and innumerable other devices that have greatly reduced suffering; electronic monitors have vastly improved patient care in hospitals and yielded pacemakers that have literally given a new lease of life to many patients who would have died otherwise; and lasers are the medical technology of the future — their role in surgery of the brain and heart and in treatment of cancer is bound to revolutionize the management of diseases.

When we admire this shining procession of achievement we should not be so dazzled as to misclassify the three components of medical practice, which are to cure, to relieve and to comfort. This was forcefully pointed out by Lewis Thomas many years ago. If we do not distinguish them and not assign correct priorities, we are likely to repeat the mistakes that invited the ridicule of Shaw. The component that aims to cure is really the high technology of medicine. Contrary to popular belief it has little to do with heart and kidney transplants, bypass operations and costly drug regimes. It thrives, on the other hand, on basic research that uncovers life processes in health and disease and enables us to reverse a malady before it devestates organs and organ systems. It is in the late stage of devastation that transplants, artificial organs and equally complex medical therapies become mandatory. If atherosclerosis can be controlled or prevented by a deeper understanding of lipid metabolism, expensive coronary artery bypass operations, coronary care units and stroke centres would no longer be as much needed as they are today. Developments in cell biology and immunology in the last few years have been such that control of the mitotic process of cancer is only a matter of time. Once this comes about, as it surely will, linear accelerators, massive surgery and dangerous forms of chemotherapy will be promptly forgotten. The remedies that basic research yields are nearly always simple, logical and inexpensive. To realize this, we need only look at what has happened in the management of polio, tuberculosis, typhoid and innumerable other conditions. This is the real high technology, founded on the bedrock of science, which would have won the approval of Shaw.

Spectacular feats in medicine are the darlings of newspapers even as the doctors carrying out the feats are popular heroes. But these achievements essentially belong to what Lewis Thomas called half-way technology which deals with the end-stage of a disease. It picks up the pieces and debris and seeks to put together whatever is left after the storm has blown over. Treatment of cancer, heart attacks and schizophrenia fall into this category at this time. What characterizes this technology is its high cost, which keeps escalating all the time and baffles hospital administrators. In spite of the associated glitter, it can only relieve, but not cure, as it springs from an imperfect understanding of disease. This is the category of medical treatment that Shaw attacked with good reason, and one should be careful not to invest too heavily in this area because the curative answers lie elsewhere.

Lewis Thomas's third category in patient care is non-technology, which aims at providing comfort. This involves kind words, lots of time, holding hands, and what is generally called moral support. This service calls for much skill and understanding of human nature and can be offered only by doctors with a great deal of experience. It need not be expensive — but it often is — and Shaw would have demanded that this service be provided by any humane person and not necessarily by a doctor.

Shaw referred to Karl Pearson's insistence on statistical proof for claims of success whenever a particular therapy was advocated for general adoption. Since that time, controlled trials and statistical evaluation have become mandatory for the introduction of any major drug on the market. It is now well known that it takes several years of trials and statistical evaluation before a promising drug can get approval for commercial production. The cost of drug development may also run into billions. Voices are in fact being heard that similar rules must be made applicable to new surgical procedures and devices before their clinical use. The entry of biostatistics in full force has strengthened medicine and protected us in three ways: it saves us from the errors of attributing wrong causes for diseases, making exaggerated claims for particular modalities of treatment, and taking credit that really belongs to civilization. Once again we must admit that Shaw anticipated the present dominance of biostatistics in medicine.

The economic argument

With regard to the economics of medical practice, Shaw pointed his finger of scorn at the absurdity of
creating a vested interest among doctors in illness: greater the illness, larger the treatment or operation and higher the fee! He pointed to the poverty of general practitioners like Blenkinsop, who catered to the masses, and the consequent debasement of their values. Nor did he spare the high-class doctors who danced attendance on the hypochondriac rich and sold their conscience for a mess of pottage. He lamented the ignorance of the cost of treatment among doctors and wondered how anyone could go through medical training and retain a spark of common sense. Finally he advocated public doctors, paid by the State, who would be paid incentives for reduction of illness in their zone.

