Personally, I have never seen a case of *rabies* (or so-called hydrophobia), but the symptoms are described as being of two varieties, sometimes a spasm of the inspiratory muscles, as well as of the pharynx and oesophagus, at other times a paralytic inertia of the whole respiratory apparatus, occurring either primarily or following the spasmodic attacks. The patient may die either from respiratory spasm, or from syncope. On the other hand, *hysterical pseudo-hydrophobia* is not uncommon, and I have seen several instances of this in which the patient erroneously thought that he had been bitten by a rabid dog. Here we observe globus hystericus with rapid breathing and various dramatic movements of the trunk and limbs, sometimes accompanied by a loud hysterical laryngeal noise intended to resemble a dog's bark. But there is neither true respiratory spasm nor paralysis, and to the careful observer the diagnosis presents no difficulties.

There are also other nervous diseases in which the respiratory mechanism may be upset. For example, in a major epileptic fit the tonic phase of the fit is often ushered in by a curious laryngeal wail, the so-called epileptic cry, produced by tonic spasm of the expiratory muscles. Throughout the tonic stage of the epileptic fit the respiratory muscles are fixed, respiratory movements cease and the patient becomes increasingly blue and cyanosed. Then, when the clonic stage sets in, the cyanosis passes off, the respiratory muscles take part in the jerking movements and saliva may be jerked from between the lips. I once had the opportunity of doing a laryngoscopy during the clonic stage of an epileptic fit and was able to see the glottis alternately opening and shutting, synchronously with the clonic jerks of the trunk and limbs.

Both in *athetosis* and in *chorea* the irregular involuntary movements may implicate not only the limbs and face but also the respiratory muscles, causing the breathing to be irregular and clumsy, so that the diaphragm and intercostals no longer contract synchronously and the smooth rhythm of respiration is interrupted. In consequence, even the patient's articulation may be jerky. In so-called "paralytic" chorea the superadded factor of muscular feebleness may sometimes be so severe that the patient's voice is reduced to a faint whisper.

The fine muscular tremors of the limbs in *exophthalmic goitre* may sometimes spread to the trunk and to the respiratory muscles. This tremulous respiration, as Minor pointed out, is best marked during a long expiration.

In advanced *paralysis agitans*, if we examine the patient laryngoscopically, we may observe a rhythmic tremor of his vocal cords, synchronous with the tremor of the limbs. This laryngeal tremor usually ceases during phonation, but not always. The patient's voice becomes thin, monotonous, and feeble. His articulation, like his gait, becomes festinant, so that he begins his sentences slowly but tends to hurry towards the ends of sentences or of long words, pronouncing the final syllables hurriedly.

Various respiratory phenomena may be met with in *hysteria*. Of these, hysterical cough is the commonest, but hysterical tachypnoea or rapidity of respiration, hysterical sobbing, also all sorts of curious laryngeal noises, may be met with in different cases. But, whatever their variety, all these hysterical respiratory affections cease spontaneously during sleep. Hysterical cough occurs almost always in bouts or paroxysms, often at the same special time of day, and most frequently when the patient knows herself to be under observation. It may last for hours at a time. Hysterical cough is unaccompanied by true dyspnoea, whilst abnormal physical signs in the respiratory organs are conspicuous by their absence. Hysterical cough often has a peculiar metallic musical sort of noise. Hysterical laughing or sobbing are frequently part of a hysterical paroxysm, whether occurring before, during, or after the hysterical attack. Hysterical tachypnoea is another fairly common manifestation, consisting in paroxysms of extremely rapid breathing (80, 100, or even 150 per minute), but without cyanosis or other respiratory distress. The pulse remains quiet and steady throughout the attack, there are no abnormal physical signs in the chest, and the temperature remains normal throughout. Hysterical aphonia, another common type, is easily recognized, not only by its concurrent phenomena, but by its characteristic laryngoscopic appearances, showing deficiency of adduction of the vocal cords.

