

SOCIAL MEDICINE

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SOCIAL MEDICINE

Its Derivations and Objectives

THE NEW YORK ACADEMY OF MEDICINE

INSTITUTE ON SOCIAL MEDICINE, 1947

Edited by IAGO GALDSTON, M.D.

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PUBLISHER'S NOTE

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Foreword

WE in this country have long been concerned with social medicine and social pathology within the framework of our public and voluntary health agencies. The purpose of the New York Academy of Medicine in assembling so many eminent leaders, in this country and from abroad, is not so much to reveal new knowledge as to take a first step toward the correlation of available information. We feel certain that these proceedings will reveal the general diffuseness of our knowledge and will focus attention upon the urgent need for a more systematic coordination of our efforts to investigate the social factors responsible for disease and to develop and ultimately apply a long-range program of correction.

Shortly before World War II, our friends in Britain discovered the need for creating a new discipline of medicine with university status which would assume the responsibility for the collection of such information for the preparation of corrective programs for the enlightenment of the medical and public health professions and the general public. With funds provided by the Nuffield Trust, the first Institute of Social Medicine was established at Oxford University. John A. Ryle, at that time Regius Professor of Medicine at Cambridge University, was called to Oxford to occupy the first professorship in this new discipline. Thereafter, similar university departments of social medicine were established at Birmingham and Edinburgh.

In this country social medicine is everybody's business but nobody's responsibility. Bureaus of vital statistics uncover great masses of information on the prevalence of disease among social groups or under specific social conditions. But we have hardly made a start on the analysis of these important data. We know that poverty, food, housing, conditions of work—all have an important bearing upon the prevalence of certain diseases;

but we have not yet proceeded very far in investigating and eliminating the specific causative factors that have the greatest social import.

The medical profession concentrates its attention upon individuals and upon the discovery and cure of disease after it has become established. Because they are so preoccupied with individuals and their medical problems, the profession can readily be excused if they do not "see the woods for the trees." Preventive medicine, a neglected stepchild of medicine and public health, is also concerned with individuals. Even medical social service, of which we in this country can well be proud, although it occasionally reaches into the family unit, seldom touches larger social groups. Public health departments concentrate their efforts largely upon environmental sanitation and the use of new tools for the prevention and control of the spread of communicable diseases. Industrial medicine is occupied with the discovery and correction of industrial hazards and purely occupational diseases.

In this country we in the medical profession have not yet begun to realize how rewarding the orderly study of social pathology can be; nor are we aware of the significance social pathology may have in the reduction of the diseases of modern society. It is with this idea in mind that the Academy as part of its Centennial Celebration has convened this conference on social medicine.

GEORGE BAEHR, M.D.

President

New York Academy of Medicine

June 1948

Introduction

To introduce a book on social medicine is a high adventure in the realm of the philosophy of modern medicine and its relationships to man and the world in which he lives. Economists, sociologists, even statesmen and governments, are thinking in terms of people as humans and of the world as an integrated association; but medical men as a group have been more than slow in initiating this type of thinking in their own particular field of endeavor. This lag is understandable, for the average physician is very close to the sickbed; it is only the exception who can raise his head skyward for a broader view and a better understanding of what is going on about him. That this is true is possibly fortunate for the individual patient. One should not ask the same painter to do both portrait miniatures and broad sweeping landscapes. But it would be well for medicine as a whole to become acutely aware of the tidal movements in the affairs of man, for medicine to recognize that, although it is an important constituent, it is only one element in the whole social organism. It is perhaps more important still for medicine to fully realize that it is an integral, interrelated, and interdependent part of a functioning social and economic system which to be viable must exist in a continuing state of flux. The days of monastery medicine and the ivory tower are gone.

What is meant by the term social medicine? Is it a new concept or a new discipline? Is it related to socialized medicine? What is its derivation and what is its particular field of function? Social medicine is a hybrid product of many schools, but its progenitors seem to be chiefly in the families of the art and science of medicine and the so-called social sciences. As an art, its existence goes back to the very roots of the history of medicine—man caring for man in times of distress. But as the accretions of knowledge became greater and came more rapidly—chiefly in the tangible somatic branches—scientific medicine

became more interested in the trouble than in the troubled, more concerned with the disease than with the diseased. This trend was understandable. Tremendous new vistas appeared with the development of the newer knowledge of physiology, pathology, chemistry, bacteriology, and the like. Knowledge was rapidly replacing art. This has been particularly true during the past century. But curiously enough the subject of all these studies, and ultimately the recipient of all the benefits of this knowledge, still remained a human being, someone with a spirit and with feelings who worked and played and loved and worshipped. He still had to live in an environment with his fellows as a social being. And here we set foot in the lush pastures of the sociologist, the economist, the agronomist, the psychologist, the social worker, the statesman, and the clergyman. Man, the patient, is identical with man, the person, the social unit.

And who shall say when man is in good health and when he is ill? Life is a continuing stream which began long before any given man's conception and flows on through an individual, traversing smooth reaches, breaking into swirls and eddies, precipitating itself over falls and obstructions. Which of these varia in the course of experience are normal? Health or normality is a relative and a variable entity. Generation, regeneration, and degeneration are natural processes. Is pregnancy a state of health or ill health, normal as it may be? The degeneration of old age is a biological phenomenon, but is the senile individual to be considered as being in a state of ill health? Senility, to use this as an example, is as well the problem of the sociologist, the economist, the psychiatrist, and the clergyman, because man—his health, his welfare, his happiness—is a common responsibility of all the social disciplines, and this common interest adds up to what one may call total medicine.

Total medicine implies the application to man of what is known concerning him in the fields of physiology, pathology, diagnosis, and therapeutics, and it requires the education of

man in hygiene, preventive medicine, and industrial medicine. But total medicine connotes more than all this. To satisfactorily fulfill its function, it must know the social relationships of man—his way of living, his family, his work, and his reactions to people and things about him. Emotional stresses, anxieties, fatigues, pleasures, an inherent emotional constitution—all go to make up the total individual; and for this individual, moulded by his inheritance and by the world about him, medicine must provide.

There is nothing new in the concept of the impact of social and psychological forces on either the individual or the masses, but there is something strikingly new in a philosophy which attempts to integrate these extra-biological forces with the bodily or somatic status of an individual or group. Medicine's recognition of the part the social sciences play in the total health, either of the individual or of groups, will constitute a milestone in human progress. The product of this anabolism of the biological, psychological, and social sciences is what is termed social medicine.

It is obvious, then, that social medicine in its purest meaning bears little relationship to what has been called, popularly and loosely, socialized medicine. Only to the extent that governmental regulation of medical services is assumed to have as its object the delivery of better and more adequate medical services to more people at less cost, does medical socialization invade the field of social medicine. The hue and cry of political expediency and political maneuvering is something apart from the philosophy of social medicine, which would provide total care, in terms both of the individual and of the population. Social medicine is concerned primarily with a mode of thought and only secondarily with the mechanics of action. In due time normal social evolution may well develop the procedures of social medicine.

It is of interest that this concept of social medicine emerged as a by-product of the labors of a committee appointed in 1943

by the New York Academy of Medicine to study the complex problem of adequate medical care. This Committee on Medicine and the Changing Order found that, although excellent medical care was available, it was not well distributed nor was it within the reach of large segments of the population. Further, the Committee revealed many economic and social problems closely connected with medical service which had never been adequately exposed. It revealed glaring discrepancies in medical thinking between the science itself and the services offered to the people, services which were not only inadequate for physical needs, but even more strikingly inadequate for emotional and social needs. From these realizations sprang the idea of holding an Institute on Social Medicine in connection with the Centennial Celebration of the New York Academy of Medicine in the spring of 1947. To this institute, which held seven sessions with an average attendance of over two hundred and fifty at each meeting, came some fifty participants, individuals eminent in widely diverse fields of thought—historians, physicians, philosophers, public health and nutrition experts, educators and administrators, psychologists and sociologists, each to contribute to the pool of thought from which the idea of social medicine might rise and form. Thus it is that the thinking of the Committee on Medicine and the Changing Order and the philosophies explored during the Centennial Institute have found fruition, not without a struggle, in this volume. If its only attainment is to stimulate thought in the direction of broadening the scope of medical care, it will have served a valuable and gainful purpose.

This book is the product of many minds, and to many men most grateful acknowledgment is made: to George Baehr, President of the New York Academy of Medicine; to Malcolm Goodridge, Chairman of the Committee on Medicine and the Changing Order through the entire four years of its unremitting labor; to Harold R. Mixsell, Chairman of the Committee on Medical Information; to Frank Boudreau and Frank

Fremont-Smith for their unfailing guidance and help in planning the programs; to Henry E. Sigerist, Ernest L. Stebbins, and Brock Chisholm for their aid and advice; to Joseph Hirsh, who assisted in editing the material for this work; and to all those who contributed material and participated in the discussions. Very real gratitude is also expressed to the Milbank Memorial Fund and the Josiah Macy, Jr., Foundation, whose generosity made possible the Institute on Social Medicine, and to the Commonwealth Fund for the publication of these papers.

It is with great sorrow that we must record the untimely death of Scudder Mekeel, Associate Professor of Sociology and Anthropology of the University of Wisconsin. His contribution, included in these papers, was one of the high points in the discussion of social psychiatry and social medicine.

And finally, the writer takes a very real and personal pleasure in expressing gratitude to Iago Galdston, who sweated through four years as Secretary of the Committee on Medicine and the Changing Order, whose imagination, enthusiasm, and hard labor not only set the key but also played the score to make the Institute on Social Medicine a living, vibrant study. To him and his staff, "Well done!"

HOWARD REID CRAIG, M.D.

Director

New York Academy of Medicine

June 1948

Prologue

INTO the making of a book enter the labors of many men. Some, as those of the binder, the paper maker, and the printer, are readily perceived; indeed they hardly can be overlooked. Others, such as the labors of the typographer and of the editor, call for some deliberate effort in order that they may be brought within the scope of critical appreciation. For unless they are either markedly poor or remarkably good, they are likely to be taken for granted.

There are, however, still other labors which, unless deliberately revealed, must perforce remain unknown. These we may call the labors of genesis, the first to which all others are acts of realization.

The humblest of books must have its inspiration, for anticipatory to the act must come the vision and this, unless revealed, may not be perceived.

If this be true of any book, how much more must it be of such a book as this, which does indeed embrace the labors of many men, each speaking from the vantage point of pre-eminent competence. The theme is embracive yet clearly defined. To effect an ultimate harmony good fellowship, cooperation, and skilful orchestration were required.

The inspiration for this book was the hundredth anniversary of the founding of the Academy. How better celebrate it than by a symposium on social medicine! This centenarian institution could thus not only advance a nascent discipline but also attest to its vigorous enterprise. The inspiration emergent, realization followed. In the order of time Brock Chisholm, then Executive Secretary and now Director General of the World Health Organization, was the first to contribute substance to the project. "If the one hundred years of development can be accepted as a solid foundation for future growth," he wrote, "and if some of the clearest-thinking and most forward-looking people of the world can be brought together to discuss

the future of medicine, you will really have accomplished something worth while." This was written in response to the following: "I should hope that this conference would reach out into the unknown; that it would avoid the well beaten paths and the well harangued subjects; that it would deal with such provocative matters as the epidemic constitution, mass psychology, psychological leverages. The aims of the conference would be to persuade the participants to appreciate that the health of the people is dependent not upon how much of medicine is served them by how many doctors, but rather upon how adequately our scientific knowledge of the prevention of disease and the promotion of optimal health is applied in their daily lives."

The exploration of the unknown calls for guides and guidance, hence Frank G. Boudreau, Executive Director of the Milbank Memorial Fund; Alan Gregg, Director for the Medical Sciences, the Rockefeller Foundation; Frank Fremont-Smith, Medical Director of the Josiah Macy, Jr., Foundation; Henry E. Sigerist, Director of The Johns Hopkins University Institute of the History of Medicine; Ernest L. Stebbins, Director of The Johns Hopkins University School of Hygiene and Public Health; and Lowell J. Reed, Dean of The Johns Hopkins University School of Hygiene and Public Health, were first singly and later collectively consulted. Beyond these shores we reached out to John A. Ryle, Professor of Social Medicine, Oxford University, and to Lord Horder. It is fascinating to reflect on how gladly these men became entangled in the problems of social medicine and with what eager willingness they contributed to its elucidation. Those who chose to advise remained to labor. The future contributors to the program came from distant parts to roughhew, to polish, and to bind their singular contributions to the whole.

It was not always peaceful at these conferences; some drew on "till night yielded to morn." But despite the violent impacts of divergent opinions, a circumbinding devotion and an

enthusiastic eagerness to get at the roots of the matter and then to trace its widespread ramifications predominated and prevailed. These rehearsals, each conducted by the respective chairmen of the Institute's sections, achieved the harmonious integration of the numerous and singular contributions to the symposium.

The Institute itself was indeed a phenomenon, and there, too, it was most gratifying to see how many of those who themselves contributed to some one section sat in and participated in the other sections. But that concerns the Institute itself. Here we are concerned with the book. The manuscripts of the contributors were collected, and then began the no simple task of converting the spoken into the written word.

Pride of authorship and fond conceits which those who have labored to compose are bound to entertain about their own creations were gently but effectively made to yield to the primary obligation to make the texts clear, informative, and persuasive. In this respect the larger share of gratitude is due to the contributors and authors who, without undue protest, yielded their texts to the pruning and polishing tools of the editor, who, it must be added, was in effect a composite person. The texts were edited thrice over, and what is here presented, is, as already told, the end result of the labors of many men; some have been named by their names. To them, and to those unnamed, go the heartfelt thanks of the Officers and Fellows of the Academy, of those who took part in the Institute, and, we fondly hope, also of the reader.

IAGO GALDSTON, M.D., *The Editor*

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**I. CHANGING CONCEPTS OF THE RELATION
OF MEDICINE TO SOCIETY**

In Early History

OWSEI TEMKIN, M.D., *Associate Professor
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LET us assume for a moment that miracles do happen, and let us suppose that by such a miracle we had a doctor of medicine of the Renaissance among us. If we asked him: "What is your concept of the relationship of medicine to society?" he would probably be very much embarrassed by the question. I doubt whether he would know exactly what we meant. Probably he would say that medicine was good and useful for man and that for this reason God had established it, princes and towns furthered it, and universities taught it. At this point it would be our turn to feel embarrassed, for we would realize that our question had been somewhat clumsily put and that we were trying to transfer the modern concept of society to a generation which was not wont to employ this term as a general denominator for the various forms of human interrelationship.¹

But let us keep our faith in miracles alive. Let us now suppose that one of us was suddenly transplanted into the sixteenth century. It would be the task of our observer to find out for himself what people thought about the relationship of medicine to various forms of human association. He would notice, first of all, that there was a great variety of groups to which medicine manifested a definite relationship—private patients, the fellow-members of the medical faculty or surgical guild, the princes and nobles, the magistrates, the army, the hospitals, the church, the poor, the lepers and syphilitics, the apothecaries, and, finally, all good Christian people. Very soon he would also notice that in many cases the relationship to these groups was not uniform and that different concepts often clashed. In short, if our observer were a historian he would

realize that the state of affairs as it existed in the Renaissance was the result of a historical development in the course of which many concepts originated, withered away, or survived and more or less successfully fused with others.

The attitude of the ancient Greek physician toward society can be characterized as follows: He conceived of himself as a person possessed of certain knowledge and skills with which he was willing to serve whoever asked and paid for his services. In the first place, of course, his services were requested by private individuals. Ancient medical literature deals almost exclusively with such medical problems as are encountered in private practice, especially among well-to-do citizens.²

The name of Hippocrates has become associated with the treatment of a sick person as a whole. Plato gives the sociological commentary on this kind of medicine when he writes: "But the free-born doctor is mainly engaged in visiting and treating the ailments of free men, and he does so by investigating them from the commencement and according to the course of nature; he talks with the patient himself and with his friends, and thus both learns himself from the sufferers and imparts instruction to them, so far as possible. . . ."³

But there were differences in the social position of men, differences which the Greek doctor had to remember, particularly since his treatment and hygienic advice tended to regulate the whole manner of life of his patients. He had to distinguish between those who had to make a living and those who could live for their health.⁴ Also, there were the slaves for sale in whom the doctor was supposed to discover hidden diseases.⁵ He often left the treatment of slaves, it is true, to his subordinates, possibly to slaves themselves. To quote Plato again: "The slaves are usually doctored by slaves, who either run round the town or wait in their surgeries; and not one of these doctors either gives or receives any account of the several ailments of the various domestics, but prescribes for each what he deems right from experience, just as though he had exact

knowledge, and with the assurance of an autocrat; then up he jumps and off he rushes to another sick domestic, and thus he relieves his master in his attendance on the sick."⁸

Now the private patient was by no means the only one who claimed the Greek doctor's services. Princes, armies and navies, the schools of gladiators, cities and various other corporations hired or appointed physicians for varying lengths of time. However, this did not invalidate the principle that the medical profession should be free. The Greek writer Lucian, who lived in the second century, makes a physician say: "In the case of the medical profession, the more distinguished it is and the more serviceable to the world, the more unrestricted it should be for those who practise it. It is only just that the art of healing should carry with it some privilege in respect to the liberty of practising it; that no compulsion and no commands should be put upon a holy calling, taught by the gods and exercised by men of learning; that it should not be subject to enslavement by the law, or to voting and judicial punishment or to fear and a father's threats and a layman's wrath."⁷

The ancient physician, then, would consider himself bound to society chiefly by the intrinsic value of medicine which he might feel called upon to cultivate and further to the best of his ability. We must stress the point that the existence of a rational medical science, as the Greeks created it, was in itself a social factor of the highest significance. But apart from this it seems that ancient physicians were little concerned about making medicine useful to the community.⁸

From early times on, certainly before Hippocrates, Greek cities used to hire physicians, sometimes at a considerable price.⁹ It remained a custom throughout the Roman Empire to see to it that the cities did not lack physicians, especially in the case of Rome herself.¹⁰ Yet we know very little about the duties of these communal doctors.¹¹ If it is permissible to draw parallels with the early contracts of medieval town surgeons, as for example the one signed in 1214 between Hugh of Lucca and

the city of Bologna,¹² then we might think that the Greek cities needed men who would be available to the arms-bearing citizens, especially in time of war. Also, the ancient cities may have expected their communal physicians to protect them from epidemic diseases and give advice regarding the supply of drinking water and other matters of public health. The Hippocratic work on "Air, waters, places," for instance, could have been useful to a physician who was hired by a city which he did not yet know. In later times the public health aspect may have prevailed. But all this is largely speculation, for here again the medical literature proper shows little concern for such problems. The social responsibility in medical matters lay with the city, the state, or other corporative bodies.¹³ Communities and emperors gave privileges and immunities to the good and efficient doctors,¹⁴ they provided them with spacious offices,¹⁵ they gave them lecture rooms and supported their pupils.¹⁶ But they could not count on a code of social responsibility from those favored.¹⁷

During the Middle Ages the classical concept of medicine was not abolished. However new conditions were superimposed, conditions which arose from the character of the medieval town, the university, and the idea of a Christian commonwealth of nations.

The general features distinguishing medieval corporative life were evident in the medical corporations too. The surgeons, often identical with the barbers, were craftsmen, and their organizations established a monopoly over the exercise of surgery and tried to eliminate any competition from outside. Strict rules were promulgated which regulated the admission to the guild and the number and training of apprentices. Apprentices had to pass examinations to become freemen of the guild and the masters had to submit to strict supervision by the elders. In this way competition among the members was regulated too. It was no longer permissible for the individual surgeon to slander his crafts-brother or to try to take a patient

away from him. Similar conditions prevailed among the physicians, where the statutes of the faculties took the place of the statutes of the guilds. The university regulated the medical curriculum and the taking of the degree. City, state, and church usually upheld these regulations or enforced them. The faculties had jurisdiction over their members in such matters as slander, intrusion upon another's practice, and the proper behavior at a consultation in the patient's house. In cities which lacked a university the medical colleges usually took over the same functions.¹⁸

These forms and regulations manifested a new concept of the relationship of medicine to society. The ancient physicians were peripatetic; they did not belong to the governing element of the Greek city-state or of the Roman Empire. However, in the medieval towns the various corporations were composed of citizens, and the crafts and guilds often participated actively in the political life of the city. Thus the barber-surgeons of London formed one of the livery companies on which the administration of the city largely depended.¹⁹ The privileges which the guilds enjoyed were counterbalanced by their duties to the public and the community. The guilds supervised the qualities of their wares and good craftsmanship. Accordingly, the master surgeons and town physicians considered it their duty to prevent or punish malpractice and to forbid open competition in the name of the honor of the profession and the confidence which the sick man ought to have in his medical attendants. Accordingly too, the authorities could call upon their approved medical men to cooperate in matters of public safety and public health.

From the fourteenth century on it became common to demand the surgeons (and in Italy the physicians too) to inform the magistrates of all injuries that came to their attention.²⁰ Leprosy, plague, and syphilis provoked a number of laws that made these diseases notifiable. In the case of leprosy a number of physicians and surgeons were entrusted with the examina-

tion of the suspect person and sometimes there existed a central place to which all suspected cases from the district were sent.²¹ When the plague threatened a city, the doctors were not only expected to cooperate in the isolation of suspected cases but were frequently asked to work out a plan for the town to prevent or combat the disease. The fight against venereal disease is of particular interest. From the end of the sixteenth century on, the consistory of Geneva repeatedly tried to compel surgeons and physicians of the town to reveal the names of syphilitics under their treatment. In 1621 the medical faculty objected on the ground (among others) that if publicly denounced, the patients might prefer to avoid treatment altogether, a situation which would only increase the danger from a sanitary point of view.²²

At this point the question arises as to the role of employed physicians and surgeons in the sanitary measures of the medieval cities. Aside from the fight against the plague, the magistrates were concerned with street-cleaning, the provision of good drinking water and healthy food, protection from certain harmful industrial agents, the housing problem, and the provision of medical personnel for the hospitals. But it is only relatively late that town physicians were employed. Whereas town surgeons are known from about 1200 on, the institution of town physicians does not become widespread until the sixteenth century. Then we find them very actively engaged in matters of public health. Altogether it can be said that the time of the Renaissance and of strengthened territorial power was an accentuation of the medieval tradition of medical regulations by the authorities.²³

The instances cited so far may suffice to show that the social conditions of medieval life tended to superimpose a concept of social responsibility on the ancient concept of mere individual relationship between patient and physician. However, such responsibility extended over a very narrow compass of guild, faculty, and town. A much more decisive change was

brought about by Christianity as an official and comprehensive religion.

Christianity emphasized charity and brotherly love as being among the highest moral virtues. Charity transcended the limits of family, nationality, and social position. To care for the sick whether rich or poor became a moral law which assumed particular force when Christianity became a way of life to which every member of the community was bound. Charity as a form of individual ethics existed in antiquity too.²⁴ But charity as a universal demand binding every member of the community was a medieval concept.²⁵ The foundation of hospitals open to the sick, the poor, the old, and the homeless, alike, was one of the early expressions of the new religion. The care of the sick became one of the main duties among monastic orders and one of the factors which preserved medical knowledge during the early Middle Ages. And when through the growth of towns and universities regulated medical practices were established, the treatment of the poor became a problem for all members of the medical profession in all countries where Christianity dominated. It was not a question of whether the individual physician wanted to be charitable; society had a right to expect charity from him.

It is not by chance that during the later Middle Ages and the Renaissance, doctors were criticized so scathingly for their avarice. There is no reason to assume that doctors had degenerated; it was only that love of riches and neglect of the poor appeared incompatible with treatment of the sick. Regulations were devised to solve the problem. In many towns the fees which physicians and surgeons could demand were fixed by ordinance, and free treatment of the poor appears among the laws imposed by the emperor, Frederic II.²⁶ Surgical guilds and medical faculties assigned certain days in the week for gratuitous care of the poor, or some members—usually the youngest—were entrusted with the duty, which might also be delegated to the town physicians.²⁷ Geiler von Keisersberg, preacher at

Strassbourg from 1478 to 1510, advised the following solution: "A physician should have compassion with everybody, especially the poor who has not much to give. He should not only help such a one from compassion and for God's sake, but he should also be at his service every day. Afterwards he may take all the more from the rich who can afford to pay."²⁸

Shortly afterwards Paracelsus wrote:

And it has become a doctoral custom—where scripture sanctions it as right, I know not—that a visit should cost a gulden although it be not earned; and that there be fixed fees for the inspection of urine and other things. That one have compassion with one another and fulfil the commandment of love, such things do not become use or custom. Neither is there any more law, but only grab, grab, whether it makes sense or not. Thus they receive golden chains and golden rings, thus they go in silk raiment and thus display their manifest shame before all the world, which they deem an honour and well suited to a physician. To walk around thus decked out like a picture is an abomination before God.²⁹

So we see that the changing concepts of the relation of medicine to society have lived on side by side in harmony as well as disharmony. Together they represent reality and together they challenge the future to find a better solution.

NOTES AND REFERENCES

1. The term *societas* was, of course, used in antiquity and the Middle Ages to express the fellowship of man (*societas humana*) or associations of a military, business, or similar character. On the development of the modern concept see T. Parsons: "Society," *Encyclopaedia of the Social Sciences*, New York, Macmillan, 1934, vol. 14, pp. 225-232.
2. See Paul Diepgen: *Geschichte der sozialen Medizin*, Leipzig, Barth, 1934, p. 13.
3. Plato: *Laws*, translated by R. G. Bury, Loeb Classical Library, vol. 1, p. 309.
4. See Ludwig Edelstein: "Antike Diätetik," *Die Antike*, 7:255-270, 1931.
5. See Owsei Temkin: *The Falling Sickness*, Baltimore, Johns Hopkins Press, 1945, p. 47.
6. Plato: *loc. cit.*

7. *Lucian*, translated by A. M. Harmon, Loeb Classical Library, vol. 5, p. 511.
8. The physician as a patriot is not an unknown literary figure in antiquity (see *Oeuvres d'Hippocrate*, edited by E. Littré, Paris, 1861, vol. 9, pp. 411, 413, 423). Hippocrates, in particular, was believed by his zeal to have prevented the outbreak of a pestilence in Greece (*Ibid.*, pp. 417 ff.). But the concern for the public welfare seems to originate in personal initiative rather than as a duty imposed upon all physicians.
9. See the history of Democedes as told by Herodotus, III, 131.
10. On the subject of Greek and Roman communal and other public physicians, see Theodor Puschmann: *A History of Medical Education*, London, Lewis, 1891, pp. 130 ff.; *Handbuch der Geschichte der Medizin*, edited by Max Neuburger and Julius Pagel, Jena, Fischer, 1902, vol. 1, pp. 182 ff. and 583 ff.; T. Clifford Allbutt: *Greek Medicine in Rome*, London, Macmillan, 1921, pp. 443 ff.; Arturo Castiglioni: *A History of Medicine*, New York, Knopf, 1941, pp. 232-239.
11. This refers particularly to the alleged obligatory free treatment of all citizens, especially the poor, a contention that has been doubted. See Emma J. Edelstein and Ludwig Edelstein: *Asclepius*, Baltimore, Johns Hopkins Press, 1945, vol. 2, p. 175. For the time of the late Roman Empire the *Codex Theodosianus*, lib. 13, tit. 3, c. 8, edited by Ritter, Lipsiae, 1741, tom. 5, p. 39 is usually referred to. The passage in question reads: "Qui [i.e. archiatri] scientes annonaria sibi commoda a populi commodis, honeste obsequi tennioribus malint, quam turpiter servire divitibus. Quos etiam ea patimur accipere, quae sani offerunt pro obsequiis, non ea quae periclitantes pro salute promittunt." Even this passage, though it belongs to a time (368 A.D.) when Christianity was already the religion of the state, does not say that the archiaters had to treat the poor gratuitously.
12. See Sarti-Fattorini: *De claris archigymnasii Bononiensis professoribus a saeculo XI usque ad saeculum XIV*, tom. 1, para. 1, Bononiae, 1769, p. 445.
13. This seems particularly the case with regard to Rome, whose far-reaching efforts in behalf of drainage of swamps, supply of drinking water, and the like have been described by Castiglioni: *op. cit.*, pp. 226-232. But it is interesting to note that our best authority on sanitation is the architect Vitruvius, and that food inspection was a matter for the police (aediles). While it is very likely that much of the hygienic knowledge had been taken from medical sources, the fact remains that ancient medical literature is little concerned with questions of public health and that we seem to know very little about the cooperation between authorities on the one hand and physicians on the other.
14. For literature, see note 10.

15. See Galen, edited by Kühn, vol. 18B, p. 678.
16. *The scriptores historiae Augustae*, translated by D. Magie, Loeb Classical Library, vol. 2, p. 267. The passage refers to Severus Alexander.
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18. For the regulations governing the behavior of members of surgical guilds or medical colleges, see I. Fischer: *Arztliche Standespflichten und Standesfragen*, Wien-Leipzig, Braumüller, 1912.
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23. For details pertaining to this paragraph see A. Fischer: *op. cit.*, *passim*; Sanford V. Larkey: "Public Health in Tudor England," *Am. J. Pub. Health*, 24: 1099, November 1934; and Lynn Thorndike: "Sanitation, Baths, and Street-Cleaning in the Middle Ages and Renaissance," *Speculum*, 3: 192, April 1928.
24. See Edelstein: *Asclepius*, p. 175. Here as elsewhere in this paper I have disregarded ethical principles which were an expression of the individual physician's philosophy and did not constitute a body of public opinion that exerted pressure upon him.
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27. See I. Fischer: *op. cit.*, pp. 42 ff.
28. L. Kotelmann: *Gesundheitspflege im Mittelalter*, Hamburg-Leipzig, Voss, 1890, p. 203.
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In the Age of Enlightenment

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HISTORICAL views depend in considerable measure upon the kind of windows through which we look. To observe the social relations of medicine in the Age of Enlightenment, it seems appropriate to select social science as our window; for social science is at once the self-consciousness of a society and an instrument through which the human community acquires knowledge of itself.

At its height the Enlightenment was an international movement, but it took its origin from the political, social, and economic ferment that characterized the England of the late seventeenth century. No one perhaps is more significantly representative of English social thought of this period than William Petty, the "weaver's brat"¹ from Hampshire, who has justly been called the founder of political economy.² In turn cabin-boy, seaman, physician, professor of anatomy and music, surveyor, wealthy landowner, and scientist, Petty in his person and in his work brings sharply into focus the social trends that have a significant bearing on our subject.

In Petty's time England was passing from commercial to industrial capitalism, and this transition is evident in his writings. With the growth of industry, production took the place of exchange as the chief concern of those interested in economic matters. The process of production came to be regarded as the core of economic activity. Petty considered labor one of the most important factors of production, an essential element in the generation of national wealth. On the basis of his computations he concluded that the "value of the people," their productive power, was more important than land and capital combined. Obviously, then, any loss of this labor productivity

due to illness and death was a very important economic consideration, and the government should consider carefully "what sum of money, and Meanes ought to be prudently ventured for the probable cutting off of $\frac{3}{5}$ fifths of this Calamity."³ The "Calamity" with which Petty was concerned was plague. He pointed out that if the value of each producer in a country were known, this knowledge would reveal the loss caused by plague, and throw light on the usefulness of any measures undertaken to combat its ravages.⁴ Petty was fully aware that the crude statistical data available to him were defective and for this reason he urged the necessity of providing for the collection of trustworthy statistics.

It is clear that Petty regarded the health of certain elements in the population as a direct concern of government. These elements comprised the occupational groups esteemed as most productive—farmers, manufacturers, merchants, seamen, and soldiers. In his opinion these occupations "are the very pillars of any commonwealth," whereas "all other great professions, do arise out of the infirmities and miscarriages of these."⁵ It is clear that basic to Petty's exposition is not the welfare of the individual, or of the people as a whole, but rather the interest of the state in having the largest possible number of healthy productive subjects.

The principle implicit in Petty's analysis—that it is to the advantage of society to promote the health of its members by the application of available social and scientific means—was also developed in Germany at about the same time. There, however, it emerged as an integral element in the theory of absolute monarchy. This development took its origin from the philosophy of Leibnitz and was extended particularly by his popularizer, Christian Wolff. According to Wolff, the relation between the ruler and his subjects is exactly like that of a father to his children. In line with this paternalistic theory, it was recognized that one of the duties of the absolutist state was to protect the people's health. But the people were not much more

than the object of governmental care. In matters of health, as in all other spheres of activity, the ruler knew what was best for his subjects, and by means of laws and administrative measures ordered what they should or should not do. Characteristically, the theory and practice of public administration was known as *Polizeiwissenschaft*, the science of police, and the branch of the field dealing with the administration of public health received the designation *Medizinalpolizei*, or medical police.

In its practical implementation the recognition of the importance of health for the individual and society was circumscribed by the social context in which it emerged. Underlying most of the proposals put forth during the eighteenth century, particularly during the first half of the period, for public or private action in matters of health and sickness is the desire for economic advantage and military strength. As the century progressed, however, there came to be associated with this motive a larger sympathy of man with man, as well as a passionate desire for rational change.

These motivations are characteristically represented in the penchant of the Enlightenment for projects. "Who, indeed, was not, in this bright springtime of the modern world, making or dreaming of projects?"⁶ This tendency is perhaps best described in the words of Daniel Defoe. "Necessity, which is allowed to be the mother of invention," he wrote in 1697, "has so violently agitated the wits of men at this time, that it seems not at all improper, by way of distinction, to call it the Projecting Age. For though in times of war and public confusions the like humour of invention has seemed to stir, yet, without being partial to the present, it is, I think, no injury to say the past ages have never come up to the degree of projecting and inventing, as it refers to matters of negoce and methods of civil polity, which we see this age arrived to."⁷

The avowed aim of the projectors was the welfare of mankind, but specifically they took as points of departure burning

contemporary social issues. The problem of the laboring poor, concretely symbolized in the figure of the pauper, occupied a strategic position in the social logic of the eighteenth century. (It should be noted, however, that the category of the "poor" was a broad one, practically synonymous with the "common people." Generally speaking, the "poor" meant all the people who were actually in need, as well as all those who were potentially eligible for this unenviable distinction.) It was in relation to the question of poverty that various social projectors began to explore the problem of provision against sickness, inclusive of medical care.

One of these pioneers in the exploration of the possibilities of modern existence was Daniel Defoe. In 1697 there appeared his *Essay upon Projects*, in which he poured out suggestion after suggestion for the common good. Among these is the proposal for a pension office which he offered "as an attempt for the relief of the poor."⁸ With strong faith in business-like methods, he proposed the application to the poor of that principle of collective self-help, the insurance principle. As part of this scheme, Defoe included the provision of medical care. "Every such subscriber," he says, "if by any casualty (drunkenness and quarrels excepted) they break their limbs, dislocate joints, or are dangerously maimed or bruised, able surgeons appointed for that purpose shall take them into their care and endeavour their cure gratis.

"If they are at any time dangerously sick, on notice given to the said office, able physicians shall be appointed to visit them and give their prescriptions gratis.

"If by sickness, or accident, as aforesaid, they lose their limbs or eyes, so as to be visibly disabled to work, and are otherwise poor and unable to provide for themselves, they shall either be cured at the charge of the office, or be allowed a pension for subsistence during life.

"If they become lame, aged, bedrid, or by real infirmity of body (the pox excepted) are unable to work, and otherwise in-

capable to provide for themselves, on proof made that it is really and honestly so, they shall be taken into a college or hospital provided for that purpose, and be decently maintained during life."⁹

In 1714, John Bellers, a Quaker cloth merchant of London, described as "a phenomenal figure in the history of political economy,"¹⁰ published a treatise in which he set forth a plan for a national health service.¹¹ The substance of his argument and proposals is based on the realization that there was a good deal of unnecessary illness and that such sickness and the resulting deaths represented an appreciable economic loss to the community. But, Bellers believed, any program to deal with this problem must be carried on in large part by government, as "it is too great a burden to be left upon the shoulders, or to the care of the physicians alone, no private purse being able to bear the needful charges of it. Especially considering the necessity of many and the indifferency of others of that faculty, further than to procure a plentiful substance for themselves: And how much it concerns every other person, there is the more reason to expect, the State should bear a good part of the expense of it."¹² Consequently, Bellers proposed the establishment of hospitals to be used as teaching and research centers, the erection of a national health institute, and a plan for providing medical care to the sick poor.

Between Daniel Defoe, dissenter and time-serving journalist, and John Bellers, Quaker philanthropist, issues were raised which more than two centuries of work and thought have not yet completely solved. Neither problems nor plans, however, were a British monopoly. In 1754 Piarron de Chamousset, a Frenchman who dedicated his life to reforms in public welfare, proposed a plan for hospital insurance. In his *Plan d'une maison d'association*, Chamousset pointed out that "men are the most valuable possession of a state, and their health is their most valuable possession. But it is not enough that they have the means of preserving it. An object of more importance to

them is that in case of sickness they may count on all the aid necessary to their recovery."¹³ Furthermore, "There are asylums available to the destitute, and that is a resource useful to those to whom it is not humiliating to accept the free assistance which charity offers." But there is "the class of the greatest number of citizens, who not being rich enough to procure sufficient aid at home or poor enough to be taken to an almshouse, languish and often perish miserably, victims of the propriety to which they are subjected by their class of society. Such are the industrious artisans, merchants whose trade is limited, and in general all those valuable men who live daily by the fruits of their labor, and who often for that reason have no recourse to treatment when a disease becomes incurable. The start of a disease exhausts all their resources; the more they deserve help, the less can they bring themselves to profit by the only resources that remain to them, and they find themselves in public asylums."¹⁴

The projects of Defoe, Bellers, and Chamouset never materialized, but several plans for the relief of the unemployed, which also provided medical care, were put into operation at Bristol, Hamburg, and Munich. At Bristol a corporation for the relief and employment of the poor was established in 1696 by act of Parliament, but it did not actually get under way until 1698. John Cary, the leading proponent of this enterprise, describes the method of providing medical care:

"To such as were sick, we gave warrants to our physician to visit them; such as wanted assistance of our surgeons, were directed to them, and all were relieved till they were able to work; by which means the Poor, having been well attended, were set at work again, who by neglect might with their families, have been chargeable to the corporation."¹⁵ The project lasted until 1714.

At Hamburg the program was initiated in 1788 and was financed by taxation and by voluntary contributions. Baron Kaspar von Voght, describing the work in Hamburg in 1796,

gave an account of the medical aspects. "Old age and incurable diseases," he says, "sickness, and the difficulty of supporting a numerous family, were evils which also called for assistance. For the first we provided a hospital; and in some cases gave to individuals the money which the boarding in the hospital would have amounted to.

"Five physicians, five surgeons, and as many midwives were appointed, one for each twelve districts, who upon the request of the overseer . . . went immediately to the lodgings of the patient, if he was not able to appear . . . at the physician's or surgeon's house. . . . The physician prescribed not only the diet . . . but he informed the overseer of what money he thought necessary for supplying the want of labor, and the extraordinary expenses. . . ."16 In 1790 a similar system of relief was started in Munich by that amazing American, Benjamin Thompson, Count Rumford.

Finally, note should be taken of efforts by employed laborers and artisans to protect themselves against the exigencies of illness. Urban trade clubs, or friendly societies as they were called, contracted with surgeons to attend their members when sick, at a small annual or quarterly sum per head.¹⁷ By the latter part of the eighteenth century these societies had become numerous enough in England to arouse at least two legislative efforts to put them on a sound actuarial and financial basis. Bills embodying plans for enabling the laboring poor to provide for themselves in sickness and old age were approved by the Commons in 1773 and 1789, but were rejected by the House of Lords.¹⁸

The Age of Enlightenment was no more homogeneous than any other historical period, and by the middle of the century a shift in social thinking became apparent. On all sides a new interest was taken in the rights and conditions of men, which expressed itself in an increasing concern with the health problems of specific groups. Appreciation of the social effects of disease led philanthropic individuals in diverse spheres of so-

ciety to undertake in their respective ways the solution of these problems.

Clergymen, physicians, and other public-spirited citizens participated in these ameliorative movements. Steps were undertaken to stem the enormous wastage of child life, and an effective infant welfare movement came into being.¹⁹ The Foundling Hospital of London was established in 1741 as a result of the efforts of Thomas Coram. In 1748 appeared *An Essay upon Nursing and the Management of Children* by William Cadogan, written for the governors of the Foundling Hospital, in which he upheld the rights of infants to life and liberty and proceeded to lay down sane empirical rules on nursing, feeding, clothing, and exercise. The remarkable Jonas Hanway—merchant, traveler, opponent of tea drinking, advocate of the umbrella, and philanthropist—waged an important campaign against infant mortality, exerting his greatest influence in the cause of the infant parish poor. On April 24, 1769, George Armstrong opened the first Dispensary for the Infant Poor in England. A similar awakening of the public conscience to the problems of childhood took place on the Continent. Infants were looked upon as victims of improper care and demands were raised for more rational hygienic measures. In France Nicolas Andry coined the term orthopedics, in his book, published in 1741, *L'Orthopédie ou l'art de prévenir et de corriger dans les enfants les difformités du corps*. He pointed out that many deformities in children were a consequence of wrong handling. The demand for the correct physical upbringing of infants was supported in 1760 by Jean Charles des Essartz in his book *Traité de l'éducation corporelle des enfants en bas-âge, ou réflexions pratiques pour les moyens de procurer une meilleure constitution aux citoyens*.²⁰ More effective than all medical arguments was *Émile*, the educational novel by Jean Jacques Rousseau published in 1762. Its influence extended far beyond the borders of France.

Paralleling the infant welfare work of this period were the

efforts to improve obstetrics and reduce maternal mortality. William Smellie helped to improve the professional standing of obstetricians. In 1739 Sir Richard Manningham established the first maternity ward in London, and this was soon followed by the founding of several maternity hospitals—the British Lying-In Hospital in 1749, the London Lying-In Hospital in 1750, and Queen Charlotte's Hospital in 1752. An outstanding contribution to the improvement of obstetrical practice was made by Charles White, of Manchester, whose demand for cleanliness in obstetrics anticipated the later contributions of Holmes and Semmelweis in the prevention of puerperal fever.²¹

At the beginning of the century, in 1700, Ramazzini had published his classic treatise on the diseases of workers, *De morbis artificum diatriba*, but it was not until after the middle of the century that further significant contributions to occupational welfare were made. In the German-speaking lands considerable attention was paid to the diseases of miners and metal workers.* In England Robert Willan described various skin diseases in workers—dermatoses of shoemakers and metal workers, grocer's itch, eczema of washerwomen, and baker's itch.

Manchester, the first industrial city, was created at this time by the impact of industrialization on the cotton industry. By the end of the eighteenth century poverty and disease had become acute among its workers. Public attention was first attracted to the factories, the congested dwellings of the workers, and the health problems connected with them by an epidemic of typhus fever in 1790. It was not until the winter of 1795–1796, however, when the spread of typhus so terrified the inhabitants that a voluntary Board of Health was formed.

* J. G. Neumann, 1721; S. A. Kochlatsch, 1721; Friedrich Hoffmann, 1738; J. F. Henkel, 1745; C. L. Scheffler, 1770; L. F. B. Lentin, 1779; J. G. Ackermann, 1780. The health conditions of workers in general was considered by Z. G. Huszty in 1786, E. F. Hebenstreit in 1791, and Georg Adelman in 1803.

Noteworthy for their activities in connection with factory and sanitary reform in Manchester are the two physicians, Thomas Percival and John Ferriar.²²

During the latter half of the century, naval and military medicine occupied the attention of various British, German, and French doctors. Notable for improving the health of seamen, especially the eradication of scurvy from the Royal Navy, are the contributions of James Lind, Gilbert Blane, and Thomas Trotter. In France the work of Lind was adopted by Poissonier Desperrières, the French authority on naval medicine. The diseases of soldiers and their prevention occupied the attention of John Pringle in England, and of E. G. Bolding and J. P. Brinkmann in Germany.²³

Basic to most of these ameliorative efforts was an explicit or implicit acceptance of the supreme social value of intelligence, and as a corollary, a belief in the great utility of intelligence or reason as a force in social progress. The theoretical underpinning for this eighteenth-century confidence in the capacity of human reason came from John Locke's epoch-making *Essay Concerning Human Understanding*, and its denial of innate ideas. As the mind owed everything to environment, to sensations from the outer world, the shaping of the mind and the practical expression of this process in education became matters of profound social significance. It was realized that social intelligence could be made effective only if there were an informed public opinion. Characteristic of the age was an eager didactic impulse to make the results of science available to the public, and in line with this trend efforts were made to enlighten the people in matters of health and hygiene. This health education movement was international in scope, and while it was adapted to suit local circumstances, its central characteristics were more or less the same in all countries—everywhere the same appeal to reason coupled with a belief in progress and perfectibility. This passionate affirmation of an indefinite progress in enlightenment and social welfare

reaches its apogee in Condorcet's *Esquisse*, with its chiliastic conjectures that preventive medicine, once improved, would lead to the disappearance not only of communicable diseases but of those diseases due to climate, nutrition, and occupation.

Illustrative of the many books and pamphlets written to further health education are S. A. Tissot's *Avis au peuple sur sa santé*, which appeared in 1762, went through ten editions in six years, and was translated into several languages, and B. C. Faust's *Gesundheitskatechismus*, which was published in 1792, enjoyed numerous printings, and was also translated into various languages.²⁴ In America Benjamin Rush, that turbulent, indomitable humanitarian, most characteristically exemplifies this tendency.

Despite the earnest conviction, humanitarian devotion, and millennial enthusiasm that these apostles of health brought to this enterprise, it was doomed to failure for various reasons. For one thing, the spread of health knowledge did not, and could not as yet concern the working classes. Scrutiny of the social context of the Enlightenment reveals it as a middle-class movement. The advocates of health education addressed themselves to the upper and middle classes, not to the peasants and workers. Illuminating are the comments of Tissot. "The title 'Advice to the People,' " he says, "is not the result of an illusion which has convinced me that this book is going to become a household fixture in the home of every peasant. Nineteen-twentieths of them undoubtedly will never know that it exists; many will never know how to read it; a much greater number will not understand it, no matter how simple it is; but I address it to intelligent and charitable persons who live in the country, and who, by a kind of providential vocation, are called upon to help through their counsel all the people around them."²⁵

The humanitarianism of the Enlightenment tended for the most part to neglect underlying economic factors. In Manchester, for instance, John Ferriar tells the poor "to avoid living

in damp cellars," overlooking the fact that most of them could hardly afford anything better.²⁶ There can be little doubt that the intellectual fabric of the Enlightenment is shot through with utopian strands. Indeed, utopia flourished in the eighteenth century, more than forty utopias appearing in France alone and many others in England and Germany.²⁷ During the Enlightenment, when the philosophy of history was imbued with and dominated by the idea of progress and the history of mankind was considered to be an unbroken ascent from barbarism to civilization, the concept that the rational ideals of the present are the realities of the future was entirely acceptable and logical. Characteristically, Sébastien Mercier, whose utopia, *L'An deux mille quatre cent quarante* (The Year 2440), was published in 1770, takes as the motto of his book the remark of Leibnitz that "the present is pregnant of the future." If to this sense of the inevitability of progress is added an expectation of human salvation from a revolution in social morality based on a rational way of life, as well as a desire to persuade others of the necessity and reasonableness of such a change, one begins to understand the great emphasis on education in matters of health and hygiene. Simply to demonstrate how to better conditions would in the course of time be sufficient to improve them.

Discussion of the social relations of medicine without specific reference to the medical profession would be like a performance of *Hamlet* in which the melancholy prince does not appear on the stage. To avoid such an intriguing, yet highly dubious *tour de force*, let us see where the medical profession stood in the world of the Enlightenment.²⁸ Like the society with relatively fixed ranks of which it was a part, the medical profession of the eighteenth century was organized in a hierarchy with the physicians at the top, and below, in descending order of prestige, the surgeons, apothecaries, cutters for the stone, and itinerant oculists. For the most part the physicians were established in the upper ranks of society, and in general

their services were not available to the mass of the people. In Germany many of the physicians were in the service of the numerous princes, while in England and France they were associated with the world of wealth and fashion. For instance, Samuel Garth, the Kit-kat poet, John Arbuthnot, the wit, and John Freind, the medical historian, are all better known for literary achievement than for scientific eminence or professional skill. To a lesser degree, the same might be said of the surgeons. In England physicians and surgeons were generally well enough trained, on the empirical side, in the diagnosis and treatment of the recognized diseases, but their number was so small that some type of practitioner, by the mere logic of the situation, was bound to fill the gap. This was the apothecary whom Adam Smith described as "the physician of the poor in all cases, and of the rich when the distress or danger is not very great."²⁰

Despite the lack of any integrated professional organization, medical men did exert an influence on health problems. Socially-minded practitioners made important though sporadic and intermittent contributions to the public welfare. Some of these have already been mentioned. Other significant contributions were made in the control of communicable disease, notably Jenner's discovery of smallpox vaccination.