The National Health Service in Britain had its origins in the Beveridge report and subsequent studies, which indirectly endorsed Shaw's views on what has come to be known as socialized medicine. This found full acceptance not only in socialist countries but also in many European countries. It has received partial acceptance even in the US. While the details of the scheme vary from country to country, the scheme takes away the 'fee for service' principle from the field of patient care. In such a system, no one need fear illness because of the doctor's fee or the hospital bill because they become the responsibility of the State. To a large extent, nationalized health care has vindicated Shaw, though the parallel existence of the free-enterprise system in medicine would not have been spared by him. The free-enterprise system thrives not so much by its excellence as by bureaucratization verging on dehumanization of governmental medicine. How to rescue doctors, nurses and other health-care staff from their governmentalized condition and how to inject greater social purpose and commitment among them are questions too big to be discussed here.

The ethical question

If Shaw's attack on the medical profession on scientific and economic grounds was sharp, his assault on their professional ethics was positively devastating. He scorned the trade-unionism among doctors and suggested for good measure that all trade-unionisms were in fact conspiracies against the public. He deplored the commercialization of medical practice and the tendency to link medical income to the magnitude of patient illness. He reserved the strongest of his condemnation, however, for vivisection, which is a cruel reminder of man's savage past when animal and human sacrifices were prominent social rituals. It cannot claim justification or respectability on the ground that it seeks knowledge because the right to knowledge, even though fundamental, is not unrestricted. One can no more kill defenceless animals to obtain knowledge than put a man in a hot-air oven to determine the thermal behaviour of cellular proteins. Vivisection used by doctors terrorizes people and mystifies medicine. Shaw demanded an end to vivisection and the immediate demystification of medicine.

Since Shaw wrote his classic, strict regulations have come into force in most countries to ensure care of animals in research. Efforts are also constantly on to find substitutes for animal experimentation—such as tissue culture and similar methods. Vigorous efforts are in progress to find mechanical substitutes for organs such as heart valves and arteries in clinical practice. However, so long as biological knowledge is sought by man—and one can find no way of stopping the search—a bare minimum of experimentation in animals is sadly unavoidable, however distasteful it may be. Nevertheless the very recognition of the rights of animals and the legislative protection afforded to them under experimental conditions vindicate Shaw, though the present situation falls far short of what he would have desired. Admittedly a scientific methodology that obtains complete knowledge without any animal experimentation is superior and preferable to another methodology that leans heavily on vivisection. But such a methodology is yet to be born in the biomedical domain.

In Doctor's Dilemma Shaw emphasized vivisection as the major ethical question; he could not have foreseen the grave ethical problems that subsequently burst upon us, thanks to the advance of technology. The new and insistent questions cover a wide range and threaten a good many of our traditional concepts—our definitions of life and death; our basic research to create new forms of life; our criteria for choosing patients for costly treatment whose availability is limited; our approach to pain and the process of dying—in fact, every aspect of our strange and wonderful story. We must await the arrival of another Shaw to see the rebirth of a Doctor's dilemma that would reflect the present rapidly evolving scene.

In conclusion, one cannot read Doctor's Dilemma after eighty years without saluting Shaw for his wisdom, farsightedness, wit and brilliant style. It is wrong to imagine, as many do, that Shaw was particularly harsh on doctors. He was not slow to point out that a doctor is a member of the society and cannot but reflect its culture and values. A society that enjoys hunting, flaunts leather coats and bags, and demands animal meat for its culinary satisfaction has no business to condemn the poor doctor who operates on a cat for research purposes. Similarly a materialistic society, where organized groups including trade unions seek to advance their interests by exploiting the laity, can hardly fault doctors for unionization. Lastly, in the famine years of the soul, when 'the great vital dogmas of honour, liberty, courage, kinship of all life' have lapsed into lassitude and greed and cowardice, a society will find only doctors who are little-minded, rapacious and unscrupulous. A great and humane society alone nurtures great and humane doctors.

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