Finally, we have the interesting group of *respiratory tics* or *habit-spasms*, which occur in highly strung, often highly intelligent individuals of psychasthenic nervous constitution. Such patients are not necessarily mentally subnormal; on the contrary, some of them are far above the average of intelligence. Respiratory tics are of many varieties. I recall one individual—a distinguished university professor—whose habit-spasm consists in an occasional sudden sniffing inspiration accompanied by wrinkling up of the nose; another individual—a surgeon of world-wide reputation—who makes an occasional sudden inspiratory laryngeal noise from time to time when talking. In another highly strung young man the breathing is interrupted at irregular intervals by paroxysms of short little expiratory puffs at the rate of about two per second, associated with grimacing and with jerky movements of the arms; another individual gives an occasional little nervous cough or grunt, and so on. Then again, one variety of stammering, in which the patient sticks in the middle of a vowel (less common than the type where he sticks over a consonant) is simply a respiratory tic affecting the muscles of the false vocal cords. Examples of tics or habit-spasms of this sort might easily be multiplied, and many of you can recall for yourselves friends or patients who perform peculiar respiratory actions of this sort. A tic or habit-spasm, it should be remembered, is a psychomotor affair of cortical origin, consisting in the frequent explosive repetition of the same motor act. It never interferes with voluntary movements. Sometimes the tic takes place automatically and without the patient's conscious attention; in more severe cases the tic absorbs the patient's attention during its performance, and is accompanied by a feeling of irresistible compulsion. The greater the psychical abnormality the more violent does the tic tend to be.

An Address

ON

SOME OF THE CAUSES OF OUR C3 POPULATION.*

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WE as a profession had a more or less general acquaintance with the existence and growth of that section of the population which has come to be known as C3, but it required a great war, necessitating the passing of a limited age group of the manhood of the nation through the sieve of physical and mental fitness, for it to become general knowledge. The examination of recruits was conducted by medical men who, generally it can be said, had no expert knowledge of mental diseases, and consequently the sieve had a very open mesh as far as mental disability was concerned—sufficiently open to allow the passage through of all except the most obvious cases of mental disease, and the rapidity with which the examinations had to be made, owing to the urgent demands of the situation, caused, in many instances, even men suffering from gross forms of insanity and mental defect to be passed into the service. Early in 1917, owing to the large number of soldiers being certified as insane, there was an outcry that the army was creating lunatics, and calling for special treatment of these men as victims of the war. In reply to this I pointed out that down to the end of 1916, estimating from the statistics then available, 5,000 men had been enrolled in the forces in England, Scotland, and Wales alone who, had the war not taken place, would have been certified as insane and placed under treatment as pauper patients. If this estimate had been corrected up to the end of 1919 the figures would have been approximately 10,000.

In this connexion it is most interesting to note the statement made in the House of Commons by the Minister of Pensions that on December 9th, 1920, over two years

* Delivered at the annual meeting of the Kent Branch, held at the London County Mental Hospital, Bexley.

after fighting ceased, the total number of ex-service men confined in asylums suffering from certifiable insanity due (it is alleged) to war service was 5,634. If to this number be added the numbers of those who were certified but who have in the interim been discharged recovered or relieved, and of those who have died, the 10,000 mentioned above will approximately be reached. In other words, 10,000 potentially insane men were drafted into the service, resulting in a standing cost to the nation, if their maintenance, pensions, pensions to their wives and families (all at the full rate of 100 per cent. disability), and the central staff charges are computed, of upwards of three million pounds a year, as against about half a million, their cost as ordinary patients chargeable to a parish. I look upon these as belonging originally to the category C3, and believe that a very large proportion of them would have been rejected if the sieve had been made of finer mesh by the addition of mental experts to the recruiting boards. All these cases have been a source of anxiety, difficulty, weakness, enormous cost, and trouble to the army authorities, both in the field and also at home. Closely allied to these, and almost inseparable from them, was a very much larger group—the neuro-psychiatric—of cases of war neuroses (commonly known as shell shock), which formed a large proportion of the total number invalided out of the service.