By the end of the eighteenth century it had been thrust upon public attention that problems of health and disease were social phenomena of importance to the individual and to society. The effects of disease upon the body politic had been appreciated, health problems of various social groups were recognized, and efforts had been directed to their solution. Through practice and theory of the eighteenth century in matters affecting the public health ran the two strains of individual action and social regulation. Consciousness of the need for governmental action in matters of the public health was greatest on the Continent, especially in the German-speaking states; and it was here that theoretical formulation of opinion and principle on

this subject was attempted in the seventeenth and eighteenth centuries. These efforts culminated in the monumental *System einer vollständigen medicinischen Polizey* of Johann Peter Frank.³⁰ The first volume appeared in 1779, the sixth and last in 1817. A detailed analysis of this work would exceed the limits of this survey. It may suffice to point out that Frank, carrying out Mirabeau's idea that the health of the people was the responsibility of the state, presented a system of scientific hygiene which was worked out in great detail and was based on enormous erudition and rich practical experience. As might be expected from a servant of Joseph II, a spirit of enlightened optimism pervades the entire work. The exposition of his ideas is intended not so much for the instruction of the people and the medical profession, as for the guidance of the health authorities who were supposed to regulate and supervise all spheres of human activity for the benefit of society.

His *Medicinische Polizey* brought Frank fame and position, but his hygienic teachings had little immediate practical effect. While his work was acclaimed by far-sighted physicians, the governmental authorities for whom the treatise was primarily intended and who alone could realize its demands, took little notice of it. Nevertheless, this does not detract from Frank's merit. He gave a systematic presentation of the whole field of social medicine in terms of the conditions and available knowledge of his time; and where reforms were needed, he not only demanded them but also indicated the way to achieve them.

The publication of Frank's last volume in 1817 was something of an anticlimax. In the intervening years Europe had passed through a decade of revolution and had experienced the rise and fall of the Napoleonic Imperium; but even more fundamental was the fact that Western Europe, and particularly England, had come under the domination of iron and coal. The French revolutionary struggles and the reaction to them had pushed problems of health into the background, but as the Age of Enlightenment became the Age of the Economic

Man, a welter of new and unsolved problems appeared. Carboniferous capitalism brought into focus new social classes, in particular the industrial workers, and with them the social questions of the nineteenth century. Industry flourished while the degradation of its workers proceeded apace in the mushrooming coke-towns. The discrepancy between this social fact and the prevailing theory of economic liberalism was once again to introduce into public discussion the need for grappling with problems of health and disease.

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In the 1840's

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IN the early modern centuries responsibility for the medical and other needs of the poor tended to shift from the Church to the State. While this trend set in earlier in Protestant states, it was also to be observed in Catholic countries—for example, in France during the seventeenth and eighteenth centuries.¹ Occasional regrets were expressed that the State had taken over this responsibility, such as when it was urged about 1700 in England that the whole matter of poor relief be handed back to the Church.² But the process of secularization had gone too far by that time to be reversed. Hence there appeared the Elizabethan poor laws, the “projects” for state medical aid in England, and Frank’s program for “medical police,”* drawn presumably from the latter’s experience in Catholic lands.

As Dr. Rosen has pointed out, these early modern programs were motivated originally by state paternalism—with an eye on national power—but were further inspired during the Enlightenment by the growth of a more or less secular humanitarianism. This humanitarianism, like the clerical form of earlier centuries, largely expressed the benevolence of the upper classes rather than any demand for reform from below.

Long before 1800, however, there were signs that the poor sought to help themselves. This can be well observed in the development of the benefit societies in Britain, though similar organizations had existed in other countries for several centuries. The British societies increased steadily in numbers and membership throughout the eighteenth century. Two circumstances made this expansion possible: first, the growth of the “labouring classes” associated with the early industrial revo-

* See Dr. Rosen’s paper, page 15.

lution; and, second, the development of statistical science that made available more exact insurance protection. Shortly after 1800 there were nearly 10,000 societies in England which collected payments from members and distributed cash benefits in case of sickness and other social difficulties. By 1815 these societies had a membership of 925,000, and a decade later their total deposits reached some £16,000,000. It was reported to Parliament that "a large proportion" of this sum came from "labouring men."³

Here was an early form of voluntary sickness insurance based upon the inadequate insurance tables then available. Various problems arose in connection with this program. As crude mortality declined during the latter part of the eighteenth century, the societies were accused of using actuarial tables compiled for local communities decades before, when the death rate had been relatively high. This situation is similar to that in the present era, when insurance companies continue to use tables composed during earlier years of relatively high mortality.

During the latter part of the eighteenth century another question vital to our time was raised in connection with the benefit societies—whether the protection afforded on a voluntary basis should be extended and made compulsory to cover the poorer classes. Perhaps the first incentive for such measures lay in the desire of certain communities to protect themselves against the costs of medical relief for outside laborers who might become stranded in the local area. Occasionally such compulsory insurance was actually provided by Parliament, for example, when the Thames coal heavers were required as early as 1757 to contribute sickness insurance premiums through a check-off from wages.⁴ The later example of the United States Marine Hospital service is well known.

At the beginning of the nineteenth century there was considerable discussion about compelling all workers to join benefit societies. It was suggested, then as later, that the worker's

contributions could be supplemented by government aid—in this case, by payments from the parish poor funds. It will be recalled that prior to 1834 there was no central office for poor relief in England, so that both payments and administration of any state aid to compulsory sickness insurance would have had to come from the local poor-law unions.

Strong objections to compulsory sickness insurance, suggestive of later debates, were promptly forthcoming. It was held, for example, that insurance would really impose taxation on the poor, who could not afford it. A further objection was that the income of the workers fluctuated so much that it would be impossible to find a base for the determination of premiums.⁵ It is not surprising that in the heyday of laissez-faire principles no general system of compulsory insurance was adopted. But it is of some interest to observe this early expression of certain of the basic problems which were to become so pressing in our own time.

During the first four decades of the nineteenth century the industrial revolution was associated with further increases in the wealth and influence of the business classes, as well as in the number and misery of the workers. Death rates in the large cities rose, and epidemics—especially of cholera—caused great alarm. The interest of the upper classes in health conditions continued to be motivated by varying degrees of self-interest and humanitarian feeling, supplemented by an increasing realization of the economic costs of widespread illness.

Meanwhile the concentration of workers in the industrial slums of British, French, and American cities made their lot worse and promoted the rise of labor unions. Pre-Marxian socialist thought filtered into labor groups and made some of their members responsive to the more aggressive class-consciousness of the Communist appeal of 1848. Not least among the factors which led to this appeal were the health conditions of the urban poor. This is clearly indicated in Engels' famous work on the condition of the English "labouring classes"

(1844), with its insistence that the State take action to protect the health of the masses; the workers had a right to such protection, and should not have to depend upon paternalism, the sporadic efforts of clerical charity, or bourgeois humanitarianism.

In actual practice, however, the health movements of the 1840's and 1850's were largely directed by middle-class humanitarians. Their appeals were made to the economic interest of the State (which meant, increasingly, the interest of the middle class) as well as to personal benevolence. Such leaders as Villerme in France; Chadwick in England; Griscom, Jewell, and Shattuck in the United States; and perhaps even Virchow in Prussia fit into this pattern.

In Southwood Smith, however, one senses something of the more radical appeal to the workers themselves. He declared that Parliament could save over 50,000 lives a year, by proper health legislation but had remained indifferent to the unnecessary tragedy of the situation. Hence he appealed directly to the workers, declaring: ". . . their apathy is an additional reason why you should rouse yourselves. . . . Let a voice come from your streets, lanes, alleys . . . that shall startle the ear of the public and command the attention of the legislature."⁶ Something might have come of this if the Chartist upheaval had been more successful. Much the same can be said of the revolutionary movements in France and Germany during the late 1840's. The famous Frankfort Congress of 1849 was fully alive to the need for medical and health reform, though it was dominated more by middle-class liberals than by the socialist elements. In any case, its ideas were buried for the time being in the ensuing conservative reaction.

The American parallel to European revolutionary movements is seen in the rise of so-called Jacksonian democracy, which was supported in the East during the 1830's by relatively radical labor organizations. Health conditions were as bad in American cities as in Europe; but if the disease situation

was a major factor in the Jacksonian labor protest, American scholars have usually overlooked the fact.

Middle-class leadership in the health movements a century ago may account, in part, for the fact that the movements emphasized public health in the ordinary and narrow sense, namely, in terms of state quarantine and sanitation rather than in terms of "social medicine." If by the latter we mean the provision of medical care to the masses it has already been implied that anything beyond the old pattern of relief seemed radical to the conservative classes. Despite the persistence of the benefit societies, the health reformers of the 1840's rarely if ever echoed the earlier suggestions about general sickness insurance for the poor. There were, in England, strong protests against the inefficiency of the poor-law doctors, and similar protests were made against the medical service in American "poor houses," but these pointed only toward improving the traditional relief systems. The example of the benefit societies survived, however, until more could be done with the insurance principle later in the century.

It is true that some approach to social medicine was involved in the efforts made to regulate medical education and practice more effectively and to set up checks against quackery. Presumably these efforts, to the extent that they were successful, raised the quality of such medical service as the poor, and indeed all classes, were able to obtain. The improvement of education and practice was a primary objective of the early provincial and national medical associations founded about mid-century—for example, the American Medical Association in 1848. These bodies also displayed interest in the sanitary reform movements of that period. The success of attempts to improve professional education varied widely. In the United States, for example, the American Medical Association, failing to improve the lax licensing codes, was unable to check the proliferation of cheap, proprietary medical schools and could not even interest the states in the collection of vital statistics.

In Britain, on the other hand, the chaos of licensing arrangements was replaced by a national system, with relatively high standards, in the Medical Act of 1858.⁷ Few, if any, countries were able to establish effective checks on quackery. Laws to this end were adopted in France and in some German states during the first part of the century, but were generally abandoned or not enforced after 1860.⁸

Something was accomplished for social medicine through the expansion of hospitals during the middle decades of the century. To be sure, these represented the older traditions of Church, State, or private charity and they were liable to the same abuses or inefficiency as was outpatient medical relief; but to the extent that dispensaries were set up, fever hospitals expanded, and "insane asylums" established, increased medical care was extended to certain classes of ill persons. Fortunately, in the United States it was customary from the start to admit private patients to voluntary hospitals and this tended to improve the character of the free services given by these institutions.⁹

This expansion of hospitals was often urged by physicians who were conscious of immediate needs and who gave their services freely to the poor both within and outside of institutions. Having given such care without charge, physicians were often irked by the failure of prosperous patients to pay their fees. The natural desire for certainty of income tempted some doctors to engage in "contract practice"—an old procedure in which care was extended to a family throughout the year for a flat sum paid in advance. Here was an unorganized attempt at a prepayment plan, though it can hardly be termed health insurance since the risks were extended only over time and not over any large number of persons. Always condemned by professional leaders, it is difficult to know how far this practice was followed during the Victorian era.¹⁰

Free service in ordinary practice was, of course, an ancient tradition in social medicine. Its merits and limitations in this

age were presumably much the same as in other periods, whereas the expansion of hospital services was a more significant phenomenon. This expansion was encouraged not only by medical men who knew the needs of growing populations, but also by religious groups and by such devoted lay humanitarians as Dorothea Dix and Florence Nightingale. Improved nursing in hospital wards was no small contribution to social medicine. Perhaps one could view the founding of the Red Cross about 1860 as providing another form of social medicine of a special sort. But these voluntary, humanitarian efforts were rather tangential to the main health movements of the times. So, too, were contemporary studies in geo-medicine, such as Daniel Drake's famous work on the diseases of the Mississippi Valley which threw considerable light on the larger environmental background of the people's health.

As to the major developments, it should be noted in fairness to middle-class liberals that their emphasis upon public hygiene involved more than general conservatism. They had good reason to believe that the most effective means for improving the health of the poor was through the prevention of illness, rather than through provisions for medical care once disease had appeared. This does not mean that the merits of public hygiene and of social medicine were consciously weighed as alternatives, nor that these were believed to be mutually exclusive programs. Instead, contemporary literature leaves the impression that the promise of sanitary reform was such that it just crowded out concern for direct medical care.

Chadwick's career seems to illustrate this. He was at first quite optimistic about rising living standards among the workers and felt that benefit societies had provided them with a considerable degree of social security. As late as 1830 he stated that two of the most vital functions of government were to ascertain the extent of illness, and to determine fair insurance rates, so that the societies could provide sickness protection at

lower costs.¹¹ No doubt he hoped that lower premiums would enable large numbers of the poor, hitherto outside the societies, to gain access to their benefits. But the very success of his first objective discouraged concern for the second. For it was soon revealed that disease and death rates were higher for certain areas and classes than they were for others, which in turn implied the possibility of lowering these rates by improving the environmental surroundings. Once this was done, a vast amount of medical care—with all the attendant suffering and expense—would simply be eliminated. Here was a prospect more promising than the extension of insurance protection. By 1840 Chadwick, alarmed by the living conditions revealed, was largely absorbed in the administration of public hygiene.

The emergence of the differential picture of disease and death in terms of special areas, occupations, and social classes is itself an interesting story. Of particular significance was the contrast between the urban poor and the prosperous. Prior to 1800 this had been noted by physicians as a matter of personal observation, for instance, by John Ferriar in Manchester.¹² But much of the best health reporting in France or Britain in the eighteenth century had related to particular occupations or institutions—for example, John Howard's work on hospitals and gaols—rather than to the condition of the poor at large. Protesting these limitations, John Roberton criticized Howard for not having examined neighborhoods and communities as a whole. Disease, observed Roberton in 1808, threatened the wealth as well as the health of a nation, and it would be economical as well as humane to study the total picture and to analyze it, so that the causes could be removed.¹³

The means for doing this had been improving with the gradual development of vital statistics throughout the preceding century. During the first quarter of the nineteenth century mortality tables were more adequate on the Continent than in Britain or the United States. Presumably following in the tradition of Süssmilch and Frank, F. L. Augustin issued tables

as early as 1818 showing the Prussian mortality from 37 supposed causes of death. From the viewpoint of social medicine, it is interesting that he also reported the number of deceased who had been attended by physicians in their last illness—a refinement that became common in later German reports, but was rarely if ever supplied in Anglo-Saxon figures.¹⁴ Such data may have revealed a need for extended medical care of the poor which was not made apparent in British or American tables.

Most significant, meanwhile, was another type of differential study which was apparently first attempted in Paris. Here there was great interest in statistical analyses of health problems, perhaps because of the brilliant mathematical work done there early in the century. Laplace, for example, in his classic work on the calculus of probabilities (1810), had emphasized its application to public health and other medical fields.¹⁵ During the 1820's, while Pierre Louis was testing the value of clinical statistics, L. R. Villermé turned to the analysis of vital statistics. In 1828 he published his pioneer study of the differential mortality of the poor and of the prosperous in France. This clearly indicated that the living conditions of the poor resulted in much higher disease and death rates than obtained among more fortunate classes.¹⁶ Health, it appeared, could be bought—a generalization to be echoed for several generations thereafter.

From such studies it was but a step to apply the calculus so as to figure the relative risks and life expectancy facing the rich and the poor. This was soon done, for example, by Professor J. L. Casper of Berlin, who found in 1835 that children born of prosperous parents had a life expectancy better by eighteen years than had those born in humble surroundings.¹⁷ The statistical reports of various German states became increasingly comprehensive through the 1840's and 1850's—as was also true in Scandinavia—and usually came to include data on the causes of deaths. The relatively complete statistical data available in Germany after 1860, together with an expansion

of the old *Krankenkassen* in the larger cities, were a part of the historical background to later national health insurance. Incidentally, the relationship of the industrial revolution to health insurance is indicated by the fact that *Krankenkassen* failed to develop in rural areas or in small towns without industries, just as had been the case with the benefit societies in Britain and the United States.¹⁸

Meanwhile, French statistical analyses of the 1820's made an impression on English authorities. Before observing how these procedures were taken up in Britain, one should note again how concern for social medicine was diverted to public hygiene. The wave of liberal political reform which rose in Britain during the early 1830's, supported jointly by the middle and laboring classes, brought with it a centralized administration of the poor-law system, including medical relief. The new Poor Law Board promptly reported that disease was one of the chief causes of poverty and therefore of poor rates, and urged that the latter be reduced by improving the surroundings of the urban masses.¹⁹

Sanitary measures were by no means new. One need go no further back in English history than the Elizabethan period, for a comprehensive sanitary code had then been adopted, including measures for its enforcement.²⁰ But medieval traditions about contagion as the cause of epidemics were then strong, and many physicians and probably most laymen were more concerned about isolation procedures than they were about sanitation. Toward the end of the eighteenth century some medical leaders returned to the classical thesis that epidemics could be largely or even exclusively ascribed to local conditions ("airs and waters").²¹ Merchants, who had long suffered from vexatious shipping regulations, lent moral support to this new view that indicated clean-ups rather than quarantines. Hence, by the 1830's there was growing support from both medical and business men for a sanitary program.

In response to such reports as that of the Poor Law Board, a

British Health of Towns Commission was appointed to examine the whole urban situation. Meantime, Dr. Southwood Smith and others reported on the environmental causes of fevers in London; and in 1842 Chadwick brought out his comprehensive *Report on an Inquiry into the Sanitary Condition of the Labouring Population in Great Britain*. This was based on the reports of poor-law union doctors throughout England and Scotland, and revealed truly appalling conditions in many cities. Following French procedures, Chadwick found a close correlation between urban neighborhoods and class status on the one hand and mortality on the other. In Liverpool the average age at death for the gentry was 35; for laborers only 15! This relationship was made more exact by William Farr, who, after Paris training, became the chief English health statistician. By 1844 the latter had found a positive correlation between density of population and mortality which could be expressed as a mathematical law.²²

While Engels used Chadwick's *Report* as a chief source for a socialist indictment of capitalist society, Chadwick himself based upon it an argument for national health administration. He was supported effectively by Southwood Smith, whose "Health of Towns Association" (1844) secured lay-medical cooperation in agitating for sanitary improvements. In 1845 the Health of Towns Commission reported along similar lines; and finally in 1848 Parliament established a national health board which had some authority over local governments. While this was subsequently abolished as a result of local opposition, a health office was then set up in the Local Government Board to advise upon sanitary measures.

Somewhat similar developments followed in other European countries. A national health office was established in Germany in 1876, for example. During the 1840's efforts were made in the United States by the National Institution—a predecessor of the American Association for the Advancement of

Science—to secure a national health board. These measures failed, partly because of laissez-faire indifference, partly because of states' rights feeling. National sanitary conventions were held in this country between 1857 and 1860, but these were voluntary organizations similar to the British Health of Towns Association. Not even state health boards were established before about 1870.

The conviction that the quickest way to improve the health of the poor was through sanitation received statistical verification during the 1850's when various British towns showed marked mortality declines following the establishment of sanitary controls.²³ Social medicine, in the form of the Poor Law Board's activities and those of the benefit societies, had been an indirect factor in promoting these results; but the actual program involved was one in public hygiene.

At the same time that sanitation promised so much, direct medical care of the poor seemed to promise little. It is to be remembered that the 1840's and 1850's were an age of clinical nihilism, when the best-informed physicians, having discredited the old medical "systems" by the use of clinical statistics, had little faith in therapeutics. There was also considerable skepticism among the laity, as was witnessed by the growth of quackery and of medical sects. In contrast, statistical science and engineering, which implemented the sanitary program, were making marked progress.²⁴ It is no wonder that lay reformers like Chadwick and Shattuck had more confidence in what mathematics could do for the poor than they had in medicine. Some physicians were sensitive about this distinction, as may be observed in their protests against the omission of medical members from the British national health board of 1848.²⁵

A priori, one would expect that renewed confidence in preventive medicine and therapeutics, which appeared with the development of bacteriology and pharmacology after 1875, would revive interest in the direct medical care of the poor. By

that time, of course, political and social factors had also changed in the European states. But this relates to a period beyond that which is under consideration here.

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From Bismarck to Beveridge

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THESE two men, different in origin and philosophy, delimit a period in which the quest for social security was continuous and impressive.

As a result of the increasingly rapid progress of science, medicine as well as society has undergone considerable change during the past seventy years. Great discoveries have been made in all fields of science, particularly in physics and chemistry. The application of these discoveries caused a second industrial revolution, when in the beginning of our century electricity was introduced into industry. New developments followed in the wake of the electrical industry. Steel, automobile, chemical, food, cosmetics, and many other industries employed millions of additional workers. As a result present-day society is primarily one of wage earners and salaried employees, and this development has increased the size of the population whose living depends on a labor market over which it has no control.

At the same time the same basic forces—namely, the rapid rise of science and technology—created a new medicine, highly scientific, highly technical, very specialized, and very expensive. The cost of production of the medical services increased more rapidly than the purchasing power of the population. Every country was confronted finally with a situation in which a new medical science was called upon to serve a new type of society—a situation which obviously called for new forms of service that would permit the full use of the modern technology of medicine for the benefit of the entire population whether rich or poor, urban or rural, white or black.

Another characteristic change in the relation between medicine and society is to be found in the steadily broadening scope

of medicine. Once defined as the healing art, medicine is looked upon today as the sum total of all activities of a given society that tend to promote and restore health and to prevent illness. Where such a concept prevails, medicine includes infinitely more than a physician's actions. It becomes a social science with a social goal. It appears as one link in the great chain of social welfare institutions which we expect to find in a civilized community. The cooperative efforts of physician, educator, scientist, statesman, and many others are needed to fulfill such a program, and the doctor who once was the individual adviser of an individual patient or family is confronted today with an infinity of new tasks. He has become adviser to the educator, to whom he lends his psychological and psychiatric knowledge in order to keep children adjusted to their social environment. He is the scientific adviser to the court who has to ascertain the cause of death and the circumstances under which death occurred. He is also consulted by the court as a psychological expert who has to determine the degree of responsibility of an individual who has become asocial and the efficacy of a sentence that tends to rehabilitate rather than to punish a criminal.

We all know how important the standard of living, material and cultural, is for the maintenance of health. The provision of full employment, of decent housing and adequate nutrition, of facilities for rest and recreation are tasks to which the physician can contribute as an expert who sets the norms, who determines what conditions must be met so that a dwelling is conducive to health or a meal adequate in quantity and quality. In previous wars when food supplies dwindled, governments let events take their course or at best distributed bread to the indigent. The last war was a splendid example of what scientific planning can achieve. Even in countries where the amount of food available was much less than in normal times, health conditions improved because the distribution of food was better and because a distinction was made between essen-

tial and non-essential food stuffs. England was probably the best example of this.

A further characteristic of our era is the increased feeling of responsibility that society has for the welfare of its individual members. The motivating force which began as charity (and still is to a certain extent) became humanitarianism in the eighteenth century and sound utilitarianism in the nineteenth century. Whatever the driving force may be, society's assumption of responsibility toward the individual is a criterion of a civilized commonwealth. The machine has created a social solidarity that no industrial society can escape.

Toward the middle of the nineteenth century the increase in the low-income population, the insecurity of industrial production, and the growing cost of medical care created a situation which imperatively called for a solution. As a matter of fact, two solutions were adopted at that time, one that met the requirements of an agricultural society and another better adapted to an industrial country. The latter solution came with the introduction of health insurance as part of a national system of social insurance. The pioneering step was taken in Germany and is associated with the name of Bismarck. The idea of insurance is anything but new. It can, in fact, be traced back to antiquity. Mutual benefit societies developed in increasing number with the disintegration of feudalism when more and more personal services became money services. Insurance was not new, but the application of the principle on a nation-wide scale was.

It is frequently said that Bismarck autocratically forced social insurance on the German people in order to destroy social democracy. The facts, however, were not so simple. Bismarck had to have legislation enacted by the German Reichstag, and it took nine years of parliamentary struggles for him to obtain not the legislation he originally had in mind, but a compromise solution. It did, however, include sickness, accident, and old age benefits. His chief opponents were the liberals, who

represented the interests of industry and commerce and whose philosophy was that of laissez-faire. Bismarck's motives were complex. A feudal landowner and conservative, he had the paternalistic outlook which made the lord responsible for the welfare of his people. What he had in mind was a central insurance system vested in a state bank into which government, employer, and employees would pay contributions. There is no doubt, however, that Bismarck at the same time endeavored to reduce the social insecurity of the workers, which he considered "the real cause of their being a peril to the state." The German social insurance system brought great benefits to the workers, employers, and society at large. It gave social security to the wage earner, provided the employers with healthier workers, and reduced the general burden of society by reducing the general number of indigents. Health conditions were improved and social insurance gave the people the right to services for which they paid according to their ability.

In one point Bismarck did not succeed. He was not able to stop the growth of the Social Democratic Party which from 1890 on increased from year to year until in 1912 it became the largest party in the country. It had made great social gains which it now endeavored to increase in an evolutionary way. Bismarck was forced to resign in 1891, but his social security legislation was accepted and so well established that no government would have been able to curtail it. On the contrary, every succeeding government extended the insurance system to cover larger groups of the population, and when after World War I Alsace-Lorraine was returned to France, the population insisted on maintaining the German social insurance system, with the result that France followed suit and in 1928 enacted legislation of its own. The German physicians did not object to the introduction of compulsory health insurance. It was not an issue to them, because in 1848 they had been the first to agitate for the introduction of health insurance. It must also be kept in mind that before Bismarck's legislation Germany

had many local mutual benefit funds, which had compulsory membership for certain groups. Doctors could hardly collect bills from uninsured workers, so that it was in their interest to have as many wage earners as possible included under the scheme. Sickness insurance made large funds available and increased the doctor's income considerably, with the result that from 1889 to 1898 the number of physicians in Germany increased by 56.2 per cent while the population increased by only 11.5 per cent.

Social security legislation does not intend to change the existing social and economic order but merely to mitigate the hardships created by it. In medical terminology we may say that it is not a causal but rather a symptomatic therapy. Unemployment insurance does not prevent unemployment but provides a minimum income to the wage earner who has lost his job, and in so doing it maintains a certain purchasing power that mitigates an economic depression. Similarly health insurance in itself does not guarantee health to the insured wage earner nor yet does it make public health measures superfluous, but by making medical personnel and institutions easily available to the people it promotes health.

When we study the history of social security legislation, we soon find that it follows a certain pattern, one that first became very clear in Germany. Increased industrialization creates the need, because it increases the social insecurity of growing numbers of the population. A second factor is found in the phenomenon that under the pressure of industrialization the working class organizes into militant political parties that present a threat to the existing order. This was the case in Germany when the Social Democratic Party was founded in 1869 by Bebel and Liebknecht; in 1875 it absorbed the conservative Lasalle group. The Paris Commune of 1871 created a great scare in all conservative circles of Europe because it showed that socialism was not a parlor philosophy but might well become a tangible reality. A conservative statesman, Bismarck

stepped in and with social insurance created a corrective mechanism to the system that he wished to perpetuate.

The very same pattern can be traced in England, the next large country that enacted national social insurance in the beginning of our century. At that time the impact of the second industrial revolution was being felt. The number of wage earners increased as a result of it and so did their insecurity. In 1900 the Independent Labor Party, the Fabian Society, and the Trade Unions joined to organize the Labor Party, which was in no way revolutionary but nevertheless had great potentialities in a highly industrialized country. In the election of 1906 the Labor Party won 29 seats and England changed from a two-party country to a three-party country. The Russian Revolution of 1905 broke down as the Paris Commune had done thirty-five years before, but it again reminded conservative groups that socialism was not dead. Lloyd George and Winston Churchill began to promote social legislation, culminating in the National Insurance Act of 1911, which included sickness and unemployment benefits. Like the German system, it had all the weaknesses of a compromise, was not comprehensive enough, and suffered from a considerable lack of uniformity, as it had to take into account the vested interests of a great number of private benefit societies and insurance companies.

World War I created a new and very strong stimulus to the enactment of social legislation. It was the first war in which the industrial potential of a group of countries proved to be the decisive factor. Industrialization was intensified in every warring country and the Russian Revolution of 1917 created a totally new situation. Not only France, but a number of other countries adopted systems of health insurance, and it was recognized that no nation could enjoy the benefits of industrialization without providing a corrective mechanism for the hardships and insecurity it created. This became particularly apparent during the protracted economic depression that fol-

lowed the crisis of 1929 when all over the Western world millions of people were unemployed. At that time social insurance bills were introduced increasingly in the American republics. Chile introduced health insurance as early as 1924, and by 1942 nine Central and South American countries had some form of health insurance. In the United States, following the National Health Conference of 1938, various bills were introduced into Congress that had the purpose of completing the social security legislation of the Roosevelt era by developing a national health program that would include health insurance. So far no bill has been passed, but the need remains and some solution will have to be found because the attitude of medicine to society has changed and the view is generally accepted that in a civilized commonwealth the benefits of medical science should be available to all people.

World War II, in which science and technology played an even greater part than in the previous war, has rendered all problems of social security more acute than ever. Health insurance, which for the past seventy years seemed the most appropriate method of financing medical services for an industrial population, has lost some of its popularity. The provision of health services from the general revenue of the state—just as education is tax-supported—is receiving increasingly serious consideration. Great Britain passed a National Health Services Act in 1946 that went into force on April 1, 1948. Its purpose is to promote the establishment of a free, comprehensive health service designed to improve the physical and mental health of the people. The service includes prevention, diagnosis, and treatment of illness.

The European countries that have been devastated by the war and face the task of rebuilding their health services will, in all probability, follow a similar line. Countries which, after the war, revised their constitutions or adopted new ones, invariably granted their citizens the right to work and the right to all means needed for the protection and restoration of

health. Thus the French Constitution of 1946 "guarantees to all, notably to the child, the mother, and the aged worker, protection of health, material security, rest, and leisure. Each human being who, because of his age, his physical or mental condition, or because of the economic situation, finds himself unable to work, has the right to obtain from the community the means to lead a decent existence."¹

The influence of the Soviet Union on these developments is undeniable, and no student of social history can overlook the fact that Russia was the first country to give its citizens a constitutional right to all health services. By making them public services, free of charge, they were thus made available to all. If Mirabeau declared that the protection of health was a responsibility of the state, Russia went one step further in declaring that not only was health a responsibility of the state but a concern of the people themselves. The Soviet health program was launched and carried out with the participation of the entire population. In providing health services to the people through health centers staffed with groups of physicians, polyclinics, ambulatoria, and dispensaries, urban and rural, Russia has adopted on a nation-wide scale the form of medical service that is able to make the best use of the present technology of medicine. Through its social organization of health services Russia was enabled to place the promotion of health and the prevention of illness into the foreground of all medical activities.

The changed attitude in the relation between society and medicine has recently been expressed in a document of great historical significance. On July 22, 1946, representatives of sixty-one nations signed the Constitution of the World Health Organization, the preamble of which states:

- Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.
- The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without dis-

inction of race, religion, political belief, economic or social condition.

- The health of all peoples is fundamental to the attainment of peace and security and is dependent upon the fullest cooperation of individuals and States.
- The achievement of any State in the promotion and protection of health is of value to all.
- Unequal development in different countries in the promotion of health and control of disease, especially communicable disease, is a common danger.
- Healthy development of the child is of basic importance; the ability to live harmoniously in a changing total environment is essential to such development.
- The extension to all peoples of the benefits of medical, psychological, and related knowledge is essential to the fullest attainment of health.

Informed opinion and active cooperation on the part of the public are of the utmost importance in the improvement of the health of the people.

- Governments have a responsibility for the health of their peoples which can be fulfilled only by the provision of adequate health and social measures.²

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**II. SOCIAL MEDICINE:
ITS DIFFERENTIATION FROM AND RELATION TO
CLINICAL AND PREVENTIVE MEDICINE**

Social Pathology

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Into those other fields of endeavour as we gaze, we see numberless close analogies to our own work. We see there another pathology than that which our clinics and dead-houses teach us, yet a pathology almost parallel in its teachings.—

*Sir John Simon**

THE term social pathology, in the sense in which we have come to use it, is not a new one. No one, perhaps, had the idea of social pathology more clearly in his mind than that great medical administrator, historian, and man of science, Sir John Simon (1816–1904). The term was also employed by Alfred Grotjahn (1869–1931), the first Professor of Social Hygiene in the University of Berlin, who made it the title of a textbook. It has sometimes been given a restricted interpretation, linking it particularly with the study of delinquency, inebriety, vagrancy, and crime, but for this restriction I can see no real justification.

Social medicine and social pathology should, as their names suggest, be considered respectively as the medicine and pathology of families, groups, societies, or larger populations. Just as human pathology is the related science of clinical medicine—whether it be pursued by the morbid anatomist or the physician, in the laboratory or at the bedside—so may social pathology be viewed as the related science of social medicine, whether it be pursued in the office of the statistician or with the aid of socio-medical surveys or experiments or other more intimate and specific types of inquiry.

If clinical medicine is a comprehensive term—for it may im-

* *English Sanitary Institutions Reviewed in their Course of Development and in Some of their Political and Social Relations*, London, Cassell and Co., Ltd., 1890, p. 478.

ply both clinical practice and the theory or discipline necessary for the advancement of knowledge and the improvement of practice—social medicine is even more so. It embraces, on the one hand, the whole of the activities of the public health administration and of the remedial and allied social services, and, on the other, the special disciplines necessary for the advancement of knowledge relating to sickness and health in the community. Of these disciplines the more fundamental may be included under the general titles of social pathology and hygiene.

We can carry our analogy further. Historically, the first developments of human pathology as a separate science were in the field of morbid anatomy. The first morbid anatomists were those great physicians—including, in my own country and my own school, Bright, Addison, and Hodgkin—who, in the first half of the last century, realized the need for a closer study of morbid changes and processes and of the causes of death by means of the detailed post-mortem examination. Similarly the first scientific development of social pathology was the social post-mortem examination, as systematized also in the first half of the last century by William Farr and evolved by him as a mathematical refinement of the broad and historic social surveys of Edwin Chadwick. The two great branches of human pathology thus had their beginnings almost simultaneously. The social post-mortem examination employs statistical methods and techniques to reveal death rates and their trends in the population, whether from all causes or from specific causes, and these rates and trends can be correlated with social factors and social change. It has this advantage over the individual necropsy: It succeeds in shedding light upon the predisposing or ultimate (as distinct from the intimate or specific) causes of the prevailing social diseases, as well as upon their incidence and distribution. The individual necropsy may reveal the extent, character, and processes of a disease and the final cause

of death, but it is silent about the circumstances which led to the development of the original morbid change.

The later progress of human pathology (as we ordinarily use the term) has required the advancement and cooperation of such sciences as bacteriology, immunology, protozoology, haematology, and biochemistry. Radiology, endoscopy, physiological techniques, and surgery have further assisted the study of the pathology of the living, and so have many careful clinical observations bearing upon the natural history and symptomatology of disease. Social pathology, too, has required the emergence and adaptation of associate methods, methods of clinical, social, and more specialist inquiry. Its epidemiological studies are concerned with the incidence and trends of diseases in the living community or its component groups and with correlations of these with season, climate, race, and environmental and social conditions. With a wider collection and fuller utilization of statistical material relating to all the commoner types of disease and injury—and not merely to those due to crowd infection and connected especially with childhood, insanitary conditions, and war—the horizons of epidemiology will by degrees be greatly expanded. Already analyses of official and other figures from various sources have considerably increased our understanding of some of our more chronic diseases and their distribution. In a more specific way socio-medical surveys are now likely to be applied in increasing measure to the refinement or extension of the findings of mortality and morbidity studies based upon official returns; to comparative studies of the health and sickness experience of different geographical, social, or occupational groups within a population; to the investigation of the incidence and etiology of particular diseases; or to the study of growth, development, and sickness rates in infancy and childhood under varying economic and nutritional conditions. The method of survey thus makes use of “natural” experiments, just as the physician avails himself of

“natural” experiments in studying the phenomena of disease in individuals. The survey has this advantage over the clinical investigation of the hospital ward: It deals with larger numbers and can study simultaneously the incidence and manifestations of disease and health and borderline states in a community and relate them more directly by parallel inquiries to various casual influences. Hygiology, the study of health and its causes, is clearly an associated interest of those who employ the survey methods of social pathology.

The third stage in the evolution of laboratory pathology witnessed the growth of the experimental method, employing animals and sometimes men. It has made far-reaching and valuable contributions to individual and special pathology, with important consequences for medical practice. The use of controlled social experiments in human populations also has important possibilities. Experiments of opportunity and planned experiments can both play their part. During times of rehousing, during industrial reorganization, in schools or other institutions, and in the armed forces opportunities arise of utilizing changes of environment, employment, or management and studying their effects on the health and sickness of partially closed communities. Sometimes a comparable population whose conditions remain unaltered for a sufficient period provides an additional check. The experiment of M'Gonigle and Kirby (1936) was a notable example of the experiment of opportunity and helped to direct immediate attention to the relative importance of nutritional opportunity and housing in maintaining or jeopardizing the health of urban communities. These authors, during a time of economic depression, seized the opportunity of studying over a period of years one half of a slum population which was moved to a new housing estate, the other half remaining as a control. The health and mortality experience of the transferred population showed a significant deterioration. Higher rents and the cost of travel into town re-

duced the budget to such an extent that too small a sum was left for sufficient and balanced diets.

In the services, in schools, and in industry it should be possible, from time to time, to design and stage experiments having specific objectives and provided with adequate controls. It will never be possible to reproduce the precise conditions of the epidemiological studies of Greenwood and Topley on mouse populations, but human social experiments may nevertheless come to have considerable value for preventive medicine and social planning. Changes of human or psychological environment should be as important to study as changes in the material environment.

The groups or populations which are subjected to survey or experiment at the hands of the social pathologist may be determined by age, as in the case of infants or school children or university students; by sex, as in the case of housewives or expectant mothers; by occupation, as in the case of factory workers; by age, sex, and occupation, as in the case of army recruits; by geography, as in the case of a village or island community. A population may be studied in relation to its total health or sickness experience—as, for example, in the case of an investigation of the growth, health, and sickness experience of the preschool child, from birth to five years of age, which we are conducting at Oxford against the background of varying social opportunities. Another population, say of adolescents, may be studied in connection with its general nutritional status or, more particularly, in order to assess the frequency of a single manifestation of a specific deficiency. As an example of this I would mention a study of thyroid hyperplasia in adolescents (carried out by myself and colleagues for the Medical Research Council) as related with their geographical and geological environments and the iodine content of the drinking waters therein available. A population may also be composed of a number of persons suffering from the same disease (for in-

stance, pneumokoniosis or peptic ulcer); in such a case, when etiological factors or the results of treatment are under consideration, the enrollment of appropriate control populations becomes necessary.

Both branches of pathology, the individual and the social, require their special collaborations. Human pathology involves collaborations among the physician, the laboratory worker, and others; social pathology among the physician, the statistician, the medical social worker, and others.

I hope I may have succeeded in showing that there are close analogies to be drawn between the histories and the methods of these two sciences. Both have developed and will continue to develop their techniques for the investigation of disease in the living and the dead and both have recourse to detailed observational and experimental methods. Both may require the assistance of mathematical methods; for social pathology (of which the statisticians, the epidemiologists, and the great social surveyors have been the chief pioneers) biostatistics provide the basic science. The unit of study in the one case is the single human organism; in the other, the human population or social organism—whether this be as small as the family or as large as the nation. The pathological science in each instance is subscribed to by a variety of associate disciplines. In each case old methods must from time to time be modified or adapted, or new methods devised.

Briefly summarized, we may say that individual pathology deals with the quality and effects of diseases and, in practice, assists diagnosis and treatment; while social pathology deals with the quantity and causes of diseases and, in practice, assists prevention. Both sciences have their peculiar value, but as to which is the more likely in the long run to assist the saving of life and health and to encourage the more effective protection and development of peoples there can—from the evidence of history—be no real dispute. Their tasks, like those of individ-

ual and social medicine, should surely, by now, be more closely integrated.

In one respect the comparisons which have been drawn are incomplete. Human pathology, in its usually accepted sense, has acquired a status of its own in the medical faculties of all universities. Its associate sciences are commonly housed close together or even under one roof. Its numerous workers are given the opportunity to contribute to research and to the day-to-day teaching of undergraduate or graduate students. Outside of a few great research institutes (I speak here of my own country)—such as the London School of Hygiene and Tropical Medicine—which have served broader national and imperial needs and have had but a slender association with the life and work of the medical schools or with other scientific departments of the university, social pathology has, until lately, been accorded no position of its own. Its students, whether they work in the fields of public health bacteriology, of epidemiology and vital statistics, or in nutritional physiology, industrial psychology, or other subjects, have tended to do so in various places and in detachment and without the advantages of a presiding and coordinating discipline. Team investigations of selected populations in relation to their total environment have seldom, until recent years, been undertaken, because organization for the sampling or enrollment of populations for study was lacking. The epidemiology of diseases other than the fevers, venereal disease, and tuberculosis, and more recently of cancer and the nutritional diseases, has scarcely been considered as a function of workers in the public health field. Its outstanding importance to clinical, constructive, and preventive medicine notwithstanding, social pathology has not notably influenced clinical teachers and the regular instruction of the medical student.

Individual and social pathology, like clinical and social medicine, have developed along parallel rather than converging

lines. And yet they surely have much to give to one another. Lacking the necessary time and associations for expansion, the medicine of the hospital ward and the research unit has been contracting its field and becoming by degrees an exercise in bedside pathology, pharmacology, and therapeutic detail. The broader natural history of disease in man and man in disease has been too little considered. The too prevalent dissociation of academic medicine from psychological and sociological inquiry (without which no patient and no disease can be fully understood) engaged the interest of Cabot (1918) some years ago and has been well commented upon by Canby Robinson (1939), Richardson (1945), and others in your country. Dr. René Sand (1938) in Belgium has been a leading pioneer in the combined disciplines.

It is curious that etiology, in its wider sense, should have so far lost the interest which it had for the older physicians. While specific agents are still assiduously sought, the contemporary neglect of more comprehensive inquiry—taking into account the influence not only of specific factors and of age and sex and race and heredity, but also of economic circumstance, domestic environment, occupation, nutrition, and education—would, I believe, have attracted the adverse comment of such great physicians as Ramazzini, Trousseau, Fagge, Gull, Wilks, and Osler, were these great men to return to us today.

These modern trends in medicine have not been good for the training of the undergraduate student or for the thought of his teachers. Have we provided anything better for the graduate student? Have we helped him to a just appraisal of his functions and his problems? In general, the newly qualified doctor embarks upon his career steeped in the ideas of individual pathology, moderately well versed in therapeutic techniques, and with a smattering of psychology, but almost ignorant of social pathology, knowing little of the incidence of diseases and their mortalities and secular trends or of the social factors which are, in part or whole, responsible for their

inception or continuance. His interest in the frequency and the reasons for the frequency of the more prevalent diseases and injuries—whether lethal and crippling, or crippling but not lethal, or of the less serious type—has scarcely been awakened. The possibility of preventing them has been too little discussed with him, whether at the bedside or elsewhere. In regard to some important groups of diseases he is actually misled by terminology and his textbooks. Cholera, plague, malaria, the dysenteries, leprosy, hookworm, and beri-beri have been classified for him as “tropical,” or perhaps (if they have too recently been familiar nearer home) as “sub-tropical” diseases. And yet they have all occurred and some of them have even flourished in Great Britain and European countries and the temperate zones of the Americas at a time when dirt, poverty, squalor, malnutrition, and ignorance or neglect of sanitary laws were conspicuous among the attendant social influences. These great endemic diseases of backward populations still prevail in India, China, and Africa. Nearly all of them are pre-eminently “social” diseases and due to alterable social causes. They are, strictly speaking, linked rather with a stage of historical development than with latitude or climate. The adjective “tropical” (if we except diseases due to parasites and vectors which are only found in the tropics) is a misnomer.

Other and more chronic diseases now prevalent in Europe and the West—peptic ulcer, cardio-vascular disease, cancer, the chronic rheumatic diseases, the visceral neuroses, the psychoneuroses, and accidental injuries—also have their epidemiologies and social etiologies, but this has not been made sufficiently apparent to the mind of the student or practitioner. And yet if a graduate, stimulated by an interest in preventive medicine, desires to enter the public health service, his training for a special diploma directs his thought too exclusively to the study of fevers and the immediate material environment, to sanitary law and engineering, and to public health bacteriology and chemistry. The living human community has been

insufficiently considered as an object worthy of study, and, outside his brief apprenticeship in vital statistics, he is not greatly encouraged to consider fundamental methods of inquiry as important to preventive and constructive medicine as histology, physiology, and biochemistry are to clinical medicine.

In England the opportunities for a research training and career in social or preventive medicine have in the past been very few and to be found chiefly at such large institutes as the Lister Institute or the London School of Hygiene. The former is mainly devoted to scientific investigation and standardization at the laboratory level. The latter, while attracting famous men, providing our best graduate diploma courses and fostering first-class laboratory, epidemiological, and environmental research, has not directly fertilized the medical schools. New experiments and opportunities in other settings are now needed.

I have scarcely as yet had time to familiarize myself with the organization of research and teaching in the field of preventive medicine in your universities, and it may be that I have overemphasized the distinctions between what we have long called public health and what we now call social medicine. The main differences, however, would seem to be these:

1. Public health, although in its modern practice attaching an ever-increasing importance to the personal services, for a long time and at first for very sufficient reasons, placed the emphasis on the environment. Social medicine, deriving its inspiration more from the field of clinical experience and seeking always to assist the discovery of a common purpose for the remedial and preventive services, places the emphasis on man and endeavors to study him in and in relation to his environment. Furthermore, the immediate material environment, in the shape of housing, drainage, and water supplies, is today extended to include the whole of the economic, nutritional, occupational, educational, and psychological opportunity or experience of the individual or of the community.
2. Public health, in the first instance, and again for obvious reasons, has been largely preoccupied with the communicable dis-

eases—their causes, distribution, and prevention. Social medicine is concerned with all diseases of prevalence, including peptic ulcer and chronic rheumatic diseases, cardio-vascular disease, cancer, the psychoneuroses, and accidental injuries—all of which have their epidemiologies and their correlations with social and occupational conditions and must ultimately be considered to be in greater or less degree preventable.

3. Where hospital practice (as distinct from preventive theory and practice) is concerned, social medicine properly takes within its ambit the whole of the work of a modern almoners' department; this includes social diagnosis and social therapeutics—the investigation of conditions, the organization of after-care and the readjustment of the lives of individuals and families disturbed or broken by illness. The almoner or medical social worker also has an important part to play in teaching and in the follow-up activities of a clinical research unit.

In brief, social medicine extends the interest and alters the emphases of the older public health, just as social pathology extends the interest and alters the emphases of earlier epidemiological study.

Accepting these changes of emphasis, can a case be made for the provision of a status for social medicine and pathology in our universities and for research departments working in close association with their medical schools? If so, how should their functions be determined or how developed from those pertaining to existing schools of hygiene and preventive medicine? What nucleus staff will they require? And, finally—and to this question the title of my discourse requires a reasoned answer—what may their influence be upon the evolution and progress of the medicine of our coming age?

In attempting to answer the questions which I have posed, it occurred to me that a brief account of the Oxford Experiment and of some other developments in England might serve our purpose better than theoretical discussion or a mere statement of personal views. I can deal but briefly with descriptions here, but elsewhere I shall give a more detailed account of our experience.

What I have referred to as the Oxford Experiment has been in progress for barely four years. Nevertheless, it can be claimed that it is beginning to take shape satisfactorily, notwithstanding its difficult beginnings while the war was in progress. The staff of my small institute includes physicians, statisticians, a radiologist and a radiographer, a medical social worker, attached workers with nutritional and epidemiological interests, secretarial and clerical assistants, and (together with a regional Bureau of Health and Sickness Records which also comes under my direction in the same building) a unit served by expert records officers, transcribers, coders, and technical workers in the Powers-Samas machine room.

With the assistance of the medical officers of health for Oxford city and county, a tuberculosis officer, a physician for maternity and child welfare, a school medical officer, a public health bacteriologist, a factory medical officer, a chief sanitary inspector, and the almoners of the Radcliffe Infirmary—all working in the Oxford area—my statistical colleague, Dr. W. T. Russell, and I have undertaken responsibility for the whole of the undergraduate teaching in social medicine and public health. We provide a course of lectures, socio-medical case-conferences and field visits running through the three terms of the academic year. At the case-conferences we present cases as living texts bearing upon the correlations of disease with social circumstance; the cases are shown in turn by the house physician or a senior student and by the medical social worker and are then discussed by the professor and the class. Teaching of this kind helps to forge the essential link between the two disciplines of clinical and social medicine. The lectures, primarily intended for medical students in the clinical period, are open to graduates, medical social workers, health visitors, and health visitors in training. This course has replaced the former statutory course of detached public health lectures occupying a few weeks of the year only. The inculcation of principles and the correlation of social and clinical medicine seem

to me more important at this stage than instruction in the details of sanitary technique and law and administration. Specialist training in all subjects should surely be reserved for the graduate period.

We hold no special graduate or diploma course. I regard the best type of graduate opportunity as that provided (as in other university departments) for a small number of men or women holding senior or junior research assistantships, each working on a particular problem but all sharing in the community of interest which the institute provides. Our research programs include, or have included, a continuing child health survey between birth and five years and covering all social groups; a statistical study of the stillbirth rate in the population in relation to social and nutritional factors; a study of the effects on parturition of residential ante-natal rest; a study of adolescent thyroid hyperplasia in relation to a positive or negative history of endemic goiter and the iodine content of local waters in various parts of rural Britain; a continuing study of occupational morbidity and accidents in neighboring factories; a study of peptic ulcer in factory populations; studies of endemic fluorosis and of the fluorosis hazard in the neighborhood of certain industries which emit fluorine-containing smokes; and a long-term study of student health.

Since 1943 three departments of social medicine have come into being, at Oxford, Birmingham, and Edinburgh—the first two with endowments provided by the Nuffield Trust. Three additional chairs and departments of industrial medicine—in an industrial country occupational health and sickness furnish a large part of the problems of social medicine—have also been created by the Nuffield Foundation at Manchester, Glasgow, and Durham. Chairs of child health have been established in London, Liverpool, Newcastle, Birmingham, Leeds, Sheffield, and Edinburgh. The beginnings of life, for very obvious reasons, are particularly worthy of detailed socio-medical investigation. These chairs and departments for which the Nuffield

Foundation makes provision are given endowments for an experimental period of ten years. Thereafter, if they make good, it is to be hoped that they will become a permanent responsibility of the universities concerned.

The case for social medicine as a subject worthy of support in a university setting would seem, in fact, already to have been accepted in Great Britain, and the report of the Goodenough Committee (1944) has done much to foster the idea. I would, however, submit that if these departments are to be fully effective and successful in their contribution to teaching and research and eventually to the improvement of practice and services, two things are necessary. First, they must—with critical regard for the quality of their methods and the maintenance of standards—develop their related disciplines, the methods and techniques of social pathology and hygiology. And, secondly, in order to secure ready access to the populations in which they are interested and the collaboration of those immediately responsible for the health of these populations, they must establish a close and friendly liaison with the departments of public health, the medical and welfare departments of industry, the education authority, and the medical officers of the school services and others. They should also maintain an association with the hospitals and science departments of the university cities in which they are established. For instance, clinical medicine and departments of both social and physical anthropology may well have overlapping interests with an institute of social medicine. Any tendency to academic isolation would at once render abortive the work of a department devoted to socio-medical inquiry. Teaching in social medicine and pathology should be available for the student throughout the clinical period of his training and should, wherever possible, be related to his bedside teaching.

The expansion or modification of existing programs by established schools of hygiene and the essential two-way linkages with the clinical worker and with the field worker in

public health or industrial medicine may not be easy to bring about. Nevertheless, the experience which we have gained during the last four years at Oxford compels me to the belief that there is a case for other experiments—not necessarily identical in type—in the medical faculties of other universities. Only time can show how far our English programs will justify themselves. An appropriate research staff and men with the training and outlook necessary for the post of director in such departments are not at present plentiful. Where such senior posts are in question, long clinical and teaching experience is probably at present more important than public health or industrial experience, for socio-medical investigations are largely concerned with human assessments and socio-medical instruction should be related constantly to patients and their problems and to the natural course and consequences of disease. It is, however, much to be hoped that the public health men will also be attracted into the field and that students from departments of social medicine will enter the public health service.

In the matter of staffing I would say that whatever specialist additions may later be found necessary, the personnel of a department should include physicians, biostatisticians, medical social workers, and, probably, a radiologist. The need for a nutritional or occupational physiologist or a social psychologist will be determined by the types of investigation undertaken or by the availability of colleagues working in neighboring departments. For instance, a study of postural defects in school and preschool populations—and how can we ever advance our knowledge of their etiology merely by studying the end-result material which reaches the hospital?—would clearly require the collaboration of an orthopedist, but it is unlikely that a department of social medicine would have a place on its staff for a whole-time specialist in this category. It might well, on the other hand, employ one or more whole-time pediatric research workers, for we cannot over-emphasize the importance of the study of early life and its special hazards within its varied social

settings and of ostensibly healthy children. The study of occupational problems in industry or the home might call for quite different types of inquiry from those at which I have hinted. For instance, in the particular problems relating to man and the machine, or the housewife and her tasks, the physiologist with wartime experience of human adaptations to the tank and the airplane might bring valuable experience to bear.

Under our new National Health Service the country will, for the purposes of administration and the hospital service, be divided into a number of regions. Where possible, a university with a medical faculty will provide a parent hospital for the region and help to influence the quality of the service and to provide what might be called its medical intelligence bureau. It would seem to me that a university department of social medicine could come to have high value, both academic and social; could maintain a coordinating interest in the vital statistics and survey work of the area, and assist in the study of the particular hazards for the peoples of the region created by main industries or retarded social development. Retaining academic liberty and without coming within the immediate sphere of state administration, it could yet have a healthy influence upon the conduct of an evolving service, could help to encourage salutary emulation among regions, and—with the aid of its statistical and records' departments—serve perhaps as a local Registrar-General's office in miniature and provide therein a training for biostatisticians and research apprenticeships for physicians and medical social workers.

I come lastly to the most important and yet the most difficult question which I have set myself to try to answer. Speculation is not my habit, but this great centenary gathering, this hour in history which we all hope to look back upon as a moment of pause between two eras—a bad one and a better—tempt me to invite my native optimism and emergent ideas to go into partnership for the occasion. "What," I have asked, "may be the larger influence of these new directives for medical and social

thought and action? How may they assist the general evolution of medicine in the new age that lies ahead of us?"

Our great contemporary biologist and humanist, Julian Huxley, has discussed the transition now in progress from the age of "economic man" to the age of "social man." Our profession, which is so particularly concerned with man and his welfare, must assist this transition with all the scientific and humanist wisdom at its command. Hitherto, our science, like our practice, has evolved along individualist lines. Whatever the several countries may do with regard to the modification of their systems of practice and of service, it seems to me that the scientific study of health and disease in man, the most complex of all social animals, must henceforward concern itself to an ever-increasing degree with the interactions and correlations of disease and health with changing social circumstance. Socially, industrially, politically, we are creating a new age. With it, inevitably, we alter the whole character and distribution of diseases and set ourselves new problems for solution in the fields of medical science, practice, and administration.

Some of my friends have rebuked me for leaving the clinical fold. I reply in effect that I have merely taken the necessary steps to enlarge my field of vision and to increase my opportunities for etiological study. My allegiance to human medicine is in no whit broken. I wish I could convey to them and to you some of the sense of stimulation and rejuvenation that my close association with statisticians and medical social workers and with men and women in the public health and industrial health services has brought to me. Thirty years of my life have been spent as a student and teacher of clinical medicine. In these thirty years I have watched disease in the ward being studied more and more thoroughly—if not always more thoughtfully—through the high power of the microscope; man in disease being investigated by more and more elaborate techniques and, on the whole, more and more mechanically. Man, as a person and a member of a family and of much larger social

groups, with his health and sickness intimately bound up with the conditions of his life and work—in the home, the mine, the factory, the shop, the office, or on the land—and with his economic opportunity, has been inadequately considered in this period by the clinical teacher and the hospital research worker.

The medicine of the teaching schools has, as I have suggested, undergone a gradual conversion to a highly technical exercise in bedside pathology and therapeutic method. The morbid "material" of the hospital ward consists very largely—if we exclude the emergencies—of end-result conditions for which, as a rule, only a limited amount of relief repays the long stay, the patient investigation, and the anxious expectancy of the sick man or woman. With etiology—the first essential for prevention—and with prevention itself, the majority of physicians and surgeons have curiously little concern. Nor have they at present the opportunity or the appropriate types of training or assistance requisite for the study of etiology or prevention. Their material is mainly selected by four factors: the gravity, the difficulty, or the rarity of their cases, or their suitability otherwise for admission to a hospital. Some of the most common diseases, the less lethal diseases, and the beginnings of disease are even considered as providing "poor teaching material." Health and sickness in the population and their possible correlations with significant and measurable social or occupational influences are outside their province.

Reverting, for a moment, to the question of the prevalent non-communicable diseases, our modern endemics, let us take as an example a particular type of disease, one in which I have long been interested: gastric and duodenal ulcer. We have watched these diseases, which were at one time, judging by earlier records of the clinic and the dead-house, relatively rare, becoming in the course of two generations two of the most common of all diseases. Their incidence is still rising. If the combined total of living persons who now have or have had an ulcer in America and the British Isles could be computed, they

would be found to number not tens or hundreds of thousands but millions. Every endeavor, orthodox and unorthodox, medical and surgical, has been made to discover a cure, but with no very outstanding or encouraging results. Animal and laboratory experiments have carried us but a very little way in the assessment of cause. And yet the causes (for ulcer will probably find its place among the "multiple stress" diseases) must have been developing contemporaneously with rising incidence. A disease which was once rare can become so again. Until we study the victims of the disease at first hand and in relation to their work, their total occupational experience, their communities, their food, their habits and anxieties, and their innate predispositions, we are not likely to obtain the answer to our question.

And here, briefly, are some other examples from among our outstanding socio-medical problems of today. In 1946 Sutherland showed that there is strong evidence of relationship between the stillbirth rate in England and Wales (at present depriving us annually of 20,000 potential citizens) and the nutritional experience of a population. Before the war the infant mortality at three to twelve months in the unskilled worker group in England and Wales—a mortality sustained largely by environmental conditions—was four-and-a-half times that in the professional classes. Rheumatic heart disease, like tuberculosis, has a close correlation with poverty and crowding. The mortality from gastric and skin cancers among the working classes is twice as high as that in the professional classes. Angina pectoris—and coronary disease is taking a higher toll each year—has a death rate among doctors that is twice as high as it is among bank and insurance officials and nearly twelve times as high as it is among agricultural workers. Facts of this kind should surely be known to every medical student. Until they are known and widely discussed and subjected to further analysis, the appropriate education of the profession and the public and the enlightenment of the legislature cannot follow, and

necessary protective measures and social planning must inevitably be delayed.

One of the most disturbing thoughts in our present age is the long lag between the arrival of new knowledge and necessary action. In some directions you tend to move faster in America than we do. We still have to confess that milk pasteurization in England is far from universal. We paid for this delay recently with some 600 childhood deaths from bovine tuberculosis and 2,000 non-fatal cases in each year. Although the diphtheria immunization crusade is now steadily extending, we have also to admit that the deaths from this preventable disease among children during the war years exceeded all those due to enemy action. In all countries infectious disease and poor nutritional opportunity take too high a toll of the working classes. In England we have shown during the war what a fair distribution of food can do even in otherwise exacting circumstances. With our declining birth rates and aging populations in Europe and the West, we cannot afford to neglect the study of how we may further reduce, in particular, our ante-natal, infantile, and childhood deaths.

For a very long time we have accepted the old adage: "An ounce of prevention is worth a pound of cure." In our new era the belief in it—for of its truth there can be no doubt—must be made ever more manifest in our research and its directives and in our teaching. The most conspicuous interest of the student ten or twenty years hence will, I hope, be no longer in the rare or difficult and too often incurable case, but in the common and more understandable and preventable disease. May the daily questions on his lips become not "What is the treatment?" but "What are the causes?" and "If preventable, then why not prevented?"

The study of the ultimate causes of disease—the protocatartic causes, without which the specific factors can never find their opportunity—goes hand in hand with the study of the causes of health; and how much we have still to learn of the

meaning and measurement of health. When social pathology and hygiology come into their own we may witness a return—this time with fuller scientific authority for the guidance of the people and their teachers and rulers—of that ancient pride in health as a cultural objective which has been largely in abeyance since the days of the old Greek civilization.

The training of the doctor, which began with observations on and the care of the sick individual, is due now for a great forward stride. Observations on whole communities, whether great or small (or on appropriate samples), and improved health provisions for them must henceforward become the prior objective. The individual is not likely to suffer neglect in the process, for all communities are composed of individuals. For generations we shall doubtless continue to build our costly hospitals and clinics, and require our armies of practitioners and ancillaries, but meanwhile we must at least embark upon the crusade which will end in the steady reduction of waiting-lists and the closure of hospital wards, and which will eventually put the physical, mental, and moral health of peoples before their material wealth. In that crusade—whether by our researches, by realistic reforms in teaching, by the better education of the people, or by direct representations to government—it is our first duty as physicians to explore and prepare the way.

I submit that we can only do this effectively by electing to pursue the study of social man in sickness and in health as assiduously as we have hitherto pursued the study of individual man in the isolation of the consulting room or the hospital bed, when health has finally passed him by. The quality of our actions and our practice and of our leadership in social reformation will depend, as in the past, on many disciplines but not least, perhaps, upon the science whose history I have briefly sketched and whose province I have endeavored to define.

The Integration of Clinical and Social Medicine

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CLINICAL and social medicine are kinetic, living concepts. As such they must either grow or atrophy, for nothing living can remain static. We must assume that both fields will continue to expand as the borders of knowledge are extended. Our discussion must therefore necessarily be more exploratory than explanatory. Before exploring the potentialities of integration, let us first examine briefly the meanings of both clinical medicine and social medicine. These terms mean many things to many men. It may be wise to present one man's interpretation, not with the idea of advocating its general adoption, but with the hope of avoiding unnecessary confusion.

Clinical medicine is so immensely broad a field that it cannot be defined adequately by any single phrase. Its meanings depend greatly upon the viewpoint of the interpreter. There are those among the ivory-towered experimental scientists who consider clinical medicine a prostitution of science by the practice of conjecture. Modern medical dictionaries define clinical as "relating to the bedside of a patient" and "pertaining to the symptoms, signs, and course of disease, as contrasted to observed anatomic change." Two fundamental associations are implied: clinical medicine pertains to *disease* and to *individuals*. Therapeutic techniques include physical measures (rest, heat, radiation), chemical substances (both pharmacologically active and nutritional), surgery, environment control, and last—though by no means least—psychotherapy. Let us not forget that education, whether applied to the individual or to the group, is psychotherapy, treatment of the mind. In essence,

clinical medicine has come to mean the application of medical science to the *sick individual*.

Conventionally, the focus of attention has been on disease. The medical student is introduced to clinical medicine through the study of the characteristics of specific disease entities. It has become customary to classify and organize our knowledge of disease into the convenient and useful subdivisions of: (1) etiology; (2) pathogenesis and pathology; (3) differential diagnosis; (4) prognosis; and (5) therapy, with the relatively recent after-thought that therapy includes prevention. Throughout the student's medical course and postgraduate career, he is both consciously and unconsciously indoctrinated with the concept that his responsibility is to identify specific diseases and to treat them by any and every means at his disposal.

The objective of all clinical study is to enhance the efficacy of therapy. All other facets of clinical medicine are subservient to this purpose. Accuracy of diagnosis is essential to the formulation of therapeutic plans; understanding of pathogenesis and pathology is requisite to safety in therapy and wisdom in prognostication, which is part of therapy. But the most significant element is the etiology of disease. Without comprehension of causation, prevention is hamstrung and curative therapy empirical and symptomatic. Symptomatic therapy is treatment by appeasement and we all know how dismally ineffective it can be. Symptoms are not necessarily direct evidences of injury, but usually signs of reaction on the part of the patient's defense mechanisms so that appeasement may make for perpetuation and aggravation of the illness.¹

The intimate and fundamental interrelations between the patient who has the disease and the disease itself are illuminated by an analysis of causation. Causation is always a combination of multiple factors. Nothing happens from just a single cause. This is as true of wars, marriage, explosions, floods, or earthquakes, as it is of disease. It would be immensely bene-

ficial to all our thinking if the singular of the word "cause" were deleted from our vocabularies, and the more flexible term "causative factors" used in its place.

Causative influences are amenable to analysis. They fall under three categories: predisposing factors, provoking factors, and perpetuating factors. These three types of influences are invariably present in the causation of any and all illness, although they are not necessarily of equal importance. Environmental or social factors, though more often predisposing, may act also as provoking or perpetuating influences. The impact of the environment may be abrupt, violent, and obvious or continuing and insidious.

The concept of specific entities and specific causes in disease, introduced by bacteriology and fixed by the dogma of Koch's postulates, has been overworked. In one sense, bacteriology has retarded medical thinking, though none can deny its immeasurable contributions. Even infective diseases are caused by all three groups of factors mentioned. Here the entities are fairly clearly distinguishable. But when we consider the degenerative diseases, we must forget the concept of specificity. The degenerative diseases overlap. The etiology in each and every instance, though following general patterns, differs in detail.² We are what we are today because of what happened to us yesterday. And each of us has had different yesterdays.³

A more general appreciation of the significance of the above fundamental classification of causative factors and greater individualization in the etiological analysis of instances of disease must improve the integration of clinical and social medicine. The significance of causation lies in the fact that effective treatment, whether preventative or curative, is predicated upon thorough elimination or control of causative influences. We can hardly expect to obtain a lasting cure of a sore heel if we neglect the nail in the shoe.

Thus far our attention has been focused on disease. What about the individual? Is not his welfare the principal justifi-

cation of all medical effort? Must clinicians be interested only in the man who is so sick that he is disabled? Hasn't medical science something valuable to offer the healthy as well as the sick?

It becomes increasingly clear that clinical practice must concern itself more and more with the apparently healthy. Pediatricians have long since demonstrated that it is perfectly feasible to guide apparently well babies and children to better health. Preventive medicine on an individual and personal level can and should become one of the more important branches of clinical medicine. Clinicians have left preventive guidance to the public health services too long; the wholesale approach is not the only avenue.⁴

Health is relative. Our medical teaching today too often follows the antiquated definition of health as "that state of being existing in the absence of disease." Health is more truly an abstraction, an ideal and, as such, perfection in health is probably unattainable. If we consider health as that state of being in which all functional capacities of the organism have maximum reserves, we see at once that invariably there must be room for improvement. The degree of health parallels effectiveness in living; contrariwise, disease induces ineffectiveness in the somatic and psychic activities of living. The mensuration of health, which closely parallels the measurement of biological age as contrasted to chronological age, is most difficult and requires exceptional diagnostic acumen and understanding of the mechanisms of homeostasis.⁵ Health measurement involves stress tests for the evaluation of functional reserves. An entirely different diagnostic philosophy is requisite; we are no longer seeking to discover specific disease entities or even clinical syndromes, but attempting to measure biological effectiveness in adaptation.

The objective of the diagnosis and therapy of disease is the reconstruction of health. The objective of periodic health inventories and consultations applied to those relatively well is

a construction of health.⁵ Constructive medicine endeavors to build health up to optimal levels. This is a new therapeutic objective to be added to the more conventional goals of cure, prevention, palliation, and control.⁶ Now, for the first time, the primary concern is with the individual rather than the disease.

Constructive medicine is more than preventive, though it includes procedures intended to prevent avoidable illness. (Particularly hopeful is the possibility of retardation of the chronic progressive disorders of later maturity.⁸) Its appeal is more direct than that of prevention. The efficacy of prevention is demonstrable only by statistical analysis; statistics have little emotional appeal in motivating people. The profits of improved vigor, endurance, euphoria, and usefulness are direct and personal. Personal, clinical, constructive medical guidance must be sought, however; it cannot be given. The initiative must be taken by individuals.

Thus, it is in the development of constructive medicine that integration of clinical and social medicine presents the most significant potentialities. The primary focus in clinical medicine should be upon the individual rather than upon the diseases which beset him; this applies to mental as well as to physical health.⁷ We must treat the person, not his illnesses, for health is relative.

Social medicine, on the other hand, is concerned with man as a member of society. Crew defines social medicine as medical science in relation to groups of human beings.⁸ Attention is focused upon the external, social, and physical environment rather than upon the internal physiological milieu of the organism man. Professor Ryle emphasized that social medicine was concerned with social pathology. Is it not also concerned with social physiology? Social medicine deals with health *en masse*; we may contrast the two fields as wholesale versus retail. Social medicine is public health maturing. As with the maturation of an individual, there appears a growing breadth of view and awareness of correlations with other sciences hereto-

fore neglected. It is only recently that public health thinking has considered the maintenance of health something more than the prevention of specific disease entities.

Social medicine is not a newly created discipline. The maiden, public health, has married sociology and changed her name. Though altered by this phenomenon of maturation and learning from her consort, she carries with her all the hereditary and acquired characteristics of public health which we know so well.⁴ Let us hope that this marriage is a fertile union.

Social and clinical medicine have identical objectives. They seek to approach their common goal by different routes and techniques. Both are concerned with health, the one individually, the other collectively or environmentally. As man cannot be isolated from his environment, it is inevitable that there are innumerable points of contact between the two disciplines. At some points smooth amalgamation exists; at others there is friction, in part because of very human jealousies, but largely because amalgamation is impossible unless the surfaces are scrupulously clean. Any film of misunderstanding prevents fusion. There have been many points of successful coalescence between clinical and social medicine, but there are much larger areas where the potentialities of integration have not as yet been developed to full effectiveness.

The immense value of modern sanitation and control of exogenous epidemic infective diseases of youth is reflected in the dramatic increase in average longevity over the last half century.⁹ The advance of average life expectancy at birth, from 47 years in 1900 to approximately 64 years today, is attributable largely to advances in knowledge in bacteriology and the application of this understanding in controlling the environment so that contact with pathogenic organisms and other noxa is avoided.¹⁰ These magnificent accomplishments enhancing survival in youth, however, have created a new and urgent problem: the rapidly rising incidence and social burden of the chronic, progressively disabling disorders associated with se-

nescence or later maturity.¹¹ This is no time to rest upon the laurels of one victory won; a more difficult battle lies ahead.

The limitations of time preclude anything resembling an adequate statement of the significance of these chronic and progressive disorders to the field of social medicine.^{3, 4} Here is subject matter ample for another conference as comprehensive as the present institute. The problems of health in later maturity are among the most complex of all those facing medicine and society today. The social costs in loss of productivity, personnel, and institutions required for medical care are incalculable. There is ample justification for alarm and an urgent need for immediate and intimate integration of the efforts of clinical and social medicine.

At least four avenues of cooperative approach are immediately apparent: (1) development of facilities for research into the etiology of these disorders; (2) development of facilities for better reconstruction therapy and at least partial rehabilitation; (3) development of means of better social utilization of the wasted productivity of the partially impaired; and (4) public education.

Understanding of causation is the foundation of modern medical science and practice. It is equally the foundation of social progress. Causative factors may be variously analyzed. Etiological factors may be divided into two major categories on the basis of their point of origin: exogenous and endogenous factors. These may affect causation as either predisposing, provoking, or perpetuating influences. The causation of the diseases of youth is largely exogenous and often single, and is, therefore, amenable to study by the methods of social medicine, which is chiefly concerned with the environment. The etiology of the degenerative diseases of later years is far more obscure, involving multiple factors which are predominantly endogenous, and therefore individually variable.^{2, 11} It is extremely doubtful as to whether the techniques of social medicine can

be as effective here as they have been in discovering the causes of infective diseases. Nevertheless, the more intensive application of biometrics, actuarial science, epidemiology, and toxicology to these disorders may reveal significant exogenous contributory factors. Clinicians frequently suspect certain etiological correlations between disease and environmental factors, but such correlations must be verified by extensive statistical analyses before they become valid. Obvious examples are the relation of dust exposure to silicosis and tuberculosis,¹² the relation of obesity to diabetes mellitus,¹³ and the factors involved in industrial absenteeism.¹⁴

Social medicine can do more than it is presently doing in obtaining and disseminating information regarding the urgency of research in certain areas. Take, for example, the data obtained by Dr. Henry Simms.¹⁵ A careful survey of expenditures by both privately endowed or supported institutions and investigators and of expenditures of public moneys for medical research in the year 1940 revealed that for each death due to infective diseases in 1940, \$4 was spent for research into these disorders; for each death due to cancer, \$2 was invested in cancer studies; for each death due to poliomyelitis, \$500 was assigned to research; and for each death due to circulatory disorders only 17 cents went for research in this field. Such gross and absurd asymmetry of public interest and support can be ascribed only to sentimental or political motivation, certainly not to logic.

Cardiovascular disease, and particularly arteriosclerosis and hypertensive disease, are the most significant health hazards today.^{3, 4, 16} Incapacitating mental disease may be more conspicuous as a cause for hospitalization, but a great and increasing percentage of the institutionalized mentally ill suffer from arteriosclerotic and/or senile dementia.^{16, 17, 18, 19} About half of the staggering patient load in hospitals for the mentally ill are disabled because of chronic vascular disease. The fact that the

two groups overlap has been ignored in most statistical studies. Why? Because social medical statisticians interpreting the data lacked clinical comprehension.

Clinical medicine has been so beset by emergencies and attention to the severely disabled that there has been little opportunity or inclination to be concerned with long-term planning of facilities and programs for medical care. This is one of the reasons for the long neglect of constructive medicine for adults, previously mentioned.⁵ Too few clinicians have the perspective necessary to visualize both the individual and social or collective problems involved in improving the facilities for medical care. Too few of those in the field of social medicine are fully aware of the true clinical needs. As a result, clinicians have gratefully accepted the hospitals and laboratories supplied by philanthropic lay boards, hospitals often built and operated with little understanding of over-all needs.

With the change in the character of the disorders menacing the health of the community, there is need for wise planning of the expanding future facilities. Chronic disease, both physical and mental, demands special facilities. Too often plans for the care of the chronically ill and the aging envisage only custodial service. Institutions for the chronically ill must have facilities for extensive research if we hope to discover the causation of these disorders and learn how to prevent, retard, or control them. Because of individual variation in etiology, the approach must be by clinical, not impersonal, methods.

Few indeed are those among the millions of partially disabled arteriosclerotic, cardiac, arthritic, orthopedic, and mentally ill patients whose health cannot be improved, often to the point where they may once again enjoy the privilege of being useful, if only to a limited degree. Properly sheltered and guided, even the severe cardiac cripple can be productive. Society must learn to recognize that disability, like ability, is relative. Perhaps our recent dependence upon military thinking has aggravated the unfortunate attitude of absolutism. The

concept that a man is either fit for anything or he is useless is an absurdity we cannot afford in the face of the increasing age of our population.⁸

Thus it becomes an important function of social medicine to study and enhance facilities for rehabilitation. Comprehensive attack upon chronic progressive disability must include occupational training and the providing of suitable occupational opportunities either in or affiliated with medical institutions. Utilization of skills and productivity is more than a problem of industrial personnel administration.²⁰ It is part of social medicine.^{3, 21} The immense and growing question of the care of the aged and infirm^{11, 22} must likewise consider the maintenance of usefulness for as long as possible. The tragedy of chronic illness or senility does not lie in physical discomforts but in uselessness and awareness of parasitism. Veterans and civilians alike have the right to work so far as they are able.

These are areas in which social medicine and clinical medicine have a heavy joint responsibility. With intimate integration of the two disciplines, these problems, serious and complex as they are, are not insoluble.

There exists one major temptation which must be resisted. Sympathy for the partially disabled must not be permitted to make disability profitable or desirable. Faith, hope, and charity must not substitute for work and intelligence. Intelligence should supplement these fine emotions; they are not antagonistic. Patients need incentives to regain as much health as possible. If there is no hope of future employment, incentive is lost and the nation accumulates an ever-increasing burden of useless dependents. Pampering paternalism must be avoided. Recent years have shown how insidious its poisoning can be. Complete support of the unfit by the fit cannot continue indefinitely.

No amount of generosity or good intentions can give health. Health, especially in the later years of life, must be earned by intelligent, individual effort. Facilities are needed, but they

must be wisely utilized. Health is a privilege and not a right and, as a privilege, entails the responsibility of maintenance.⁴

Let us not fall into the error of rewarding those who through carelessness, ignorance, or wilful neglect jeopardize their health. It would be a step forward if society would frown upon those who failed to exert themselves in maintaining their health. In addition to the obvious personal reasons for health maintenance efforts, there is the social obligation of maintaining work efficiency for the benefit of the community.²¹ The relationship of the individual to the group is reciprocal: he is affected for better or worse by his physical and social environment and simultaneously he affects his environment by his existence and behavior.

The last but perhaps most important point of integration between clinical and social medicine which we intend to mention is that of education.²³ The clinician is distressed many times daily by the appalling ignorance of his patients as to how to operate the delicate and precious machines which are their bodies and how to develop the potentialities of their minds. It has been rightly said that most illness in later years is the result of abuse of the organism.³ If we hope to reduce the tragic load of chronic disease, we must teach people how to live more wisely within the framework of biological laws and how to avoid unnecessary violations. For every violation entails a penalty, though often it is occult and not immediate.

Sir Edward Mellanby has said: "The difficulty I foresee is not that of obtaining knowledge, but of its application to human needs. . . . Much of the new knowledge to be gained may concern the prevention of disease, and especially the prevention of chronic and degenerative disease. The adoption and application of this knowledge will generally depend on the degree of education and wisdom of individuals. Without an enlightened public opinion, the average individual will do nothing to save himself or herself, and the State even less."²⁴ It becomes a major responsibility of the medical sciences to supply

the material for education in health and to stimulate the desire for such learning. Mental and moral hygiene are equally essential to health.⁷ The individual is indivisible.

The desire for knowledge is of primary importance. Education is a failure if this is not successfully cultivated. Admittedly, many are immune to education. In matters of health there should be ample motivation for the effort of study necessary for learning. There is a vast difference between the mere pupil and the true student. The student studies. Education must be both retail and wholesale: in clinicians' offices, in schools and out, and presented by every means of communication available. It must not be over-simplified, too remote or impersonal, nor made nauseating by infantile content or delivery. Above all, health information must be realistic. Scientific accuracy and comprehensiveness in educational material are vital. One views with some alarm certain recent programs to train health educators without a truly scientific biological and medical background.

It is suggested that the information most urgently needed by the people pertains to:

1. The fundamentals of their structure (anatomy)
2. The fundamentals of the workings of the machine which is their body (physiology and nutrition)
3. The fundamentals of causation of disease; the consequences of abuse
4. A sense of individual and social responsibility for health maintenance
5. The magnitude of the problem of health conservation and the price (social or personal) of mental and physical illness
6. The potentialities of continuing development despite partial disabilities
7. The relativity of health; the consequences of senescence and the limitations of the human organism

Man is the core of medicine. Visualizing individual man in relation to the cosmos, we see that on the one hand he is composed of myriads of minute cells and microscopic structures

operating in health as a highly integrated, harmonious, co-operative, semi-conscious, cellular biochemical organism. On the other hand, man, when multiplied many-fold, becomes society. But the whole is more than the sum of its parts. As man is composed of cells, so society is composed of men. Man, the individual, lives in two concomitant environments. Both are complex. The tissues and chemical reactions and equilibria of the organism constitute the realm of the biological sciences; the social and external environment is the realm of social medicine. Clinical medicine, between these two, is concerned with the indivisible individual. Psyche and soma, internal homeostasis, growth and atrophy, and adaptation to external environmental forces are all part of the domain of clinical medicine. Looking at man with the naked eye he is an individual. Studying man with microscopes, both visual and electronic, he is biological. Stepping back and viewing man through a telescope, he becomes a small unit of society. All three perspectives are requisite for full comprehension.

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Preventive and Social Medicine

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MEDICAL thought and medical education can be considered from two points of view. There is what might be called the horizontal concept: with anatomy, physiology, biochemistry, and the like as separate disciplines without integration; pathology, bacteriology, immunology, and so-called public health equally separate and unto themselves; and finally, medicine, surgery, obstetrics, pediatrics, psychiatry, and the like considering themselves as the end of all the means. But where in this departmental scheme of things is Man and his happiness, which should be the ultimate goal of all our thoughts and endeavors?

The other view of medical education and practice of what I call the vertical and humanistic concept comes much closer to the considerations of this institute. Its aspirations should be to view man individually and collectively as living, loving, hating, and propagating units of a biological species which has one additional but rather dubious attribute called the mind.

The physician, in the broadest interpretation of the word, carries a great burden of responsibility for human happiness and the welfare of mankind. He can no longer maintain a role whereby he makes a good living only through the diagnosis and therapy of organic disease, and incidentally acquires a favored social position. Our people are crying for guidance out of the darkness of their ill-health. They are demanding a new Moses, not merely to free them from their physical and spiritual bondage, but also to prevent the recurrence of such imprisonment.

The manner whereby the prevention of infectious diseases might be achieved was conceived in a vague way before the era

of Pasteur and Lister. Dr. Jenner and Lady Montague understood the fundamental concepts of individual protection which have been followed by vaccination against typhoid and paratyphoid fevers, tetanus, diphtheria, typhus fever, whooping cough, tuberculosis, and so on. The sanitary engineers have taken over from the medical profession the control of water supply, sewage, and garbage disposal, the inspection of milk, meat, vegetables, and canned goods. Today we take these services for granted and sink back into smug satisfaction to devote our time and energies to the diagnosis and treatment of established organic disease.

The traditional concept of the teaching of medicine and its practice is arranged on lines which emphasize disease and take health for granted. But it is a serious indictment of our medical training and practice that nearly 50 per cent of our young men and women were considered unfit to defend their country in time of national emergency. The vast majority of these disabilities had developed through bad personal habits or community environment. The causes of their unfitness were almost equally divided between physical and psychological conditions. Can we be so neglectful of our responsibilities as to be concerned only with disease entities and not their beginnings?

It is quite true that we do not know the cause of rheumatic fever and have difficulty in recognizing its insidious and stealthy invasion. We cannot detect arterial hypertension until organic and functional derangements are irreversible, and the origin of most cancers still is elusive. But these play a comparatively small part in the great number of disabilities which plague mankind. It has now been amply proved that social and economic conditions contribute materially to the initiation and perpetuation of these organic lesions. The great majority of the medical profession may claim that this is beyond their responsibility. It is theirs to diagnose and treat the consequences of these primary causes called diseases. But over and above the specific organic diseases there is a vast wastage

and consequent human misery, both physical and spiritual, which presents a challenge to the medical profession for exploration and solution. It is somewhat ironic that periodic health examinations should be principally patronized by those over forty years of age. Why not a periodic family examination to explore the economics, housing, clothing, and nutritional conditions of these young people? Why not examinations of their emotional strifes and stresses, their sexual incompatibilities and misunderstandings, their fear of want and insecurity! These are lurking as nemeses over their spiritual consciousness with untold subconscious repercussions.

There are many minor but insidious disabilities which interfere with happiness and effectiveness, such as corns, flat feet, hallux rigidus, all due to bad shoes; constipation, the curse of womankind dating from childhood; pyorrhea and bad mouth hygiene; chronic otitis media, accepted as a natural condition to be treated with a vicious plug of absorbent cotton; scoliosis from inappropriate school desks; and so on. These problems should be our concern; their solution part of our daily jobs.

The question can be rightly asked: Are we as a profession condoning overcrowding, promiscuity, malnutrition, bad clothing, and other personal environmental conditions which cause physical and spiritual disabilities? These issues may seem heretical if our whole concept of medicine is solely the curing of the organic disabilities and not their prevention. We have been too much concerned with the preservation of life as against the prevention of those simple disorders which lead to physical and spiritual unhappiness. I would recommend to every practitioner of medicine, whether general or specialist, to read weekly or oftener, the Twenty-third Psalm—six short verses, but one of the most poignant cries for physical and spiritual happiness ever uttered. It deals with simple things—pleasant environment, emotional quietude and comfort, physical health, security, good nutrition—"surely goodness

and mercy shall follow me all the days of my life"! This is the essence of both preventive and social medicine.

Although synonymous, there is still an essential difference between preventive and social medicine. A physician, particularly a teacher who attends his outpatient department, is constantly enmeshed in the problems of both preventive and social medicine. He must attend the farmer from the plains of Europe who is constrained to live in an urban environment in America which is foreign to him in language and trade; the older men or women who still are energetic but find the tempo of modern industry beyond their capacity, though not their skill; the young man or woman with a mild or negligible physical disability whom the company physician has rejected as an unjustifiable risk; and so on *ad infinitum*. He must instill in his students a concept that spiritually or psychologically maladjusted people make up about 60 per cent of the suppliants for relief. There may be a physical disability; on the other hand, environmental and social conditions may be the crux of the situation and thus of more importance to the patient than heart disease, hypertension, tuberculosis, and cancer. There was a time when many were brushed off as "neurotics" and disposed of in a cruel and stupid manner. The whole trend of modern medical education is veering from such practice, however.

How has this been done? By giving the undergraduate student a true concept of the miseries of mankind, both spiritual and physical. This is where a dean of a faculty of medicine can exert a subtle influence quite beyond his ordinary professional function. I have a firm belief that the medical student is father to the practitioner, whether physician, surgeon, obstetrician, pediatrician, or psychiatrist. Therefore the student must be guided in his thinking in a vertical manner. He must be inculcated with the concept that man as a person is not just a cancer, a duodenal ulcer, a heart disease, or what have you,

but that these conditions are incidental to man's claim for happiness—in the last analysis it is his social adjustment which matters most. Therefore, to the undergraduate student preventive and social medicine should have an extended meaning: it is man's adjustment to his physical and emotional environment. This means his happiness, his pride and satisfaction in his work and in his home and community. It includes the idea of medicine designed for the service of man as a fellow citizen. To this end we should devote our intellectual equipment toward a better understanding of all man's physical, emotional, and environmental troubles which contribute to, or are inimical to, his well-being, and not concentrate merely on removing or alleviating a specific threat to life.

It has been claimed by many that medicine has been submerged in a sea of technology. If this is so, is it not just one of those over-swings of the pendulum which will in a short time return to a more reasonable equilibrium? Let us for a moment review the situation. There are, by and large, three accepted prerequisites for medical education, namely, chemistry, physics, and biology. Schools and colleges have provided more or less excellent facilities for such training. These are the principal disciplines required for the medical courses in anatomy, physiology, and biochemistry which, in the horizontal plane, prepare for medicine, surgery, obstetrics, pediatrics, and the like, with pathology and bacteriology in that hyphenated zone connecting alpha and omega.

What would happen if we also required sociology, psychology, and economics as prerequisites? An evolution or synthesis of the natural and social sciences would be a good thing for those in charge of education to consider seriously. In the meantime medical faculties must give a great deal of thought as to how they may bridge this gap. They must take the problem under their own wing and introduce into the first and second years of the medical curriculum simple but fundamental

courses dealing with biopsychology and biosociology (both rather indefinite terms) to condition the students to the goal of considering man as a person, not as a pathological specimen or a case of this or that.

I am convinced that this can be done with perfect sympathy and understanding at the undergraduate level, in collaboration with the anatomist, who finds it a rare relief to discuss social anthropology; the biochemist, who is at home in nutrition; and the physiologist, who yearns to collaborate in teaching the adaptation of man to an abnormal habitat.

One could extend this association of preventive and social medicine into a wide range of ordinary incidents of life, such as the impact on the ear and eye of unusual noises and sights which unconsciously influence our reactions to our fellow man and the family. It is essential to explore diligently why mankind is unhappy in his particular physical and spiritual environment and lay down proven means for his emancipation.

Medical students must have some first-hand experience in the practical side of these questions. Where can he obtain this better than in an outpatient service, health center, or any place where the economic, emotional, and familial factors are inquired into as part of the total medical history and not subservient to only organic disease.*

The vertical concept of medical education must permeate the whole of our pedagogy. It is impossible for a faculty of

* Since these notes were written, the curriculum of the Faculty of Medicine at McGill University has been changed in the following manner: In addition to courses in sociology and psychology applied to medicine, medical statistics, vital statistics, medical economics, and the traditional instruction in preventive medicine and hygiene—all of which run in sequence or parallel through the first two years—time has been allocated in the third year to the Department of Health and Social Medicine for practical instruction and training in field work. This time is the same as that allotted to obstetrics, pediatrics, and psychiatry. It is greater than that given to surgery (ratio 6 to 4) and almost as much as that for medicine (ratio 6 to 8).

medicine which draws its students from the whole world to lay down too rigid prerequisites. These must be reduced to a minimum.

In addition to the requirements of physics, chemistry, and biology, the student should concentrate on some branch of knowledge such as mathematics, philosophy, the classics, languages, or economics, and so train his mind as the athlete would his body, not store it with bits and pieces of unrelated flotsam and jetsam. On this foundation the medical student can build an intellectual structure with serenity. A plan can then be introduced to make him appreciate the role of the preventive and social aspects of medicine. But this must be started as early in his medical career as possible and must be parallel with anatomy, physiology, and biochemistry, otherwise it becomes a side issue and the really human concept, the happiness of mankind, takes a second place.

General practitioners are diminishing in numbers—by death and retirement. Why isn't the rising generation taking their places? Without general practitioners, trained in the proper manner and ideals, the hopes for the future practice of preventive and social medicine on a large scale cannot be realized.

An uncomfortably large number of the medical officers of the armed forces are aspiring to meet the qualifications of the various specialty boards. Without such certification they think that they cannot obtain a respectable position on the staff of any hospital of reasonable quality. Nor is this the sole cause of our dilemma. I have believed for years that the lack of migration of young doctors to rural, village, and small-town environments has been due to the poverty of means to practice up to the standards of their education.

The ways of the practitioner in the rural and semi-rural areas are much different from those of his urban counterpart. Yet we have not provided training for rural practice. I confess

it is difficult for most medical faculties to arrange such graduate study and training, but surely it is not beyond the range of our combined ingenuity.

In Canada, 45 per cent of all practitioners consider themselves specialists. This leaves only about 55 per cent, at the most, concerned with personal preventive and social medicine. We need more adequately trained doctors, public health nurses, and social workers. But a four-year course in the last seems too long an apprenticeship. Are social workers and public health nurses educating themselves out of the scheme of things? Are we requiring artificial standards which are unrealistic for the job in hand?

There is no use criticizing governments for not providing money. They cannot buy the personnel to do the job. The time has come for us to take stock of ourselves. It is futile and childish to criticize governments because they do not provide what we and our associated educational disciplines are not producing in volume and in time.

There must be some faculties of medicine that can so organize graduate training based on high ideals and standards of expert attainment that it will attract men and women to be general practitioners, public health nurses, and social workers in large numbers. But even if this can be done, communities must provide the facilities to make it possible for these young people to practice their profession without a sense of inferiority and frustration. If this can be brought about, perhaps slowly, the practice of preventive and social medicine will spread through the land, nurtured by a growing pride of place and watered by the knowledge of a warm affection in the hearts of the people.

The difference between preventive and social medicine and the whole realm of diagnostic and therapeutic medicine, surgery, and various specialties is one of degree and time. I cannot see how medical education can escape this responsibility.

The total impact of fulfillment and practice is another matter, as it takes twenty years for undergraduate education and training to make their influence felt. But these young people, I firmly believe, will be the Moses to lead our people both physically and spiritually out of their bondage.

III. EPIDEMIOLOGY IN SOCIAL MEDICINE

Epidemiology and Social Medicine

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THE word epidemiology, derived from the Greek *epi* and *demo*—"upon," "the people"—has to do with occurrences in relation to people in the collective sense, presumably favorable or unfavorable. But quite early and apparently quite commonly this term became associated with visitations upon the people of disease, famine, or misfortune. One frequently encountered definition of epidemiology is "the science of epidemics." Most of the early epidemiological observations were in connection with epidemics of infectious disease, but there has been a very definite and progressive change in the concept of epidemiology. Hirsch defined his studies of historical and geographical pathology as "the science which will give firstly, a picture of the occurrence, the distribution, and the types of the diseases of mankind in distinct epochs of time and at various points of the earth's surface, and secondly, will render an account of the relations of these diseases to the external conditions surrounding the individual and determining his manner of life." Frost was willing to accept Hirsch's definition with the reservation that "this definition is deficient in that it fails to take account of variations in the inherent traits of individuals as factors in the distribution of disease."

This broadening of the definition of epidemiology to include the chronic infectious diseases, or endemic disease, led to the collection of a constantly increasing volume of information concerning social and environmental factors in relation to the occurrence of disease. There is a growing acceptance of the broad application of epidemiological methods as indicated in the following definitions of epidemiology: "the science of the

mass phenomenon of disease and disability," and "the study of mass pathology."

The most significant contribution of epidemiology to medical science has been the emphasis upon the study of the population group, as contrasted with clinical medicine, which concerns itself with the study of the individual. There is, however, a definite analogy between the study of disease in the individual and in the population. The epidemiologist in the study of his patient, the population group, is as interested in the history of disease in that population preceding the time of his study as is the clinician in the history of his individual patient. The epidemiologist has no instrument comparable to the stethoscope for the examination of his patient but he has developed methods of examining the population for certain significant characteristics and symptoms.

Considerable progress has been made in the epidemiological study of a number of population groups. Perhaps the most significant of these are the family studies in the Eastern Health District, under the direction of Dr. Lowell J. Reed, which have made possible the long-range studies of disease and disability such as those of Jean Downes and Selwyn Collins. Mention should also be made of the development of the community studies in the National Health Survey. These basic studies may provide only limited information about the social factors involved in any specific disease or disability, but they represent a point of departure for further studies of specific pathology in relation to the social conditions within these family groups.

The epidemiological approach has been rather widely used in the study of other disabilities presumably associated with social factors. Outstanding among these are the epidemiological studies of malnutrition by Milam, Stayre, Jolliffe, and others. That method has also been used extensively in the study of disease and disability associated with occupation. With additional opportunities for the study of population groups comparatively stable in character and with the accumulation

of social data, the quantitative techniques of epidemiology will become more and more important.

It would seem that the greatest contribution which has been made to medical science by the epidemiologist is the orderly collection of data concerning the multiple factors in disease or disability and their application to large masses of the population. In the accumulation of such information there has been the close cooperation of the biostatistician which has been most fruitful. It is quite true that in the past there has been a predominance of the infectious diseases in epidemiological studies, first the acute or short-term infectious diseases and later the chronic infectious diseases. However, as the science clearly increased its scope to include noninfectious disease, there has been an increasing emphasis on social factors as they relate to the occurrence of pathology. It is this aspect of epidemiology that needs more and more study.

The term social medicine embodies a somewhat new concept to many in the medical field and has far greater significance in England than in this country. The development of the Institute of Social Medicine at Oxford and the creation of chairs in social medicine in a number of the English universities are indicative of the growing interest in the subject. We may therefore be justified in turning to our British colleagues for a definition of the term "social medicine." In the creation of the Institute of Social Medicine at Oxford, the purposes of the institute, as laid down in the Resolution of the Trustees, are as follows:

1. To investigate the influence of social, genetic, environmental, and domestic factors on the incidence of human disease and disability
2. To seek and promote measures other than those usually employed in the practice of remedial medicine for the protection of the individual and of the community against such forces as interfere with the full development and maintenance of man's mental and physical capacity
3. If required by the university to do so, to make provision in the

institute for the instruction in social medicine of students and practitioners of medicine approved by the Board of the Faculty of Medicine in the University of Oxford

The first of these purposes, and perhaps the most basic of the three, is the field in which epidemiology is obviously of the greatest importance. It might even be said that this first purpose of the institute is included in our present concept of the science of epidemiology. There is implied a more direct and practical application of social medicine in individual therapeutics based on knowledge of social pathology and social theology, which goes beyond the field of epidemiology.