The dictum that man is the product of his heredity *plus* environment is very true, and it depends upon the interaction of these forces what the dominant characters, physical and mental, of the individual will be. Like produces like, but every breeder of stock will say that by judicious selection in mating, suitable housing, proper feeding, and the cultivation of desired characters, he can obtain, after several generations, a breed of animals whose dominant characters are infinitely superior to his original stock; we, unfortunately, in dealing with the human race, can in our time only influence directly one and, in some rare instances, two generations.

Heredity.

Heredity is without doubt one of the great factors in the production of our C3 population, and the trend of modern civilization, by its Poor Law system and by its treatment of the unfit during childhood and early adult life, tends to foster the growth of this class. The care, treatment, and education given to the physically and mentally unfit children in the special schools and homes may reduce materially the degree of unfitness, but if their improvement is such as to enable them to escape incarceration under the Mental Deficiency Act, they are turned out mental, moral, and physical weaklings, to return to an environment which was associated with the development of their unfitness. At the best they are misfits, capable only of the most menial work; they are deficient in the power of initiation, of application, and of control; their moral sense is feeble, and they are easy prey to evil influences. Members of this class are, as a rule, very improvident; they marry or cohabit usually with their like at a relatively early age, and, not being restrained by such problems as how the children are to be housed, fed, clothed, educated, and placed in the world, they produce large families to populate our workhouses and homes for the defectives, fill our prisons, and supply the bulk of the patients to our mental hospitals.

The good work which is being done throughout the country by the pre-natal and child welfare clinics sheds a ray of hope over this aspect of the problem, but to what extent the improved environment in the shape of better food, healthier conditions, and early treatment will counteract the bad heredity, time alone will tell.

Alcohol.

Alcohol is another of the great factors, and is commonly inseparably associated with heredity. A great amount of work has been done by numerous investigators to determine the effects of alcohol upon the growth and activity of animal and vegetable cell life, and these investigations all tend to prove the poisonous effects of even dilute solutions of alcohol upon every form of cell life. It appears to interfere in some way with the power of oxidation, resulting in retarded growth and imperfect development if it does not cause death. It is a protoplasmic poison, and as such it attacks the germ plasma in the prospective parents,

beginning its evil action even before union has taken place. With regard to its effects on the developing ovum, it has been found in the case of hen's eggs hatched in incubators that when alcohol was applied in the form of vapour or injected as a solution, a large percentage of abnormalities, deformities, and monstrosities were present in the chickens hatched out, and further, that the chickens thus obtained showed a lack of normal instincts. Dogs given alcohol with their food are found to give birth to an unusually large proportion of deformed or dead puppies, and those puppies which survived for a time showed retarded development and the same loss of normal instincts observed in the chickens. These observations would lead one to expect that the human foetus does not escape from these poisonous effects during its sojourn in the womb of the drunken mother—in other words, the prospective mother, addicted to drink, poisons her child before it is born. What possible chance can a child have of developing into a normal citizen when born with such a handicap and surrounded from its birth with an environment of neglect, improper feeding, and the mental and moral miasma of a drunkard's home? Of course if the germ plasma had been handed down through several generations of strong, healthy, and virile ancestors, it is possible that its inherent power of resisting adverse influences might enable it, in a measure, to surmount the obstacles in its present environment, but though it may rise above the physical and mental defects which we associate with imbecility, it will not attain a normal maturity. During the past thirty years my work has necessarily brought me in close touch with the C3 element of our population, and I am therefore entitled to speak with some authority as to their physical, mental, and moral attributes, even though I cannot at present bring forward statistics to support my views. I have observed that people with an alcoholic heredity are commonly undersized, frequently weedy or malformed; they have poor resistance to any stress, and their recuperative powers are relatively feeble. Mentally their standard of intelligence is poor; they rarely pass beyond the fourth standard at school; they are not willing students, and they show a poor return quantitatively and qualitatively when they do apply themselves; they are emotionally unstable, are easily swayed by passing influences, and are poorly controlled; their realization of their own deficiencies tends to develop the herd instinct, and their noisy valour in a crowd would appear to be great, but individually they are cowards. Their moral sense is commonly poorly developed, and they easily fall a prey to habits antisocial, which land them into the criminal class, and antisomatic, which will probably call for the intervention of the psychiatrist. I believe that the physical, mental, and moral standards of any community are in inverse ratio to its drink bill, and I am convinced that much as many of the U.S.A. citizens may rail against the interference with the right of the citizen which it entails, their present drink policy, if continued, will place them in a very short time intellectually, socially, and economically in advance of the rest of the world.

Diet: Vitamins.

Bad feeding in early life is an important factor in the production of malformations, poor development, and in the laying of a seed-bed for the many diseases and disorders which culminate in chronic ill health, even amongst those who have a good heredity. The deficiency diseases rickets, beri-beri, and scurvy, the underlying causes of a great amount of subsequent unfitness, we now know to be due to the insufficiency or absence from the food of certain definite principles—the antirachitic (fat-soluble A), antineuritic (water-soluble B), and antiscorbutic vitamins. I have for some time held the opinion that a number of other widespread diseases—for example, dysentery, diarrhoea, and even tuberculosis—will ultimately be relegated to this group. Tuberculosis is always associated with fat deficiency, and any improvement in the condition of the patient is invariably accompanied by an increase in the deposit of fat in the tissues. The discovery of vitamins opened the door for unbounded possibilities of improving the health and physique of the nation. I have always been a strong believer in the importance of milk as a sick diet, and long before vitamins were recognized I formed the opinion that when boiled it underwent

some profound change or lost some property which practically destroyed its nutritive value, so that for years I have insisted upon it being taken fresh or with the addition of a little lukewarm water. As during the last three-and-twenty years I have had, among my other duties at this hospital, the important task of supervising the dietary of between 2,000 and 3,000 people daily, I have of necessity given much time to the study of dietetics, and I have made innumerable experiments to aid me in devising nutritious yet economical dietaries. As instancing the value of a few elementary facts in dealing with a restricted dietary, such as the poorer classes have available during normal times, I may point out what happened at the London County Mental Hospital, Bexley, and similar hospitals throughout the kingdom, as a result of rationing during the war. The rationing of foodstuffs had not been long in operation before the health of the patients began to suffer and the death rate began to rise. After much deliberation I came to the conclusion that the primary trouble was the insufficiency of fats containing enough of vitamin A. Accordingly the roasting of meats, as being a process wasteful of fats, was stopped; the boiling of meat was not continued, as a large proportion of people will not take fat in that form; and all the meat was finely minced and converted into soup, with vegetables added and thickened with pea-flour, oatmeal, or maize-flour. The health of the patients rapidly improved; they regained weight, and the death rate dropped to practically normal—on the female side of the hospital it was below the 1913 rate—whilst in other hospitals throughout the country similarly placed and issuing foodstuffs of equal calorific value the patients lost weight and the death rates mounted up to double, and in many instances to treble, the pre-war rate, tuberculosis and dysentery being rampant. Patients transferred here from other hospitals invariably gained weight, in some instances as much as 2st. in double that number of months. I have given these details not in order to blow our own trumpet, but to emphasize the important fact that a cheap dietary, composed of the cheapest food elements available to the poorest classes, is compatible with good health if properly cooked. The lack of knowledge of the most elementary facts with regard to cooking and the real value of foodstuffs (a form of ignorance not confined to the poorer classes) is deplorable, and a disgrace to the women of this country. Thriftiness is a virtue seldom found amongst our C3 population, and I have often been struck by the extravagant mode of catering which I have elicited when interrogating patients on their mode of living and dietary. Oatmeal porridge is practically unknown; maize meal, one is told, "is cattle food"; whilst pea-flour is never heard of south of the Tweed. I often wonder as to the true dietetic value of margarine, which is a most important ingredient in the diet, and as to the degree in which it is responsible for the stunted growth which I think is becoming increasingly evident. When first introduced it was composed chiefly of animal fats, which no doubt retained their vitamin content to a greater or less extent during the process of manufacture, and some makers also added a percentage of butter fat, so that its nutritive value was practically equal to butter itself, even though the vitamins might have been considerably reduced during the process, seeing that there is reason to believe, as Professor Halliburton has pointed out, that only a small amount of vitamins suffices. Now, however, it is made from vegetable oils, which are subjected to a very high temperature during conversion, which probably completely destroys the vitamin content, and unless a sufficiency of vitamin is available in the form of milk or fat meat, we have the diet which has been proved by experiment to produce rickets in rats. It is a matter which calls urgently for investigation.