"Social medicine," according to Dr. John A. Ryle, "means what it says. It embodies the idea of medicine applied to the service of man as *socius*, as fellow or comrade, with a view to better understanding and more durable assistance of all his main and contributory troubles which are inimical to active health and not merely to removing or alleviating a present pathology. It also embodies the idea of medicine applied to the service of *societas*, or the community of men, with a view to lowering the incidence of all preventable disease and raising the general level of human fitness."*

It would seem that epidemiology in its broad implications is a basic part of social medicine. Through epidemiological methods we may logically expect to determine the extent of pathology within population groups and the relationship of social factors to pathology. We may also expect that epidemiology will be of the greatest importance in determining etiology in social medicine.

In accordance with these concepts of epidemiology and social medicine, the chapters that follow consider three themes: "The Epidemiology of Health," "Social Means for Social Medicine" and "Individual Responsibility in Social Medicine."

* John A. Ryle: "Social Medicine; Its Meaning and Its Scope," *Milbank Mem. Fund Quart.*, 22:58, January 1944.

The Epidemiology of Health

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THE study of the epidemiology of some thing or event—cancer, for example—involves a recognition of the event we are talking about, so that the population can be separated into those who have cancer and those who have not. Moreover, the study demands classification of the population on other axes to determine the important related factors that single out these particular people for attack. Are they different in inheritance, in nutrition, in occupation, and so forth, from the rest of the population?

Considerable imagination is required in seeking out the pertinent variables to study. We may search along one axis of classification assiduously and neglect some other more relevant one, and thus the real relationship may elude us. The study of cholera in London might be recalled, in which Farr showed that there was a diminishing proportion of people attacked as the altitude increased. This fitted in beautifully with the miasma theory of disease. It happened also that the water supply got increasingly better with altitude, and that water was the relevant axis of classification, altitude being merely incidental. If we are able to separate our population with regard to the event whose epidemiology we are studying and if we are able to relate this classification to the factors which produce it, we will understand the epidemiology of the event.

When we consider health as the factor to be studied, it may seem as if this approach is impossible. Everyone has health of some kind or other, and it hardly seems possible to separate the population into those who have it and those who do not.

If, however, we consider the quality of health as a graded scale, we are merely extending our concepts beyond the classes of have and have-not to cover a more extensive classification. It is as if everyone were classified in two groups, tall or short, and then this dichotomy were superseded by more numerous subdivisions. We could think then of a graded scale of health from positive through zero to negative health. On such a scale people would be classified from those who are in top-notch condition with abundant energy, through the people who are well, to fairly well, down to the people who are feeling rather poorly, and finally to the definitely ill. The word health rather than illness is chosen deliberately to emphasize the positive side of this scale, for in the past we have focused our attention thoroughly on the disease side.

In order to orient the epidemiology of health to that of our more familiar epidemiological studies, it might be well to take a look at one or two simple cases. When we speak of the epidemiology of measles, we visualize that we are going to collect information about the cases of measles under various sub-classifications to see the factors involved in the flow of the disease through the population. However a real analysis of the problem shows that it is essential to study the unattacked as thoroughly as the attacked, and the recent papers that have done so much to clarify the epidemiology of measles have done so because they have classified the whole group into those who have never had the disease, those who now have the disease, and those who have had it in the past. Without this information it is impossible to get a rational picture of the epidemiology of the disease.

When we turn to a more complex situation—for example, the epidemiology of tuberculosis—we realize again that it is not enough to study the clinical cases, but we must also study those which are inactive, those persons who have a positive tuberculin test but no other evidence of infection, and those having no evidence of infection at all. Our mass x-ray exami-

nations and tuberculin testing have been concentrated primarily on case finding and have been considered worth while if they have turned up a sizable number of cases. This attitude fails to recognize that the study of the non-tuberculous as well as the tuberculous, with regard to the various factors of their physiology and environment, is necessary for a real understanding of the epidemiology of the disease.

So in the case of the epidemiology of health, information on all the population with regard to its health status is essential for an appreciation of the important relationships.

We might think that we could get at this information by taking our rather extensive knowledge of specific diseases, patching it together to get the total disease picture, and by subtraction obtain the non-diseased group. We find, however, that this is impossible. One very obvious reason is that we lack knowledge as to the frequency with which different groups of the population have two, three, or four of these diseases in combination or in quick succession.

But it is not only this difficulty that prevents our approaching the epidemiology of health in this way. We need to break down the word health into various categories of such a kind that they may be intelligently related to the society in which man lives. These classes must be related to other variables in order for us to understand the factors that put certain people at one end of the scale of health and others at the other, and that move people from one class of health to another. Classifications of health therefore need to be different from those of specific diseases. Just what they should be is not clear at the moment. This is not surprising when we consider that even with our long experience with such specific diseases as tuberculosis and syphilis, we are still using such titles in our classification as early, latent, moderately advanced, secondary, and so forth. Laboratory and other diagnostic tests are leading us to greater precision in our classifications, but we are still far from a satisfactory solution. In the case of health, it is certain

that we will have to explore a number of possible classifications and we will probably go through a stage of using very general ones before we arrive at more precise and meaningful descriptive classes.

If we examine the work that has been done along this line, we find that certain writers have developed elementary classifications that are meaningful with regard to health, as it relates to individuals operating in society, and with regard to the medical care necessary to preserve and restore good health.

One example is contained in the study of Jean Downes of the Milbank Memorial Fund and Selwyn Collins of the Public Health Service in the Eastern Health District of Baltimore.¹ About 1,500 families were followed for a period of five years through periodic visits to determine the extent and nature of the illnesses occurring among them. The classification used contains such titles as:

- Chronically ill
- Ill enough to require hospitalization
- Ill enough to be confined to bed at home
- Ill enough to require attendance of a physician
- Ill enough to prevent engaging in usual occupation
- No reported illness

This classification is admittedly crude, but is approaching the sort of thing we need: to pursue the subject of health as it is correlated with other variables in the business of living. Its greatest weakness is that it does not break down the title "no reported illness" into different degrees of positive health.

Another series of pertinent studies is that of Selwyn Collins based on 9,000 families surveyed at the time that the Public Health Service was conducting its nation-wide survey in 1936.² The results should not be confused with those of the general survey since they involved more intensive examination of this group of families. Instead of a general health report obtained at a single visit, repeated visits were made at two- to four-month intervals over a twelve-month period to get at the incidence of

illness. One thing that greatly increases the value of this study is that the figures are statistically consistent, so that the results of the different analyses can be related. Thus the tabulations on "frequency of health examinations" and on "frequency of illness treated surgically" can be related. It is possible, therefore, to put the various analyses together into a comprehensive picture. Collins used classifications similar to those of the Baltimore studies but was able to extend them because of the breadth of the study.

From these studies we are able to obtain some of the basic information necessary for planning medical care programs. For example, a few of the rates which come out of this study are as follows:

Percentage of Population Followed for a Year

Having complete or check-up examinations for preventive purposes	9%
Having no reported illness	48%
<i>Rate per 100 Total Population per Year</i>	
Total illness	82
Cases attended by a practitioner	65
Hospital cases	6
Calls by a practitioner	295

Thus it is seen that the number of physical examinations of apparently well persons, made presumably to prevent disease and disorders, is very small in the general population relative to the frequency of medical attendance for illness. Although nearly half the population reported no illness, those who were ill had enough repeated illness to bring the general population rate to 82 per 100. Sixty-five per 100 of these reported illnesses were attended by a practitioner, and there were approximately 4 calls by a practitioner per case of attended illness. These rates and the many others coming out of this study were correlated with various factors such as age, sex, occupation, and income to get at some of the fundamental relationships of illness and health.

When one looks at the present-day movements toward comprehensive medical care and sees that they make provision for examinations of whole population groups rather than groups confined to ill persons, it is clear that we are just beginning the collection of basic data which will allow us to study the epidemiology of health. We have, through our surveys, made a small start on classification of the health of the population and an even smaller start on the study of these classifications as they are related to other variables. But with large groups coming into our medical care plans, we should get at the factors associated with good health rather than with disease alone, and should acquire enough knowledge of the epidemiology of health to allow us to develop sound plans for the promotion of positive health as well as for prevention and treatment of disease.

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Social Means to Social Medicine

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THE philosophy of social medicine and intensive socio-medical surveys are foundations upon which a structure may be erected to provide a new type of service. This service will not be a shiny toy, neatly wrapped in cellophane, unlike anything we know at present. It will develop as a coalescence of the best features of some more or less experimental programs now in operation. Changes will be made as knowledge of the problems and the people with which we deal advances. However we cannot wait to learn the whole story before putting into practice the best of what we know today.

Based on present knowledge a program of social medicine might develop along several major lines:

1. Extension of basic public health activities
2. Addition of new services to the public health program
3. Early diagnosis and treatment of disease (including psychiatry and rehabilitation) made readily available to everyone
4. Careful planning and coordinated activity by all those concerned with health
5. Improved efficiency on the job
6. Education
7. Research
8. Evaluation

This is not intended to be merely a blueprint for a bigger and better health department; much more than that is involved. A different approach from that of the traditional health department is needed, and group action must play a major role.

By definition, social medicine involves the group. In the general population, as well as among those interested in study-

ing and alleviating the problems, group teamwork is demanded. Many types of specialists must contribute their various skills; questions must be approached from numerous angles; and provision must be made for regular discussions and conferences at all stages of investigation, implementation, and evaluation.

Group action on the part of the community is also essential to realization of the aims of social medicine. This has been appreciated in the Peckham Experiment.¹ Health education workers realize the great importance of enlisting community support and developing a full sense of participation. People must be given a feeling of belonging and a real voice in the planning and execution of the program; otherwise, what is done will not be genuine social medicine.

Basic public health services must become available to all, with the greatest possible local participation in their provision and control. These services must be of the high quality likely only when full-time, trained, adequately paid, and properly housed personnel are doing the work.² In some countries, such as India,³ and in some sections of the United States where public health services are still quite meager, it will be necessary to establish priorities and both short-term and long-term plans. Certain aspects of the basic public health program illustrate how the social medical approach may make the work more significant.

Reliable statistics are absolutely essential, not only in planning and for experimentation, but also for evaluation. Present statistical information is too fragmentary and often founded on unreliable basic data.

During the war employment boom many people realized for the first time the value of birth registration in securing jobs. An experiment is being made in Louisiana to increase parental responsibility for registering births whereby the mother will review and sign the certificate prepared by her doctor or hospital.⁴ One may expect a greater sense of partici-

pation and improved accuracy to develop from this procedure.

New York City is experimenting with a confidential system of reporting to improve the accuracy of death certificates.⁵ Where family feelings must be spared, two certificates are prepared. One, for the family, states that the death was from natural causes; the other, for the health department, gives the true cause of death. The first year this method was tried the number of syphilis deaths reported increased by 35 per cent. The true incidence of other causes considered socially undesirable will be revealed by this system.

Mortality reporting alone is inadequate for today's planning. Formerly, most illnesses were acute and a fairly constant proportion resulted in death, so mortality statistics were more valuable. Now the statistics are often misleading. We must know more about the causes and duration of ill health. Progress is being made toward this objective in developing systems of morbidity reporting.⁶

Statistics based on smaller and more homogeneous areas provide the maximum amount of information. In large cities the census tract may be the proper unit, if tracts have been set up on a sound basis. More information on occupation and economic status will be helpful, for social medicine requires consideration of all factors contributory to health and disease.

More adequate study of the probable year-to-year variation in the incidence of various diseases is needed so that deviations from the expected normal may be recognized early and suitable control measures considered. Normal bodily measurements and functions must receive more attention so that again we may determine deviations with greater accuracy. It is uneconomic to depend on skill acquired by long experience to develop a sense of the normal, when mathematical measurement may shorten professional training periods.⁷

Special study areas such as the Eastern Health District of Baltimore will be increasingly useful in solving many of our problems. What we learn about a given population group in

one type of study may be of inestimable value in relation to another type undertaken later.

Tuberculosis experts would be the last to say that the role of the tubercle bacillus is epidemiologically all-important. Many feel that improved economic and social conditions have done as much as or more than public health measures in reducing tuberculosis. In discussing sanatorium treatment with bread-winners, we must make arrangements for care of the family if we expect the patient to remain under treatment as recommended. Attention to the problem of his earnings after sanatorium discharge has led to increased emphasis on rehabilitation programs. Special skills and the cooperation of numerous agencies are needed for the social work and rehabilitation jobs, which require broadening the type of personnel in health work.

Not long ago health administrators thought that if only some excellent curative agent were available to treat venereal disease cases, the problem could be solved fairly promptly. Now penicillin is providing more satisfactory treatment than the most sanguine might have dared hope, and yet we find that instead of diminishing, the venereal disease rate is rising. Recently the venereal disease director of one of our best state health departments said that he is convinced that the problem is much broader than that of treatment alone. There must be a concerted assault on all aspects of the situation if effective control is to be secured. Treatment must be pushed as completely and carefully as possible. There must also be an attack by all community agencies which can help to remove conditions leading to promiscuity. Sex education must be improved and decent recreational opportunities made available. Home ties will have to be strengthened, prostitution repressed, and intensive efforts made to rehabilitate socially those now engaged in prostitution.

In the industrial environment, which is important to social medicine, management has applied science and technical skill

to production techniques effectively, but it has been less successful in organizing sustained cooperation on the part of workers. A much better understanding of psychology and socio-economic relationships is needed to develop the kind of teamwork that produces happy citizens with a feeling of real participation in the job. Great strides have been made in industrial safety and industrial hygiene. However, prevention of home and motor vehicle accidents still leaves much to be desired. Those concerned with traffic safety have evolved the three "E's" of prevention—engineering, education, and enforcement—a good example of the multiple approach needed to solve such complex problems.

In some areas of the world, notably India and China, serious sanitation problems are unsolved. The greatest single thing that could be done to improve health would be to provide safe water supplies. Basic sanitary services for the protection of water, food, milk, and sewage disposal must be available and maintained on a high level, if we are to continue to enjoy the opportunity to find ways to improve our control measures for the degenerative diseases.

One hesitates to call new services which have been part of many public health programs for some time. Such a designation can be justified only because these services are not yet as widely accepted as the so-called basic activities. A few of these newer fields deserve special comment: geriatrics, nutrition, genetics, mental health, and housing; all are intimately concerned with social medicine.

The field of geriatrics embraces a number of public health problems. Introducing a symposium on the aging population, Dublin said recently: "The public health profession has always been ready to adapt itself to new situations, to try out new procedures and to widen its sphere of influence. . . . It is now confronted with a new and enticing opportunity for valuable service brought about by the very success of its previous endeavors and by the changes which have accumulated

in the population structure of the country."⁸ At the same meeting Wilkerson described surveys of entire population groups to determine the real incidence of diabetes; here is an example of what we may expect to accomplish when the periodic health examination is developed into a really useful public health tool.⁹

Cancer control was wished on the Massachusetts Health Department years ago by an aroused public, convinced that only community action could provide the best type of diagnostic and specialized treatment service for all.¹⁰ The primary reluctance of the public health officials soon changed to leadership, and the medical profession now recognizes the necessity of community participation if present knowledge of cancer control measures is to be fully applied.

Much more adequate provision must be made for the care of chronic illness, which includes so many complex problems that almost no insurance schemes have attempted to cope with it. Almost by common consent it is passed over as a problem which local government handles as little as possible. Chronic illness, of course, is not confined to old people; it is mentioned under geriatrics simply because so many "senior citizens" are chronically ill. With our aged population increasing we must develop much more adequate plans for vocational guidance and rehabilitation. We will have to revise our ideas about retirement ages to increase the span of productive life proportionately with the lengthened expectancy. Moreover, we need to provide the right sort of recreational opportunities for older people.

During the war years Great Britain conducted the most extensive nutritional experiment to date.¹¹ Scarce food was parcelled out scientifically where it would do the most good, and the children, by and large, grew more rapidly than in normal times. The stillbirth rate was materially reduced—in spite of all the adverse influences of the war—by 34 per cent during a five-year period in Wales.¹² Other prime examples of social

medicine applied to nutrition at the administrative level are the fortification of bread with thiamin and iron, the addition of iodine to table salt, and possibly the "fluorination" of drinking water. This is group nutrition with a vengeance.

Public health workers were exhorted to renewed activity by a geneticist, who recently said at the New York Academy of Medicine: "The field of public health has always been noted for its ability to put to practical use the basic discoveries of the various sciences which have had something to contribute to public welfare."¹³ In expanding his theme further he said, "As the infectious and nutritional diseases are conquered one by one, the genetic anomalies and diatheses become of greater relative importance." The Rh factor served as an example of a genetic problem in which public health laboratories are taking a rapidly increasing interest,¹⁴ and practical application of genetics to disease prevention was suggested: examining relatives of patients with genetic conditions, using suitable laboratory tests in the search for early preclinical signs. Preventive measures would be instituted in cases where signs of the genetic condition were found.

Progress in housing has been made in this country with less help from health workers than has been the case in many other places. However, some of our outstanding public health figures have contributed significantly, and there is every reason to expect growing general concern. The importance of housing to health is beyond doubt, and dwellings should be planned and constructed in accordance with the principles of health.¹⁵

In mentioning early diagnosis and treatment of disease we may appear to step abruptly over into a field quite different from the public health activities we have been discussing, directly into the great problem of medical care. However the transition is not a sharp one. A considerable number of health departments now conduct broad medical care programs and a great many more are active in one way or another in the field, especially in providing medical care for indigents.

Prepayment is the only practical solution to the economic problem of providing needed care for illness. This fact has passed the stage of argument and interest is now focused on securing agreement as to the best method of prepayment and the most effective way of putting it into operation.

Prepayment alone, however, will not guarantee early diagnosis and adequate care, including desirable preventive services. There must be proper hospital, laboratory, and health center facilities integrated on a regional basis.¹⁶ Trained personnel must be available and organized to provide efficient service (few would deny that group practice is the most desirable scheme), and competent administrators are required to make the whole complex system function smoothly.

The place of voluntary health agencies, including hospitals, is secure as long as they continue to provide essential services, to experiment in new fields, and to demonstrate the value of new techniques. Their work will be even more valuable than at present when voluntary agencies perfect techniques for adjusting their activities and money-raising campaigns to the actual needs of the community.¹⁷

Planning and coordination are woven deeply in the fabric of social medicine. Many agencies and types of people provide the services we are discussing; even more are on the receiving end. Really effective planning will take account of all essential factors, including personalities. On the local level, organizations such as health councils and councils of social agencies may well serve as nuclei for planning and coordination, providing representation of both voluntary and official agencies as well as the public.

The medical and social fields have only occasionally utilized business methods to greatest advantage. Much can be learned from organizational principles, around which a genuine science is developing. The best office procedures and personnel practices used in business may be studied to advantage. Social medi-

cine should not neglect those employed in providing and distributing its benefits, wherever they may be working.

Education must be a keystone in social medicine. President Conant of Harvard emphasized the very great importance of broadening professional training when he said: "Not only must the professional curricula be constantly overhauled and brought up to date without lengthening the period of study, but in most instances the education must be broadened. . . . Unless he [the student] feels the import of those general ideas and aspirations which have been a deep moving force in the lives of men, he runs the risk of partial blindness."¹⁸ Undoubtedly, the elements of social medicine must be injected into the curricula of our professional schools if real progress is to be expected.¹⁹ Admission requirements should be revised to give opportunity to students who have had broader social interests and studies than some of their fellows who have specialized in the natural sciences. Elements of statistical analysis should be taught on a much broader base than now exists, and there must be instruction of a practical nature in the elements of the social and economic environment which contribute to disease problems. Knowledge of the normal is essential, and the measures necessary for the earliest possible diagnosis of abnormalities must be taught. Here the importance of training in interviewing will be apparent, as so much depends upon the history in detecting early disease.

A major problem with medical students is training them to think of the mass rather than a single patient. Conversely, the great importance of the individual needs to be stressed with students of public health, who are likely to lose sight of him in their mass attack on public health problems. Preventive medicine must receive greater teaching emphasis than clinical medicine, though the distinction between the two tends to diminish to the vanishing point if we practice the most adequate medical care of which we are capable.

Professional education involves training social workers and specialists in many other fields. The social sciences must broaden the base upon which they are operating at present by increasing experimentation and observation. Mayo has recalled that William James pointed out that every civilized language except English has two words for knowledge. In French, for example, there is *connaître* which refers to knowledge gained by actual acquaintance and *savoir* which has reference to knowledge about something. In Mayo's opinion, there is need for much more knowledge-of-acquaintance in the social and economic fields, gained best by "the pedestrian step-by-step development of a simple unquestionable skill" which might well "begin with careful observation of what may be described as communication; that is, the capacity of an individual to communicate his feelings and ideas to another, the capacity of groups to communicate effectively and intimately with each other."²⁰ In the established society prior to the industrial revolution, workers were brought up through an apprenticeship which developed social skills at the same time technical skill was being learned. A man expected both types of skills acquired during his training period to meet his requirements for the rest of his life. By his own desire he subordinated his interests to those of the group, for it was through the group that he found his greatest satisfactions.

Social disintegration is the outstanding feature of our modern industrial communities. Effective communication between individuals and groups has failed, and with this failure spontaneous cooperation is lost. Groups when formed are not eager to cooperate with other groups. Uncertainty exists because no one can assume that "technical processes of manufacture will exist unchanged for long in any type of work." In pursuing his thesis, Mayo and his co-workers have studied individuals and groups working under industrial conditions and many ideas useful in all types of organizations are developing.

Methods of public health education have improved, and

there is a much more unified approach to the subject than that which existed a few years ago. School and community health educators are realizing that their problems are not very dissimilar, even though there may be certain differences in their techniques. Those working with the community are appreciating the great importance of dealing with groups and presenting problems which face the community. The group then seeks suitable solutions, assisted and to some extent guided by the experts available. Fundamentally, the group reaches its own independent conclusions.

We need new criteria in evaluating the progress in social medicine. For example, measurement of mortality and even of morbidity is much too gross in dealing with chronic disease. One must be able to measure improved function, both physical and mental, in order to evaluate our efforts realistically. No program designed to improve the status of older people could be judged successful if it were measured solely by reduction in death and sickness rates. It would be essential to know to what extent the lives of the old people and their families had benefited by the program.

Better accounting will demonstrate the actual cost of various types of activity. With such knowledge we can decide how much the community can afford. We must determine what elements of the periodic health examination are most productive when used for large numbers of people. Will costly procedures be sufficiently useful to pay their way?

Some standardization of evaluation techniques is desirable to make results in one community comparable with others. The techniques being evolved in Health Practice Indices illustrate what we may reasonably expect to accomplish.²¹

Many problems in social medicine can be solved only by painstaking research: we must know a great deal more about group dynamics and what influences group thinking. For example, how can the inhabitants of grossly overpopulated sections of the world be influenced to face their situation realis-

tically? At present their choice seems to lie between a disproportionate number of deaths by starvation or disease and some form of planned parenthood. Our real knowledge of economic and social problems is none too sound; can we not learn a great deal more from the field-type of epidemiological investigation suggested by Mayo? We are already learning something about administrative techniques, but much can be added to our present store of information.

The health center idea in its broader implications provides a very natural vehicle for making social medicine available to the people. Gale of South Africa describes the British concept of the health center:

Its approach to health needs is entirely different from that of ordinary private practice. It places in the field not an individual medical practitioner, but a team, headed by a practitioner trained in the techniques of this new approach.

An endeavor is made to secure the periodic attendance, at the Health Centre, not only of those persons who are complaining of ill health, but of all persons in the area. In other words, to the casualty service, which is almost all that private medical practice and hospital outpatient departments can supply, there is added the periodic medical examination. The findings at periodic medical examinations are correlated with what has been ascertained regarding home and working conditions, and the assessment of health and ill health is made in terms not only of individual pathology, but also of environmental and social pathology.

The Health Centre will provide not only curative services, but also personal preventive services.²²

Gale does not mention the housing of social agencies and of voluntary health agencies in health centers, though these are important adjuncts to the services which he does include.

Both careful planning and coordinated activity are elements essential to applied social medicine. Coordination of expanded public health services with diagnosis and treatment must be so real that patients scarcely will realize where prevention ends and treatment begins; they will seek both from a single source.

When the professional health workers and the people are educated to play their respective roles and to do their jobs as effectively as possible, seeking new answers and constantly evaluating results—that will be social medicine achieved through social means.

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Individual Responsibility in Social Medicine

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It is axiomatic that all social programs begin and end with the individual. Individuals devise these programs, put them into effect, and individuals benefit or suffer from them. By its very definition, social medicine is that type of medicine or, more accurately, that point of view in medicine which considers the individual in relation to his social setting. Properly understood, social medicine is, or should be, all of medicine applied for the benefit of the individual in society.

The responsibility of the individual in social medicine is, of course, but a reflection of the central problem of the world today: the responsibility of the individual in a highly organized society. This problem is often posed as: Shall we concentrate upon using our incredible scientific techniques to build an efficient society of complete "social security," though such a course may lead to tyranny and the submergence or total loss of the dignity of the individual? Or shall we aim primarily at retaining our hard-won freedom (and responsibility) of the individual in the midst of a highly complex industrial world, even if, because of purely laissez-faire methods, this may result in a loss of efficiency which will produce a chaotic and technically backward society incapable of maintaining the individuals who compose it?

But are these the only choices? Isn't there any chance to have our cake and eat it too? Perhaps we can, but it will be a tough job. The job is to make full use of our scientific knowledge and technical skills in such a way as to create a society in which the freedom and responsibility of the individual can flower. This means the development of a vast technical organization without regimentation, the provision of universal social se-

curity without loss of individual freedom. And we face this task in medicine at least as acutely as in any other aspect of our civilization.

In medicine no individual, be he patient or doctor, can have an entirely passive role. The very act of eating clean instead of contaminated food, for instance, may mean the choice between life and death. No one can escape some share of responsibility even if it is only the responsibility for his own health. Actually, of course, it nearly always involves larger responsibilities—for a family or for individual actions insofar as they affect the health of the entire community.

But people as patients are often singularly unaware of their responsibilities. Often they fail to come to the doctor early enough in their illnesses to permit him to cure them or to prevent crippling complications. They pay little heed to the doctor's advice about better eating and living habits. All too frequently they fail to return to the doctor when they should, and consequently suffer relapse. Early in this century William Osler observed with considerable apprehension the number of patients discharged from the Johns Hopkins outpatient department who, having failed to follow instructions and having received no follow-up care at home, returned after a few months with a recurrence that might have been prevented. The same thing was found, in reverse as it were, only a few years ago in Syracuse by Drs. Weiskotten and Jensen who showed conclusively that many readmissions to hospitals and hundreds of days of hospital care could be saved by a conscientious follow-up service, at home and in the clinic, for patients discharged from the medical wards.

We all know that poor diet, neglect of teeth, unwise recreation, and poor housing adversely affect health. But, with all this knowledge, how many individuals accept responsibility for improving these conditions for themselves or others?

If individuals as patients do not live up to their responsibilities for health, what is the reason? Is this wholly the patients'

fault? Have they really had the opportunity to learn what their proper responsibility should be? Have we, the physicians, dentists, nurses, and social workers, accepted our share of responsibility in social medicine? It is often said, in one breath, that people do not make good use of the obvious and existing medical resources and, in the next, that if good medical service were free to everyone, people would abuse it unreasonably, to the point of exhaustion. If it is true that people do not properly utilize medical resources, it is because the doctor does not understand the real needs of the people and has not shown them how modern medicine can best be used to meet their needs.

If there is any hope that the patient will some day realize his full responsibility in health, the doctor must show the way. But he can do this only if he can offer the full personal, emotional, social, as well as medical, understanding that his patient requires—and, futhermore, only if the patient has full access to his services. It is a fact, however, that today the concrete individual is very often supplanted by the theoretical patient. No doctor would neglect to test the blood sugar of a fat woman of fifty with symptoms of diabetes nor to examine the eye-grounds of a man with increasingly frequent headaches, vomiting, and paralysis. But how many physicians always remember that a wife's relation to her husband or to her dreary isolation in household tasks, a man's reaction to his job or his wages or his living quarters, a child's reaction to his parents or his school may be *the* clue to a major illness?

I know of a little girl of six who, less than three weeks ago, was admitted to one of the most renowned hospitals in this city with acute rheumatic heart disease. Neither her parents, nor the doctor, nor the admitting nurse or social worker prepared this child for what she had to face. When she protested at being separated from her mother, someone casually said, "Never mind, your mother will come to see you in a few minutes." But hospital rules forbade the mother to come to the ward to visit for five days.

What happened? The little girl, suddenly finding herself deserted in strange surroundings, began to scream and she screamed steadily for four hours. No one bothered with her except to threaten dire punishments if she didn't stop, which, of course, only provoked louder and more violent paroxysms. How many people do you suppose would have lost their jobs at that hospital if they had allowed a six-year-old child with acute rheumatic fever to run up and down three flights of stairs steadily for four hours?

It happened here and it happens every day. But it isn't any more tragic or more foolish than the doctor who thoughtlessly advises a holiday in Florida for the low-wage-earner who has a family to support, or who casually orders a fat-free diet for the southerner with "fat-back" and deep-frying traditions, or who thinks a simple "stay in bed for three weeks" will mean something to a housewife with three small children. Perhaps the doctor in such cases may salve his conscience by believing he has given the scientifically correct directions, but he has done little to discharge his responsibility to the individual and he can hardly expect the individual to learn from this experience what his own proper responsibility is.

So we have much to learn and much to accomplish if social medicine is to become a reality. And we must learn it while medicine is becoming—and will continue to become, whether we like it or not—more highly organized every minute. It is not a task which can be lightly allocated to the people, or the doctors, or the government. It is, rather, a task that will require the skills and energies of us all, if it is to be accomplished.

People as patients must accept and exercise their responsibility to see that every man, regardless of his income, has the means to secure the amount and kind of health service he needs, and the kind of nutrition, housing, recreation, and education that are necessary for good health. This much the people are learning with astonishing rapidity. But this is not enough. The people must also learn responsibility for making the best use

of these goods and services; they must play their proper role in active health. They must know the value of good health service and the futility of bad. They must grasp with intelligence and perseverance the best assistance that modern medicine can offer. The people must inevitably and ultimately be responsible for securing these things and for maintaining a free and vigorous voice in their management.

The doctors, on the other hand (and I use doctors to include all health workers), must take their responsibility for leadership toward making active health possible. They cannot supply a mere crutch. They must show the people how to stay healthy and they must guide and assist them to secure comprehensive medical service for all. Furthermore, they must see that this is good medical service, including all the special skills that medicine now possesses.

Many doctors are afraid that the organization of medicine necessary to make this possible would result in professional frustration, economic hardship, and political tyranny. But it is precisely this that constitutes the challenge. For unless we can harness our medical knowledge to serve the people's health in freedom, our future as a profession is dark indeed. Above all, the doctors must learn to be responsible for the people, as individuals in society. We need medical schools which will give us doctors as completely imbued with their responsibility toward the individual as they are now imbued with scientific responsibility toward the patient. The two must go hand in hand.

These goals will certainly not be easy to attain, but they can be attained if the doctors and the people will shoulder the task together. It must be accepted as a community—indeed, a national community—job. In this way, and only in this way, can we realize, to the full, the individual's responsibility in social medicine.

**IV. THE PLACE OF NUTRITION
IN SOCIAL MEDICINE**

Nutrition and Social Medicine

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JOHN RYLE has described clearly the relation of food and nutrition to social medicine. Beginning with the statement that the business of social medicine is "the better understanding and more durable assistance (of man) of all his main and contributory troubles which are inimical to health," Ryle goes on to point out:

Many of the prevalent illnesses of supposedly unknown cause, and indeed many of the organic diseases have discoverable origins in social, domestic, or industrial maladjustment, in fatigue, economic insecurity, or dietary insufficiency. . . .

The idea that many noninfective diseases can also be considered as preventable and so may eventually be brought within the jurisdiction of a nation's health authority has sunk more slowly into the consciousness both of the profession and of the laity. But before our eyes and in the space of four years of war we have seen the work of the great students of nutrition bear fruit, a Ministry of Food established, and our people as a whole in better health through better feeding, in spite of many shortages, than they were in times of peace. Measures to secure better standards of nutrition, better housing, and better education, and to reduce industrial fatigue and hazards . . . have marked the beginning of our third epoch (of preventive medicine).

Good food and habits of feeding, good houses, better facilities for open-air activities and cleanliness, better education and cultural opportunity, holidays and social security — could they be extended to the populace as a whole — would bring benefits, both human and economic, to the individual and to the State beside which those accruing from all our remarkable advances in remedial medicine and surgery of the last century, valuable though they have been and must remain, would make but a poor showing.¹

Henry C. Sherman of Columbia University, one of nutri-

tion's foremost research workers, has this to say of the health building possibilities of applied nutrition:

To a much more important extent than had been supposed, we build our own life histories by our daily use of food. . . . It is no exaggeration, it is a simple summary of scientific fact, to say that our new knowledge of food and nutrition brings us a new order of mastery of our life processes and thus of our life histories. . . . Health is more than freedom from disease, it is a quality of life that can be built to higher levels, and this upbuilding of positive health is ours to accomplish through the food habits built by our daily decisions of what foods to eat and how much of each.²

How can we put into practice, for the benefit of all our people, the ideas formulated by Henry C. Sherman? The experience of the war has taught us that it is a complex and difficult task to feed whole peoples adequately by modern standards of nutrition. That experience has also revealed that, given the proper incentives, the task can be performed and that health benefits beyond our expectations may result even during the stress of war.

The food program of a people must take into account such major factors as the soil and its uses, the state of agriculture, food production, food marketing, food processing, the standard of living, and education in nutrition. In the time at my disposal I can touch briefly on a few aspects of some of these subjects.

All the food to nourish the 2,200,000,000 inhabitants of the globe must come from the soil, a thin crust wrapped around our planet, equal by comparison to the thickness of a sheet of tissue paper wrapped around a globe six feet in diameter. This is our food bank. From it, with some help from the atmosphere and the sun, we must draw all of the sustenance for life on our planet. Millions of years are needed to make new deposits in this food bank and it is constantly being spent by cropping and wasted by wind and water. With proper care it can last indefinitely. Wastefully used, it will, in a few years, impoverish the

people who live on it or from it: How to use this asset properly is one of the great economic and social problems of our day, for different soils are adapted to different uses. Not all soils can be used for food production; some will yield their greatest profit from being used for such a long-term crop as timber. Human beings will be better nourished when the different soils are put to the right uses, for then the long-term yields will be greatest, enabling men to raise their standard of living, perhaps the most important factor in the betterment of human nutrition.

Primitive agriculture could never have fed the present population of the world, even at today's inadequate levels. According to a World Food Survey, prepared and published by the Food and Agriculture Organization of the United Nations, before World War II, food supplies at the retail level (actual intake would be from 250 to 300 calories less per person per day) were sufficient to furnish an average of less than 2,250 calories per person daily. Food supplies furnishing an average of more than 2,750 calories per person daily were available in less than a third of the world's population. The remaining areas, containing about one-sixth of the world's population, had food supplies that were between these high and low levels.⁸ Science and technology applied to agriculture have increased food production many-fold. With it the population of the world has increased four-fold since the middle of the seventeenth century. We have every reason to believe that birth rates before that time were much higher than they have been since, hence increases in the food supply have acted by preventing deaths. The marked difference between well-fed and badly-fed countries can be seen today in the life span of their inhabitants. In ill-fed countries expectation of life at one year is 40 years or under, while in well-fed countries it is 60 years and over.

The maximum population that the world could support has been estimated by various students at from 3,000,000,000 to 13,000,000,000, and it is conservatively estimated that there will be 3,000,000,000 people in the world by the year 2000, less

than fifty-three years hence. Hicks has estimated that 3.5 acres per person are necessary to maintain the American people at their present high standard of living.⁴ On this basis 160,000,000, a figure we may expect to reach in about twenty years, would be the maximum supportable population in the United States. I mention these considerations to show that the problem of food production has social, economic, and political aspects.

The character of the soil determines the quality and the quantity of the food grown upon it. The Florida Experiment Station, for example, demonstrated that a severe nutritional disease of cattle, known locally as "salt sick," occurred when feeding was restricted to native forages grown on certain white and grey sands and residual muck. In the districts where deficient soils were responsible for a high prevalence of "salt sick" among cattle, from 52 per cent to 96 per cent of the children were anemic. Where the soils were protected for "salt sick," from zero per cent to 23 per cent were anemic. Turnip greens were found to have 258 parts per million of iron when grown on protected soils, and only 56 parts per million when grown on deficient soil.

Phosphorus "is the major essential component whose deficiency in the soil is linked with the greatest number of disturbances in the health of animals, and the element which offers the most striking and convincing demonstration of the close relationship between the chemical composition of the soil and the health and vigor of the plants and animals that live upon it."⁵

Many soils in this country are deficient in phosphorus and the practice of raising large numbers of cattle on ranges and taking them away to be slaughtered undoubtedly further depletes the soil of calcium and phosphorus. In the Union of South Africa, Sir Arnold Theiler showed that a prevalent disease of cattle, thought to be infectious, was due to a deficiency of phosphorus in the soil and in the grasses of the affected areas. These animals developed a depraved appetite for bones and

when the bones they chewed were green, a botulinus-like infection developed, masking the effects of the deficient forage.

However, factors other than soil probably play more important parts in determining the nutrient content of foods. "In many cases climatic conditions such as temperature, humidity, rainfall, sunshine, and altitude are the dominating factors in controlling the composition of the mineral matter of crops."⁶ This is probably also true of the vitamin content of foods. The vitamin C content of tomatoes, for example, is greatly influenced by the amount of sunshine to which they are exposed just before harvesting. Climatic conditions act by affecting plant respiration, assimilation, photosynthesis, metabolism, and other physiological processes.

The composition of the soil may exert a positively harmful effect upon the plants which grow upon it because of mineral excesses, as well as the negatively harmful effect of mineral deficiencies. Selenium is a case in point. This element causes the fatal alkali disease in cattle, characterized by loss of hair and hoofs, lameness, liver lesions, and dropsy. Areas where selenium is present in toxic concentration have been found in South Dakota, Nebraska, Wyoming, Kansas, Colorado, New Mexico, and Montana. Soils containing one part of selenium per million or even less may produce vegetation that is poisonous. Plants differ in their absorption of selenium and in their tolerance to it. Field-grown wheat, for instance, has been found to contain as much as thirty parts of selenium per million. Selenium poisoning in man from wheat or bread is, however, unknown. This may be due to the fact that the wheat from different regions is mixed together and the selenium is thus diluted before the wheat is processed and consumed. Here is a problem for the research student of social medicine: whether mild degrees of ill health may be due to selenium poisoning from bread or flour made from wheat grown in areas where selenium is present in the soil.

In our modern world man is protected from soil deficiencies

or mineral excesses in the soil by the mixed diet he consumes and the wide variety of sources from which his food is drawn. The New Yorker drinks milk drawn from many states. His meat comes from the ranges through Chicago, his vegetables and fruits from New Jersey, Long Island, Texas, Florida, and California. There is little that is local about the food supply of any large city. This is true in a lesser degree of towns, villages, and even of farm families.

H. C. Sherman states that "through wiser choice and use of food we build our own and our children's health to higher levels." To be able to choose the kinds of food needed for better health, that food must first be produced and then placed on the market and sold at prices the consumer can afford to pay. Making food available at the right price is not enough, however. Consumers must be conditioned to make the right choices. Consuming the proper amounts of the right food does not necessarily mean that the consumer will be well nourished, for infections and other pathological conditions may raise bodily requirements or prevent the absorption of the nutrients in food.

The production of food should be guided by the food requirements of the people as determined by the science of nutrition. This may seem obvious, but until recently it has been the practice in only a few countries, and in these countries only in wartime. Do not be too hasty in blaming the department of agriculture or the farmer, however. The first has to keep in mind the interests of the whole of agriculture, which includes non-food crops such as cotton and tobacco. The latter has to earn a living and he will plant those crops which give promise of the greatest return for his investment in land, capital, and labor.

War experience has shown that it is the business of government to guide agriculture and economic policy so that the right kinds and quantities of food will be produced or imported to nourish the people adequately. To practice this kind

of social medicine a new government agency is needed, an agency concerned solely with the production and distribution of food, having in mind the interests of all consumers and seeking to promote the nutrition and consequently the health of every segment of the population. During the war, when the need was greatest and the importance of food was brought home to the people, ministries of food or war food administrations were set up by the governments of several countries. They are just as important in peacetime.

In August, 1945, a report appeared on Nutrition and Food Management, prepared by an international committee for the Quebec Conference of the United Nations on Food and Agriculture. Part II of that report analyzed the manner in which, for the first time in history, certain governments, by integrating nutritional measures with food supply and general economic programs, had been able to secure some nutritional improvement even in wartime. How did they go about it?

Fortunately for us, the science of nutrition had advanced sufficiently before the war to permit a reasonably precise statement of human requirements of the principal nutrients and of the adequacy of a variety of common foods to meet these requirements. The most commonly accepted standards during the war were the Recommended Dietary Allowances of the Food and Nutrition Board of the National Research Council. These allowances are described as a tentative goal toward which to aim in planning practical dietaries. The allowances can be met by a good diet with a variety of natural foods. The recommendations, or a modification of them, were used during the war by departments of agriculture or food in the United Kingdom, the United States, Canada, and elsewhere in setting food production and food importation goals. Since food was an important weapon of war, greater food production was encouraged. As a result we in the United States raised nearly one-third more than ever before. More of the right kinds of food were available to civilians during the war than ever before in

our history, in spite of apparent shortages and the large supplies sent to our allies.

During the war, then, our food resources were managed in such a way as to satisfy nutritional needs as fully as possible. This experience has brought the words "food management" into our vocabulary. Food management as practiced during the war was strikingly successful, whether measured in terms of quantities of the right kinds of food made available to the people or on the basis of the health record of our people during that period. Food management may also be practiced by regions, states, cities, and families.⁸ Because food management rests upon the science of nutrition, it can improve the food and nutrition, and consequently the health of the people in almost any given economic situation.

Once the food is produced, it must be marketed. This requires transportation, processing, preserving, canning, freezing, storage, and the like. The object of marketing should be to make the right kinds of food available to all of the people at prices they can afford to pay. During the war some governments adopted special measures for groups in the community whose needs were most critical and whose health was most important to the state. This included members of the armed forces, who were fed the best possible diets at the state's expense; mothers and children, who had priority for milk and other important foods; war workers who were fed nourishing meals, sometimes at less than cost; and in the United Kingdom where the war situation was most critical, everyone, without regard to ability to pay, was assured of a diet more nearly up to physiological requirements than ever before.

Making the right kinds and quantities of food available at prices the people can afford to pay is still not enough. Too many human beings have been known to starve in the midst of plenty, or to choose poor diets when good ones are available. Habits and traditions, superstitions and prejudices, likes and dislikes must receive our attention. The patient with pellagra

in the South often prefers the food to which he is accustomed, and which incidentally was deficient enough to bring on his pellagra, to the good diet he is offered in the hospital. Millions in India eat highly milled rice and refuse parboiled rice, although the latter would probably save them from the ravages of beriberi. Fishermen often suffer from serious vitamin A deficiency, yet throw away the fish organs which would put them on the road to better health.

How to educate the people so that they will make the right food choices is a problem that has not been solved. More workers are engaged in this task than in any other aspect of nutrition work, but the results seem disappointingly small. For example, years of education in the value of whole wheat bread has had little influence on the percentage of people who consume it. Nevertheless, the picture has some bright spots, for progress has been made even under difficult wartime conditions. The subject needs reexamination to appraise the different methods and techniques and to make a fresh start with programs adapted to modern conditions. Like all other aspects of the problem of nutrition, education in good food habits must take account of all the factors involved and bring to bear the techniques of many different branches of science. It will not succeed if attention is devoted exclusively to food, for peoples' food choices are influenced by other factors as well, such as their incomes and the amounts they spend on rent, other necessities, and luxuries. The classical example of Stockton-on-Tees where many of the families who were moved from slums to model housing suffered in health because the higher rents reduced the amounts they could spend for food should never be forgotten.⁹

The practitioner of social medicine, whether he deals with individual families or whole communities, must be concerned with the nutritional quality of the foods available to his people. In this respect the dead hand of tradition has greatly impeded progress. Our authorities are more concerned with adulter-

ations and misbranding than with the possibility that consumers may suffer injury to their health through depending upon foods lacking important nutrients which they have reason to believe the foods contain. Different samples of the same food item often differ widely in their vitamin content. No food has a definite and fixed quantity of any vitamin. "Values for vitamin content can in no sense be considered exact unless correlated with an adequate knowledge of the conditions that might have had an influence on them."¹⁰ Here are a few examples of these variations. Head lettuce has from 70 to 700 international units of vitamin A per 100 grams, while in loose leaf lettuce the similar values are 700 to 7,000 milligrams. Tomato juice has a vitamin A content varying from 500 to 1,200 milligrams per 100 grams. Variations of several hundred per cent in the vitamin content of different samples of the same food are not uncommon. Factors associated with such variation are variety of the plant, age, maturity, size, soil conditions (such as fertilizer used and moisture content), and the degree of exposure to sunlight.¹¹

After harvesting, the vitamins in food must run the gamut of a whole series of influences. Drying, storage, and cooking may have unfavorable effects, so that the vitamin content of food, as consumed, may be far lower than its content when harvested. Thiamin, for example, is heat labile, and ascorbic acid is destroyed by oxidation, so that thiamin and ascorbic content of foods may be greatly reduced by improper methods of cooking.

Much of the vitamin content of a food may be lost in processing. Wheat is a classic example. In the endeavor to get a fine white flour with good baking and keeping qualities, much of the thiamin, riboflavin, niacin, and iron content of wheat is lost. Recognition of this loss and its detrimental effects on human diets has led to the enrichment of white flour and bread, a practice that is becoming more and more common. Some twenty-one states have adopted legislation requiring en-

richment, and where such legislation does not exist, millers and bakers enrich a large proportion of white flour and bread voluntarily. This practice has added comparatively large amounts of thiamin, riboflavin, and niacin to the American dietary. Definitions and standards for enriched bread and flour have been adopted by the United States Food and Drug Administration which thus safeguards the nutritional quality of the bread and flour which are labeled enriched. The practice of guaranteeing the nutritional quality of common foods is at least as important for the public health as the prevention of food adulteration.

Having planned and produced the proper kinds and quantities of food, having made it available to the population through marketing, and having educated the people to make the right food choices, what results may we expect in the way of better health at various ages?

The benefits to health which experts have assured us would result from better nutrition have been strikingly demonstrated by the results of Britain's food policy during the war. That policy was laid down by a scientific advisory group which recommended that diets on a health standard (similar to the Food and Nutrition Board's recommended allowances) should be made available to all of the people as a primary measure of national survival and without regard to ability to pay. Hence food subsidies cost the government a sizable sum every year, but it is doubtful if any other government expenditure in the United Kingdom paid such high dividends in public health, in the reduction of sickness, and in increased working efficiency. These benefits can be expected to extend into the next generation, for better fed mothers have given birth to healthier infants, and the health of young children and adolescents has been maintained and improved by better nutrition. This was the greatest demonstration in history of the effects of better diets on the health of the people. Since under the stress of war all environmental conditions except food deteriorated seri-

ously, the results have greater validity. Here are the results as reported by the chief nutrition officer of the Ministry of Health:

The war-time food policy was the first large-scale application of the science of nutrition to the population of the United Kingdom. . . . A diet more than ever before in conformity with physiological requirements became available to everyone, irrespective of income.

The other environmental factors which might influence the public health had, on the whole, deteriorated under the stress of war. The public health, so far from deteriorating, was maintained and even in many respects improved. The rates of infantile, neonatal, and maternal mortality, and the still-birth rate reached the lowest levels ever.* The incidence of anaemia declined, the growth-rate and the condition of the teeth of school children were improved, and the general state of nutrition of the population as a whole was up to or above prewar standards. We are therefore entitled to conclude that the new knowledge of nutrition can be applied to communities with the expectation that concrete benefit to their state of well-being will result.¹²

The rapidly advancing science of nutrition has placed new and powerful weapons in the hands of those who would practice social medicine, whether for the benefit of the whole people or of individuals. If we are to use these weapons effectively, we must adjust some of our methods and practices, in government, in agriculture, and in industry, to the new knowledge. Since the incentive is so great, the process of change should not be too painful. The experience we acquire in applying nutrition will be useful in more difficult fields. And is it not true that in the future, the race will be to the peoples who

* Death rates from tuberculosis are worth adding. Among males they were 76.8 for the period 1931-1935, 63.8 for 1939, and 58.8 for 1945. Among females the similar figures were 54.3, 41, and 35.9. These figures are for all ages and per 100,000 population. Deaths from prematurity also reached a new low level. (Percy Stocks: "Tuberculosis Death Rates by Sex and Age, 1931-1946," *Month. Bull. Min. Health & Pub. Health Lab. Serv.*, 6:26, February 1947.)

adapt themselves most readily to the new conditions brought about by the advances of science on all fronts?