Teeth.

Good sound teeth and healthy gums are rarely found among the poorer classes. There is no country in any part of the world that I have been in where the teeth are so bad as they are in this country. Those who came in contact with the American and Colonial soldiers must have been struck with the great contrast between them and our own in this respect. There is probably no condition, particularly when accompanied by pyorrhoea, which bears in its train so many forms of ill health, such as chronic dyspepsia, chronic toxæmia, neuritis, and valvular heart

affections, as bad teeth. Bad feeding and lack of proper care during infancy and childhood is without doubt an important cause, and I often wonder if the form in which bread is eaten in this country does not materially assist in producing this condition; here bread is baked in the form of a loaf, that is to say, with a minimum of crust, whereas on the Continent and also in America it is made in long or small rolls with the maximum of crust. The crumb is the portion which is most appreciated in this country, and rarely is the crust preferred even by the beggar; if any portion of the bread is discarded it is the crust. The teeth are consequently given little or no work to do; the crust, which would strengthen and clean the teeth and harden the gums if eaten, is so small in amount, whilst the crumb forms a pulaceous mass in the mouth which fills the interstices of the teeth and later undergoes acid fermentation. The enamel of the teeth, already of poor quality and possibly deficient in amount owing to rachitic and scorbutic conditions in infancy, is destroyed. Another important point in favour of the maximum amount of crust is that the larger the proportion of the crust the greater the amount of mastication required, with resultant increase in the quantity of saliva and a more advanced state of digestion of the carbohydrates before they reach the stomach, to the great benefit of the whole process of digestion.

Syphilis.

The researches of Wassermann and Noguchi have enabled us to envisage the terrible ravages of syphilis much more completely than was possible before they placed such important aids to diagnosis at our disposal. Syphilis belongs to a totally different category of causes from those already mentioned, seeing that it produces its dire effects independently and uninfluenced by heredity and environment; the soundest heredity and the most ideal environment do not retard or minimize its effects. It also, in the case of acquired syphilis, brings down its victims most frequently in the prime of life when often children have been born, who consequently are thrown dependent on the world and possibly handicapped with the congenital form of the disease. Though it may attack any tissue in the body, it appears to have a selected affinity for, and produces its most disastrous effects upon, the nervous tissue, and the vessels in its vicinity. Insanity, chiefly in the form of general paralysis, blindness, and organic nerve lesions, particularly tabes dorsalis, are the principal forms of the disease which reduce the patients to the C3 category. In the congenital form we now recognize it as a great cause of maldevelopment, of wasting, blindness, idiocy, imbecility, or organic nerve diseases, including what is termed congenital general paralysis.

Housing.