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Planning Food Supplies

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PLANNING is a process which must be both purposeful and practical. To be purposeful, it must help us to advance toward specific objectives that are believed to be desirable. To be practical, it must take into account the difficulties that stand in the way of progress and the limitation of our powers to attain the desired ends as quickly or as completely as we might wish. If we sought no progress, we would need no planning. If we set ourselves immediate utopian objectives, the proposals we arrived at would be too unrealistic to be reasonably regarded as plans. Our concern is with the middle ground between these two extremes, where planning can be at the same time progressive and realistic.

A great deal of planning is done by individuals and families in the management of their own affairs. The greatest part of the economic planning that is done in this country is done in the management of private business enterprises. In most countries the relative importance of public agencies in the conduct of the economic affairs of the nation is greater than that in the United States. Similarly, the trend in our own history has been to require an increasing participation by public authorities in the planning and regulation of economic activities. Neither of these facts necessarily implies that we should continue in this direction. The extent to which we, as a nation, choose to depend on private or public agencies for the performance of planning functions is a matter of our free choice, and each decision of this sort must be made on its merits, as judged from the point of view of the public interest.

From the time of Adam Smith to the present, the case for

free private enterprise has been based on the ground that it brings the best results for the people as a whole—in Bentham's language, "the greatest good for the greatest number." This is a logical test to be applied to all economic institutions and arrangements maintained in a democratic society.

Planning is a many-sided job. It requires the cooperation of experts with varied types of specialized knowledge and with technical competence in various fields. Since food is the most fundamental requirement for the life and health and well-being of mankind, it is naturally a matter of vital concern to medical science. In dealing with food problems, individually or socially, the contributions that can be made by those trained in the field of medicine have been, and always must be, of paramount importance. Men in the medical profession have a combination of qualifications which are particularly needed in all social planning projects: they are practical; they are consumer-minded; they are scientific.

In the planning of food supplies, the practical experience of the medical profession in applying the results of scientific research to the treatment of actual cases adds tremendously to the value of the more specialized contributions they can make. The planning process involves not only diagnosis but also the prescription of whatever treatment is most appropriate in the circumstances. Doctors are accustomed to making judgments on behalf of their patients and adapting their recommendations to the practical necessities of each specific case. They are often faced with the dilemma of knowing what treatment would be ideal, but knowing also that the means are not available for putting it into practice. The same is true in social planning. Those who work in the field of social medicine are in a liaison position of the greatest strategic importance and have a leading role to play in the development of better food planning for the people of the United States and for the world at large.

Public policy on questions relating to food should give bal-

anced consideration to the interests of both producers and consumers. But the attainment of this balance is not always easy. All people, including farmers and their families, are consumers of food. In a country like the United States the producers of food constitute a relatively small proportion of the total population. On the basis of numbers, it might be expected, therefore, that the consumer point of view would exercise a predominant influence on public policy. In fact, however, exactly the opposite has been the case, not only in our own country, but also (with occasional exceptions) in other countries throughout the world. It is natural that people should be more clearly conscious of their interests as producers than their interests as consumers; and that being so, the development of effective political and economic means for the promotion of those interests has been easier than with respect to our more widely diffused consumer interests.

The fact that food problems have been approached, in the past, mainly from the producers' point of view does not mean that the resulting policies and programs have necessarily been entirely contrary to the interests of consumers. On a wide range of subjects, producers and consumers have interests that are in harmony with one another. Progress in technology which increases the efficiency of agriculture brings benefits to farmers and to non-farmers alike. We cannot even say categorically that agricultural tariffs or monopolistic marketing arrangements or production curtailment programs are always wholly undesirable from the point of view of the consumers of farm products. Consumers have an interest in the stability of agriculture and in the prosperity of all groups of producers on whom they depend for supplies. But, on the other hand, there can be no doubt that the one-sidedness of the influences hitherto dominant in the planning and management of food supplies has led to results which were in some cases injurious to non-farm segments of the population and were in many other cases less bene-

ficial to them than they could have been if the promotion of consumer interests had been more consciously accepted as an objective of public policy.

One of the highly significant developments in the past two decades has been the growth of consumer-consciousness and the efforts to make the representation of consumer interests more effective. Consumer education has become increasingly important in school and college curricula. Consumer programs have been adopted more and more widely by citizens' organizations which gained strength, particularly during the war, from the trade union side. At the present time a National Association of Consumers is being organized. In connection with the NRA and AAA programs in the early thirties, consumer counsels were provided for within the governmental framework. When the National Defense Commission was set up in 1940, one of its seven members was specifically assigned the responsibility of representing the interests of consumers. The OPA program during the war was basically for the protection of consumers and under Mr. Bowles's leadership close working relations were established with representatives of the consuming public.

Medical men and nutritionists have naturally studied the problems of diets and health. This is important in relation to future progress in the planning of food supplies. It can help enormously in providing the balance that is necessary in the formulation of sound public policies and programs.

Wartime exigencies brought quick recognition of the importance of nutritional knowledge as a basis for the planning of both military and civilian feeding programs. No sooner had the war begun than a Food and Nutrition Board was set up as part of the National Research Council. Under Dr. Boudreau's able and tactful leadership it has played an increasingly important role during the past five years. Similarly, when the War Food Administration was established at the end of 1942, a

Civilian Requirements Branch was immediately set up under another of the nation's most outstanding medical and nutritional authorities, Dr. Russell Wilder of the Mayo Clinic.

In Britain, where the most successful large-scale food management program of all time was developed during the war, a major part of the credit is ungrudgingly conceded by everyone concerned to the scientific advisor of their Ministry of Food, a world famous nutritionist, Sir Jack Drummond. Similar roles were played by medical doctors and nutrition scientists in the food programs of other countries: Drs. Janson and Dols in the Netherlands; Professor Chouard in France; Drs. Tisdall and Pett in Canada; and so on. Nor is it an accident that the first head chosen for the international Food and Agriculture Organization should be Sir John Orr, a man whose distinction as a scientist is equalled only by his eminence as an international statesman and world leader.

In the food field, as in no other economic field of comparable importance, firm foundations have already been laid for the scientific analysis of consumption problems; and further work along these lines is proceeding with promise of still more valuable results. For this we are indebted to the work of medical and nutritional specialists. And the extent of that indebtedness can hardly be overestimated.

In wartime it was readily recognized that social controls over the production and distribution of food supplies were necessary. The nature and extent of these controls varied from country to country according to their circumstances. International machinery was also developed for the allocation of available supplies among the different countries of the world. Postwar food shortages have required the continuance of substantially the same controls since V-J Day except in the United States and some of the other supplying countries. Immeasurable benefits have resulted from these food management programs. Without them conditions would have been

intolerable—famine and suffering would have been many times worse than they have been.

This type of management was introduced for an emergency period only, however. Before the war nothing comparable had been done, and the expectation has been that when once conditions become more normal again there will be an almost complete return to prewar methods. Only recently has it become recognized that the experience of wartime food management may have a marked effect on future policies and practices. People of the Western World are more conscious today than they have been for generations of the importance of food as a basis for national health, efficiency, and well-being. They also know that the participation of scientists can give to food supply planning in the future a professional as well as a political character.

In Britain, where the health of the nation actually improved during the war, many of the essential features of the program developed by their Ministry of Food will definitely be continued. This is, of course, consistent with the policies of a socialist government, but the prospects would not have been very different even if the Conservative Party had been returned to power in 1945. To anyone who saw the rosy cheeks, sparkling eyes, and sturdy legs of British children during the grim years when their country was literally a battle front, this is not surprising. The same is true of many other European countries. Even in their darkest hours most countries, in their rationing systems, made special provision for meeting as fully as they could the special needs of mothers and children. The benefits resulting from these policies are not likely to be forgotten and, in one way or another, programs for the attainment of similar objectives will almost certainly be continued in peacetime.

In the United States, where we suffered no real food shortages and where the government food program has been associ-

ated in the public mind with efforts to increase the supplies we could send to other countries rather than with the meeting of our own needs, the immediate postwar reactions have naturally been quite different. Americans were more impressed with the irksomeness of controls than with the benefits derived from them. As a nation, we have more faith in business management and less in government management than almost any other people in the world. The immediate postwar tendency here has been to sweep away all emergency controls as quickly and completely as possible. It would be wrong to suppose that the lessons learned in the past five years will not ultimately have a significant influence on the course of events even in this country, however.

There will be some food supply planning on the local level, at the state level, nationally, and internationally. This planning may be well conceived and efficiently carried out; or it may be misdirected and badly executed. The fact that it is "planning" does not give us assurance that it will be generally beneficial. That can be assured only if it is done by the right kind of planners, by people with a high degree of technical competence who clearly see as their governing objective the promotion of the public interest. For example, sanitary regulations to insure the purity of a city's milk supply are necessary for the protection of the public health; but these regulations can be used (and have been used) to limit available supplies and to secure monopoly gains for favored groups of producers. State and county planning of agricultural production goals, together with services to farmers to increase their efficiency, may be expected to bring good results; whereas the laws in certain dairy states which prevent the sale of margarine deprive low-income consumers of a food that it would be desirable and economical for them to use.

In our national programs it will be important to plan in such a way that our food production and foreign trade resources

are used to provide with the greatest economy the things that are most essential for the nutrition, health, and well-being of the nation. In this connection we must think, not in terms of a single integrated program which we can readily examine and appraise, but in terms of a heterogeneous assortment of measures all of which, in different ways, will affect the food supplies of the American people. Among these measures will be included: tariffs and quotas, direct and indirect subsidies, soil conservation payments, production adjustment plans, surplus disposal programs, school lunch programs, and broader proposals such as that contained in Senator Aiken's bill for a comprehensive National Food Allotment scheme.

Finally, in addition to this national planning, there will be international planning in which the United States has a vital interest. The influence of this country in international planning makes our responsibilities correspondingly great. During the war we worked jointly on current problems with the United Kingdom and Canada through the Combined Food Board. Within the past year that board has been replaced by the International Emergency Food Council, which is more truly representative of all the United Nations. These agencies have been concerned with short-run food problems arising from the war. To deal with longer-run problems, the United Nations Food and Agriculture Organization has been established. The Organization has already made some preliminary investigations of the future food supplies of the world in relation to consumption needs and has pointed the direction for constructive efforts which would better the conditions of producers and consumers alike. The International Trade Organization which is being set up by the United Nations will also have a part to play in arrangements relating to the international movements of foodstuffs. The charter for this organization, now approaching the stage of final acceptance, makes provision for inter-governmental agreements with respect to

basic commodities and significantly requires that in the administration of any such plans, producing countries and consuming countries shall have equal representation.

This brief review offers clear evidence of the extent and importance of the problems of food supply planning that lie ahead. Members of the medical profession, particularly those with a special interest in social medicine, can make a contribution of inestimable value in this essential and indispensable work.

Marketing and Diets

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THE simplest way to put our marketing system in a perspective that will be meaningful to doctors is to contrast it, first, with our system of medicine and public health, and then with our system of education. By and large, the private medical profession adjusts its service charges to the ability of the patient to pay for them, and in the aggregate takes care of large numbers of poor families at small returns. Some of this comes about by differentiation in the quality of the service rendered: those with limited means obtain a very ordinary level of medical care; those who can afford it pay handsomely for the most highly skilled medical care. The principles underlying this practice are widely accepted in the medical profession and represent a very old tradition of service. These principles have also been applied in hospital service: public hospitals generally provide free or low-cost service to those who cannot afford to pay for it, and private hospitals commonly have flexible schedules of rates. Public nursing services are being provided increasingly, and public health is an accepted part of our social organization. There is now before the Congress, with support from unexpected quarters, the Wagner-Murray-Dingell bill, proposing a large expansion of health services to the masses of the population. Finally, institutes such as these are testimony to the fundamental belief of the medical profession in bringing health within reach of every last member of the community.

Our school system long ago adopted the policy of free tuition to all in the same community through the high school level, and almost free tuition through the state universities. The costs of such education are borne by taxes collected out of property and income, taxation roughly in accord with ability

to pay. Education is therefore already farther on the way toward our common goal, a truly free society, than is health. The progress that education still needs to make lies along the following lines: (1) Improving the educational service in poor areas and communities by drawing upon the sources of public revenue in wealthier areas and communities. This is proper because the incomes received in the wealthier communities are produced in part elsewhere; because the children of the poorer rural communities become the future population of our cities—otherwise our cities would become smaller and smaller; and because the children in the poorer schools are the future employees of the factories, railroads, mines, and merchandising establishments which earn the larger incomes. (2) Making higher education more available to young men and women of high promise. (3) Increasing the scope of adult education in health and nutrition. (4) Improving the quality of the education in our schools generally. Measures are now before Congress, again with support from unexpected quarters, designed to contribute to progress along these lines.

Now, consider our marketing system from the same point of view. In the typical independent family grocery store, the poor family pays at exactly the same rate as the well-to-do family for the merchandising service which it obtains from this store. Perhaps this is as it should be. Perhaps no other arrangement is compatible with modern one-price merchandising. But the actual process goes beyond this; it compels the poor families to pay for the same amount of merchandising service as is furnished the well-to-do customers. This might be all right if the amount of service paid for is what the poor families want and can afford to buy. But in fact the very opposite of this tends to be true.

The most important single truth about consumer markets nearly everywhere is that minorities rule them. If a small fraction of the buying public wants some new service added, first one merchant offers it, and then another, and presently the

majority of consumers are all paying to have it. But this majority would not have voted for it if it could have had a choice between the extra service and the lower retail price. The minority fraction that wants and gets this extra service is, of course, the well-to-do minority. The majority that does not want it but has to pay for it includes all the lower-income families.

We have heard a great deal about consumer sovereignty in recent years. In the consumer market this sovereignty is used to vote more and more services for the select well-to-do. This is of course the very reverse of the situation in our medical system, where the well-to-do pay extra and by so doing commonly make possible medical care for the poor and indigent.

A clear-cut example of this extra marketing service is in order. In one of our large cities several years ago one of the milk distributors began advertising the extra service of delivering extra milk or cream any time in the day after the regular delivery. It was only a few months until all the bigger companies were offering the same service; not long after that margins between farm and consumer had risen an extra cent per quart. By such a process, the independent retail grocer has had to add an increasing amount of delivery and credit service, selling and delivering in smaller and smaller amounts, more and smaller packaging, fuller lines of fancy groceries, more and more year-round fresh vegetables, and more and more brands. Of course many of us would not like our grocery stores without them. But *we* can afford them—although no doubt some of us would do without part of them if we had to pay the retailer mark-ups really required to cover what it costs the grocer to provide them. As it is, the rank and file of lower-income customers are paying additional mark-ups on the goods which they must have, so that we can have the extras we want.

The most expensive part of retailing service takes the form of providing the public with the convenience not only of a grocery store nearby, but perhaps a half a dozen of them to choose

from. How do we get such a multiplication of retailing outlets? First of all, almost any new location is handier for some buyers than the ones already there. Second, most of us are always trying out something new, even if it is nothing more than a new grocery store with a new front or window display. This is enough to give the new store an initial start. The number of stores that never get much beyond this stage is pretty large. But enough get beyond it so that another new store is added at most trading corners every few years. Of course the business which the store gets is largely taken away from the older stores, and this may force the weakest store to quit. But often it does not. Instead, margins are stepped up little by little so that the older stores and the new ones manage to hold on; the final result is that the community is supporting one more store.

A roughly similar situation prevails in the wholesaling and jobbing field. These operators find themselves furnishing more and more services to the retailers; new services manage to crowd in among the old ones and gradually raise margins.

It would be wrong to leave the impression that no counteracting developments appear. First of all, retail stores do differentiate according to the population groups they serve. In the well-to-do residential sections of a city, more services, at higher margins, and fuller lines of goods are provided than in the low-income sections. In the second place, new types of retail operators arise who cater to those wanting less retail service. First came the mail-order house, then the chain store, and still later the super-market. The chain stores not only cut out delivery service and credit, but also simplified and standardized their lines of goods, increased turnover, and reduced costs. But they passed only a fraction of the savings on to the consumers, and the resulting high profits soon induced various wasteful forms of service competition among chain store systems. Moreover, since the chain store units displaced only a part of the independents, one of the results was a big increase

in the number of retail food outlets. The super-markets, which appeared in turn, reduced the number of outlets. At first they made some savings by increasing the average size of the customer purchase, but even they are now in the process of dissipating their gains.

The fact of the matter is that competition does not seem to reduce cost in distribution as it does in manufacturing. Instead, it seems to multiply services. That this is true is attested by some simple statistics. From 1900 to 1940 the number of workers employed in commodity distribution—foods and all other commodities—increased 160 per cent, whereas the number employed in all forms of production increased only 40 per cent. Volume of commodities handled per worker increased not at all in distribution, whereas volume of output per worker increased 90 per cent in production. Back in 1913, 1914, and 1915, the distributors and the railroads were taking 54 cents out of the average consumer dollar spent on food; twenty-five years later, in 1938, 1939, and 1940, they were taking 61 cents of it, an increase of 7 cents. No doubt there had been some gains in efficiency in handling and selling during this period, but they had been swallowed up, and more, by an increase in services, plus rises in wages and rents.

A few statements are needed as to the impact of the war and the postwar to date. The sharp rise in prices of farm products during wars always increases the farmer's share in the consumer's dollar and decreases the middleman's share. The middleman's share fell off from 55 to 49 cents in the first world war. In the recent war it fell from 61 cents to 50 cents. However in the recessions following the wars a sharp break occurs in the other direction. The increase from 1919 to 1921 was from 49 cents to 60 cents. By 1928 and 1929 this had leveled out to 58 cents, about 9 cents above the wartime peak. In the severe depression of the 1930's the middleman's share rose to 68 cents and the farmer's share fell to 32 cents. If the rise in the middleman's share in the price recession now anticipated is again

9 cents, the middleman will be getting 59 cents of the consumer dollar. If farm prices are held at 90 per cent of parity as under present legislation, the rise will be only 56 cents.

Another development is the expansion of food consumption during the war and postwar years as a result of higher incomes for workingmen. The index of food consumption per capita as now computed by the United States Department of Agriculture, which uses 1935-1939 as the base equal to 100, rose to 107 in 1942, to 111 in 1944, and finally to 118 in 1946.* This 118 can be compared with 96 before the first world war and 97 at the bottom of the depression in the 1930's. Perhaps it needs to be explained that the rise in food consumption represents only to a very slight extent an increase in the consumption of calories. It represents instead an increase in the consumption of meats, dairy products, fruit, and vegetables and the substitution of these for equivalent calories of cereals, roots, tubers, and other cheap foods. It is therefore a good measure of the quality as well as the quantity of the diet.

It might help to comprehend the values of these index numbers if they were converted to the "diets at four levels of nutritive content and cost" of Stiebeling and Ward. The index numbers for these four diets at 1935-1939 prices would be roughly as follows: the restricted diet for emergency use, 54; the adequate diet at minimum cost, 66; the adequate diet at moderate cost, 93; and the liberal diet, 113.

The columnist Thomas Stokes recently published a typical monthly grocery list for a plantation cropper family in the Mississippi Delta, consisting of flour, corn meal, rice, beans and peas, salt pork, lard, molasses, and sugar. The index number of this food budget, supplemented by the usual amounts of home-produced milk, meat, eggs, vegetables, and fruits in such a diet, would have been 61 in 1935-1939. Probably ten million of the people of the United States even now have diets no better than Thomas Stokes's cropper family. On the other hand, an

* The preliminary figure for 1947 is 117, and the forecast for 1948 is 113.

average for the United States, excluding the South, would be fully as high as the best in the world.

If the diets reported in the 1935-1939 World Food Survey are reduced to index numbers on the same base, the range is from 113 for New Zealand to 33 for India and Java and 35 for China. The index for the diet of the United Kingdom is 88; for Germany in that period, 81; for Belgium, 71; for Brazil, 76; for Russia, 59; for Italy, 56; for Puerto Rico, 47; for Japan, 48; for Mexico, 48; for Peru, 39; and for Egypt, 38. The average index for the 70 countries is 53.

The target set for 1960 in the World Food Survey averages 65 for the world. The one set for the United States would raise its diet from the prewar 100 to 113; that for the United Kingdom, from its prewar 88 to 103; that for India, from its prewar 33 to 55; that for China, from its prewar 35 to 56. A composite target published in the Survey for South America, excluding Argentina, would raise its food consumption from 70 to 80. The target set for southeastern Europe is 76, compared with its prewar 64.

The increase in food consumption in the United States from 100 to 116 has had an important effect on the business of wholesalers and retailers of food. First of all, it has given them more business; on the other hand, labor costs and rents have not been increasing in proportion—in fact, the amount of services sold with the food has been considerably reduced. Also, the number of stores was reduced in many communities during the war. As a consequence of all these changes, merchandising profits have risen greatly. This is a world-wide phenomenon. Professor Ohlin of Sweden, who visited us recently at Harvard, commented upon the great reduction in Europe in the number of persons now being employed in merchandising and selling. The markets of the last few years have been sellers' markets in which the sellers have been in a position to offer only what they could get to sell. The great savings thus achieved, however, are in danger of being reduced by a rapid increase in the num-

ber of retail outlets. This may absorb all the savings and leave us with a still larger fraction of the consumer's dollar spent on marketing.

In the immediate situation, the wages of workingmen have not kept up with the rising prices of food. The lower-income families are therefore in a position to buy poorer diets than before, and the index of consumption for them has been declining rapidly in the last six months. The purpose of the letter written to Thomas Stokes was to show how much more the diet described was costing then than before the war and to balance this against the relatively small increases in income of the share croppers.*

The general public has not been unaware of the seriousness of our marketing problem and of the increasing absorption of consumer income in the marketing process. The first explosion over the situation came in the period around 1910-1913. Food prices had been rising faster than other prices since 1880 and especially since 1900. Wages had risen scarcely at all from 1900 to 1910. There was wide discussion of the high cost of living, and this was attributed in large measure to the high cost of marketing. The *Saturday Evening Post* ran a cartoon that showed a big black splotch in the middle with a farmer on one side of it and the consumer on the other, with the heading, "What takes place in the dark?" This was reprinted and circulated widely over the country. The agricultural colleges came under attack for not helping the farmers with their marketing problems, and professorships in marketing began to be set up for the first time in the various colleges. The colleges busied themselves for the first ten years with collecting data to show what happened in the dark. The results were commonly published in the form of pie diagrams that showed how big a slice was taken by the retailers, the wholesalers, the railroads, and the country buyers. In 1913 a division called Rural Organization

* The increase reported was from \$12.73 to \$22.10 for the monthly grocery list.

and Markets—later the Bureau of Markets—was created in the United States Department of Agriculture. By 1918 this bureau had a staff of over one thousand in Washington and out in the states helping with problems of grading and inspection, price quoting, market news, and the like.

The next big explosion occurred when the price of farm products began to break in 1920–1921. Congress set up a Commission of Agricultural Enquiry which held hearings and published three volumes, mostly devoted to marketing. A long list of acts was passed by Congress, and most of the states set up departments of marketing. All of this movement, however, was in the interest of better prices for the farmer; the consumer was rarely mentioned. The culmination of this legislative movement was the passage of the Hoover Agricultural Marketing Act of 1929 which created the Federal Farm Board.

The New Deal legislation, beginning in 1933, undertook to raise the prices of farm products by controlling production, and provided little in the way of marketing aids or controls. However, under the guise of distributing surplus food to families on relief, there developed a system of surplus food distribution which eventually grew into a School Feeding Program and a Stamp Program.

With the end of the second world war, we have a new burst of interest in marketing. It differs from that engendered in 1920–1921 in that it has arisen in anticipation of the appearance of surpluses and a sharp break in prices of farm products. The last Congress passed the Hope-Flannagan Act, now technically called the Research and Marketing Act of 1946. The method proposed to improve marketing under this new program is to conduct a large volume of research, particularly in the utilization of farm products for industrial as well as food purposes. Amazing statements are being made as to what marketing research can do to protect the farmers against loss of income. Over \$13,000,000 was appropriated for carrying out this act in 1948–1949; increasing amounts are authorized for

succeeding years until a level is reached that will make about \$1,000,000 a year available in the state of Texas and \$200,000 in Massachusetts.

Meanwhile, those who are faced with the task of conducting this research have few illusions as to how much they can accomplish along these lines in a short time. One of them recently in a public address quoted Tennessee Williams from the *Glass Menagerie* as follows: "We have tricks up our sleeves and illusions for sale." None of the methods of research and extension now employed in the field of marketing will reduce consumer prices and increase the farmer's share in the consumer dollar at any startling rate. A vigorous prosecution of research along established lines will do well to keep up with the rise in wages and rents that is in prospect. Only a departure from established methods of marketing, and concentration of effort on the kind of marketing organization that will integrate more effectively the various steps in the marketing process and adapt marketing services to the needs and interest of consumers can achieve any large gains.

One of the most promising lines which such research might take would be to develop standardized grades for food products of all descriptions and forms of informative labeling. The consumers would then know exactly what they are buying, and would be saved the expense of a vast amount of sales effort directed toward getting them to buy particular brands of foods that are no better than any standard grade ought to be. One of the things that democracy means in the economic sense is what the economists call "perfect competition." Such competition exists when all the buyers and sellers are fully informed about what is being bought and sold and about supply and demand. Under the democratic system that we presume to have, every buyer of food or anything else has a right to know exactly what he is buying. This is what free enterprise really means. Unfortunately, many of those who shout "free enter-

prise" the loudest do not want consumers to know what they are buying and are doing their utmost to delude them.

It should be apparent from what has been said, however, that no prospective reforms of our present marketing system are going to meet the situation which faces doctors when they set out to improve the health of the large low-income fraction of our population by getting them more of the right kinds of food to eat. Doctors realize that the health of a sizable fraction of our people cannot be improved until the foods they need can be put within the reach of their incomes; no ordinary marketing reforms will do this. If employment can be kept at a high level, the number of low-income families will be kept from mounting, but still there will be many who do not have enough earning power to feed themselves properly. The only conclusion that can reasonably be reached is that the needs of this situation can be met only by supplementary food distribution methods.

In the United States around \$150,000,000 was spent in 1946 by the federal government and local governmental units combined for school lunches. The National School Lunch Act of June, 1946, authorized a 50 per cent increase in the federal allotment for such feeding. The major reason that school lunches are favored is that they have high educational value. The children learn, in the most effective way, by doing, at a time in life when they are forming lifetime food habits. They also carry these new habits into their homes and thus change the food patterns of their parents' households. Because of the high effectiveness of school lunches, the foods served need to be carefully considered from the standpoint of how they fit into the economy of both food production and food consumption, and the food served should be adapted to the income and occupational groups in the school district or part of the city served by the school.

Some countries have made even more progress than the

United States in school lunches, notably the United Kingdom and Denmark. The cut in the United States Department of Agriculture budget proposed by the Republicans included the \$75,000,000 for school lunches; but the final adjustments and compromises left this item largely intact.

There is also strong support in many quarters for programs designed to supplement the diets of expectant and nursing mothers and children of preschool age in low-income families, to the extent of supplying them with a few of the highly essential foods, including milk, orange juice, cod liver oil, and the like. The number of stillbirths and maternal deaths has been considerably reduced by such programs in Great Britain and elsewhere.* All doctors know that the period between weaning from the breast or bottle and beginning school is a critical period in the life of many children. Deficiencies in intake of calcium, vitamin D, and other essentials in these years cause structural or other bodily defects that may never be outgrown. The method of getting foods distributed to needy mothers and children is one of the problems of this type of nutrition program. In May, 1946, schools and child-care centers operating child-feeding programs in the United States were receiving supplementary foods from the Department of Agriculture for 2,400,000 children. England and Wales have nearly 5,000 infant welfare centers, which are the main distribution centers for milk, orange juice, cod liver oil, and vitamin tablets for mothers and preschool children. A recent report estimates that 90 per cent of the mothers entitled to milk were receiving it, 54 per cent were receiving fruit juices, and 26 per cent, cod liver oil. Other countries are evolving programs of this type.

In-plant or in-service feeding may take the form merely of insuring good mid-day or night-shift meals for workers; of providing breakfasts for workers who travel long distances to work or who do not eat a proper breakfast before reporting

* See Boudreau, p. 144.

for work; or of mid-shift lunches to restore the energies of the workers as well as to afford relaxation. Good in-service feeding programs are carefully planned from the standpoint of supplementing probable inadequacies in home feeding. Public aid principally takes the form of helping employers to organize such programs. Good collaboration between employer and worker is highly essential, and some degree of joint management is usually arranged. At the peak of the war effort in 1945, around 45 per cent of the workers in manufacturing plants in the United States were provided with in-plant facilities of one sort or another. The percentage was much lower in mining, construction, trade, and transportation. In-plant feeding is still further developed in the United Kingdom. During the war it provided a method of differential rationing in the United Kingdom.

The Stamp Program, which was in operation in the United States from May, 1939, to March, 1943, was designed to make available to families and persons on relief or receiving public assistance a select list of foods which were in surplus in the United States and at the same time were valuable supplements to the diet. Thus pork was being included in early 1942 because it was relatively abundant and low-priced. These foods were paid for with blue stamps, which were issued free, at the rate usually of 50 cents worth for every dollar's worth of orange stamps purchased. The orange stamps were supposed to be bought for the full amount of the foods purchased before the blue stamps became available, so that all the blue stamps would be used to buy additions to the diet. At one time the foods on the list included pork, lard, butter, eggs, rice, flour, drybeans, and fresh fruits and vegetables in season. At its peak in May, 1940, the Stamp Program reached 3,970,000 persons in 345 areas. The average blue stamp distribution was then at the rate of \$40 per person annually. In operation, some of the orange stamps were used to buy soap and other non-food items sold in the same stores, and blue stamps were used to buy food

normally bought. Perhaps half of the extra 50 cents bought additional food. The program was conceived more largely as a surplus disposal than as a nutrition program, and it was dropped when food was no longer in surplus.

The first method of disposing of surplus foods in the United States was by direct distribution through relief agencies or food depots. These foods were furnished free. The Stamp Program largely took its place after 1939. In a few cities, however, milk continued to be distributed from depots at reduced prices or free. In other cities milk was distributed from wagons to families certified as on relief and to schools, where it was to be sold to the children at one cent per glass. The milk distributing companies did this distributing, usually on the basis of bids, and the milk producers commonly received less than the full Class I price.

Hospitals, homes for the aged or indigent, mental institutions, and other similar public institutions may share in feeding programs that have somewhat the character of school feeding programs and somewhat that of direct distribution. In May, 1946, around 565,000 inmates of such institutions were receiving food from the United States Department of Agriculture to supplement their other available foods.

The most far-reaching legislation thus far proposed is the Aiken national food allotment plan first introduced in the Senate by Senator Aiken and in the House by LaFollette in June, 1945. Under this plan the government would sell a family enough coupons to buy the basic food allotment, which is essentially the Stiebeling-Ward low-cost adequate diet, for 40 per cent of its income. Families with good incomes would find the coupons purchased on this basis costing them more than the food, and hence would not buy them. Only the low-income families, those who normally spend more than 40 per cent of their income on food, would save any money by buying the coupons. Many of these would not save enough to want to bother with the coupons. Under normal income con-

ditions the families eligible for the coupons would amount to fully 40 per cent of the population of the United States. As for the cost of such a program, Dr. Rainer Schickele estimates a range of from \$2,000,000,000 to \$2,500,000,000 in times of severe depression, to \$500,000,000 to \$600,000,000 with full employment.* But he does not expect that all eligibles would take advantage of the program—only about two-thirds of them did so under the Stamp Program. Nor does he expect Congress to vote enough funds for a full program, at least at the start. If as little as \$1,000,000,000 were provided, it would take care of most of the low-income families with severely deficient diets, even in depression periods.

The Aiken plan leaves families free to spend their coupons for whatever foods they choose. Educational measures would have to guide their purchases. (The bill authorizes liberal expenditures on such education.) Many think that this freedom is a weakness of the plan. If so, it could be remedied in part by designating certain coupons as acceptable only in payment for certain foods, such as dairy products and eggs.

The objectives of the Aiken plan are obviously two-fold: to promote better nutrition and to provide a larger outlet for farm products. Rainer Schickele has estimated that the Aiken plan, had it been operating in 1941 on a full scale with all eligibles participating, would have increased food consumption as much as 17 per cent.* At 1946 levels of income the increase would have been very much smaller—10 per cent according to his figuring; fewer families would have been spending 40 per cent or more of their incomes for food. As little as \$1,000,000,000 spent on the Aiken plan at levels of income such as would prevail if a mild business recession set in might very well increase food consumption by as much as 3 per cent; this might raise food prices by as much as 10 per cent, if one may judge by past relationships.

* Rainer Schickele: "The National Food Allotment Program," *Journal of Farm Economics*, 28: 515-533, May 1946.

To administer this plan would require getting income statements from each family making application for coupons. The number of coupons would have to be reduced to take into account meals eaten out and home-produced food on farms and in family gardens in cities. The difficulties in administering the plan represent an important objection to it.

A balanced program of supplementary food distribution would include the following:

1. A vigorous program of public education in nutrition, including home planning for non-farm families when such is desired by the families
2. School feeding
3. Distribution of special foods to mothers and preschool children
4. Institutional feeding
5. In-plant feeding—limited to aid in organizing such services in plants or on jobs and to subsidizing the consumption in such feeding of a few key foods whose consumption needs to be expanded
6. Stamp programs—to supplement the foregoing when needed, especially in periods of surplus food production while production adjustment programs are getting under way. Two general principles should be followed in expanding stamp programs:
 - A. Extend them to groups in the population in the following order: First, families or persons already receiving public assistance; second, families or persons certified as malnourished because of low incomes by competent local reviewing committees, or upon the recommendation of physicians, teachers, extension workers, and the like; third, low-income families generally, on the basis of income and food budget statements. The stamps should cover additions to diets only. This means requiring the purchase of other stamps to cover the former normal consumption.
 - B. Extend them into selected communities first and into others later. The order of selection will be determined (a) by income and nutritional status and (b) by the adequacy of the local organization provided to administer the program. The central administration of the stamp program will determine the specifications of an adequate local administrative set-up

and offer the program only to communities with administrative set-ups that meet these specifications. Competent and responsible reviewing committees are necessary before stamps can be sold to the second, and especially the third, group named above.

The stamp program thus outlined is not as inclusive as the Aiken plan, but it provides the essentials for future development. Such development would be accelerated if severe unemployment were to develop in this country or if prices of farm products were to fall to low levels.

The problem still remains as to how to get the supplementary foods distributed among the low-income families. This distribution can be through the regular marketing agencies, or entirely outside of it, or through some combination of existing and new agencies. When surplus food distribution was begun in the 1930's, special depots were set up for this purpose. The merchants did not like the arrangement and proposed a stamp plan as an alternative. After some discussion a decision was reached to give it a trial. As indicated above, it worked only fairly satisfactorily. It needs to be pointed out that the margins taken by the merchants on stamp plan sales were the same as on their regular sales. As long as distribution was small, this was not objectionable. With a full fledged stamp plan, however, the subsidy to the retail marketing system would be altogether too large. Furthermore, in the end, the principal effect would be the addition of new retail stores. Methods should be developed which will make use of the regular marketing channels but will remove the subsidy to merchants.

The experience with milk distribution in the later 1930's suggests other possibilities. Milk for school lunches was furnished in many cases on the basis of competitive bids by milk distributors. Even some distribution to families was handled on a competitive bid basis. The milk-producer cooperatives sometimes furnished milk for supplementary distribution at prices midway between Class I and Class II prices. Food for use

in school feeding is commonly bought in the wholesale market. The essential need is to discover methods of distributing food to low-income families with all unnecessary services eliminated, in other words strictly on the basis of the actual cost of handling the food. In general, supplementary food distribution should pay only the special or prime costs of such distribution. For example, if a merchant were doing a \$30,000 business at a cost of \$6,000 for expenses other than his food purchases and \$2,000 worth of stamp plan or other supplementary food sales were added, with an addition to his expenses of \$250 for labor, delivery, and the like, then the \$2,000 worth of business should be handled at a charge of only \$250, an operating expense ratio which would be 12.5 per cent as compared with the 20 per cent ratio for his regular business.

In general, supplementary food should not be furnished to low-income families free, but at reduced prices, often at half the regular prices. In order to accomplish such a reduction, an effort should be made to arrange the purchase and distribution of this food so that the difference between the cost of providing it and the sales receipts will be relatively small. An effort should also be made to provide basic foods in cheap forms. Milk, for example, can be provided much more cheaply in the evaporated form than as fresh milk; or with proper equipment, milk can be reconstituted from whole milk powder and used in school feeding programs where it is reasonably acceptable to the school children. Tests in the southern states have shown that as high as 90 per cent of the children in some communities like reconstituted milk as well as fresh milk. Fundamentally, the problem of acceptability is one of food habit. Children fed reconstituted milk when first taken from the breast or bottle are likely to prefer it to fresh milk afterwards. Also, a form of semi-evaporated milk is now being made which anyone can convert to the equivalent of fresh milk merely by adding water. This milk will keep for several weeks in a refrigerator.

In some communities, providing essential food supplies may

require arranging for production as well as distribution. For example, not enough milk is produced on farms around some southern cities to meet the needs of the children. An assured outlet through a supplementary distribution system at relatively small subsidies to producers may be the most economical way of using the resources of the area. In the aggregate, a great deal of local production-consumption adjustment is needed.

The doctors in a community can be very useful in the development of supplementary food distribution programs. They can inform themselves fully with respect to the programs and their methods of operation, assume leadership in getting them adopted in their communities, and then take an active part as members of advisory committees in seeing that the particular foods necessary to supplement present diets are provided. School feeding needs especially to be supervised from this point of view. Doctors can also serve as the certifying officials who decide which families are to be supplied with supplementary foods. The stores in some poor communities do not carry some of the foods necessary for good diets. The merchants say that they cannot afford to carry them. A little leadership and planning is ordinarily all that is needed to improve such a situation. The doctors are in a strategic position to assume this leadership.

Underlying all the foregoing analysis is the democratic principle of equality of opportunity, which is the essence of a free society. There is no equality of opportunity if some members of the community are suffering from poor health or low working efficiency that can be corrected with adequate medical care; or, more important, if they might have had good health had they been given proper medical care from their prenatal years on. Health, of course, requires an equal access to the minimum diet for health.

In the early years of our republic when new opportunities were at every hand, our ancestors assumed that nothing more was required to assure equal opportunity than equal suffrage

and equal protection of the laws. We now realize that a positive provision of equality of opportunity must be added to make this equality real. Otherwise, economic power tends to concentrate and to ally itself with political power in such a way as to restrict the outlets and the avenues of progress for great masses of our population.

In the last few decades we have seen other kinds of social systems develop which we call communistic, which restrict suffrage and many other civil rights that we have learned to esteem highly in our type of society, but which do emphasize, in their ideologies at least, equal access to the necessities of life more than our system does. We must meet the challenge of these systems by providing this access along with our political freedom. It is not enough to point to the lower standards of living of these people. Ours might be lower than theirs if we had as many people to feed per square mile as they have. Large masses of people in Europe and other parts of the world with indexes of food consumption in the 60's or below are not going to be content with mere political freedom. This is the meaning of the political shifts that have appeared in England, France, and other countries. The Western democracies must show that they can provide full social freedom along with political freedom.

A letter has been sleeping restlessly in my files since the late summer of 1945 when our armies were closing in for the kill in western Europe. It was written by a soldier and a former student, who had been profoundly moved by what he had seen in Italy and France and was asking the meaning of the war in what was to come after the war. This particular paragraph was prefaced by a reference to the American Legion and a belief that the returned soldiers of this war would have more serious purposes than those of the last war. He wrote as follows:

If we could rear but one generation of our people with enough of the right foods to eat, enough medical care to keep their bodies sound, and enough education and training to make them as good

workmen as their natural abilities allow, we as a nation could go on from there without fear of the future. A good life has other things in it than food and health and knowledge and skills; but the other things increase as these four increase, and even more rapidly. We have resources enough, and manpower enough, and knowledge enough, to provide a minimum adequacy of these four for all our people. We can produce such an adequacy with our present institutions, within the American way of life, if we will but use these institutions as their builders meant them to be used. We can do a large part of this within one generation if we set our minds and hearts upon it. Our generation, the generation of the twelve million men and women now waging the second great war to keep the world free, should be the one that does this for the generation now being born, the generation of our children. Give us a chance to use whatever strength, courage, and wisdom we possess in this cause of peace as now in the cause of war; and let not the blight of idleness and wasted days rob us of our right to earn a decent living for ourselves, and of our heritage to serve the new generation.

Education of the Public in Nutrition

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ASSUMING that we know what the body needs and that all of the necessary food substances are available, how can we get the food out of the market and into the body? This is not an easy task.

Let us first take a glance at the evolutionary experience of man and the other vertebrates. Species usually flourish in areas where they have a few suitable and abundant foods. A species disappears from the area when the source of food is withdrawn. Fishermen know this relationship.

Of course there are other factors which determine the maintenance of a species in a locality—disease, a natural enemy, or an occasional ice age—but a tremendous force is exerted by a few adequate foods in making it possible for a species to thrive in a particular area. Not infrequently, in fact, certain animals—as illustrated by the polar bear—will adapt themselves to a new and strange existence quite different from that of all close relatives, in order to take advantage of a natural food supply.

In the life of primitive man, groups thrived where they found a few foods which would guarantee them an adequate, even though restricted, diet. The Macropolynesians added poi to the available fruits and fish and developed a sturdy race in the Hawaiian Islands. The natives of the Netherlands Indies found a way to extend their food supply by fermenting soya beans with a mold to remove the bitter taste. Other natives found that red palm oil met the dietary need which we now serve with vitamin A.¹ Our own sturdy Colonial ancestors thrived upon a limited number of natural foods. Around the time of the American Revolution, a Connecticut farmer with a

large family wrote that he spent about \$10 a year, all told. This was for tea, nails, and a few such items. In general, his farm produced almost everything he ate and wore.

Man, like other animals, has done very well on a few foods when they were natural and chemically adequate. Today instead of a few natural foods, we have many manufactured foods.

Complex problems have arisen because of mechanical, industrial, and culinary revolutions, accompanied by urbanization, the machining and storage of foods, and the transportation of food products. "Denutritified" food like white flour and "anutrient" food like pure sugar have appeared. These two foods, of such tempting appearance and excellent keeping qualities, have crowded out the vitamin-rich flour of the past. The annual sugar intake has increased from 10 pounds per capita to 110 pounds per capita in the last few generations. About 90 per cent of the thiamine content, 70 per cent of the niacin, and most of the iron of wheat is lost in milling white flour. The lack of thiamine in the diet has been found to produce apathy or defiance. The average man consumes so much of these two foods that it is extremely difficult for him to secure a balanced diet, even with the wisest selection of his remaining food intake.

Cereals nowadays are "shot from guns" and sold by radio cowboys. They are high in allure, but low in amino acid.

Dehydration is a new process which is commercially enticing, especially from the standpoint of transportation costs, but it is often disastrous to heat-sensitive constituents, and vitamins C and A are both lost during the storage of dehydrated foods.

The point is that modern man is urged to buy foods that are attractive and marketable rather than nutritionally desirable. Even when he plants his own garden he is subject to the same pressures. His seed catalogue advertises tomatoes that will not crack, that are mold resistant, drought resistant, and fungus resistant, not tomatoes high in vitamin C. If he buys

tomato juice, he is likely to get a vitamin C content far below that in the average ripe tomato.

Poor Mr. Public is plagued almost as much by the multiplicity of foods as by his temptation to use foods of low nutritive quality. Suppose he undertakes to include all of the dietary essentials in his food selection for the day. To do this successfully would require the knowledge of the content of each of 200 foods with respect to some 10 essential amino acids, 4 important minerals, 6 vitamins, 3 unsaturated fatty acids, as well as calories and roughage. If he knows the consistency of 200 foods with respect to these 25 items, he is carrying in mind some 5,000 isolated facts. Think of the problem of computation: finding out where you stand after lunch and what to order for dinner. This situation presents a mnemonic impossibility unless one is the hybridized offspring of the *Encyclopedia Britannica* and an electrical differential analyzer.

A third difficulty lies in the emotional pull away from an adequate diet. We are pulled in the direction of our national dietaries. It is not easy to sell chili con carne to an Eskimo or blubber to a Mexican. Even two such friendly states as Maine and New Jersey cannot agree on how to make clam chowder. National dietary and family customs get in the way of a nutritionist who is trying to improve the diet by the introduction of new foods. So does appetite. When appetite is pulling an individual toward the candy counter and knowledge is pulling him toward the salad bowl, he usually goes with appetite. A friend recently told me of a Philippine student who died of beriberi within two months after writing an essay explaining perfectly how the disease could be prevented.

Clearly, we cannot rely upon instinct to guide man to a sound diet under these conditions. Studies by Richter and Davis suggest that rats and young children do pretty well in selecting what they need from an assortment of good food; but established taste habits, curiosity, and other facts confuse the picture.²

Certainly we do not observe instinctive selection among adults. Pellagra patients do not ask for pellagra-preventive foods when they are brought to the hospital. Many peoples come to shun highly desirable food through the development of taboos which could not have developed if instinct had given sound guidance. In one spot in South America the natives do not eat fruit, because they believe it produces malaria. A patient at one of our treatment centers on the Amazon River told me that he must save money to buy a baby chick to cook for his daughter before she began hookworm treatments. He said the first treatment with a purgative must be accompanied by "weak food" or the child would die.

Changing basic habits through education is not quick or easy. Action is governed by emotion more than by knowledge and reason. It is not surprising, then, that our prewar nutrition education by physicians and nutritionists was rather unsuccessful. We must recognize the limitations of education and see whether there is not some better procedure available. Recognizing as we do the difficulty of changing food habits, we should follow a course of action that requires as little change as possible.

But while taking into account the limitations of nutrition education, we must recognize the importance of developing scientific attitudes through general education. This will make it more readily possible to separate people from their superstitions. A more highly educated person is more amenable to nutrition education.

We must also be aware of the nature of educational processes. If we are not we may rely too much upon propaganda. Propaganda proposes to persuade passive persons. Education energizes individual interests into initiative. Pleasant associations with desirable foods make it easier to learn to like them. Learning to eat what is on your plate is a real learning experience.

Furthermore, it is more important to educate some individ-

uals than others. Nutrition education for legislators, food manufacturers, restaurateurs, physicians, nurses, and health educators is more important than nutrition education for the workingman. Note that the word "man" and not "woman" was used. More adequate nutrition education for women is of the utmost importance, especially education in food selection during pregnancy and lactation and for the care of the young.

Finally, we must accept the principle that economics is a factor, though not the sole factor, in controlling diet. Studies have shown that "rising expenditures for food meant increased purchases of nearly all kinds of food. The increases were most pronounced in the case of milk, butter, cream, eggs, meat, fruit, and succulent vegetables, and least for grain products, sugars, and fats other than butter and cream. . . . The quality of the food supply selected by families was by no means only a matter of the level of food expenditures. At every expenditure level above a certain minimum some families succeeded in obtaining good diets but others procured food only fair or poor from the standpoint of nutritive value."⁸ "In any group it will be found that some families make better use of their food resources than others."¹ Assuredly the consumption of good foods can be increased by lowering prices, but it must also be increased through education.

On the basis of the principles listed, what procedures suggest themselves?

First, enrich common foods, as in the addition of vitamins and minerals to flour and vitamins A and D to oleomargarine. In this way the people can be protected without any effort on their part. The procedure is like safeguarding the public water supply or pasteurizing milk before delivery.

Second, guarantee the nutritional quality of food through legislation, where we have the knowledge, the means of control, and the laboratory tests to make enforcement possible. We have legislated minimum standards for the sanitary quality of food in the attempt to increase the length of life. Why

should we not legislate minimum nutritional standards in behalf of the quality of living? Our present technical knowledge would allow us to control the content of vitamin A, thiamine, riboflavin, and ascorbic acid.⁴ The guaranteeing of these essentials would be a possible guarantee for others. Note also that enrichment and legislation complement education because they do most for the group at the economic level at which education does least.

Third, improve commonly used products by improved procedures in agriculture, manufacturing, and food preparation. Soil balance can be improved, as can methods and time of harvesting. In England, for example, better methods are used for manufacturing flour. Minor changes in recipes can add food yeast, soya beans, and milk solids.

Fourth, utilize opportunities to supplement the diet in the case of direct food distribution. The Oslo breakfast is a classic example of this procedure. The school lunch is perhaps the outstanding opportunity in this country. Records have shown that making up for thiamine deficiencies in the school lunch results in better students as well as gains in health and in growth.⁵ The school lunch has been especially helpful in pellagrous areas and has the additional advantage of aiding working mothers and poor families. It is probably better than a baby bonus as a means of warding off the threatened population decrease.

Fifth, invent attractive supplementary foods. We have not been too successful in this direction as yet. We have invented foods which are comparatively good chemically but which are lacking in taste appeal. It should not be beyond the possibilities of American technical genius to produce diet-supplementing foods so delicious in taste and attractive in appearance that they will sell themselves.

Sixth, educate wisely and effectively in the following terms:

Remember the importance of attitude in relation to dietary deficiencies and food selection. This suggests universal

education in basic facts concerning diseases of dietary deficiency.

Make education simple as we do when we teach eating salads or the seven basic foods. Let us not try to produce a knowledge of dietary detail which is beyond the capacity of the individual or which is not likely to be used even if it is mastered.

Turn educational efforts in the direction of those groups for which nutritional education is most important.

Educate by doing instead of preaching.

This means community organization in which the groups concerned study the problem and work out a solution. It means school gardens related to school lunches and home economics classes. It means home gardens in which children have a plot. It means the provision of supervised, practical food selection experience in the training of young women, especially those who are going into such occupations as nursing, teaching, social work, and health education. It means experimentation, demonstration, and visualization in the learning process.

Use propaganda without expecting too much from it; its limitations are reflected in the excellent characterization which says that the essence of propaganda is "repetition without causing boredom."⁶ We must always compete with powerful propaganda pulling people in the wrong directions. It is difficult for the honest man to outsell the radio implication that "aba" spelled backwards will solve all life's problems. Let us use the educational psychology and skills of public presentation, but not expect miracles from propaganda in behalf of nutritional values. People would rather have Bob Hope sell them tooth paste with irium so they can be the life of the party, like Miriam.

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Nutrition and Individual Well-Being

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KNOWLEDGE of nutrition is an essential part of the equipment of a physician, irrespective of his specialty. For the general practitioner nutrition offers a good way to be of greater service to more patients. Like preventive medicine, it may improve and maintain health. For those who are ill it may be used to promote recovery and to hasten convalescence.

Only recently has it been possible for the physician just starting his career of service to be supplied with reasonably adequate knowledge of nutritional requirements. For nutrition is a relatively new medical science. Research is active and the boundaries of our knowledge are constantly expanding. Facts discovered in the laboratory only gradually find practical clinical application.

Beginning with the child-bearing period, it was at one time believed that the fetus was parasitic on the mother and that it was possible for the fetus to fare reasonably well regardless of the diet of the mother. This concept has been disproved completely. It has been shown that good nutrition of the mother makes child-bearing less hazardous for her and for her infant. It reduces the complications of pregnancy and tends to assure the health of the young infant.

Reports concerning the benefits of a good maternal diet are accumulating. Ebbs and his co-workers observed 400 women who were selected because of their poor diets.¹ They were divided into three groups: (1) those permitted to continue with their poor diets; (2) those whose diets were supplemented; and (3) those whose diets were improved by instruction. In the poor diet group there were more complications of pregnancy, more miscarriages, stillbirths, premature births, and more early in-

fant deaths. After birth the incidence of illness was greater than in the groups with better maternal diets, and the babies of the poor diet group were generally in an inferior condition at six months of age.

In a study of 216 women by Burke and her co-workers, a significant relationship was found between the quality of the maternal diet and the quality of the infant. In every instance in which stillbirth, premature birth, functional immaturity at birth, and death within a few days after birth occurred, the maternal diet had been inadequate. Toxemia of pregnancy occurred in 44 per cent of those with a poor diet and some variety of prenatal complication occurred in 58 per cent. Mothers with poor diets had more difficult deliveries. When the maternal diet was good, no toxemia was observed; the infants were 1 kilogram heavier and 3.5 cm. longer.²

Similar reports come from England and Wales where, during the war period, maternal diets were supplemented with increased amounts of milk, eggs, meat, and vegetables. The babies born were longer and heavier than during the preceding period. Fewer babies were born prematurely and a significant reduction occurred in stillbirths and neonatal deaths.

Of the pregnant women surveyed by Stuart in Boston, few had adequate diets and 50 per cent had definitely inadequate diets.³ In Philadelphia, Williams found that 2 per cent of the pregnant women had diets that met the National Research Council allowances, 41 per cent had diets between optimum and minimum, and 57 per cent had diets below minimum in important nutrients.⁴ Pregnancy materially increases the requirement for many of the nutritional essentials, yet Darby found that pregnant women have little tendency to alter the nature of their food intake, other than by increasing the number of calories. Economics, habits of eating, and availability of foods enter into the picture.

The role of the physician must be to educate the patient to appreciate the varieties of foods most needed. He must also

show her how to obtain these foods within the limitations of her budget. In Ebbs's study, for example, it was found that appropriate supplements could be supplied at a cost of 20 cents a day. In the study of Stuart and Burke, it was found that those women whose intakes of protein foods were ample were usually in excellent nutritive condition. Milk is one of the excellent sources of high quality protein. It supplies important amounts of many vitamins and it is our best food source of calcium. It is common to find that milk is ingested in minimum quantity or not at all. It is common also to find that calcium salts are considered as a substitute for milk. It is obvious that these salts can be only a partial and inadequate substitute for a food with all the nutritive advantages of milk.

A baby gets the best possible start in life when he is born to a mother who is healthy and who has had a good diet. It is the role of the physician to keep him in good health and to assure that he has optimum growth and development. Successful nutrition of the infant requires more exacting knowledge of food requirements than does nutrition of the adult; growth factors and the various changes that occur with growth must be considered. Because of the increase in our knowledge of nutrition, babies grow more rapidly than they did in the past and deficiency diseases are far less common; rickets has practically disappeared and scurvy and nutritional anemia are uncommon.

A baby who is thriving at the breast or one who is receiving a good milk formula has need of relatively few supplements, but these few must be supplied. All babies need vitamin D or its equivalent from the time of birth; all need iron or iron-containing foods after three months of age; artificially fed babies should have vitamin C from the time of birth or from the time of starting artificial feeding. Since thiamine intake is likely to be marginal, the early supplement of foods containing this factor is desirable.

If I were to criticize current practice in infant feeding in the

light of our nutritional knowledge, I would mention particularly the following: the delay in giving vitamins C and D in adequate amounts, the subsequent excessive dosage of vitamin D, and excessive amounts of cereal in feeding.

Vitamin C is not usually given until the second month or later, despite the fact that the artificially fed baby requires it at birth. Not only is the administration of vitamin C delayed, but the amount given in the beginning is much too small—often 4 mg. or less daily when given as orange juice.

Vitamin D also is needed from birth, but except for the use of milk fortified with vitamin D, it is not given until the second month or later and then the amount is often excessive. Maximum calcium retention is attained when a baby receives 350 units daily or the amount obtained from milk fortified with 400 units to the quart. No increase in retention is observed when the amount of vitamin D is increased above this level. Amounts of vitamin D above 1,500 units daily decrease the appetites of babies after several months. With consequent lowered intakes of food, retention of calcium is decreased and the growth rate is slowed. This toxic effect cannot be observed with the usual type of physical examination. It is determined by balance studies and the comparison of the growth rate with that of babies receiving a smaller amount of vitamin D.

The feeding of cereal to babies began many centuries ago as an empirical custom and has persisted to the present with little change. The custom is still empirical. Our most recent nutritional knowledge has developed the fact that when a baby receives a milk formula, orange juice, and vitamin D, his diet is nutritionally complete except for iron and possibly thiamine. Whole grain cereal is a fair source of both these factors, but not so good a source as egg yolk, fruits, and vegetables. For both nutritional and psychological reasons it seems better that babies receive these latter foods abundantly and in variety before they get cereal and until the gastric capacity has increased sufficiently for cereal to be taken in addition. Never-

theless, it is the common custom to give cereal as the first solid food, so it is just as well that proprietary cereal foods fortified with iron and vitamin B are available and are in extensive use. Instead of giving cereal twice daily as is commonly done, however, it would seem advisable to give it only once a day, thus permitting a greater variety of fruits and vegetables.

One cannot properly discuss infant nutrition without considering related psychological factors. Knowing how to feed a baby is fully as important as knowing what to feed him, if he is to develop good eating habits. Too often physicians prescribe specific amounts of food to be given at specific times. The solicitous mother attempts to carry out the directions given to her without taking into account the varying appetite of the baby. Often, when the baby does not want all that is offered, the mother tries to make him take it. The result is an emotional disturbance and rebellion against food in general. Chronic anorexia is very common in children and in many instances has its beginnings in improper management in infancy.

Attention is now being given to the psychological aspects of feeding children, and there is general acceptance of the concept that emotional factors produced by poor management and environment have a strongly adverse effect on the nutrition of the infant and child. A fairly recent concession of the infant food trade to the psychology of infant feeding is the marketing of so-called chopped fruits and vegetables to replace the sieved varieties at an early age, for babies who are fed sieved foods exclusively throughout the first year become resistant to taking coarser foods.

Satisfying the nutritional needs of the normal healthy infant is relatively simple. It is when he becomes ill that more specialized knowledge must be applied. Some of the newer developments in this field concern the nutritional maintenance of an infant when he can have little or nothing by mouth, as in the case of severe diarrhea. Severe diarrhea of a type different from that to which we have been accustomed has made its ap-

pearance in the past few years. Without meticulous care babies with this condition may die within a day or two. It is necessary to maintain the water and salt content of the body. The daily water requirement of 150 cc. for each kilogram cannot be supplied with salt solution alone, for serious edema would certainly result. Chloride must be restricted to a total of that which will be supplied by 150 cc. of saline solution, or in the case of severe diarrhea one and a half to twice this amount. The remainder of the fluid is supplied by dextrose and lactate solutions. The newest development in this field is the discovery that potassium is lost from intracellular fluid with severe diarrhea and that this loss must be replaced if the baby is to survive. Formerly it was believed that only interstitial water is lost; a fluid which contains almost no potassium. If oral feeding cannot be given over a period of several days, one must resort to parenteral alimentation. Maintenance of protein nutrition by means of amino acid infusions is relatively new. Maintenance of a balanced and appropriate fluid intake over many days requires careful record-keeping so that the various totals may be known at all times.

On the whole, infants receive more detailed and meticulous nutritional attention than do children beyond this age period. The customary basic diet of the infant contains ample protein, calcium, and vitamin D. It is after infancy that the diet is more likely to be deficient in these essentials.

The protein needs of the child have been studied by determining the rate of growth of the skeletal musculature as shown by urinary creatinine excretion. Skeletal musculature is 25 per cent of the body weight at birth and grows at the rate of the remainder of the body during infancy. At some time between eighteen and twenty-four months muscles begin to grow rapidly, more so than the body as a whole. This increased rate of growth is maintained, if diet permits, until the child is about four years of age. By that time he has increased the amount of his skeletal musculature from 25 per cent to nearly 40 per cent

of his body weight. An additional though less rapid increase occurs in mid-childhood. By eight to ten years about 45 per cent of a well fed child's body weight is muscle. Very few children are this well fed, however. Those who are not do the best they can with the food they get. Many children presumably normal in weight have little more than the infant proportion of muscle. Such children are not in optimum health, though the impairment of health may not be suspected without special observation. They have decreased efficiency in muscular performance. They tire easily and recover slowly from fatigue. Growth in height often is retarded and specific defenses against infection may be impaired.

At any age during childhood a few weeks of good feeding promptly increases to normal the quantity of musculature. The increase in musculature may not and often is not accompanied by gain in weight. The child may even lose weight for a time. However, the appearance of the child changes remarkably. He becomes more alert and active. His appearance is indicative of reserve strength. Children who receive ample protein grow faster and mature earlier.

Ample protein is desirable at all ages during growth. During the period when the child is becoming accustomed to maintaining an upright posture, from one and a half to three years, his protein need is as great as during the rapid growth in infancy, namely, 3 to 4 grams for each kilogram. These amounts can be decreased gradually throughout the remainder of the growth period, but should be maintained well above the adult level of 1 gram for each kilogram until growth in weight has ceased.

The need for calcium during childhood varies with the rate of growth of the skeleton, and skeletal growth parallels the rate of growth of the child in height. The calcium need is least during the period of slow linear growth from two to five years of age. After this time it increases and is at its maximum during the prepuberal and early adolescent periods. Milk is our

one superior food source of calcium, so much so that we are justified in thinking of the calcium requirement in terms of intake of milk. A pint and a half of milk included in a customary diet supplies the calcium need of mid-childhood, but during puberty and early adolescence a quart daily is desirable. These amounts are not obtained by a large proportion of children. As a result skeletal development is retarded and tooth decay is a possible consequence. Park found that 46 per cent of the children of his study group up to fourteen years of age had histological evidence of rickets at necropsy. The use of calcium salts as a substitute for milk already has been mentioned. Even though calcium may be supplied in this manner, children deprived of milk must have close dietary supervision in order to make sure that they get enough protein and certain of the vitamins of which milk is a superior source.

Relatively few babies in this country are deprived of vitamin D, but the practice of giving vitamin D routinely to children past infancy is not widely prevalent. Vitamin D is needed at all ages during growth to insure efficient utilization of calcium. This vitamin is not present in important amounts in common foods, and special sources must be provided. Vitamin D milk is to be recommended because it provides a satisfactory amount of that vitamin automatically when appropriate amounts of milk are taken.

Puberty and adolescence are periods of metabolic stress with nutritional requirements increased in many respects. In addition to the increased energy requirement, here again the special needs to be stressed are those for protein, calcium, and vitamin D. Even in the higher social and economic levels these special needs too often are not met. Sometimes in the case of girls it is because of the desire to remain thin, and the diet is not well chosen for this purpose. When food resources are limited, the men in typical families eat the best meals. The women and the older children fare the worst. Even though teen-age children require more nutrients than the other age

groups, they often get less. It is not uncommon to find osteoporosis in this age group, presumably caused by deficiency of calcium or vitamin D or both. While dental caries is very common earlier in childhood, adolescence is often a period for the development of rampant tooth decay. It is my own belief that dental caries is related to nutrition and metabolism as well as to factors in the oral environment.

Earlier it was mentioned that children who have had protein deficiency, as shown by low muscle volume, are able to make up their deficit within a relatively short time when fed an ample amount of protein. This same situation does not hold with nutrients that are absorbed and utilized with greater difficulty. This has been shown to be true for calcium and phosphorus particularly. From studies of young adolescents who previously had been well fed and of others whose nutrition had been below optimum for several years, it was concluded that the best insurance for nutritional well-being in adolescence is a good dietary regimen throughout childhood. Children who had been poorly fed for several years, even though within normal range for height and weight, utilized their food poorly as compared with the children previously well fed. In some cases it required six months with an excellent dietary regimen for retention of calcium and phosphorus to attain values equivalent to those of a group previously well fed. If these findings are of general application, it is obvious that a change from a poor to a good dietary regimen cannot be expected to result in a rapid change in growth rate or in dental caries status.

Except for pregnancy, lactation, and periods of illness, early adulthood does not present the same critical nutritional problems as those in the period of development. However, adults also must have a complete diet in order to remain in optimum health and well-being. In the case of women, too often as a result of the cumulative effect of inadequate diet and child-bearing, they arrive at middle age or the menopausal period in a depleted nutritive condition.

At all ages, especially during the more critical periods of life, illness causes decreased efficiency of the gastro-intestinal tract. The food materials most affected are those which are difficult to absorb, those least soluble in water, including fat, fat soluble vitamins, calcium, phosphorus, and iron. Even in illness, however, protein, simple carbohydrate, and water soluble vitamins usually are well utilized.

If the period of illness is prolonged, body losses and deficits may be major and serious. Thus nutritional care during convalescence becomes of great importance not only for maintenance but also for replacement of lost body substances and restoration of resistance to infection. It has been shown, for example, that if children with rheumatic fever are well fed during the convalescent period, if they are restored to good nutritional status and maintained in this condition, recurrences of rheumatic fever are reduced greatly.

The problem of the aged is increasing because of the increased number and proportion of this group in our population. Some of the problem is nutritional. Easy fatigue is common, and no doubt in many instances the fatigue is as dependent on poor nutrition as it is in other age groups. A good diet at any age, in the absence of disease, produces a sense of physical and mental well-being. Such a lift is needed if elderly persons are to continue in some variety of useful service.

The nutritional needs of the elderly are much the same as those of other age groups. Nevertheless, their diet often is such as to produce gradual starvation—tea and toast is one example. Even when the diet is better chosen, deficiencies are common, the most common deficiencies being protein and calcium. A diet with an abundance of these two essentials is likely to contain all others.

Osteoporosis is common in old age, so common that sometimes it is considered physiological. How often we hear of a fractured hip as a forerunner of death. Perhaps relative inactivity is one of the causes of osteoporosis through bone

atrophy; however, it is much more likely that inadequacy in the diet is the chief cause. Osteoporosis in the aged may represent a gradual calcium depletion as a result of the effects of a diet of borderline calcium content over many years. Persons in the seventh decade are able to retain calcium and phosphorus and increase the density of bone when the dietary regimen is suitable.

Many of the changes incident to old age and the reasons for them are not yet well understood. It appears that many elderly persons have less tolerance for fat in the diet than do younger persons. Since fat sometimes interferes with the absorption of calcium, it has become customary to advise some restriction of fat intake along with an increase in protein and calcium. Some evidence exists of other digestive and metabolic changes that are still too vague to identify. For example, during the restricted wartime diet in Belgium, aged persons lost more weight and when the diet was subsequently augmented regained less weight than did young persons. In this instance the fat content of the diet was low. Appropriate dietary advice to the aged should include the recommendation of easily digested foods with ample protein and calcium and only moderate fat content.

In summary, we can assume that every physician is interested in the general well-being of his patients and that his interest is not limited to the specific complaint. Nutrition is the one thing that applies to all patients in any medical specialty. It is related to reproduction, fetal and postnatal growth, and to physical fitness at all ages.

Of the three million babies born annually in the United States, at least a million would have a better chance of life and health if the diets of the mothers were improved. Efforts in this direction would have a prolonged beneficial influence on the health of our population. That nutrition after birth has been improved in recent years is indicated by the greater stature and weight of children.

Sherman has recently expressed the opinion that nutrition

is much more important to health, growth, and development, both mental and physical, than even science realized a few years ago.⁵ Optimum well-being is not possible without a good nutritive state. Such a state is to be attained by a good diet rather than by preparations of vitamins and minerals. Except for vitamin D such supplementation has no place in the diet of the normal person.

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V. SOCIAL PSYCHIATRY AND SOCIAL MEDICINE

The World Scene

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THE managers of a large American corporation, most of whose holdings are in Latin America, are at the present moment very much worried. Were the name of this corporation mentioned you would all recognize it; its stock is listed on the New York Stock Exchange. What worries them is very real. In the Latin American country where most of their resources are located they have the finest working conditions. They have an excellent public health program. Their workers live in the most sanitary quarters and are given every consideration, supposedly by the most scientifically minded personnel directors. Nonetheless, the laborers prefer to go across the valley and work at lower wages under conditions of comparable squalor. Everything that these North American executives or their experts try to do is of little or no avail.

What is the trouble? The trouble, I believe, is that these business executives are operating in a Latin American culture from the ideological standpoint of an Anglo-American culture. Such behavior will not do.

What is true of Latin America is true of the world generally. If we are to succeed in the field of public health, in the field of international trade, and in the much more important political field, if civilization is not to destroy itself, we must consider cultures other than our own. Until this is done, the United Nations will be nothing but a vague concept which people can agree upon, providing they never define their terms. And unless they do define their terms, all the sweet sentiments and the vacuous agreements of the League of Nations and the United Nations will get us nowhere.

What is involved in understanding the different cultures of

the world? First, we must obtain full empirical information about the specific social practices, social mores, individual events, and psychological reactions and behavior of the people in question. We must understand their social institutions, the type of government they tend to have, the type of buildings they possess, the particular churches in which they worship, their art, their religious symbols, and their religious practices.

Our sociologists and anthropologists are doing this reasonably well. Nonetheless, as now presented, this information is not in a form adequate to meet the needs of the situation. There is the added disadvantage that the anthropologists and sociologists have been brought up in a culture which is predominantly that of the modern Western world, often that of the Anglo-American modern Western world. As a consequence, the concepts and methods which they bring to the empirical anthropological and sociological data that they observe in foreign cultures all too often do not fit those cultures.

Thus what often happens when empirical information is gathered is that this information is subjected to the concepts of a modern Western anthropology and sociology. The result is that either the facts are presented in a neutral, colorless way with all the ideas necessary to comprehend them eliminated, or—what is more likely—the facts are interpreted in terms of a set of assumptions peculiar to the modern contemporary school of anthropologists and sociologists.

It must be remembered that there is no such thing in science as presenting pure facts. It is possible, of course, to apprehend pure facts, but if they are to remain pure, the observer must remain perpetually dumb, like a calf contemplating the moon. For the moment one reports facts, in a speech like this or in a scientific journal, one has brought them under words and propositions; one has facts conceptualized. And if one has concepts, then one also has theory.

There is only one cure for this. The physicists, for the most part, are the only scientists in our midst who know the cure

and who have introduced the methods necessary to carry it into effect. The physicists have learned that there is only one way to handle facts properly without surreptitiously smuggling in half-baked or uncritically examined conceptualizations of those facts. The solution is to spend as much time on the determination of the concepts used as on the facts that are brought under these concepts.

Albert Einstein has written, "Science is the attempt to make the chaotic diversity of our sense experience correspond to a logically uniform system of thought. In this system single experiences must be correlated with the theoretic structure in such a way that the resulting coordination is unique."¹

One never, therefore, understands any culture, even after one has observed it and described it by the inductive scientific methods of modern Western anthropological and sociological science, until one goes further and finds the particular concepts and assumptions which the people in the culture being investigated use to order, understand, and evaluate their empirical behavior and that of others.

A given culture is not merely its empirical observable practices and institutions, it is also the practices and institutions envisaged and evaluated from the standpoint of the conceptual framework, the ideology or philosophy, of the people in question. The rituals and buildings of a culture are a congealed ideology; they are ideas embodied and materialized.

Similarly, the personality structure and behavior of the individual is in part what it is because of the culture in which he is rooted. Thus a human being is also a walking ideology, embodying in his emotions and spontaneous responses the specific ideology of his cultural inheritance, while at the same time he is continuously preyed upon by diverse and often conflicting rival ideologies which are competing for his allegiance. When the ideologies of the individual and his social milieu conflict and yet are inescapable, psychiatric repressions, conflicts, or rebellions and nervous breakdowns result.

At this point Lawrence K. Frank's important paper, "Society as the Patient," becomes most relevant.² The psychiatry which does not envisage personality conflicts as having their source not merely within the individual but also in the traditional ideological conventions and pressures of society, and which consequently does not entertain the possibility that in part at least it is society which needs to be cured, is a psychiatry which has not fully understood its subject matter. Conversely, the political science or sociology which regards economic factors or so-called social trends or societal evolution as all-decisive, and which consequently neglects the ideational factors and conflicts embodied in emotions within and pressures from without the individual not only is a stupid social science but also presents a false basis for statesmanship.

What must be realized is that the introspective data of one's consciousness and the empirically given institutions of one's culture are not indubitable, objective facts independent of the individual's or society's conceptualizations of them. Instead, all these empirical factors are the fruition and reflection of ideologies, often conflicting and incompatible ideologies. This is easy to see in foreign cultures such as those of contemporary Soviet Russia and Mexico.³ It is equally true of the data of one's own conscience and the objective buildings and institutions of one's own society. As Peter Buck has shown regarding the Polynesians following their conversion to Christianity, and as the culture of Mexico over the last four hundred years unequivocally demonstrates, if, for one reason or another, the people of a given society give up their allegiance to their traditional ideology, their empirical value judgments of introspective conscience and their objective religious buildings crumble and evaporate.⁴

Failure to recognize the ideational component in the empirical data of conscience and culture gives rise to the prevalent and erroneous notion that determinate moral values are known absolutely and are intuitively given and immediately

apprehended. Socrates and Plato pointed out this error in their famous allegory of the cave at the beginning of Book VI of Plato's *Republic*, when they noted that the shadows on the wall of the cave must not be taken for real things. One's observable cultural institutions and practices and the introspective, empirically given convictions of one's inner conscience were Plato's and Socrates' shadows on the wall of the cave. These shadows were the reflections of a philosophy which was above and behind the wall to which the people were chained, reflecting over their heads and throwing shadows upon the wall before them.

Socrates and Plato saw further that if one wants to escape the diverse relative, sophistic valuations of individual peoples and individual cultures which parade in each case as absolute values holding for everybody, when in fact they are relative, varying from person to person and culture to culture, one must release men from their chains and pull them away from their caves. One must make them look at the light and at the previously unseen factors of which the shadows on the wall of their caves are the reflections. Then one's intuitive empirical values and one's social institutions will be seen for what they are, the reflections of a particular traditional philosophical ideology, not absolute things in themselves.

This means that one must direct people's attention from the data of consciousness and the objective institutions of their society to the economic theory, the political doctrine, the religious faith, and the unifying traditional philosophical premises which have made these empirically observable facts in considerable part what they are. One must also pull people out of the intuitive value judgments they are making on their own conduct and their own social institutions which they have objectively before them in their churches, their business practices, and their government buildings—the Capitol in Washington, the Supreme Court, and the White House.

Why are these buildings in Washington separated? It is not

a mere geographical accident, but is in part at least the reflection of a theory, the theory of the separation of powers laid down by Locke in his philosophical *Essay on Government* and incorporated by Jefferson and the others who designed the government of the United States. Hence, it is literally true that the governmental buildings in Washington, located as they are, are shadows on the wall of the cave, reflecting a specific political theory, a political theory rooted in British empirical philosophy. The traditional economic science with its attendant conception of sound business practices in the United States, derived as it is from Adam Smith, John Stuart Mill, Bentham, and Jevons, goes back similarly to British empirical philosophy.

Socrates and Plato noted also that if any traditional philosophy of a given person or people is changed, it is as if one put a different film into the picture projector. New shadows are thrown on the wall of the cave. Consequently, Socrates and Plato saw that the problem of arriving at a universal good necessary for the resolution of psychiatric and social conflicts is a problem of attaining one single philosophy which is not a mere matter of human preference but is instead empirically verified by appeal to empirical data, such as the data of nature, which refer to real public objects rather than mere shadows. Hence, their dictum: There will not be good government until philosophers are kings. Hence, also, their insistence that the philosopher who is king must verify his philosophy by an appeal to the real objects of nature rather than to the reflected shadows which are the introspected data of consciousness or the institutions of culture.

The first of these two prescriptions does not mean that philosophers should be in the White House. Far from it. What it does mean is that the criterion of the good in government or in personal conduct is centered in philosophy, since it is philosophy which provides the concepts that unify the inductively given facts of life and thereby pull civilization out of chaos in-

to some kind of a cultural unity and harmony. Consequently, unless the people who do go to the White House are guided by an adequate and objectively grounded philosophy, bad rather than good government and chaos rather than harmony will be the result.

Socrates and Plato noted one further thing. The philosophy which is to define an ideology valid for everybody and which is to unify culture and civilization must be a philosophy of the natural sciences. It must be verified against the real objects of nature rather than by appeal to the provincial, relative, pluralistic, sophistic, empirical data of culture. It must be founded on things rather than upon shadows. This means that it cannot be grounded upon the humanities.

On the latter point Socrates and Plato are unequivocal and explicit. This precision and explicitness applies to their ethics, their political science, and their psychiatry. In the *Republic* Socrates makes this clear for ethics and government when he writes that one can arrive at the idea of good for personal conduct and the state only by passing through "the hypotheses of the previous sciences." The word "only" is to be noted. If one turns back a few pages, where these previous sciences are listed, one finds that each one of them is a mathematical natural science. None is a humanistic cultural science. A similar basis for psychiatry is laid down by Plato at the end of the *Timaeus* and also by the Platonist who wrote the *Epinomis*. The *Timaeus* is a treatise on nature, not on culture. At the end of the *Timaeus* Plato informs us that the man who would be without psychiatric conflict, the man who would be "pre-eminently happy," is one in whom "the perceiver has been adjusted to the thing perceived," a person who has reared his outlook upon "the motions and revolutions of the universe." In short, he would be a person whose philosophy is grounded upon the truly objective data of the deductively formulated natural sciences.

The point of these surprising conclusions for ethics, politics,

and psychiatry is that cultural institutions, like the humanities, exhibit empirical data; these empirical data are in considerable part the fruition of human art and a reflection of human theory. This is the reason why the classical Western tradition has given a Bachelor of Arts degree rather than a Bachelor of Science degree to humanists. The humanists are human artists; they are not scientists. And the function of a human artist is not to determine the truth of the ideology he conveys. Truth belongs to the sciences, not to the arts. The artist's task, instead, is to take objectively verified truth, after it has been determined by the scientist and the philosopher of science, and to move the emotions of men and the institutions of culture in terms of the ideology which that philosophy of science prescribes.

Our contemporary anthropologists have found that in studying cultures other than one's own, one does not understand the moral judgment or the empirical practices and institutions of people of that culture until one has determined their philosophy. This is precisely the point Socrates and Plato were making. The cultural institutions and intuitive value judgments of the people are shadows on the wall of the cave reflecting a specific philosophy, often one created so far in their past that they do not know it even exists. Furthermore, our contemporary anthropologists have found that the determination of the philosophy of a given culture is not a sufficient basis for understanding the empirical facts of that culture. One must go behind that philosophy and the time when it was first proposed to the empirical data of the biological man and nature which led the sages who created the cultural institutions and valuations initially to the particular philosophical hypothesis in question.

Nature is not only objective, independent of our theories, and a system which existed before any human culture arose; nature is also knowable by scientific methods which produce the same verified results for people in one culture as they do

for people in another. Newton's mechanics is not true merely for Englishmen. If it is true or scientifically verified for anyone in one culture, it is true and verified for all people in all cultures. Hence, a philosophy with the attendant humanism entailed by such scientific theory possesses the same universal validity.

We can now understand why Socrates and Plato stated that it is only by rearing one's humanistic ideology on a philosophy of the natural sciences that one can escape the relativity of moral judgment of the Sophists. It is to be noted that Socrates and Plato define the Sophist as one who makes man the measure of things. Put more concretely, in terms of the issues of our contemporary world, this means that a Sophist is a person who makes the humanities the measure of human values. Socrates' and Plato's objection to such a procedure is that the inevitable result is a relativity and pluralism of moral values.

It is clear that Socrates and Plato were right. For example, in choosing a poet to define one's good, which poet, even in a single culture, is one to choose? The theistic Dante, the atheistic Lucretius, or the skeptical Hausmann? Certainly the sociologists and anthropologists who have gone over the world studying the humanities of the different cultures of the world have made it abundantly clear that human values and social ideologies differ from culture to culture. This relativity and conflict of valuations and ideologies are the tragedy of the contemporary world situation. The tragedy is exhibited most dramatically in the issues between the United States and Russia.

But ideological conflict is not peculiar to the United States and Russia. It applies equally to the Kremlin and the Vatican, and to Protestants and Roman Catholics, whose religious provincialism is far more important to each than the Christianity which they purport to hold in common. A similar conflict occurs, especially in the economic component of political ideology, between the British Labor Government with its social-

istic theory and the United States Government with its economic and political laissez faire. Another unresolved incompatibility of values and cultural forms exists between the English speaking cultures of the United States and the Latin American culture of the peoples to the south of the Rio Grande.

It is not merely a matter of academic interest, therefore, that no culture in the world is understood until one finds the philosophy embodied in the emotions of the people and in the institutions of their society. The fate of civilization probably rests on the capacity of people to learn this fact quickly and to act upon it. In any event, unless it is grasped, the contemporary international situation simply cannot be understood.

The Russians at the present moment use a Marxist philosophy, and every act in the world, not merely their acts, but ours, is judged by them from the standpoint of this philosophy. It negates the philosophy underlying the culture of the traditional Western democracies. So Molotov, when he sees us doing certain things in Europe or in the Far East, has to say, "No, no, no." We, acting upon our traditional Lockean, more British empirical philosophy (incorporated into our lives so distantly in the past that few realize it exists), seeing the Russians pursuing their ideology in the Balkans, in the direction of the Dardanelles in the Middle East, and in Europe, and finding the latter ideology contradicting ours, have similarly said through former Secretary Byrnes, Secretary Marshall, and President Truman, "No, no, no."

But "No, no, no," especially when added to the pressure of power politics and the drive for metals and oil in a world of the atomic bomb, means eventual war. It means, as is the case at the present moment in France, contradictions and conflicts within the state, among the nations, and within the solitary individual. Unless these pressures and conflicts can be resolved, revolution, chaos, and civil war will come here and there and

eventually spread everywhere. How are we to escape this horrible situation?

The first thing which has to be realized is that the issue in our world today is not an issue between "good" and "bad" people. It is an issue between different conceptions of what is good. It is not a simple skirmish between the good men and the bad men that threatens the peace of the world. It is a battle of the gods. For our ideologies define our gods, and where there are different ideologies, there are different conceptions of divinity. Consequently, a battle of ideologies is a battle of the gods.

Each people or party identifies the divine with its technical ideological theory. The philosophy of Socrates and Plato did more than define an ethics and a politics and a psychiatry. It also in considerable part defined the God-the-Father of Roman Catholic culture up to the time of St. Thomas. St. Thomas similarly used the philosophy of science and attendant metaphysics of Aristotle, with minor novelties, to define divinity. This philosophy continues to define divinity for orthodox Roman Catholics. Similarly, the ideology of the communists has become a veritable religion for them. If peace is to be achieved, this battle of the gods must be brought to an end. An armistice must be called. The gods must be made one, not many.

To this end, certain things must be done. First, the diverse ideologies of the major nations and cultures of the world must be brought out into the open and understood. The problem of peace, like the problem of international social medicine or international relations of any form anywhere, is the problem of reconciling the differing philosophical generalizations underlying the differing and conflicting ideologies.

Inquiry shows that when the basic different philosophies underlying the ideological diversities and conflicts of our world are brought out into the open, they fall into two groups: Cer-

tain philosophies are different but nevertheless logically compatible; others are not only different, but contradictory as well. The philosophy of the traditional East and the philosophy of the traditional West are an instance of the first type. The philosophy of traditional modern democracy and the philosophy of contemporary Russian communism are an instance of the second type.

Because the two great civilizations rest on philosophical assumptions which are affirming different but not contradictory things, the East and West can meet without conflict. All that is required is that the philosophy and attendant ideology of the one culture enlarge to include that of the other.

This will not be easy because those holding the traditional religious beliefs of the West tend to affirm that their religion is completely perfect. But there is another component in divinity which the Orient has mastered and which Far Eastern Oriental religions, rather than any one of the Western theistic religions, perfectly embody and express. We need both components of the divine, and we shall not have grasped the full nature of divinity until the divine is conceived and worshipped in terms of both. This means that missionary endeavor in the future must be as much concerned with going to the East to obtain Oriental religious values as it has been traditionally concerned with the conveying of Western religious values to the Orient.

Certain cultural philosophies are not to be reconciled as easily as this, however. They not only differ, but rest upon assumptions which are logically contradictory. This happens to be the case with the cultural philosophical assumptions underlying the two major powers in the world today, the United States and the U.S.S.R. Reconciliation cannot be obtained by enlarging the ideology of the one culture to include that of the other, for contradictories cannot be embraced. In fact, the more the people holding the one ideology come to fully understand the ideology held by the other people, the more this

mutual understanding will intensify rather than alleviate the ideological conflicts.

How is such an ideological conflict to be resolved? Again, it is the natural scientist and in particular the mathematical physicists who show us the way. Only when we have learned to approach cultures not only inductively but also from the standpoint of the deductively formulated theories which constitute their respective ideologies is this way open to us. The mathematical physicists are very well acquainted with situations in which the inductive and experimental facts have forced them to two different theories, each of which is required by certain of the facts, but neither of which is capable of taking care of all of them. These theories may be incompatible, if not even positively contradictory, at certain points.

This is the case at present with respect to Einstein's theory of relativity and the quantum mechanics of Schroedinger and Dirac. The facts call for both hypotheses, but the two hypotheses do not agree in their basic premises. The relativity theory, for example, prescribes that it is meaningful to talk about the position and velocity of an entity at any one time. Quantum mechanics rules this out.

Nonetheless, the mathematical physicists know the way out of such a predicament. It consists, obviously, in finding a new set of assumptions which has the merit of accounting for all the facts taken care of by the two traditional theories, without contradiction. It is precisely such a new set of assumptions transcending both those of quantum mechanics and those of relativity theory which the best minds of contemporary mathematical physics are now seeking. Precisely the same thing must be done with respect to the ideologies of classical modern democracy and contemporary Russian communism.

The contradiction between the two ideologies is itself proof that both ideologies must be transcended. Put more concretely, this means that there will be no genuine resolution of the frightfully dangerous ideological conflict between the United

States of America and Soviet Russia until someone constructs a new philosophy of economic and political institutions which takes into consideration the facts which led the British empirical modern philosophers to the traditional modern democratic ideology and also the facts which guided the post-Kantian-Hegelian-Feuerbachian Marxists to their communistic ideology.

By what method is this new philosophy for the contemporary world to be achieved? The previous analysis indicates that a more adequate philosophy of culture for our world must find its basis in a more adequate philosophy of natural science.

The discovery that our method for solving ideological conflicts directs us to the philosophy of natural science gives us hope for our world and hope that the communists as well as the democrats will pursue the necessary and appropriate method; for the Russians, like the citizens of the United States of America, believe in science and in scientific inquiry. Both peoples envision the theories of science applied to the resources of nature to lift the well-being of men everywhere. Thus, although there is little hope of these two peoples and their leaders getting together upon the basis of their traditional humanistic philosophy, there is a chance, and a real one, for them to get together upon the basis of a scientific philosophy. Upon all these points the people of the United States and the people of the U.S.S.R. can be and most likely are in agreement.

Thus, if this scientific approach to the problem can be brought into the foreground so that we will stop hurling our self-righteous moral judgments at them from the standpoint of our ideology, and they will stop hurling their moral judgments at us from the standpoint of their ideology, there is a real chance for peace. Not only is this the correct approach to the problem theoretically, but it is also the approach most likely to appeal to both Russians and Americans and to succeed practically.

This is not to say that we should not stand up for our tradi-

tional ideology and make a strong front in terms of it. Any other procedure would be as false idealistically as it would be naïve realistically. The Russians hold an ideology in which it is affirmed that ideas not embodied in force or matter are irrelevant ideas. Consequently, unless we back up our ideology with political and military might, they, from their ideological standpoint, will have no respect for it or for us. Furthermore, we have a right to see that our traditional ideology carries the weight in the world which it merits. For there are facts, scientifically verified ones, behind classical modern British empirical philosophy. It is, to be sure, an incomplete philosophy, but nonetheless it has its truths and the attendant values, both of which the world needs. Similarly, the post-Kantian and post-Hegelian Marxist philosophy also has equally indubitable facts behind it, with their attendant philosophical requirements and ideological consequences; and the world needs these also.

But while each party thus insures that his own ideology possesses the weight and achieves the influence in the world which the facts behind it indicate that it deserves, the one party can and should approach the other with words such as the following: "Let us be realistic about the existence of these conflicting ideologies as well as about the power forces of our world. These ideologies, by their nature, are theories. Let us leave these theories as much in abeyance as we can, each one holding to his own until we achieve the superior theory which takes care of the merits and facts of both without contradiction. To this end, let us go back behind the philosophies underlying our respective ideologies to the empirical evidence and the scientific method which takes men from the facts of nature to the philosophical conceptualizations of these facts. Certainly we can agree upon the importance of scientific evidence and scientific methods in passing from facts to their philosophical conceptualizations and the attendant ideology. In this agreement we should be able to find the working basis internation-

ally for setting up the social code necessary to save both contemporary communistic culture and contemporary traditional democratic culture from destruction in a world war of atomic bombs."

It would be a mistake to suppose that the understanding of the diverse cultural ideologies of the world and their reconciliation in a philosophy of all the world's cultures grounded in a philosophy of science is important merely for international peace among nations. It is equally important for medicine and psychiatry and for the enrichment of human values for the individual in any particular nation or culture.

The family physician and the practicing psychiatrist long ago found that science and art involve reconciling and relating a technical scientific knowledge with the humanistic values and ideals of the patient. Thus medicine perhaps more than any other profession forces its practitioners to mediate between the sciences and the humanities. Consequently, a philosophy which puts the humanities upon one set of philosophical premises and scientific knowledge of the nature of man's body upon a different set of philosophical premises is of no use to the physician. Nor is it of any use to the physician's patients. In fact, it will do them positive harm and increase their emotional, moral, and ideational conflicts. The physician and the patient must get man's scientific conception of his nature and his humanistic conception of himself together. This only a philosophy of the humanities which is at the same time a philosophy of the natural sciences can do. Only such a philosophy can make man one man rather than two conflicting men; and thereby make man whole.

But in a world where men are no longer isolated from ideas and ideologies foreign to those of their traditional upbringing and their traditional culture, a philosophy which can guide medicine and psychiatry and remove the conflicts of individuals, thereby making them whole, must be a philosophy of all the humanities and all the world's cultures which integrates

with a philosophy of the natural sciences; it cannot be merely a philosophy of the humanities of but one of the world's cultures.

Any alert contemporary Chinese is confronted within his emotional life and in his family relations with the task of putting together the traditional Taoist and Confucian and Buddhist conceptions of the good life, the good family, and the good society with the quite different and inescapable Western ones. Any Roman Catholic, in a non-Catholic university in the United States, is confronted in his emotional and intellectual life with some way of combining the religious values embodied in his emotions and the habits of his church—values which are rooted in the philosophical assumptions of St. Thomas and Aristotle—with all the ideas and values he hears in the classroom and finds in the laboratory—values which are conceptualized in terms of the philosophical premises of a quite different and in part contradictory modern science and philosophy. As any psychiatrist in a university can tell you, more than one student has had a nervous breakdown because of his failure to resolve such conflicts.

There are additional considerations pointing in the same direction. We have previously noted psychiatric conflicts that arise in an individual when the ideology of his culture differs from the personal ideology which he himself, for one reason or another, may be led to espouse. There is also the genetic factor. Different people are constituted genetically in different ways. Few people have the constitution to discover all the facts or to appreciate all the values which an omniscient knowledge of the facts of experience would give an omniscient mind. Some people are moved by certain factual considerations and are cold to others. Some people have the potentiality to achieve certain cultural values and no capacity to achieve other equally important values. This means that in any culture dominated, as any culture is, by a predominant ideology, there must be countless individuals with the capacity for creating only values

which the culture in question does not recognize. Such people are permanently repressed. They never receive the response from their cultural environment necessary to call forth and reward their potentialities. Those individuals are fortunate who chance to be born in a culture whose ideology corresponds to the predominant genetic component of their nature.

It is at this point that a culture grounded in a philosophy of all the cultures of the world becomes as important for psychiatry and for the happiness and fulfillment of the isolated person in his own provincial nation as it is crucial for world peace. For only when each culture in the world has an ideology rooted in the philosophy of all the world's cultures will it have a society which permits any individual to express his particular potentialities and values spontaneously without inhibition or repression.

The psychiatry of the individual, like international politics, requires a philosophy of the humanities which is at the same time a philosophy of the natural sciences. Moreover, such a philosophy must be a philosophy not merely of the humanities as conceived in one culture but of the humanities of all cultures. Only then will the ideals of men lead them toward peace and concord rather than conflict and war. Only then will any man anywhere have a society and a culture in which his particular potentialities will find expression and coordinate harmoniously with those of his fellow men. The scientifically true and the humanistically good for both the individual and the world are identical.

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Social Implications of Dynamic Psychiatry

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THE social implications of dynamic psychiatry can, I believe, be best encompassed in the term psychosophy. By psychosophy I mean that body of knowledge relative to the psyche which is derivable from, but is more than, psychology and psychiatry. It constitutes the intellectual and practical discipline in which the knowledge of psychology and psychiatry is applied to everyday normal life.

Our present knowledge of the psyche has advanced beyond fractional physiology and therapeutics and has reached a stage where it can and does encompass the whole of normal life. In these respects the development of our knowledge of the psyche parallels the progression of all medical knowledge: in its beginnings it is concerned with disease and disorder, and as it matures, it becomes increasingly concerned with the conservation and promotion of health—that is, with hygiology. It is certainly true that medicine is in a measure now capable of being informed and concerned with health. In actuality the realization of this capability is still rather partial.

Returning to the specific thesis of the psyche, we now know enough about it to be able to actively promote its optimal development and function. This does not mean that we have solved the "riddle of the psyche" (whatever that may be), nor that we know specifically how to cure and to prevent the major, or even the minor psychopathies. The fact of the matter is that the knowledge concerned with pathology is of a distinctly different order from that concerned with well-being. That is one warrant for the term psychosophy.

We must not, however, confine our thoughts to the individ-

ual viewed in a hypothetical isolation. We must first see the individual set in the matrix of his social milieu and then scrutinize the social matrix. Apropos of this, I wish some skilled Latinist would formulate a companion phrase for *mens sana in corpore sano* to express the even higher desideratum, "the healthy individual in the healthy society." I could use this phrase as a felicitous apologetic for psychoscopy, which in the last analysis refers to a body of knowledge applicable chiefly on the social—in contradistinction to the individual—level.

A little less than five years ago Adolf Meyer, speaking at a symposium appropriately devoted to the philosophy of psychiatry, made the following pertinent statement: "Church and philosophy evidently meant to grant science and the physician professional status and license only as long as he left the *mental* and *spiritual* problems to the priest—or to the philosopher."* The priest and the philosopher, according to Meyer—and I would add to the two, the politician—are willing to allow the physician to meddle with the psyche, but only the psyche of the invalid; otherwise they protest.

Originally, when mental illness was attributed principally to some constitutional, hereditary debility or to the ingress of some malevolent spirit, the division of the field among the priest, the philosopher, and the physician worked out fairly well. The priest and the philosopher flourished, the mentally sick languished in prisons or asylums, and the physicians busied themselves with other things.

But with the advent of dynamic psychiatry, the psychiatry of Freud, Jung, and Adolf Meyer, it became increasingly clear that a vast amount of the prevailing psychopathy was etiologically traceable to the conflict between the primitive drives and singular goals of the individual and the restrictions and exactions imposed upon him by the group or by society. At the same time it became clear that the conflict between the individual

* F. J. Sladen: *Psychiatry and the War*, Springfield, Ill., C. C. Thomas, 1943, p. 361.

and the social body revolved primarily about mental and spiritual problems—problems of being, of values, and of ultimates. Modern dynamic psychiatry does indeed deal with precisely those matters which, as Meyer states, the priest and the philosopher deemed their exclusive realm.

I have implied that all the adherents of modern dynamic psychiatry are in unanimity. Of course this is not the case. What I said about the position of dynamic psychiatry vis-à-vis the mental and spiritual problems which confront the individual in his existence within society would, I believe, prove acceptable to Jung and probably also to Adolf Meyer. I doubt, however, if Freud would agree. For as you perhaps remember, Freud, speaking for psychoanalysis, affirmed rather sharply that it did not offer a *Weltanschauung*. He also wrote an essay in which he described religion as an infantile delusion. By these tokens and by others in his works, it would appear—and many of his disciples stoutly maintain so—that Freud did not consider what Meyer termed “mental and spiritual problems” to be within the province of psychoanalysis.