Bad housing undoubtedly yields its quota to the C3 population, and bad as its effects are upon the physical health of the inhabitants from overcrowding, insufficient lighting, and insanitary conditions generally, I believe, for reasons which I will presently state, that infinitely greater evils result from its influence upon the moral health, particularly of the children. With the physical aspect of the problem—the lack of oxygen, the excess of CO₂, and the poisonous exhalations of the human body, the presence of sewer gas from faulty drains, dampness, and the absence of sunlight, with their results, poor development, chronic anaemias, catarrhal conditions, tuberculosis, and chronic rheumatism—you are brought in daily contact, and can realize more fully perhaps than I, the extent of their degenerative influence. I wish therefore to emphasize the importance of the moral, or rather the immoral, aspect of overcrowding and its influence upon the mentality of the people as judged from my standpoint as a psychiatrist of over thirty years' experience.

Sexual Excesses.

I want you for a few moments to consider with me the function of reproduction. We know as a biological fact that the function of reproduction is implanted by Nature for the sole purpose of continuing the species, and to ensure that the acts of combining the necessary elements should be performed, Nature further provided that the act should be accompanied by the sense of pleasure; without this insurance animal life would have long since died out. It is only on rare occasions that the sexual act

is engaged in for the purpose of its true function. It is rather looked upon as a well of pleasure which can be drawn upon to an unlimited extent without incurring any penalty. Nature, however, imposes a penalty for the abuses of any of the functions it has created, whether that abuse be positive or negative, and though the range of excessive use and insufficient use may vary in individuals, Nature usually gives warning signs to the individual concerned before imposing the full penalty. You are all acquainted with the nature of the penalties attached to the abuse of most of the body functions, as your daily life is occupied in warning your patients, and in endeavouring to lessen the effects and counteract the penalties they have incurred, but few of you probably realize the nature and extent of the penalty Nature inflicts for abuse of the sex function. I do not propose, on this occasion to enunciate any theories as to the pathological states which may ensue as the result of abuse of the organs of generation, but I purpose making an *ex cathedra* statement based upon my clinical experience, and showing how, in my opinion, the depraved morality and pernicious habits so frequently acquired during childhood and early youth, fostered by overcrowding, lead to the mental, moral, and physical deterioration of the race. I am fully convinced from my observations of, and the close investigation of the previous histories of, thousands of cases, that excessive drain on the sexual glands at any age leads to mental deterioration, varying in degree according to the amount of excess, the nature of the feeding, and the hereditary nerve stability in any particular case; and further, that if the drain is set up in early youth, the period when the maximum physical and mental building is taking place, partial, if not complete, arrest of mental development follows. In some rare instances the intelligent and observant parent has recognized the cause of the change, but commonly the child is said to be "outgrowing its strength" or to be "over-studying." A typical history of a very large number of my cases would be as follows: Up to the age of 12 or 13 the child was bright, clever, intelligent, and always held a high position in class, then gradually became dull, found it increasingly difficult to memorize, memory became less reliable and showed curious lacunae; apathy gradually became more pronounced, position in class dropped at each examination, was prone to fits of sullenness and bad temper, formerly unknown, and though at one time prominent in games, tended to become retiring and to be given to seeking solitude. Constipation was a source of much trouble, the complexion became muddy, and it was obvious to the parents that the health was suffering from some cause. The child was given more attention, was kept more closely under observation, was given tonics and special food, and for a time improved, but did not return to the former standard, and the progress at school was slow. After leaving school found difficulty in settling to any kind of work, never stayed in any place long, sometimes left abruptly; was poorly controlled, given to impulsive acts, had been "walking out" for some time, or was approaching marriage, or had been recently married; or perhaps, if the patient was a female, had the first baby, when the complete mental breakdown took place. Close investigation reveals that knowledge of sex matters had been acquired at a very early age, due possibly to observing the conduct and hearing the remarks of a drunken parent or sleeping in the same room with the parents, or, sharing the bed with older children or grown people, had been initiated in masturbation when 10 or 12; possibly had often practised the habit in concert with other children, had been checked, and for a time the habit had been arrested, due to increased attention received, possibly supplemented by religious influence or a change of environment to one of greater social purity; occasional gross lapses had occurred, followed by impulsiveness and irrationality, leading to change of occupation or place of employment; more frequent abuses brought about by the sex excitement associated with "walking out," or the greater excess of normal sexuality of early married life, or that factor, *plus* the stress of childbirth, resulted in the mental attack which we recognize by the term dementia praecox. If the excesses are not commenced until after adolescence has been established—in other words, until after the body building and mental development are completed—then the reduction is not so great, but the balance in the bank of health may have been brought so low that