It is futile to argue the matter on the basis of citations from Freud's work. Nor is the question definitively answerable in terms of precisely what Freud meant. There were many things upon which Freud, as he himself affirmed, could pass no more than tentative judgment. However, this much can be said relative to his dictum on psychoanalysis and *Weltanschauung*, as well as to his essay on religion: neither of them really gainsays the basic fact that modern dynamic psychiatry traces much of the prevailing psychopathy to the conflict between the primitive drives and singular goals of the individual and the restrictions and exactions imposed upon him by the group in which he dwells. Nor do they gainsay the fact that the conflict between the individual and the social body revolves about mental and spiritual matters.

Freud is quite correct in his assertion that psychoanalysis—let us extend it to dynamic psychiatry—does not offer a *Weltan-*

schauung. By *Weltanschauung*, Freud intended some definite perspective, some fixed scheme, some revealed or otherwise orthodox account of the world, its origin, its purpose, and its end, bolstered by set values and prescribed commandments relative to good and evil. We must, I am sure, agree that thus defined, modern dynamic psychiatry does not offer a *Weltanschauung*. Quite to the contrary, it must regard, as Freud did, such *Weltanschauung* as a morbid and morbidic dynamism. But there is a whole series of basic assumptions predicated by modern dynamic psychiatry which could easily be considered in the nature of a *Weltanschauung*, a sort of relativistic, dynamic *Weltanschauung*, quite different from those older ones which are absolute and static.

Freud's essay on religion I can touch on but briefly. Despite his *bahnbrechend* ways, Freud was a man of the nineteenth century. This century witnessed the greatest challenge to organized religion since the days of the Reformation. Few of us can appreciate the furor engendered by the theory of evolution. The church bitterly opposed this movement; Freud opposed the church—not religion or religious feeling.

Two basic assumptions predicated by modern dynamic psychiatry are particularly relevant to our deliberation: the reality principle and the composite derivation of the individual. No matter how divergent the different schools of modern psychiatry may be in many respects, they all concur that sanity, in the sense of wholeness, and effectiveness can be achieved best when the reality situation is appreciated and dealt with by the individual. Modern psychiatry, unlike the older ethical systems, does not attempt once and for all to define the reality situation for all men under all circumstances. Indeed it maintains that such a definition must be in error. On the basis of its experience with the abnormal, psychiatry rather urges the inescapable need for facing and acting on the reality. In its nosology, psychiatry catalogues and describes the different devices

by which men fail to, and seek to avoid facing and acting on reality.

But if modern psychiatry refuses to subscribe to a fixed pattern of the so-called reality situation, in the way that the ethical systems do, it has gone a long way in describing the major factors which enter into, and act as powerful determinants in, the mosaic of the reality situations. Modern psychiatry recognizes that the individual's personality has a composite derivation; it is compounded of many elements that fall within two major categories: those of the time-, energy-, and space-bound self, and those which carry and serve the relatively immortal strain of man. You will recognize these categories by their more popular but less illuminating designations—the id and the super ego.

Practically all religious and ethical systems have recognized the existence and the apposition of these two categories of being. But the recognition has been at the intellectual and philosophical level, and not—as has been the case with psychiatry—on the biological level. Furthermore, most religious systems, and also many of the philosophical systems, have made it their avowed aims to uproot, to annihilate, to repress, or to undo one or the other of the two categories of being, the mortal or the immortal. Modern dynamic psychiatry, on the contrary, predicates the basic assumption that in order to achieve sanity and effectiveness both these categories of being must be integrated and reconciled, for like the apposition of centrifuge and centripitate forces, they maintain the configuration and dynamism of the individual.

Throughout his history man has found it difficult to understand and to reconcile his mortal with his immortal self. Their joint presence within him has caused him to be uneasy and unhappy. At different times, in different climes men have sought to overcome this dualism by extirpating one or the other. Some were for "taking the cash and letting the credit

go—nor heeding the beating of the distant drum." These were the hedonists. Then there were the others, the ascetics, who mortified the flesh. Entire civilizations have been based on the favoring of one category over the other.

It has been the historic function of modern psychiatry to expose the fallacy of the wars between the categories of being. According to modern psychiatry, salvation lies, if I may paraphrase, in "rendering unto the id what is the id's, and unto the super ego what is the super ego's." But this is no mere happy middle of the road compromise. Were this the case, psychiatry would be merely another vaporous system of metaphysics hardly worthy of our notice.

It is rather from the hard and bitter school of the morbid that psychiatry draws its salutary lesson. It is from the unrecconciled that psychiatry draws its conviction of the need for reconciliation and integration. And by the signposts of the morbid, psychiatry has explored the ways of the normal. Thus we have come by a body of knowledge which I have designated as psychosophy, by which it is possible to actively promote the optimal development and function of the human psyche.

The time is ripe. The knowledge derived from modern dynamic psychiatry needs to be extended and applied to social medicine, to the individual in his manifold social relations, and to the social organism itself. One insistent proof is the doctrinaire attacks that are being made on modern dynamic psychiatry.

This is also an earnest challenge to psychiatry, which seemingly wills to remain psychiatry—that is, a specialty dealing with the mentally ill or at the best an experiment with the prevention of illness—and which is loath to go on to psychosophy. But it must so progress, or it will be displaced. Psychiatry must carry its wisdom and knowledge into all highways and byways of life. Every phase of human endeavor—education, art, government, industry, parenthood, marriage, the laws, yes, even

morals—should be penetrated and illumined by psychiatric wisdom and knowledge.

Psychiatry in practice may now be said to be in the antiseptic stage. It attacks mental disorders, as Lister first did his surgical wounds, with vaporous clouds of finely-dispersed, sterilizing matter. It hasn't yet advanced to the robust, basic procedures favored in the best of clinical medicine, where attention is focused on the defensive competences of the individual.

The atomic bomb hangs like the sword of Damocles over the heads of this generation. The scientists who unloosed atomic energy have been overwhelmed and dismayed by the possible consequences of their labors. Most of them have suddenly discovered that science does have ethical and social implications. The scientists' tantrums are amusing. They are disturbed about what may happen to the world because of their little bomb. It is even said that some of them wish they had never been born. But the significant thing is that the scientists reformed are still unregenerate. For even when they turn sociologists, they can still advance only mechanistic schemes. To safeguard the world against atom bombs they propose a system of world police. It is the old story—to prevent crime increase the number of policemen.

What they and many others of us miss is that the problems of the atom bomb, and of war, and of crime, and of human relations in general are in the last analysis psychological in nature; they are problems in which mental and ethical matters are predominant.

I do not discount the other orders of action required in the day-to-day government of the affairs of man. However, I do affirm that there is little hope for improvement in human relations until the body of knowledge available in modern psychiatry has been made common in the knowledge, thinking, and motivation of the common man.

Psychiatry and Social Leadership

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THE word lead is derived from the Anglo-Saxon *laeden*, the casual form of *lithan*, to travel; hence, also laden. *Lifland* is the Anglo-Saxon for life course related to lead. The word leader in its popular use means one who is outstanding in a military, scientific, or other social relationship, one who is first or prominent in a group or community; one who takes precedence by virtue of particular qualities or who is assumed to be superior.

In sociology, leadership is a situation-process in which an individual or small group, because of special or supposed ability to solve problems that confront a group or society, is followed by the others and exerts a definite influence over their conduct.

In psychology we often speak of situations, and we employ the term to indicate the totality of all external and internal organic and environmental factors participating in behavior. By situation-process we indicate "the inseparability in actuality of the relatively stable or momentarily observed aspects of experience (structure, form, situation, gestalt, event, product) and the changes (function, process) which are occurring even as the observation is made."* Practically every social phenomenon falls under this definition.

Leadership may be based on a number of possible factors, including spontaneous aggression, personal physical strength and courage, skill, extensive knowledge, age with its superior experience and position, alleged supernatural power or endowment, or upon a combination of these. Leadership should be distinguished from domineering, in which the group either

* *Dictionary of Sociology*, edited by Henry P. Fairchild, New York, Philosophical Library, 1944, p. 274.

through fear or strategic disadvantage finds it necessary or expedient to submit reluctantly, and where the driving motives of the domineerer are predominantly or entirely selfish rather than altruistic. Domination is that type of social interaction in which the ideas, motives, and objectives of the dominator determine those of the dominated.

Naturally there are a number of situations which are characterized by mixed motivations. A dictator may refer to himself as a leader or become known as one, and gain control of a problem or crisis under the appearance of his interest in the welfare of the group. His real satisfaction, however, lies in a new or unique experience, the manipulation of power, or even in the expression of a sadistic trend.

The two most socially significant varieties of leadership are operative in all communities, namely the conservative and the progressive. The conservative leader tends to stimulate interest in the direction of maintaining the social order or some specific situation in status quo. This type of attitude and leadership is particularly attractive to those who long for security and fear to risk that which they have at hand. The progressive leader operates in a different way. He develops interests in changing the social order or particular situation so that its benefits and opportunities may be distributed more extensively to those persons who have been stinted or excluded. The improvement in technical efficiency is one of the objectives in both movements. Progressive leaders attract followers who have never had security; they also attract the semi-integrated, the venturesome, a section of the wealthy who are philanthropic, or those who are dissatisfied with life.

There is also such a thing as indirect leadership in which the supposed or actual qualities of the leader are impressed on the followers by transmission through other people or by artificial channels.

In an analysis of the characteristics of outstanding leaders of large groups, one commonly finds unusual energy, initia-

tive, a high degree of intelligence, free oral expression, courage, self-reliance, kindness, tact, and fairness. When individuals are placed in positions demanding or stimulating leadership, they tend to grow in these qualities and in authoritative weight. Experiments in schools where certain children have been placed in leadership positions show that these qualities associated with their position actually increase.

There are some special characteristics that seem to constitute an original inborn endowment, however. Although they may be enhanced and sharpened by opportunities and experience, these external factors never create them. These characteristics are: an active, quick-working mind; the ability to sum up and evaluate situations, to estimate people and their worth; to sense the trend and also to anticipate and keep ahead of it, and to grasp the individual reaction of people in a particular situation and know how to take advantage of it, a sense of humor; and humility.

Freud has emphasized that intellectual mastery of our world depends upon the discovery of the principles, rules, and laws that bring order and understanding out of confusion. He points out, however, that processes of development and change are susceptible to falsification when attempts are made to simplify these phenomena.

With man's increased ability to control the physical forces of nature there has been no obvious increase in the ability to control human nature. The old savage is still in the new civilization to the extent that blessings in the form of scientific discoveries are readily turned into destructive forces of war and greed. We may have and do have considerable insight into our human activities, trends, and obligations but we lack oversight in the ways of applying them.

In evolution there is a long succession of events among the impulses of life from the single celled organism to multiple celled and multiple organisms. One of these impulses is the tendency to form compact groups in ever increasing complex-

ity, culminating in the swarm, the pack, the herd, and in humans, the tribe and the nation. Whether this unification be physical, instinctive, or consciously social, the chance of survival is enhanced, although there is a subordination of the more personal activities and interests of the individual.

The study of man goes on in two directions, inward to the microanatomy and biophysics of the cell and outward to the macrocosm of types and races. Here we are led to deal with human social and ethical characteristics which are governed by the forces directing organismic evolution.

In times of stress and anxiety individuals are welded into homogeneous masses with a so-called collective mass soul.

Some of the outstanding features of this mass mind are an enormous suggestibility with the concomitant lack of critical faculty, and a high degree of emotionalism often leading to impulsive aggression. Although the mass mind is capable of noble sacrifices and constructive accomplishments, it may commit deeds of brutality that few single members of such a mass would or could bring themselves to do. Men are different in the plural. The old Romans noted this: *Senatores boni vivi senatus mala bestia* (the Senators are good men; the Senate a beast).

Acute emotional behavior is highly infectious: a dog fight raises a rumpus with all dogs yapping within hearing; one cackling hen in a farmyard brings all the others to follow suit—even the rooster joins in although he is incapable of laying eggs; an excited monkey will touch off a whole colony of apes into a frenzy of screeching. We are all only too well acquainted with the spread of a mob spirit through a community and a war psychology through a nation. These reactions or phenomena take place on different scales, in different degrees of intensity, and at different rates of speed.

In the mass reaction there seems to be a tendency toward destructive rather than constructive activity. This may be only an impression, for destruction is the more impressive of the

two; but after granting the constructive elements that make for progress in the group mind, it would still seem upon close analysis that enthusiasm is a bit stronger in the individual while indignation is stronger, or at least more prominent, as a group phenomenon. Indignation leads easily to acts of aggression.

In the mass a rumor becomes a certainty demanding immediate action. This phenomenon is based partly on a feeling of irresponsibility on the part of the individual, who is not tempered or guided by logical argument and thoughts but by sensational statements and the repetition of stimulating catch words. The group or populace is in a continuous state of expectation, craving sensational news which it tends to believe; it therefore lends itself to being led by anyone who can supply the demand for sensation. In a mass organization the individual is almost totally different with respect to his powers of observation, critical faculties, and intellectual integrity, all of which are notably reduced. Suggestions from the leader become more effective and the subjective feeling of power is strengthened. This same feeling, which is also possessed by the leader, may increase to the proportions of omnipotence.

All social classes of people may be and are involved in the mass reaction. Wealth, education, intelligence, social status, age, and sex only add a little more or less to the initial resistance to the process or situation. Once involvement is effected, the individual succumbs to and is absorbed into the mass psychology. Only a few geniuses or similarly unsuggestible individuals have immunity, and they are liable to be ostracized, imprisoned, or given the status of permanent quiescents according to the particular force of the issue and movement. The ignorant and the learned become as one.

To become a welded psychological mass the individuals must feel that they have something in common—an interest, a goal, a gross injustice, or a hatred. The instinctive trends of gregariousness, protective and emulative tendencies, pugnac-

ity, and acquisition are all mobilized and in action. The greater the mass integration, the more instinctive the reactions and the less the intellectual control. Among the individual units some struggle to be leaders, others are content to be followers. Men's instinctive urge to dominate others is coupled with a willingness to yield when circumstances require it. This involves not merely submission but also allegiance and support. Although leadership depends considerably upon such factors as reliability and responsibility toward those led, when the divergent trends of dominance and submission reach their peak, man may and often does become one of the most cruel of animals.

The leader need not necessarily be highly intellectual but he must have the gift of understanding the emotions of the masses and how to stimulate them. He must supply the sensational and must know how to appeal to followers by exaggerations and repetitions. Most people do not wish to be told that they must think for themselves. Thinking is not easy. It seems to be more satisfactory merely to repeat the ideas of others.

Have we reached the point where civilization itself is a disease? Are we now attempting to live on the wasted remnants of our original vast resources with the possibility ever before us of wasting more human blood?

Government operates by force, not only in emergencies, but always in the enforcement of various laws; it is based on the principle of force in the interest of peace and order. Why not use some force in the interest of peace when formulating international policies?

When a certain type of mass mentality has taken over, war is apparently unavoidable. The Nazis are conquered but the Nazi techniques are not. Under certain conditions they will work anywhere in this world. As long as the masses are not properly informed in the principles known to psychiatry, there will probably always be a brute force whose energies will be

at the command of any person who is a combination theorist, organizer, and rabble-rouser disposed to giving them weapons of war.

The world is eager for a lasting peace based, if possible, on some type of world-wide legal organization with binding laws. Nations still resort to fighting tactics while private individuals have for a long time settled most major disputes by means of the law suit. Even now, when attempts are being made to regulate world affairs by leaders poorly informed in psychology, danger threatens the construction of any international legal organization; for there seem to be marked differences between individual and international ethics.

The reorganization and rebuilding of the world of societal relationships will have to be done in the light of psychological knowledge. In psychiatry we know a great deal about the psychodynamics of patriotism, identification, mass psychology, and the psychology of security. Why not utilize the psychology of social leadership to create a definite mass movement demand for a real scientific evaluation of social affairs with the idea of preventing pathological developments? Why not use all the tricks of the leadership trade to accomplish such a constructive purpose?

I, for one, should like to see some definite positive objectives set up in this nation and this world and some fighting for the things we want rather than for those we do not want. To see some positive constructive action based on scientific principles rather than on political and uncontrolled emotional factors would be exceedingly refreshing, and would, moreover, offer the greatest possibility for success.

This is America's hour of destiny. She can assume her role in the scheme of things by applying the scientific method, by using men trained for scientific research in the problems of sociology, economics, and politics. But is there any way of transferring control into the hands of the scientists, of orient-

ing them rather rapidly in a field where previously they have not been allowed to function? The cleavage in intellectual viewpoint and mental habits between the political leader and the psychiatrist is so fundamental and constitutes such a barrier that it is not to be dismissed without further comment.

It is common for scientists, including psychiatrists, to refer to the methods and attitudes of the politician as stupid or downright wicked, while the politician and his expert advisors are scornful of the views of the psychiatrist and other "intellectuals." On the practical level, this cleavage has important consequences. The scientist or objective observer, who objects to the fact that men's actions are determined and controlled largely by emotions and semiconscious motives and who wants to consider every proposition in the cold clear light of analytic thinking, can have no part in present political life, where success and support of issues depend almost entirely on emotional appeal.

And so reasonable, realistic solutions continue to evade us. We hear a great deal from our politicians about the organization of a new world—one that represents security, freedom from fear and want. But these men offer no guiding principle as to the method of achieving such freedom. A variety of possible solutions are advocated from diverse sources. Economists emphasize one approach, communists another, clergymen still another. One group demands a disarmament program, another favors federation, another harps on Christian socialism, still other groups insist that more education is the answer, while in the midst of the confusion the psychiatrist would have us acquire an understanding of the psychology of individuals and of the masses. It would seem that until we have a better understanding of leadership and mass psychology, we must expect that wars, pathological greed, and interpersonal strife will continue to torment, and perhaps will eventually destroy, humanity. So far no plan has been adequate as there has been no

general fundamental understanding of the basic capacities of man. Such an understanding must be our immediate and persistent objective if the species of man is to continue its existence.

Culture and Communication

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COMMUNICATION is a problem in applied social science. One must feel and know in detail the culture and the personality organization of the group with which one wishes to communicate. One must also know oneself and the culture of which one is a part before one can even begin to understand anyone else.

In a large sense communication is dependent upon the development of a psychodynamic social science and social psychiatry. Psychiatrists need to be more aware of the cultural milieu in which all human behavior takes place. Social psychiatry as a preventive discipline has only the institutions of a culture for its working materials. For that reason we must know a good deal more about our culture and what it does to us than we do now. Although we are beginning to get the insight necessary for creating a really social psychiatry, the field cannot be developed by psychiatrists alone. The social sciences have their part to play. But the social sciences themselves will first have to incorporate the knowledge about ordinary human behavior that is being accumulated by psychiatry and particularly by psychoanalysis. Insight and knowledge from the social sciences and psychiatry must be so intimately blended that they form one body of knowledge. Then when a social scientist thinks about institutions, he will not regard them as separate entities in hypothetical space but as creatures and creators of the human psyche in a given cultural setting.

The most systematic technique so far developed in the field of personality and culture is that devised by the psychoanalyst, Kardiner. In his recent book, *Psychological Frontiers of Society*, he has analyzed several cultures, including our own.¹ It

* Deceased July 24, 1947.

was the great discovery of Freud that individuals develop different personalities when variations are made in their early training, that is, in the handling of the nursing situation, sphincter control, and the attitudinal relationships of parents to children. Anthropologists and psychoanalysts following Freud have perceived that different cultures have different ways of bringing up children, and more important, that there is a direct correspondence between these methods and the kind of personality capable of successful functioning within a given culture. Kardiner uses the term "basic personality structure" to describe the "normal" or "typical" character organization of individuals brought up in a specific culture. Such a basic personality structure develops from the patterns of training to which individuals are subjected from birth. Other institutions in the culture, like value systems and religion, provide suitable outlets for the already formed personality. In this way we have an opportunity to project our personality characteristics into the culture. Thus, Kardiner, in all the cultures he studied with the anthropologist, Ralph Linton, found a one-to-one correspondence between the techniques adult individuals use to communicate with their gods and the ways in which children in that culture ask their parents for favors or forgiveness.

The basic personality structure of a people sets definite limits to thought, attitudes, and behavior. It defines the situations within which individuals will feel secure or anxious or hostile. For example, we Americans tend to have guilt anxiety over sex behavior, whereas the Japanese do not. On the other hand, the Japanese experience a great deal of anxiety over losing face in social situations in which Americans behave with equanimity. Our respective security systems are built around different situations. In World War II we made use of this kind of insight. We wanted to destroy the will-to-resist of our two powerful enemies, Germany and Japan. Our government made a systematic attempt to study the personality structure of our enemy so as to find its Achilles' heel.

We need to know much more about the basic personality structure of the peoples of the world. With this knowledge we could appreciate when feelings of security were threatened and in what situations hostility was likely to be aroused. For international tensions are neither blind, sporadic, nor accidental; they are endemic, predictable, and analyzable through the developing insights and techniques of social science and psychoanalytic psychology. Either we subject international tensions to scientific investigation, and thereby to eventual control, or we continue to be at the mercy of the haphazard solutions of the past which have proven unworkable.

The older schemes visualize a single world culture brought about by the military conquests of one people, or by eventual conversion of the world to one religion, or by spreading our particular form of democracy to all peoples, or by devising a philosophical schema of absolute values which includes a little from every culture and through which every people can supposedly find some identification with every other. Instead, we must all accept the diversity of world cultures and harmonize them within a world order; any other procedure is unrealistic on the basis of social science knowledge. If we accept cultural diversity, it follows that we must also include diversity of basic personality structure. We must understand how the people of each nation integrate their ethnocentric drives. We must find the points at which their particular security system is endangered. Not even a perfectly devised world organization can withstand the emotional tensions created among nations, no matter how sincere and strong is the will to peace among all peoples. The will must be there, just as a mentally ill patient must want to get well, but nations, like patients, must have emotional understanding of themselves or they will remain slaves to forces beyond their control.

This is particularly true in our dealing with the U.S.S.R. There appear to be anxieties that arise within both of us, but they do not necessarily arise in similar situations. If such af-

fects are not checked, they will lead to mutually aggressive feelings which can only end in unpleasant and dangerous international incidents. We cannot eliminate anxiety, but we might avoid arousing it unnecessarily.

The communists believe that they have the only true democracy, and we believe in ours. We criticize their form, and they say ours is incomplete. The difference between the American and the Soviet interpretation of the word democracy is symptomatic of deeper lying differences. America has serious unsolved problems that press for attention: the achievement of full employment, the control of the business cycle, the elimination of minority group discrimination and prejudice—to name a few. While these problems grip us, we will be fearful of any country that claims to know their solution, particularly when that solution involves an ideology opposed to our own. To try to stop communism internationally by power politics or domestically with witch-hunts is not a fundamental solution. The one way in which we can protect ourselves and at the same time win friends and influence nations to our design for democracy is to solve our own serious economic and social problems. Our democracy must be vitalized into a passionate creed that will compromise with no special interest and that will push on with its unfinished business. Then we will have something powerfully attractive to communicate, and neither communism nor fascism will have any terrors for us. Without this kind of democracy we can fight only rear guard actions.

Edward Hallett Carr in his recent book, *The Soviet Impact on the Western World*, notes that there is a world-wide trend toward more authoritarian regimes and that the period of individualism from 1500 to 1900 may turn out to be merely an historic interlude.² Kardiner states in his *Psychological Frontiers of Society* that the basic personality of Western man is less adapted to the modern era than to the medieval epoch in which one's status was fixed in this world as well as in the next.

There may be a connection between these two statements. If so, we should examine the primary institutions responsible for the formation of our basic personality structure—and hope it is not too late to do something about it.

We do not have to go into international affairs to find breaks in the lines of communication between groups whose harmonious relationship would benefit our whole country. Management and labor have aligned themselves into two powerful camps, existing most of the time on an uneasy truce. Neither group really understands the problems of the other. Each has acquired tremendous economic power, and one realm of power is incomplete without the other. Labor and management had a common stake in winning the recent war. Now there is no such obvious stake, except the negative one that the economy must somehow be kept going. There may be a possible common peacetime stake in the guaranteed annual wage; but meanwhile lines of communication are down and emotions run high on both sides.

In our society we offer no guarantees that subsistence needs will be met or social status maintained. These fundamental insecurities affect each class in varying ways, according to differences in their character structure. The horrible spectre of a life wanting in food, shelter, and clothing haunts labor more often than it does management, but it affects both. Subsistence insecurity may be more painful than status insecurity, but the latter may be as upsetting psychologically. Men in the laboring group object to being treated as if they were a commodity with a price but no voice. Our society provides very little feeling of dignity and honor for the position of labor, except possibly in wartime. Management, on the other hand, does not always have infallible prestige; it lost much of its stature during the great depression of the 1930's. There is more to the status insecurity of management than the rise and fall of business cycles, however. Management, more than labor, is caught in the throes of the American class system—a system which we do not often

admit exists in our culture. To the extent that men in management have acquired economic power within their lifetime, many of them try to translate it through their families into social position; this is usually psychologically unsettling.

Thus labor and management are caught within a culture that yields little security in subsistence or status needs, and the resultant anxiety manifests itself in the struggles between the two groups. A permanent resolution of these anxieties would have to be accomplished through bringing about a more meaningful way of life for everyone within the framework of democracy.

The final instance of broken lines of communication in this country is that of minority group prejudice and discriminatory behavior. The subsistence and status insecurity rife in this country sustains prejudice and discrimination, but it does not create them. Derogatory stereotypes of racial and minority groups are part of our cultural heritage and are used by individuals in varying ways, often to the disadvantage of minority group members. Our relatively stringent child training tends to produce free and floating aggressions that seek outlet. Minority group prejudice serves as such an outlet because it is socially sanctioned, the American Creed notwithstanding.

About 10 to 15 per cent of our population is virulently prejudiced against at least one minority group. These individuals appear to have generally constricted personalities. They tend to be conservative in their social, economic, and political opinions. Hence fascist propaganda was quite sound in stirring up race prejudice while at the same time attempting to swing public opinion to the right. Some 80 per cent of our population is at least mildly prejudiced against some minority group. But we are a nation of minorities. We cannot find lines of communication among ourselves unless we can become less hostile persons. Once more we must examine our basic personality structure and the institutions that are responsible for it.

Minority group prejudice is not our own private affair. Those who are infected with it mark it for export abroad. Racial prejudices inevitably play a role in the formation of our attitudes toward other nations and of other nations toward us, and might easily prevent satisfactory interrelationships with other peoples.

Whatever problem we discuss, whether it be international relations or labor-management relations or minority group relations, we must face the factors that produce anxiety and hostility. Some are in us, and some are in the situations in which we find ourselves. Unless we can come to grips with these factors through emotional understanding, we will continue to be at their mercy. Our only hope is to rebuild ourselves with the new tools and the new knowledge that are gradually being fashioned.

In the last three hundred years of scientific inquiry we have traveled a long way. We have placed the earth in its correct relation to the sun. The earth is no longer the center of the universe. The discovery was the first but not the last blow to our egoism. We have examined the nature of physical matter. We have studied plant and animal life and established the principle of evolution and our close relationship as a species to the other animals. That, too, was a blow to our pride. We have begun to examine ourselves objectively. This has been a slow and painful process. The last and greatest battle is to realize that man is not in complete control of his mind and body. This struggle, initiated by Sigmund Freud, is not won, nor are we yet able to see all its implications. Just as the last thing a fish turned scientist would discover would probably be water, so the last thing man is discovering is culture. No one yet knows what human nature is, apart from the cultures in which we find man. The way in which we think and what we think about are strongly colored by the culture in which we are raised. So far it has been impossible to step completely outside this frame; but having started down the long road of objective

inquiry, we cannot turn back. We have no other choice than to push on to complete objective control of our cultural environment. We cannot remain in midstream between reliance on a set of values conceived of as absolutes and reliance on newer knowledge, as yet incomplete, of the human psyche. As we push forward, we will be laying the foundations for true communication among all the peoples of the world. Let us hope the understanding will come in time.

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VI. SOCIAL APPLICATIONS OF PSYCHIATRY

In Childhood

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It has long been recognized that no period in the life span of individuals is more important from the mental hygiene point of view than infancy and early childhood. There is growing agreement that basic attitudes are developed in the foundation years, that emotional needs of infants and young children are of primary importance, and that ways of meeting experience which are learned early remain characteristic throughout life.

Such agreement is growing but it is far from universal even among psychiatrists. General acceptance of the importance of childhood years is naturally much less widespread among non-psychiatrically trained medical and professional groups—and among parents. Yet it is through parents and teachers and doctors that the social applications of psychiatry are now being made and will continue to be made.

How to help parents, teachers, and other professional workers understand, accept, and apply the valid contributions which psychiatry has to make to human relations is a major problem of the mental hygiene movement. It is a problem which is far from solved. Important beginnings have been made, however, in sound social applications of psychiatry—along with many false stops and starts and exaggerated claims. These beginnings are well illustrated by the nursery and parent education of the past twenty years. The process of change and the forces of reaction and resistance are also particularly apparent in nursery schools and homes.

A brief review of changing practice in good nursery schools and in good homes over the past two decades offers an accurate index to: what has been learned from psychiatry about the care and nurture of children; what has been unlearned; and

what new approaches promise to be productive of a more effective social application of psychiatry in the next decade. In this context, a good home or a good nursery school may be defined as a home or a school where parents and teachers understand certain basic things about human relationships: what children need, how children grow, what kinds of problems all children have to face and solve if they are to achieve maturity, and what these experiences mean.

In other words, a good nursery school teacher or a good parent can now accept and "take" the childishness of children. They may be worn out by an expansive two-year-old; they may be sorely tried by the explosive, out-of-bounds four-year-old; but they are not at a loss when the two-year-old says "No" and runs nine out of ten times in the opposite direction. Nor are they morally shattered when the four-year-old says, "You old stinker you, I hate you."

Good parents and good teachers are not afraid of children; they are not hopeless or helpless about their behavior. One of the major contributions of psychiatry has been to help us to understand the nature and problems of the emotional life of the young child. We know now that children are not clay to be molded into adult images. We know that basic needs differ at different stages of development. We have learned that the very earliest needs for gratification, comfort, and mothering are followed in the second and third years by equally basic needs for independence, competence, and definite limits. It is agreed that very young infants should have as little thwarting and frustration as possible in order to stabilize physiologically and build up reserve and momentum for the rapid physical and psychological growing before them.

We understand better now than ever before that many of the so-called bad habits of infancy are the baby's own instinctive compensations or adjustments—his way of getting something which he needs for his own balanced economy of growing and

living. As Dr. Margaret Ribble has pointed out: "Thwarting may consist merely in *neglecting* to bring any of the primary body functions into action."¹ Thwarting does not have to be intentional. We are learning that mistakes which are made in ignorance can be just as costly as those which are made on the wrong assumptions or through carelessness.

One of the brightest spots in the social application of psychiatry is that good medical and parental practice now recognizes the infant's needs for sucking, bodily contact, and sensory experience. It also accepts the infant's equally strong need not to have his physical autonomy invaded or violated by too early or too rigid scheduling or toilet-training. Fortunately the days of sacrificing babies to schedules are over—or at least they will be as soon as certain books, doctors, psychologists, and a goodly number of grandparents can be taken out of circulation.

There is another change in current attitudes and practice which also suggests clearer understanding of emotional growth. When psychiatrists first called attention to the personality problems which frequently seemed to center around jealousy and sibling rivalry, an undue emphasis on the importance of eliminating conflict developed. Instead of accepting developmental fears, hostility, anxiety, and feelings of rejection as normal and expected growth experiences to be kept at a minimum, some psychiatrists appeared to imply that struggle should be eliminated. Many parents overprotected their children in order to give them security.

There is considerable evidence that the trend toward overprotection is slowly being corrected. Good nursery schools and good homes are more natural and realistic than they were ten years ago. Parents are learning that having definite limits, learning to wait, giving up part of what one wants because of love and the desire to please are as essential to healthy growth as balanced diet and good hygiene. Psychiatric insights are now helping parents and teachers to understand why a child's

capacity to accept the necessary limitations and frustrations of life is affected by the extent to which his very earliest needs are met.

In addition, more and more parents understand that the preschool years are self-centered, creative, urgent, and sometimes violent and why the years from three to six can be appropriately called the first adolescence. Like the adolescent, the preschool child is developmentally a mystic, philosopher, scientist, lover, and poet. He asks, "What?" "Where?" "When?" "Why?" "Is it because?" and "Will it if . . .?" He, too, is concerned with life and death, birth and origin. He loves and hates and knows jealousy, but he is also curious, realistic, and capable of enduring what the important adults in his life can accept and bear.

The general agreement among psychiatrists that personality disorders have their roots or origins in childhood experiences is now coming to be accepted by social scientists and educators. Recognition of the importance of early experiences in the family is changing our folkways, but not fast enough. From the point of view of national health there is still too much emphasis on the treatment of individual children and too little on education.

We can grant that it is important to develop more centers for emotionally disturbed preschool children and their parents. These centers will prove to be increasingly valuable for training, experiment, and research as well as for treatment purposes. At great per capita cost each center can rehabilitate at best a few hundred children each year and help reeducate a few hundred mothers. Their findings can keep on confirming what is already well documented, namely, that tense, anxious, insecure, conflicted, and hostile mothers tend to have tense, anxious, insecure, conflicted, and hostile children. Child guidance centers can produce more and better case histories which demonstrate with relentless monotony the following:

1. Emotionally immature mothers have overdependent or over-aggressive children.
2. Emotionally immature mothers usually were deprived in their own childhood.
3. Rejecting mothers are usually women who have not accepted their feminine roles.
4. Women who cannot nurse their babies, or are disgusted by the thought of nursing their babies, are most frequently the mothers who have not achieved good sexual adjustment.
5. Women who are not well adjusted sexually are frequently overconcerned with the child's elimination and health, and their children may be constipated, as well as fussy eaters.
6. Children who are too rigidly and too early trained for cleanliness are apt to be the tense, high-strung, nervous children who feel more than their share of the terror and insecurity of living.

These syndromes are fairly definite and well known. We do not need to gather further proof or evidence that children need loving, confident, competent, and mature mothers and fathers. We know now the behavior to be expected from children whose mothers are overprotecting and dominating, compared with those whose mothers are overprotecting and submissive. Dr. David Levy and his research colleagues have reported accurately and with great insight the mother-child monopoly which can help produce the child-tyrant or the passive, submissive adult's child.²

The consequences of these and other disturbed relationships are known only too well. It is a fact that psychiatric research and treatment have already yielded more data, insights, and useful methods than we have even begun to assimilate or apply. Emotional disturbances are now epidemic. Some of our current concern over who shall give treatment is like an argument in time of flood over who shall throw out the life lines. Surely an epidemiological approach is the only defensible one in these times of tension.

The systematic study and observation of children over the past decades have yielded one item of particular relevance

here. It is well known that children, in their social development, go through a period of so-called parallel play during which they play side by side but do not cooperate or share. At the same time they carry on what Piaget calls "collective monologues," each talking earnestly about what he is doing without regard or concern for the words or action of others unless they intrude or threaten. It may not be too far-fetched to suggest that the social and medical sciences are still in the stage of parallel play in their social development.

Is it too much to hope that we can get on with our social development, outgrow our jurisdictional disputes, our concern over priorities and seniorities, and get on with the basic problem of prevention? And in the areas of prevention all the evidence to date points to parent education as the most fertile field for the social application of psychiatry. If parent education comes to be understood as education for emotional maturity, we can help parents to help themselves and their children during the periods of greatest growth sensitivity and in the human relationships in which people are most vulnerable and most accessible.

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In Adolescence

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ADOLESCENCE is that period of shift from childhood to adulthood which is the last, the longest, and perhaps the most painful of the series of shifts in the growing-up process. It is a period which presents such picturesque, contradictory, and sometimes baffling behavior manifestations that parents, teachers, and physicians are inclined to retreat in bewilderment, terror, indignation, or humor before them. Often they "lie low" and hope that the phase will somehow pass and that by endurance alone the young person will somehow reach a safe mooring in adulthood. The community in general is even less sympathetic; confusing size with total maturity, it is apt to apply adult standards and assay the behavior too frequently in terms of delinquency and offense. This is a great pity, as adolescence by its very nature is a time when the young person needs, and in his own chaotic way is effecting, a separation from his parents to find new ideals and goals in society.

Adolescent impulsiveness and emotionality are characterized by passionate attachments and kaleidoscopic changes of plans, often beautifully unhampered by considerations of reality. Aggressiveness and readiness for daring action (side by side with the greatest touchiness) retreat into fantasy, vague intellectualizations, and states of the most hidebound conservatism, with so great a desire to conform that courses of action may be changed or sacrificed in order not to appear at a disadvantage in the group in some comparatively minor detail. All this is well known to parents whose children have reached a voting age. It would seem that the adolescent demands at one moment the right to unique individuality and at the next is uneasy at being even slightly different. Perhaps nowhere has

this span of years been more poignantly described than by the late Booth Tarkington in *Seventeen* and *Alice Adams*.

This brief sketch of the forces at work in the struggle of adolescence falls into three major considerations: the biological changes of adolescence itself; the unfinished business of earlier stages of development which is revived in a new and sometimes intensified form in adolescence; and the discrepancies between the biological and the cultural demands of maturity.

The generally recognized landmark of the biological changes of adolescence is the appearance of puberty, focused in the girl by the menarche and in the boy by the pubertal increase in the size of the genitalia and the appearance of active spermatozoa. Even before these changes there has been a marked acceleration in body growth and stature, usually reaching its peak about a year before puberty. This is accompanied by increased muscular development, especially in boys, and by the development of the secondary sex characteristics in both sexes—that is, the growth of adultly pigmented and distributed body hair, increase in the relative size of the genitalia in both sexes, growth of the breasts in the girl, and change in the voice of the boy. In the girl the appearance of the menstrual flow adds a particularly vivid and visible emphasis to the awareness of body changes.

It is apparent that the changes which occur relatively rapidly are mostly in the sexual and extravertive aggressive systems and must entail a new glandular balance with marked endogenous changes. That these endogenous changes may directly affect the sexual impulses and behavior is strongly suggested by the study of a number of cases of pathologically precocious puberty and by certain experimental work in the administration of hormones. We can look for an increasingly accurate and important body of facts as physiological methods become more precise.

In addition to these direct endogenous effects of the chang-

ing physiological balance, resulting in a rather rapid increase in aggressive and sexual instinctual drives, there are certain secondary psychological results of these body changes which may be worth considering. The period of childhood preceding adolescence, roughly the period from five to eleven or twelve years of age, is characterized by relatively stable physical and emotional balance, with a solidification of the child's sense of himself, his own identity, and his developing powers. The sudden increase in body size and change in body form, the impact of heightened and vaguely apprehended instinctual pressures, the general shift in internal integration—all tend to produce some anxiety and a dislocation of the adolescent's sense of himself, his subjective ego sense. Inevitably there is a change in his concept of his body image, a change contributed to by the visible changes in its contour, size, and in some degree in its function, as well as by the inner stirrings and endogenously aroused sensations.

These changes may be so sudden that the adolescent may be unable to wear any of the same clothes which he has worn comfortably six or even three months before. They may, on the other hand, occur much more gradually and with readier assimilation. It is my belief, however, that the acceleration of statural and special sexual growth which is so characteristic of adolescence generally threatens the young person's sense of himself, for he feels a change in his emotional and physical centers of gravity. When this is felt, there is an automatic compensatory effort to bolster the self, first, by a reversion to the earlier mechanisms of the ego, especially by an increase in the narcissistic sense of omnipotence and magic (reinforced by his increased aggressiveness); and second, by the erection of special patterns of defense to allay the anxiety resulting from the instinctual urgency and the variable, even slightly weakening, stability of the ego.

Combining the growing need for independence and the seeking for stability through the old pattern of identification,

we see adolescents characteristically turning outside the family for ideal adults whom they desire to emulate. This is a period of intense attachments amounting to hero worship. Frequently and simultaneously with the search for new adult ideals, there is a further reinforcement of the ego through the increased tendency for the formation of groups—the gang so characteristic of the teens. Sometimes, especially where there is a heavy residue of left-over problems from the five- to six-year period, the pressures are so great that the young person can handle them only by the sharpest denials or retreats into asceticism, prudery, and sometimes diffuse intellectualizing. In such cases we have, instead of the gross overt disturbances of behavior, a dangerous goodness that begins as a retaining wall and may persist as a confining prison.

In the past many students of human behavior considered that sexual interest began at puberty; Freud and his pupils were largely responsible for demonstrating the beginnings of sexual interests and patterns in infancy. Especially critical in determining the later exigencies of the sexual development is the period at about five to six, when the child regularly shows an infantile sexual urgency toward the parent of the opposite sex, with a rivalry and hostility to the parent of the same sex. This early sexual interest, which comes at the end of a period of rapid growth, is inevitably and healthily doomed to frustration.

Normally, adequately liberated emotional energy is invested in the less sexualized experiences of learning. However, when an unhealthy indulgent attitude on the part of the parents or a poor relationship between them prevents the child from meeting this critical period with a sufficient renunciation of his sexual interest in the parent, then the whole problem may remain smoldering until it flares up again in a renewed and even more exigent form in adolescence; one encounters either extreme and crippling defense reactions of denial and asceticism or impulsive sexual activities. The ability to defer sexual satis-

faction in the interest of future gain has not been adequately assimilated by the adolescent, and the parental love-object is even more forbiddingly unsuitable, while still desired. Depending largely on other elements in his character structure, the young adolescent who is burdened by his unresolved Oedipus attachment, either wins through this struggle, with an increase of pain and rebellion, or attempts to deny his intolerable predicament by withdrawing from sexual interest altogether and acting out his denial with premature and repeated sexual affairs which are gratifying only to the pride or the senses of the adolescent or both.

There are, of course, other sexual patterns of late infancy which may appear again in slight degree, and under untoward conditions, in an extreme degree. Thus, in the early adolescent period there is ordinarily a recrudescence of incomplete or wavering sexual identifications. This is especially apparent in girls who shift back and forth rapidly from tomboyishness to coquettish femininity. There is also a revival of interest in dirtiness, in cruelty, or their opposites, depending partly on the underlying conception of sexuality.

In adolescence more than at any earlier time in his life, the young person turns directly to the social group. Intellectual maturity is reached generally at some time within the adolescent span, but is seemingly not dependent on, nor necessarily in synchronous harmony with, physical maturity. When there is a marked disparity between the attainment of the peak of intellectual and physical development, this in itself causes further intra-organism strain and may be accompanied by rather marked social reverberations, especially in those instances in which physical maturing is a bit precocious and noticeably precedes the intellectual. The general but primitive human tendency to judge capacities on the basis of size and external appearance (which contributes to endangering the adolescent's self-evaluations) often plays some part in the community's expectations of the adolescent. It is seemingly harder to sympa-

thize with the impulsiveness or disturbed behavior of the young person who is large and looks mature, than with one of the same age, and of even greater intellectual maturity, who is not as physically advanced. Thus there are discrepancies not only within the individual, but also in the developmental stage of the members of the same adolescent contemporaneous group, with leadership frequently won by force of size and physical aggression.

There has been a tendency among some investigators to regard adolescence as purely, or largely, a cultural phenomenon. They believe that in a culture which permits the young person full sexual activity and responsibility at, or soon after, puberty, there is no period of appreciable disturbance. It appears, however, that nuclear changes are essentially biological and create, at the very least, a susceptibility to disturbance which finds magnified expression in situations where there is a marked difference between the age of physiological and intellectual maturity and that of the opportunity for economic and social independence. In our culture, specialization of work entails an increased period of education and at least semi-dependence. The period of deferment or partial gratification may be so prolonged and the strain within the individual so heightened as to crystallize too firmly defense reactions which may restrict the individual's later happiness; or it may, on the other hand, lead him into premature commitments. In general the adolescent treads a zigzag course with the danger of a too strongly fixed renunciation on the one side, and a too ready acceptance of irresponsible instinctual gratifications on the other.

It is striking that society has fewer positive resources for solving the adolescent's problem and is generally more prohibitive toward the adolescent than toward the child. Perhaps this readiness to check instinctual urges rather than be concerned with their direction is due to the dominant fear of their primitive impulses in most adults and the consequent resent-

ment at seeing these impulses in all their rawness in the adolescent.

Yet it would seem that the greatest constructive alleviation—aside from a general improvement in the understanding of the first years of life—may come from a social awareness of the needs of adolescence—its susceptibility to new ideals and particularly its need for social group activities. Such organizations as the Boy and Girl Scouts would undoubtedly have far greater appeal to the adolescent if they were oriented toward the activities of adulthood rather than the supervised play of childhood.

In the Family

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ONE of the greatest contributions of our present age is the clear-cut, scientific portrayal of the unhealthful influences of specified social forces. Many of the ills that were formerly regarded as visitations, hereditary or constitutional accidents, or as evidences of moral degradation are now regarded as the resultants of social pressures which work against or inhibit natural human tendencies. From the point of view of the social environment, these pressures are regarded as rules, obstacles, crises, or restrictions. From the point of view of the individual, they are called frustrations.

If the human individual did not possess that marvelous quality called learning, social pressures would be temporary obstacles and would be relatively unimportant. In actual fact, these pressures have an influence on the individual's very nature. They persist, or rather their effects upon him persist. That is why psychotherapy works on the individual in such a way as to undo his past, and preventive psychiatry says to society: "Be careful with the young."

We have long been convinced of the importance of early childhood, not only in regard to physical health, but also in regard to mental conditioning—hence the Jesuits' "Give me a child until he is seven," or the moralistic injunction, "Bring up a child the way he should go," or the behavioristic child study experts' alarm-clock method of fixing convenient habits of elimination. But now, by contrast, we are warned against any social pressure which conflicts with what the infant by his nature is, or what he will need to be later on if he is to be mentally healthy.

To take the latter consideration first, Strecker and other:

have pointed to the restrictive influences and inherent dangers of dependencies such as "Momism." To be thus dependent is a handicap, unless one can continue to live in a social world where mother's apron strings are available in real or substitute form. Chisholm takes the bolder and more generalized stand. We must avoid social pressures which conflict with the essential nature of the child, the essential nature being that of an intelligent learner. The positive note here is that the human infant has a natural potentiality for contiguous learning, a potentiality that must be satisfied.

There is a marked difference between the Strecker and the Chisholm theses. The former portrays the handicaps of early childhood as a family responsibility, without reference to the wider cultural pressures to which parents are submitted. The latter blames the influence of outside culture transmitted through the parent to the child in early training. In so far as we go along with Strecker (and with the majority of psychiatrists), we are forced to view the child as conditioned by the family. With Chisholm, we view the child as potentially intelligent, but frustrated in his development by family influences which reflect the dire impact of culture and of cultural moralities. Thus, he presents two main problems: the nature of the child, and the influences of cultural mores (largely inhibiting) transmitted to the child through the parental medium. The parental-cultural influence is viewed as negative and restrictive; but the basic challenge of Chisholm's thesis lies in the first problem—the nature of the child. If this were clarified and if our institutional policies recognized its reality, there would be hope for social health.

Chisholm challenged the mental disciplines to view the social scene and give their insights in the interests of social health. Individual psychotherapy, he claims, is not enough. Nor is the conception of family responsibility adequate without the inclusion of the wider cultural pressures governing and often restricting parental attitudes. The parental function

in that event would be all too limited. Caught between the psychological demand of the child to be himself and the moral suasion of the culture, the parent would merely be permissive in respect to the cultural taboos. Actually, this frame of reference requires a practical compromise between permissive and restrictive policies. The hope for social health lies in the increasing recognition of the unique character of man and the insistence upon the institutional recognition of this character in practical policies. This is the challenge of Chisholm's thesis. It is psychology's challenge.

In studying Chisholm's two important points—the restrictive social impact on the child through parents and the child's potential rational development—attention is drawn to family-community relationships, for the family cannot be considered in isolation from the culture in which it lives. Its members reflect the cultural mores. The outgoing members bring home the rules and regulations of the culture, particularly their personal responses to the institutions with which they are associated. That is why the vocational adjustment of the adult is, by and large, all-important in determining the atmosphere of the domestic scene. Unsound vocational adjustment results in inter-familial hostilities, rivalries, rejections, prejudices, and the like. A man who feels imposed upon in his work-world may come home and relieve his feelings of inferiority by dominating the family situation. This in turn creates other hostilities in a never ending procession. In the same way, the school adjustment of the child is of importance in the family picture as a whole. If the child is unhappy, this reflects itself in the home and its concern for him. Conversely, if the family considers him to be a failure—absolutely, or in relation to siblings—this reflects itself in his school pattern. Sound vocational or school adjustment implies that the unique character of man is recognized in institutional life beyond the family; he has an opportunity to satisfy his psychological need as an individual. In industrialized societies the reference i

particularly important in regard to industry and is applicable also to school, church, and government.