the bills presented by other forms of stress cannot be met. A person of either sex who had become a disciple of Onan commonly indulges in the habit very much more frequently than the normal sexual act would, for obvious reasons, be possible; and I have had quite a large number of cases under my observation where the habit acquired before marriage has been more or less persisted in after marriage. These people, when met by the ordinary trials, worries, and difficulties of life, can offer no resistance, but develop neurasthenia, psychasthenia or melancholia. In the great bulk of cases they recognize the cause of their trouble, and may try to fight against it; some may prevail, but with others the force of habit and the sex impulse is too strong for their weakened will power, and their neurasthenia, psychasthenia, or melancholia become more marked, when they are labelled as suffering from a "nervous breakdown." To this class belong a large proportion of the so-called shell-shock cases. In some fulminating cases, under the influence of sudden stress, real or imaginary, the patient suddenly commits suicide, or we have a double tragedy or some bizarre act bringing the case under public notice, and it is then said to be "a case of temporary insanity."

Bureaucracy.

These are, in my opinion, the principal factors which enter into the causation of our C3 population. The question at once arises, Are we as a nation, and we of the medical profession in particular, as the real custodian of the health of the people, combating these adverse forces successfully? I fear the answer must be in the negative, for those of us who spend our lives in close contact with one or other section of it must, I think, admit that it is increasing out of proportion to the rest of the community. The enormous growth of bureaucracy in recent years, at enormously increased cost, has not, in my opinion, added to our efficiency in any branch of public health. Every branch of the profession is being pigeon-holed each into its own watertight compartment, presided over by an army of clerks and governed by lay bodies whose chief concern is to see that every man shall do his work in exactly the same way as everybody else. It puts a premium on action, stultifies individuality, kills progress, and writes innumerable reports. Reports are the life blood of bureaucracy. The rapid growth of medical knowledge necessarily means more specialization, as it is utterly impossible for any one man to keep in touch with its increasing ramifications, and therefore, to obtain results in any way commensurate with the increase in medical knowledge, we need greater facilities for team-work, so that special knowledge in any direction may be more readily brought to bear upon any particular problem at the earliest possible time. One of the greatest difficulties in connexion with my own speciality is the long duration of the attack and the progress which the disease has made before it receives the special attention which it requires, with the consequently reduced chances of recovery, and the greater mental scarring should recovery take place. If our special knowledge could only be brought to bear upon the case when the earliest manifestations of the disorder show themselves, enormous benefit might accrue to the patient and to the nation as a whole. I had the great pleasure of being present at the meeting at Dartford when Lord Dawson propounded the scheme formulated by the council over which he presided, with which I found myself in absolute agreement. I believe that the scheme of hospital centres, if efficiently established, would materially assist in solving the problem of our C3 population.

At Yale University Dr. Francis G. Blake has been appointed professor of medicine, Dr. Edward Albert Park professor of pediatrics, and Dr. Arthur M. Morse professor of obstetrics and gynaecology.

A SCHOOL for health officers has been established by the American Red Cross in Cracow, and has been very successful there. It grew out of a need for a well-trained Polish personnel to assist in carrying out the child-welfare work of the American Red Cross in Poland. It is stated that the school will probably take a place as part of the educational curriculum of the University of Cracow, and it should have a wide influence in arousing public interest throughout Poland in the numerous health problems of that country.