For the infant, the community and the family are one. The earliest family function is that of providing a base for taking care of the infant's biological needs. Once biological security has been experienced, it can safely be threatened. The individual's world then becomes the world of learning. This learning can in itself be reassuring in that it adds freedom of action and takes place in a social setting without competition or social threat. Social threat is always restrictive in influence for it creates rigidities, aggressions, and withdrawals and limits the freedom of development. In contrast, learning that is socially grounded lends itself to further exploration, practice, and development of range of skill. Learning as such is, therefore, not nearly so important to security as the quality of the learning situation. Security is not static; it is the habit of continuous learning without the by-product of rigidities. In this sense it is the habit of not forming habits.

At the preschool age, when the experience of the child spreads beyond the family scene, the home's primary function is that of a security base, where people and things are familiar and known. Preschool learning situations, if properly constituted, are social, even though they may include many phases of biological habit-training. It is of vital importance for the child's security that family and community standards do not conflict. Learning that takes place in preschool life should have an opportunity to contribute to positive social life within the family and should not be in conflict with it.

The same is true at school age. Here the conflict between family and community is likely to be of a more complex nature, involving ideas and standards, prejudices, religious ideologies, and the like. The home as the base of psychological security needs to become increasingly a base of active participation also. It will continue to be both as long as it develops to the point where no serious conflict in ideologies has arisen.

The child who is required to swear allegiance to the flag in school but who is refused parental sanction for doing so is placed in an unwarranted position, one not of his own making and beyond his own control. Where the ideas, attitudes, prejudices, and experiences in the community differ from those of the family, the home must function as a place where conflicting ideas may be rationally discussed. While there need not be conformity or uniformity, at least there must be respect for divergent opinions and a rational acceptance of the social fact of various points of view. The conception of absolute, right-or-wrong moralities can only result in disastrous and unresolved conflict.

The parental relationship with the school should not be that of introducing a socially competitive note into the constructive social scene, but rather that of partnering the child in his development within a wider social group. This attitude is particularly important at the school age, because school introduces the widest psychological social change in the life span. The home and community furnish a social enterprise in which the school learnings can be demonstrated.

By adolescence and beyond, life is more and more outside the family scene. The original home and the new home established by marriage continue to serve the now highly developed security in social learning, provided that the vocational life is similarly geared.

It cannot be too strongly emphasized that if the home, at any time, is unable to resolve significant conflicts, there will be either a breaking away from the family or a retreat from the community, with resultant rigidities and handicaps to development. On the other hand, if the home maintains itself as a base of participation, even beyond the time when the children have formed homes of their own, the family ties and social learnings continue to be strong and healthy as well as thoroughly and positively dynamic.

This process of going out from the family to the community tends to be very seriously threatened by industry and societal employment generally. In our culture the older generation in the world of affairs tends increasingly to keep the oncoming generation out. This is one of the most dangerous aspects of our culture. It is characteristic of the professions and labor unions, of entrance standards and employment provisions everywhere. It was least evident during wartime when youth was invited to serious adult partnership. But in peacetime it forces a stunting of growth through insisting upon a form of extended adolescent education divorced from wider social partnership. The effects are evident in the mental health records of any modern university. Leaving youth without an opportunity to satisfy its needs for social participation is a major threat to social health. It is the responsibility of the mental sciences to see that our institutions are appropriately geared to avoid this.

The parents' part lies within and beyond the home circle. They must overcome their own rigidities; constantly learn as participants with their children in the home; change their points of view as circumstances and experience demand; and endeavor to understand the dynamic nature of all institutions with which they are concerned, immediately as parents and workers, indirectly as citizens. Parents have increasingly recognized of late their family-community partnership on the pre-school and school age levels. There must be a drastic change in the same direction relative to home and church, and home and the workaday adult community.

It is the task of the mental disciplines to make known everything that has been discovered, to insist upon realistic application of these discoveries—yes, even their hunches and best guesses—in our own social institutions. At the very least we can do a large amount of social sanitation. In wartime we proved we could do a great deal more.

We must not hide from ourselves the fact that we are even now engaged in ideological warfare. Ideologies are ways of social living. It is not so much the hostilities engendered in childhood, as the inappropriateness of our family-community relationships that constitutes our handicap to effective living.

In Society

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How can we make social psychiatry more effective? Our point of departure is the realization that although psychiatry was initiated to take care of sick individuals, at the present time its function has spread far beyond that earlier purpose. Psychiatry has now developed a body of knowledge, many facets of which are presented in the papers of this institute. A review of these different approaches makes it eminently clear that those of us who are interested in any phase of social improvement must work as colleagues with the rest of those engaged in the attack upon this tremendous problem. What we have learned in the last fifty years as psychiatrists working with individuals must now be applied to the group.

The clearest example is in epidemiology where the knowledge of infectious diseases as derived from individual cases has spread laterally through the use of adequate techniques of engineering; the result has been that happier circumstances of living have been created by the elimination of disease at its etiological focal points. It is to be hoped that social problems have reached that same phase of development, now that we have made a good beginning in our understanding of the etiology of neuroses and other social ills. The time seems ripe for an adequate use of the engineering principle in order to spread laterally as well as vertically the vitally important knowledge created by psychiatrists. The present state of the world cries for the objective use of this knowledge even in international relations.

It is amazing today to look back and view the very recent progress in the development of psychiatry. As recently as December, 1941, psychiatrists tried hard to utilize their knowl-

edge effectively in planning the treatment of psychiatric problems which they knew would be created by the war. But they met great resistance and misunderstanding. The aftermath of the problems created by the war is appalling. Sixty per cent of the veterans in hospitals have an NP diagnosis; 60 per cent of the veterans who are on the pension rolls have an NP diagnosis. It is almost inconceivable now, as we see the excellent psychiatric program which the present Veterans Administration has inaugurated, to think that a few years ago it was impossible to get most Army doctors in positions of leadership to prepare themselves for the psychiatric problems that were to come. Out of this rapid development, of course, comes a great feeling of optimism, accompanied by a feeling of duty to develop this opportunity to its maximum fulfillment.

This shift in orientation toward psychiatric awareness has occurred since the war's end. It expresses itself in a variety of ways. I will mention only a few. The first, of course, is the excellently conceived psychiatric program of the Veterans Administration developed under Generals Bradley and Hawley and Dr. Daniel Blain. These men inaugurated this program and based it upon forward-reaching and farsighted principles which utilized the best modern psychiatric knowledge.

Another milestone of progress is the attitude of the medical schools. Immediately before the war as a Director of the American Board of Psychiatry and Neurology, I saw how impossible it was to get the schools to conceive of an adequate undergraduate or postgraduate training program in psychiatry. Today the deans and important officers of medical schools seem ready and willing to accept as part of the basic science of medicine a teaching program based on sound modern psychiatric concepts.

Last spring a pilot course of teaching psychiatry to general practitioners was set up at the University of Minnesota. A great lesson was learned from that experience: namely, that

even the practitioner of medicine in the rural areas is hungry for sound psychiatric knowledge as it relates to his needs. He is ready to accept such knowledge when you offer it to him. Demands are made from so many other quarters for psychiatric knowledge—from industry, education, marriage counseling services, and the law. By the last I do not mean the old type of alienists' testimony in courts, but sound advisory help for the judge in the courtroom so that a wise disposition of a social problem rather than plain punishment can be given. These are only a few of the evidences of a changing attitude toward these problems.

Another development of the war has been the full use of the psychiatric team, consisting of the psychiatrist as chief, the less well trained psychiatrist as assistant, the psychiatrist social worker, and the clinical psychologist. These workers have combined to utilize their respective professional functions cooperatively. The organization of such teams can bring help in a widespread and effective way to people with social and psychiatric needs.

Let us consider for the moment how we can utilize our psychiatric knowledge more fully and spread it in a lateral direction so as to make it more effective. One clear-cut practical example of the use of psychiatric understanding was presented by General Chisholm a year ago last fall. The lecture was later published under the title "The Reestablishment of Peacetime Society." In this article General Chisholm says in part: ". . . we are the kind of people who fight wars every fifteen or twenty years. We always have, for as far back as we know anything of the race, and if we go on being the same kind of people it is to be supposed that we will continue to fight each other."

He goes on to say: "Can we identify the reasons why we fight wars or even enough of them to perceive a pattern? Many of them are easy to list. There are prejudices, isolationism, the inability emotionally and critically to believe unreasonable

things, excessive desire for material power, excessive fear of others, belief in a destiny to control others, vengeance, ability to avoid seeing and facing unpleasant facts and taking appropriate action."¹ In other words, here we see mass expressions of infantile attitudes which in individuals we know to be the basis of neurotic behavior and neurotic symptoms.

General Chisholm states that in dealing with these problems, "the responsibility for charting the necessary changes in human behavior rests clearly on the sciences working in that field. Psychologists, psychiatrists, sociologists, economists, and politicians must face this responsibility. It cannot be avoided." Going further, he advances the reasons for such widespread manifestations of mass neurotic reactions: "So far in the history of the world there have never been enough mature people in the right places."²

For the moment we might consider the question: What is maturity? Can we not say briefly that it is the ability to live constructively and freely, unhampered by excessive and inappropriate infantile fears and guilts; to live with emotional and intellectual freedom; to choose intelligently the course of action which is best in the long run for the individual and for the group in which he lives. It is the function of psychiatry and those of us engaged in all aspects of social endeavor to aid people to become emotionally mature and to find these goals of better living. Then we can create more perfect social structures, mores, and cultures.

What is holding us back? What has been holding humanity back so long? What prevents us now from reaching out and using what we know and accept as the basic facts of our science of psychiatry? Why have we, as doctors, failed to use our knowledge to help children grow to maturity? It is well to know some of the forces which have kept psychological medicine from rising to meet this obligation as squarely as it should. The first factor causing this delay is that psychiatry has only

very recently been accepted by medicine as part of the family group, worthy of sitting at the family table.

Dr. Mekeel has suggested that man is loath to be honest with himself regarding that part of himself which he calls his soul or spiritual life and to accept the fact that it is subject to illness. He needs to feel that his inner immortal self is perfect and does not acquire defects as does his mortal soma. Dr. Mekeel said that when man has a neurosis or a psychosis, he experiences a narcissistic blow in accepting the fact, doing so with great reluctance and difficulty. There is no doubt that this is one important reason for the residual unwillingness within the family of medicine to accept these facts and these problems as part of clinical medicine. This is indeed a misfortune; clinical medicine should have the basic responsibility for psychiatric problems although practically all the contributions made in this field have come solely from clinical psychiatry. Until psychiatry is completely accepted by medicine, its contribution will be greatly limited.

How does medicine rationalize its evasion of this great responsibility? The chief rationalization is reflected in the attitude that psychiatry is unscientific. With that point of view as a background, let us consider the nature of the data with which the psychiatrist deals. By and large, all of that material is material of a subjective nature, something which is presented to him as the experience of another person and reported to him as experiential matter. Studies of pure objectivity, such as Gesell's, are pretty nearly impossible with adult people, particularly so when one's interest is in the levels of deep, inner, unconscious motivation, the important cornerstone of a better understanding of social psychology. What is the special nature of this subjective material for which the psychiatrist has such deep concern? His first concern is with the nature of inner stimuli, impulses arising from within man himself, or with his inner instinctual life—if you choose to call it that. His second

and very great concern is with the nature of the distortions which these inner stimuli undergo as they are translated from inner impulses to external behavior patterns and activities. The character and nature of the change which these inner stimuli undergo before they reach their ultimate expression is a measure of the personality of the individual and the status of his emotional health. The study of these phenomena is concerned clearly with man's total behavior and not simply with that part of him which can be diagnosed as psychopathically ill. These phenomena should become the concern of the whole field of medicine and the social sciences as well.

Let us consider briefly what has been done in other fields of medicine toward understanding the distortion which original stimuli undergo before responsive behavior is achieved. A fine piece of research is being done by the Dartmouth Eye Institute at Hanover, New Hampshire, under the direction of Adelbert Ames, Jr. This project is set up to study ocular perception by taking pure ocular stimuli which are presented to the retina. The scientists seek to understand the various distortions which these incoming ocular stimuli undergo as they change from perceptions to apperceptions or the ultimate concept of what is being seen. It can be proven that these stimuli undergo tremendous distortions before the frontal lobes finally elaborate their meaning and the apperceptive idea is developed into its final form. The characteristics of these distortions follow certain fundamental laws which can be defined quite satisfactorily according to the standards presented by LeCorbeiller. If this principle of distortion is true in regard to ocular stimulation, it can also be readily demonstrated as occurring similarly with inner emotional stimulation or the stimulation of instinctual urges arising from within. Before these urges finally are presented to consciousness and are ready for actual experiencing in the living world, they have undergone great distortions which require the special techniques of psychiatry and psychoanalysis for clarification and understanding.

This then is the important area of psychiatric study—the nature and the character of the distortions which these inner instinctual stimulations undergo before they are finally translated into action in the outside world, action which may make for health or may mean illness. These elements—vague, hidden, and distorted—are just as important a scientific problem as any of the other scientific investigations in which scientists are engaged.

As illustrations of this point I have a few rather interesting stories of natural events which occur in the lives of little children as they express themselves spontaneously. One is about my own boy when he was age five. At that time we were in Vienna and during the summer were living in a little suburb, Baden-bei-Wien. Each day Johnnie and I would go down to the baths for a swim together. Johnnie had a boat which he had brought from Berlin and of which he was very proud. It was driven by a couple of clock motors which when wound up would propel it round and round in the pool. He had played with it for a number of weeks in the little pool in the villa where we were living when he decided that he wanted to make it go in the big pool down at the baths.

I said, "Johnnie, I don't think that is wise. You may lose it. There are a lot of older kids down there and they will steal it."

He thought it over. "I still want to do it."

He was a pretty reasonable youngster who did not want his way too often. I said, "All right, Johnnie. If you want to do it, OK!"

He took it down there with him and I left to go over to the big pool. I came back in an hour and we started walking across the sand. Suddenly it occurred to me that he was empty-handed.

"Johnnie, the boat?" I asked.

Down came his chin into his chest. "Oh!" was his only comment.

We turned back and looked for the boat, but could not find

it. Finally we started back across the sand. Halfway across Johnnie said, "Have you got a towel for me, Daddy?"

"I have the big bath blanket."

"I want my own towel." He started to cry.

"Well, you can have the big one. That will be yours because I am all dry."

He said, "No, I want my own towel. I want a little one."

I said, "I am awfully sorry. We will bring one down tomorrow. We can't get one today."

We walked on and went into the bath house. When we got inside I said, "Here you are, Johnnie," and threw the towel to him. He handed over one end to me. "Here is your end, Dad."

"What's wrong, Johnnie? Why all the fuss?"

He said, "I lost that boat. I didn't like to think about it, but I still felt bad and if I felt bad about the towel it didn't hurt so much."

This is an example of a distortion which psychiatry calls displacement, displacement of emotion or affect from a painful object to a neutral object. It is utilized, as Johnnie noted, as an attempt to spare ourselves pain. At this time in history an understanding of such phenomena is equally as important as understanding sodium chloride as NaCl—perhaps more important.

Another illustration comes from the child of one of my colleagues. My colleague likes to make things and he can make about everything. One day his little boy, who was about four at the time, had been pushed around a little bit by a lad that he probably could have beaten up. However, he did not do it. He held aggression well in bounds and was kindly and understanding. He explained this to his father in these terms: "I know that his mother is sick and he is not very happy. I feel sort of sorry for him."

The father was so touched that he wanted to do something for his son, so he made a hunting knife, including the blade and handle and gave it to the little fellow. The little fellow

was very proud of this knife, and the first day he talked about how some day maybe they could go hunting or fishing and he could wear it.

Two days later, however, he changed his mind. He said to his father, "Daddy, you and I have got to make a shield to go with my knife."

What he was really saying was: "I want to have something to protect me from the aggression of others." He did not need protection until he got the hunting knife, a possession which after a few days became a weapon which stimulated aggressive fantasies in him. Now he is saying, as fantasies arise from the ownership of this weapon of aggression, "I need something to protect myself against the aggression of somebody; somebody may want to do something to me, and I have to be ready for them." This is what psychiatry defines as projection.

From real life we have two illustrations—an illustration of displacement and an illustration of projection. Displacement and projection are psychological mechanisms which are of the utmost importance in our generation. Perhaps there would have been no attack upon the Jews in Germany and no rape of the smaller countries around Germany, with the subsequent World War II, had it not been for the projection and displacement which arose because of the racial, political, and economic inferiorities which Germany experienced and felt after the first war. Overt aggression was Germany's way of solving her feelings of helplessness and frustration and these rationalizations justified the acts; at least they did so in the minds of the Germans.

If this thesis is correct, then certainly we all can agree that such phenomena are as worthy of study as is the metallurgy of steel. We need to know all we can about reactions that can cause destruction such as we knew during the last war. The importance of understanding how such mechanisms prevent nations from living up to international standards of humanity and decency cannot be overstressed. Through comprehension

of the true meaning of these reactions, we may be enabled to take adequate measures toward the early solution of the problems they create. As such understanding becomes better developed and accepted, it is our hope that it will serve to activate preventive functions that will prove adequate against holocausts such as we have just experienced.

Let us return now to LeCorbeiller's article on science. Can we not agree with the author that we cannot delude ourselves into thinking that such things as man's emotional reactions are unworthy of study because we cannot put them in the test tube and examine them? The day for such thinking is gone. The atomic bomb gives us no leisure for indulging in such reasoning. The inner sources of human motivation must be better understood, and we must spread that knowledge as broadly and as effectively as we possibly can.

It is, therefore, the responsibility of clinical medicine to stand in the vanguard of this particular development; it is within the clinical situations of clinical psychiatry that our greatest knowledge of these matters has developed. True, such knowledge has been taken over by psychology and psychiatric social work, clinical anthropology, and other sciences, and amply used in the development of each special professional body of knowledge. But it originated in, and its major development has continued within, the field of clinical medicine and medical psychology. The latter discipline has given this knowledge its specific components and has been most responsible for its broad development.

Perhaps those who evidence an excessively rigid attitude toward the requirements of science have developed that attitude in an attempt to make these standards serve as a protection. They unconsciously react to their own fear of inner processes and in so doing exclude psychiatry from its legitimate place in the family of medicine. Perhaps they are merely doing what Dr. Mekeel mentioned in his paper—reacting to the third group of man's narcissistic blows. But whatever the rea-

son may be, it is now high time for the thoughtful man to evaluate the deeper significance and meaning of the problems which psychiatry attacks and to align himself behind those whom LeCorbeiller speaks of as worthy and ethical investigators engaged in truly worthwhile endeavors.

In closing, I bring one more thought, and this again comes from General Chisholm. In his work cited above, he speaks of the importance of moving away from the status quo at certain times and of the courage it takes to do so: "Let us be our own authority. We know far more than any of our ancestors. Scientists of this generation have no obligation to admit superiority of knowledge or of wisdom in any body of traditional belief or authority. There is no room for authoritarian dogma in the field of human relations. Let us discard the bromides which have kept us drugged, obedient to old people and afraid of their displeasure. Let us accept our own responsibility to remodel the world in bolder, clearer, but more honest lines. Let us stop prostituting man's noblest developments intellectually to the service of guilt and fear and shame. In other words, let those of us who are engaged in the activities of the social sciences bravely face the total implications of man's motivation and behavior. This seems to be the most promising road to a better world."^a

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**VII. SOCIAL MEDICINE:
THE APPEAL OF THE COMMON MAN**

The Appeal of the Common Man

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In the historic approach to medicine in the changing order the emergence of the social unit is seen to have synchronized with a number of profound alterations in ways of living and in social attitude. Among those of importance are industrial expansion, poverty, the rise of big business and big government, the arrival of social service, and the development of voluntary health insurance plans.

Admitting all this, there are two even more basic elements in this concentration upon the individual which is the fundamental feature of the changing order. The first is the recognition of the fact that the citizen himself, and not his goods and chattels or the want of them, constitutes the real wealth, or poverty, of a nation. Thinking men have told us this again and again, but we did not listen until dire national peril was upon us. During the recent war we, in the United Kingdom, passed our men and women through a finer comb than we had ever done before, and now, in the post war era, manpower is the commodity we find in shortest supply.

The second basic element leading to the emergence of the individual is his own spiritual evolution. That the evolution of personality proceeds along lines which tend to help humanity forward is generally accepted. One of your greatest thinkers has traced the sequence. At first, "we do not eat for the good of living but because the meat is savoury and the appetite is keen." All the time Nature is preserving the individual. "The lover seeks in marriage his private felicity"; but "Nature hides in his happiness her own end, the perpetuity of the race." All this time "the craft with which the world is made runs also into the mind and character of men. The world is mind precipi-

tated. . . . At last comes the era of reflection, when we not only observe but take pains to observe . . . when we keep the mind's eye open whilst we converse, whilst we read, whilst we act, intent to learn the secret law of some class of facts."¹

And so it transpires that even if there is no new era, there has opened up for the statesman, the sociologist, and the physician, a new field for their inquiry and for their action, a field that is common ground. The equally old cliché that the health of its citizens is a nation's greatest asset assumes the economic value of the individual, as does Virchow's oft-quoted dictum that "Medicine is a Social Science and politics is nothing else than Medicine on a large scale."² Virchow followed this by pointing out that the doctor's task was an educational one; he must fight the battle of Humanism.

It is considerations of this kind that doubtless call for your survey of present medical care in this country and your recommendations for future action, as like considerations led to the National Health Act which has so recently been passed by Parliament in the United Kingdom. Taking the final chapter of the Academy committee's report, "The Method and the Goal," as a guide, two things are proposed: first, a comparison of the committee's conclusions with those which we in Great Britain have reached, and second, some personal views as to what are the fundamentals underlying any changes that promise an advance toward the objective we all have in view.³

There is surely consensus, as the committee suggests, concerning certain basic desiderata. Medical services should provide everything that science can offer toward the preservation of health and the cure of disease; the whole corpus of knowledge, as it is termed, must be implemented in the citizen's interest. Then these benefits should be available to the entire population. No single plan can be applicable to all parts of the country, and we must therefore encourage experimentation in conformity with local conditions. Moreover, seeing that the

general public has a vital interest in our plans, it should be adequately represented in their formation.

But, inasmuch as it is the physicians who must render the medical care, they should play the dominant role in the preparation of the scheme they will be called upon to carry out. What would we think of a designer of an airplane who proceeded to the point of manufacture and then—and only then—asked the pilot to take the machine into the air? But this is actually what has been happening in Great Britain, where an act of Parliament of an extremely comprehensive kind has been put on the Statute Book without discussions with the medical men and women who must implement the act. Such meetings as did take place between the Minister of Health and representative groups of the profession were spent in the former's announcing an *ipse dixit* and giving the latter no chance to reply.

The committee concludes the desiderata by expressing the belief that gradual extension and improvement of medical care is preferable to revolutionary changes and that, while recognizing government responsibility for the citizen's health, sweeping legislative action would defeat its own purpose by impairing the spirit and quality of a service which is essentially individual and personal.

This final and conclusive estimate of the position marches with the view we physicians have taken in the United Kingdom vis-à-vis the Socialist intention to nationalize our medical health services and make the doctor a civil servant. We had hoped that it would be through the more natural process of evolution, rather than through the method of revolution that is now being adopted, that the government would help us to attain our objectives. We believe that we could have set up health centers without sacrificing the doctor's liberty, and we could have brought together in a comprehensive whole the industrial medical services of the various government depart-

ments. Of course we realize that this less dramatic method of advance is not adapted to our present government's temperament, but we do know from experience that such an advance is eminently suited to the progress of medicine and to its application in terms of the citizen's health and happiness. You cannot stereotype medicine without a great deal of sacrifice. It is very easy to level down; it is very difficult to level up. If I were asked to state in brief terms what is the nature of the anxiety facing our profession today in Britain, I would say that it lies in a realization of the tremendous centralization of power, which, in its present form, the new health act invests in the Minister of Health. Many years ago the elder Pitt said: "Unlimited power is apt to corrupt the minds of those who possess it." A more familiar quotation is that of Acton, who said that "All power tends to corrupt and absolute power corrupts absolutely." I feel that the ideal to be aimed at in framing a medical service policy for the nation is a maximum of central direction and a minimum of central control.

When your committee comes to consider the conditions necessary to bring about the desiderata I have enumerated, it states certain paramount criteria: the quality of medical care must be preserved; provision of public health services is essential; there must be effective use of hospitals with adequate facilities; trained professional and non-professional personnel is a *sine qua non*; optimal results require organization and co-ordination of physicians through the extension of medical groups and health centers; voluntary prepayment plans are needed; extensive education for both physicians and the public is required; the local needs of the community must be allowed for; and finally, government help, preferably by grants in aid, will be necessary. It is of interest to note that the committee considers government participation by means of a general method of grants in aid to be the brightest promise, so far as help by a central authority is concerned. So much for the

ideas we have in common and so much for our common purpose.

I believe it is as true of you, as it is of us, that the practical expressions of unplanned energies are often cumbersome and wasteful. This is the price we pay for highly individualized societies. We began doing things many years ago; we did some of them so well that it has never been considered helpful to scrap them. There are parts of the machinery of our health services which work perfectly; some units stand out as pieces of perfect organization and efficiency: the large teaching hospital, the well run cottage hospital, some of our public health services, our Medical Research Council, and your equivalents of these. It is when we come to consider the machine as a whole that both organization and efficiency are found to be unsatisfactory.

But we cannot scrap our health services and start from scratch unless "bloody revolution" gives us an opportunity to do so, which in our countries is very unlikely. Starting from scratch would entail chaos and enormous expense. In Russia such a chance has been taken. Soviet health services, the physician included, have been worked out with great thoroughness on a communal plan. This plan eliminates the notion of the family unit, to which we attach great importance; it disallows a free choice of doctor for the citizen; and it makes continuity of care impossible.

How can we tighten up our health services so that there is less slack? Whose job is it? Probably everyone's. Into this effort to clarify, simplify, integrate, and reorient come the common man, the sociologist, the economist, the statesman, the borough municipal councilor, the researcher, the medical officer of health, the family doctor. But how can the efforts of all these be coordinated? Do we need a small group of knowledgeable and wise individuals, with a roving commission, carrying so much personal prestige that their influence in sur-

veying, advising, and adjusting would almost amount to power to act? Could we in some such way as this encourage a more extensive trial of regionalized coordination? This seems worth considering. Regional coordination of the work of hospitals is a principle almost, if not quite, conceded; a regional system of contributory and allied schemes for hospital maintenance is growing rapidly in favor; to extend the principle to the personnel should not be impracticable, given tact and good will.

For us physicians the stage is clearly set. The citizen is untutored, but he is amenable; he is more health conscious today than he has ever been. He is more aware of the value of health; he is more willing to be taught how to be healthy, since he realizes that both in the physical and in the mental spheres the highest values for which he ultimately strives are attained along that road.

Although we have not been blind in the past to the sociological aspects of medicine, we have as yet done very little about it. The recognition of that omission has influenced our statesmen to do something about it. Looking at our health services in a more objective way than the physician can possibly do, they take note of the big gap that he is doing so little to fill. Then war, the great accelerator, has taken a hand by stressing the importance of intelligence, agility, endurance, and strength, and by giving the term positive health a more exact meaning. In short, "Social Medicine . . . signalises . . . the birth of a new outlook on human affairs, a new interpretation of human relations in a free society and a new scale of social values."⁴

A pundit of the so-called natural sciences considered the best in medicine a mere by-product of science, and it has been contended that medicine does not really possess a scientific basis. This lofty and remote position is not a new phase in history. Wordsworth wrote *The Excursion* in 1814. The tendency of science to isolate itself from human interests was evidently apparent even then. Anticipating the time when "sense is made subservient to moral purposes," the poet says:

Science then
Shall be a precious visitant; and then,
And only then, be worthy of her name:
For then her heart shall kindle; her dull eye,
Dull and inanimate, no more shall hang
Chained to the object in brute slavery;
But taught with patient interest to watch
The processes of things, and serve the cause
Of order and distinctness, not for this
Shall it forget that its most noble use,
Its most illustrious province, must be found
In furnishing clear guidance, a support
Not treacherous, to the mind's *excursive* power.

This rebuke was gentle, as befitted its author. The scientist's position has been much more rudely assailed as a result of the war. The Nazis prostituted science, already accustomed to being "chained to its object in brute slavery," to the solution of ad hoc jobs, keeping the scientists in the dark as to what the jobs were all about. It may even be the fact of taking the scientists into our confidence that enabled our own leaders here and in Canada and in the United Kingdom to win the race by applying atomic energy to making war.

The subject of science in relation to social welfare is one of great interest, but I must not stay to pursue it. However the names of Harvey, Jenner, Hunter, and Pasteur serve to remind us that, in medicine at all events, science and humanism have not been divorced in the past. Despite the scientist's boasted detachment, I believe that science and humanism can and will march hand in hand in the future; for surely science was made for man, not man for science.

To make medicine a complete science in the service of man we must see that it infiltrates this important and now more clearly perceived sphere—as yet largely neglected—of social need. This sphere lies between that in which the diseases of the individual patient are presented and treated by the individual doctor and the sphere in which the preservation of the

public health is achieved by the proved methods of the state health officer. This largely untilled field includes all the environmental factors which influence the citizen's health and happiness—his conditions of work, his house and home life, his sense of security or insecurity, and his ignorance of the things that make for the salvation of his body and his mind. In short, as Professor Ryle has stated: "Our next advance [in medicine] will be . . . concerned with causes, but with the ultimate, rather than with the intimate, causes of disease."⁵

As things are at present I do not feel at all hopeful that the physician is capable of dealing with this aspect of medicine, I believe his incapacity to be due to two things—his lack of training for the particular job and his lack of time in which to do it.

The student's premedical education is lopsided. Almost from the moment a boy or girl decides to be a doctor, the confines of his or her interest tend to become more and more narrow. Medicine, which should have the widest contacts of any profession, almost ceases to be a liberal education, for its cultural outlook dwindles from this moment.

In a memorandum on medical education under the section on premedical studies, the British Medical Students' Association says: "Many sociological problems have a bearing on the health of the patient, e.g., unemployment, hygiene. At present only the purely medical aspects of these problems are touched on by the medical student. We feel, however, that a purely medical approach, because of the very nature of these problems, will tend to be incomplete. It is only by seeing such cases as a part of the social phenomenon, in addition to seeing them as individual patients, that a full view can be obtained. . . . We . . . recommend that Sociology should be included as a subject in the official syllabus. However, in this subject, we would stress even more than in others the need there would be for frequent revision of the detailed requirements of the syllabus as the subject is one that is of necessity rapidly developing."⁶ This is a modest beginning, but it is a beginning. In

effect the association considers that our technology has outrun our sociology, a conclusion to which I heartily subscribe.

If you should remind me that the premedical part of the curriculum is already over-full, I should reply that there are many things which might safely be omitted. For several years I have pleaded for a closer approximation of the subjects taught in the premedical part of the curriculum to the actual practice of medicine. Much time might be saved if this were done. I am ashamed to admit that at the time I qualified I had not become really familiar—as surely one should—with the optic disc, with the drum of the ear, or with the vocal cords. Yet I could reel off the theories of color vision; I could give a description in minute histological terms of the organ of Corti; and I could recite all the ramifications of the vagus nerve. That, of course, was a long time ago. But if I may judge by observation today, I should conclude that things have not greatly changed. It is clear to me that room could easily be made for the most essential part of the modern doctor's education.

During the clinical period of his training, the medical student should be made familiar with the application of medicine to groups as well as to individuals. He should become acquainted with the principles (at least) of industrial medicine, of rehabilitation, of family planning and the practice of contraception, of nutrition, of the hygiene of the artisan's home, of environmental factors in the etiology of disease, and of the cause and the prevention of the anxieties of life. I assume that neonatal and maternal welfare and the needs of the school child are already dealt with by the teachers of public health.

No doubt the personnel properly fitted to lecture to the student on these sociological matters is at present very inadequate. There are at the moment only two chairs in social medicine in Great Britain; there should be at least a dozen. This insufficiency will not be remedied until the importance of the matter is recognized by those who have the statutory power in the ar-

rangement of the student's training. Some eight years ago I said: "If it be advanced that the doctor's training has not, up to now, fitted him for work of this sort, then the sooner it does so fit him the better. Inevitably the doctor's work in the future will be more and more educational and less and less curative. More and more will he deal with the physiology and psychology of his patient, less and less with his pathology. He will spend his time keeping the fit fit rather than trying to make the unfit fit. And we must make it worth his while to do this work. This reorientation of his education and of his work is overdue, and it will remain overdue until reorientation occurs in the attitude of the health authorities toward him and toward his sphere of usefulness."⁷

The doctor is in the very midst of all that is happening to the various groups within the social fabric. He sees the people's needs and his natural inclination is to help; if this were not so, it is unlikely that he would have chosen medicine as his vocation. But time is essential, and he just doesn't have it. He doesn't have it because he is generally grossly overworked and his day is badly organized. When the statesman seeks to free the doctor from trivialities and time wastage so that the doctor may be able to pull his weight in the field of social medicine, he deserves all our sympathy and all our help. But there are many of us in Britain who think that this freedom should not be secured by nationalizing medicine. We consider that such a policy would lose to medicine two of its most virile characteristics—individual initiative and the spirit of adventure.

How, then, are we to free the doctor from his incessant grind and hurry? I think the health center is the answer. The health center could do much to organize a doctor's work; it could also save him from the sterilizing effects of isolation. Moreover, it could be a place where the social aspects of medicine might be studied.

The boundaries of the state health officer's job are better defined than are those of the physician, and he has the power

of the state behind him. For these two reasons his results are quicker and more easily seen. The physician is up against the lag inherent in the individual; progress in his field is therefore slower and less apparent. True, when the state imposes compulsion on the individual citizen, progress, even in the doctor's sphere, seems to be more rapid. But the sacrifice of personal freedom which compulsion entails is too big a price to pay even for physical hygiene. Anyway that is the view we in Great Britain have taken of this matter up till now. I hope we shall continue to take this view. And be it observed that control is very frequently an insidious form of compulsion and must be watched closely on this account. You may remember a passage in one of Herbert Spencer's speeches made in this city fifty years ago. Reminding his hosts of Lincoln's dictum that "the price of freedom is eternal vigilance," he added the warning, "but it is far less against foreign aggressions upon national liberty that this vigilance is required, than against the insidious growth of domestic interferences with personal liberty."⁸

"But," say some, "look how successful control was during the war." True, but war and other temporary disasters are "the only exceptions to the rule that a free society must not be subjected to a single purpose." The reason for subjection during the war is that at such times "subordination of almost everything to the immediate and pressing need is the price at which we preserve our freedom in the long run. . . . It is sensible temporarily to sacrifice freedom in order to make it secure in the future; but the same cannot be said for a system proposed as a permanent arrangement."⁹ In effect, even totalitarianism is justified at times of national crisis. But the defects of totalitarianism lie in two directions—its inhumanity and its tyranny, its drastic curtailment of liberty in thought and action. What we must bear in mind is that owing to the imperfections of human knowledge and the enormous and ill understood potentialities of human character, it is not as yet possible to approximate such an ideal as "totalitarianism attempts, without

very great sacrifice of all sorts of cultural possibilities. Men are not yet sufficiently agreed as to what *is* the good life, politically or individually, to permit of a completely harmonious coordination of activities toward an end that appears reasonable and acceptable to all. A certain amount of conflict is essential to progress, though of course this conflict must not amount to anarchy." (Flugel.)

It has been remarked in defense of the totalitarian outlook that the Greeks lacked the humanistic approach. In our modern sense of the word this is true, for not only did the underdog get no consideration, his very existence was scarcely recognized. But the importance of the individual in the composition of the state was recognized by the Greeks. As Aristotle said, "The State exists for the exercise of the qualities which make men good husbands, fathers, and heads of households, good soldiers and citizens, good men of science and philosophers. When the State, by its education and laws, written and unwritten, succeeds in evoking and maintaining in vigorous activity a life rich in noble aims and deeds, then and not till then has it fully attained the end for which it exists. The ideal State is that which adds to material advantage the noblest gifts of intellect and character, and the will to live for their exercise in every relation of life, and whose education, institutions, and laws are such as to develop these gifts and call them into full play."

Meanwhile, as is typical of both your country and mine, we do not wait for authority; we initiate and we plan and we work out our own salvation. But the pity of it is that the physician is so little with us in these efforts. He should be leading us, whereas in actual fact it is difficult to recruit him for the councils, still less for the executives, of the various voluntary organizations that attempt something in the sphere of social medicine. The members of the state medical services plead that they are not free agents and the general practitioners plead their already overcrowded life. When I consider a few of the

social movements (as they are hopefully called) in which I, personally, am interested—eugenics, family relations, marriage guidance, Peckham Health Centre, food education, noise abatement, national parks, cremation—I remember how few of my colleagues I meet in the committee rooms of these groups. A few of us plough lonely furrows in these fields and because we are alone we are prone to be somewhat conspicuous; we are even at times suspect on the score of "oblique or indirect advertisement." Our representative medical bodies are nearly as detached from things like these as are the individual members of the profession. They are busy with their domestic politics, with academic matters, and with examining candidates for their diplomas.

It is much the same with other intimate and pragmatic matters which touch the common health. Some of us have very recently been fighting the battle for bread, pleading that there should be a specification of the national loaf with respect to certain token nutrients. The backing by physicians was scanty. There was, and still is, an effort to clean up the milk situation. The contribution made by doctors in my country to get compulsory pasteurization for all pooled milk has been meager. It was not until recently that a representative meeting of the British Medical Association, at the end of a lengthy session during which the subjects of discussion were medical politics, passed a resolution dealing with the subject. A third matter which is of great importance to the public is quack medicines. We were only recently able to establish the principle of disclosure with respect to these medicines, but no more than that; the intimidating character of the advertisement still goes on unchecked. Concerted opinion expressed by the doctors would force action in the public interest.

There are some 54,000 practitioners engaged in medical care in my country. There are nearly three times that number in the United States. The impact which these skilled armies could have upon the public mind is tremendous. I have dealt

with the doctor's influence in society, saying of him that I thought he was the most important citizen the nation possesses. The public takes the same view. The physician owes his power to three things—his training, his humanistic outlook, and his opportunity to effect a close-up with the individual patient.

There is today hardly a field of human endeavor that does not require the physician's advice at some time or other. In the words of Sigerist, "no longer a magician, priest, craftsman, or cleric, he must be more than a mere scientist. Scientist and social worker, prepared to cooperate in teamwork and in close touch with the people he serves, a friend and a leader, he will direct all his efforts toward the prevention of disease and become a therapist when prevention has broken down—the social physician protecting the people and guiding them to a healthier and happier life."¹⁰ The doctor's job has by its nature and traditions always been linked up closely with the special structure of the day; only in quite recent times has the doctor seemed to be aloof from the rapidly changing pattern.

When I use the phrase general social science, I do not mean another plan; I mean, pragmatically, things as they are at this moment in the unbroken stream of human welfare, and of course I have in mind also the probable continued trend of things in the future. I want to see a "closer-up" between the physician and the social services. Is the physician—and when I say physician in this connection, I mean the family physician—going to continue only to cure or relieve disease, or is he going to make contact with this health business that we are finding to be such a vital national asset?

We all pay lip-service to the great importance of preventive medicine. But again and again we say, "That is the state health officer's job," when in reality it is every doctor's job. Inevitably, if the general practitioner does not accept the challenge and is not helped by all of us to accept it, the service of the state health officer will expand while that of the general practitioner contracts. Then the rivalry between private and pub-

lic medicine will be intensified, a situation which all of us would surely deplore.

I want to see the physician make use of the public health services, not only audit them, but show some passionate conviction about them in his patient's interest. For example, it is the doctor's duty to protect the worker against excess fatigue, against dullness, and against the various hazards of his job. In all these matters medicine has accumulated a mass of facts, but they are very largely wasted because they are not put into practice. If I embarked upon the subject of nutrition and the light which our rapidly growing knowledge in regard to it has thrown upon food, I could, of course, give equally striking examples of the need for the physician's direction and execution in that field.* In truth, there is very little in the life of John Citizen, whether he be in a factory, an office, or a public utility service, that does not give the physician scope for the practice of social medicine.

Consider the basic needs of the citizen in terms of: a sufficient amount of the proper food, suitable shelter and clothing, a satisfactory job, access to fresh air and sun, and reasonable leisure and access to the amenities of life. The doctor must stake out his claim in every one of these needs, for his is the knowledge that can guide and his is the enthusiasm that can stimulate to achievement. We physicians must lead; we must guide the politicians since they cannot act effectively without expert help, and we must keep the citizen's end up since he learns to rely upon us for support.

But suppose the politician won't be guided? Suppose it is as Swift wrote in a letter to Pope: "Although I have known many great Ministers ready enough to hear opinions, yet I have hardly seen one that would ever descend to take Advice; and this pedantry ariseth from a maxim which they themselves do not believe at the same time they practice it, that there is something profound in politicks, which men of plain honest sense

* See papers on this subject by Black, Boudreau, Cassels, and Jeans.

cannot arrive to."¹¹ In that case the physician has no alternative but to appeal to public opinion, continuing to serve his patient in the manner which he believes to be in the patient's best interest.

In a lecture by a great clinician, Peter Mere Latham, the history of the soul of the good doctor is sketched in the following terms:

Diseases are not abstractions; they are modes of acting, different from the natural and healthy modes—modes of disorganising, modes of suffering, and modes of dying; and there must be a living, moving, sentient body for all this.

This body must be your study and your continual care. Nothing must make you shrink from it. In its weakness and infirmities you must still value it—still stay by it—to mark its hunger and thirst, its sleeping and waking, its heat and its cold.

And is it possible to feel an interest in all this? Ay, indeed it is.

Whence comes this interest? At first perhaps it seldom comes naturally; a mere sense of duty must engender it; and still, for a while, a mere sense of duty must keep it alive. Presently, the quick, curious, restless spirit of science enlivens it; and then the deliberate choice of the mind.

When the interest has reached this point, there arises from it a ready discernment of diseases, and a skill in the use of remedies. And the skill may exalt the interest, and the interest may improve the skill, until, in process of time, experience forms the consummate practitioner.

But does the interest of attending the sick necessarily stop here?

What if humanity shall warm it? Then this interest, this excitement, this intellectual pleasure, is exalted into a principle, and invested with a moral motive, and passes into the heart.¹²

There is in Nathaniel Hawthorne's *Scarlet Letter* a description of the ideal doctor-patient relation which I should like to read to you. Speaking of the doctor, he says:

He deemed it essential, it would seem, to know the man before attempting to do him good. Wherever there is a heart and an intellect, the diseases of the physical frame are tinged with the peculiarities of these. . . . In the patient, thought and imagination were so

active, and sensibility so intense, that the bodily infirmity would be likely to have its groundwork there. So the man of skill—the kind and friendly physician—strove to go deep into his patient's bosom, delving among his principles, prying into his recollections, and probing everything with a cautious touch, like a treasure seeker in a dark cavern. Few secrets can escape an investigator, who has opportunity and licence to undertake such a quest, and skill to follow it up. A man burdened with a secret should specially avoid the intimacy of his physician. If the latter possesses a native sagacity, and a nameless something more—let us call it intuition; if he show no intrusive egotism, nor disagreeable prominent characteristic of his own; if he has the power which must be borne with him, to bring his mind into such affinity with a patient's, that this last shall unawares have spoken what he imagines himself only to have thought; if such revelations be received without tumult, and acknowledged not so often by an uttered sympathy as by silence, an inarticulate breath, and here and there a word to indicate that all is understood; if to these qualifications of a confidant be joined the advantages afforded by his recognized character as a physician—then, at some inevitable moment, will the soul of the sufferer be dissolved, and flow forth in a dark, but transparent stream, bringing all its mysteries into the daylight.

If, finally, I should be asked: "Do you see hope in the future of medicine?" I should reply: "Yes. I see more hope for doctors and for the people who will come under our care. I see more hope in the future of medicine than perhaps in any other single thing in the new world toward which we are striving. We doctors have not yet forfeited the trust of the people for whom we work; we have not yet turned inward in despair, bartering our spirit of adventure for a mere hope of security. We stand for sane knowledge, selflessness, and mercy in a world gone mad. We cannot let those people down who trust our profession. It is in this firm resolve that we shall face the future of medicine."

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Social medicine, rooted in both clinical and preventive medicine and drawing upon the social sciences and on individual and mass psychology, endeavors to integrate all of these, and yet attempts to remain a distinctive discipline.

To define its origins and better to define its objectives, The New York Academy of Medicine sponsored an Institute on Social Medicine. To this Institute were drawn leaders in widely diversified fields, from this country and Europe—historians, physicians, philosophers, public health and nutrition experts, epidemiologists, educators, administrators, psychologists, psychiatrists and sociologists. The result of their deliberations, given in this book, is a first step toward a dynamic concept of social medicine.

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PATIENTS HAVE FAMILIES

By Henry B. Richardson
M.D., F.A.C.P.

To say that patients have families seems as obvious as to say that a diseased organ is a part of the individual, yet it is only recently that most physicians have begun to integrate the concept of the diseased organ with that of the personality of the patient. Too many physicians still have not taken the next step, recognition of the fact that the patient is a member of a group and that his state of health is affected by his family relationships.

This book is based on a study of the families of individuals who found it necessary to seek medical advice. The study was conducted jointly by the Cornell University Medical College, the New York Hospital and its Social Service Department, and the Community Service Society, and was aided by a grant from the Josiah Macy, Jr. Foundation.

1945

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THE PATIENT AS A PERSON

A Study of the Social Aspects of Illness.

By G. Canby Robinson, M.D.

At this time of changing attitudes toward medical care, preventive medicine, and mental hygiene, especial importance attaches to Dr. Robinson's study of a series of unselected patients at the Johns Hopkins Hospital to determine whether all of the factors contributing to their illnesses had been considered. He concluded that, if a sound diagnosis is to be made and effective treatment planned and applied, an understanding of the way in which problems involving the patient as a person bear on a given illness is no less essential than the medical history, physical diagnosis, and all the technical procedures available to the physician.

1939

437 pages

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Knowing your influence with General Maxa⁴² and the Czechs in general, I appeal to you to adopt my plan. It may not now be too late, but a few days' delay will irrevocably change the situation to the disadvantage of the Don and Russia. The departure of the volunteer forces from the Don is certain to lessen our chances to overcome the Bolsheviks. . . .

GENERAL A. ALEXEEV

Alexeev's efforts to secure foreign aid were as unproductive as the appeals for recruits, although the Allies were willing to provide funds. During December the British Government had instructed its agents to offer £20,000,000 to two groups in South Russia, the French had appropriated 100,000,000 rubles for Alexeev, and the Allied Supreme War Council on December 23 had declared it necessary to support "by all means in their power the [Russian] national groups which are resolved to continue the struggle [against Germany]." Less welcome to the anti-Bolshevik groups was the decision of the French and British to divide the Black Sea-Caspian region into "spheres," the French to direct political moves in Rumania and the Ukraine, the British in the Caucasus and Persia, and the two jointly in the Don. All these policies gave little real aid to the anti-Bolshevik groups, since the Allies found it practically impossible to deliver funds in South Russia.⁴³

Faced by superior Red forces moving against Rostov and Novocherkassk, threatened by risings in the rear, and with no hope of support from the Cossacks, the four thousand men of the Volunteer Army abandoned Rostov on February 22 and marched into the Kuban steppes, hoping to unite with other anti-Bolshevik detachments which were defending Ekaterinodar, the Kuban capital.

⁴² Not a general, but Dr. Prokop Maxa, member of the Russian Branch of the Czechoslovak National Council.

⁴³ *U.S. Foreign Relations, 1918, Russia*, II, 591-92, 596-600. The agreement between France and England on activities in Southern Russia is translated from the French original in Louis Fischer, *The Soviets in World Affairs: A History of Relations between the Soviet Union and the Rest of the World*, 2 vols., London, 1930, II, 836.