

A DOCTOR'S VISIT TO U.S.S.R.*

BY

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I look upon it as a great honour to be invited to give the Long Fox Memorial Lecture for 1956, the more especially as my twenty-five years in medicine have been spent in the field of general practice, away from the University classroom, the laboratory, and the hospital bed. General Practitioners are not used to giving lectures; when they do they are wise if they confine themselves to the bird's-eye rather than the worm's-eye view and in the language of the Authorized Version "speak the things that they do know and testify the things that they have seen".

My trepidation in appearing in the role of lecturer is somewhat sedated by the terms of the appointment—that the lecture is expected to be a popular rather than strictly scientific one, and that although the subject-matter must be about some aspect of medicine it should appeal to a non-medical as well as a medical audience.

In July of this year I had the good fortune to be a member of the civic delegation from Bristol which visited Saratov in Russia, and as I took the opportunity of finding out something of the progress of medicine in Russia in general and Saratov in particular and visited several of their hospitals and clinics, I have taken as my subject tonight "A Doctor's Visit to U.S.S.R."

It may be objected that one can see little of another country in a fortnight—especially in the field of medicine. That is a fair criticism. But I think it also fair to say that the seeing, however brief, and the impressions, however personal, may not be without value if one goes to Russia with open mind and with open eyes. Yet it is also true to say that personal contact with the Soviet Union is still charged with considerable emotion on both sides, and it is sometimes difficult to separate a personal reaction from an impartial assessment of conditions and work in U.S.S.R. One must also resist the human temptation to be an authority on such a subject after so brief a visit and simply trade on the greater ignorance of one's audience just because they have never been there.

There is also the language difficulty. The interpreters do their best but one is not always sure that the question has been understood or that it means the same thing in Russian as it does in English. We were more fortunate than some other delegations in that before accepting the invitation to visit Saratov the Town Clerk insisted on having an interpreter from the British Embassy. This I am sure saved us from many a pitfall. On many occasions she saved us from getting a completely false impression from an answer to a question just because the Russian interpreter wanted to put a polite gloss on either question or answer.

ADMINISTRATION

To understand the structure of the medical services in Russia one must remember that the country is a federated state of sixteen sovereign republics each with its own constitution. But this sovereignty is nevertheless restricted so as to create a uniform system in a planned society. Within the different republics further divisions are made consisting of the region, sparsely populated region, and district. Again, the large towns are divided into districts like our metropolitan boroughs. Each of these units has its own Soviet or local Executive which directs the activities of administration, local economic and cultural affairs and draws up a local budget.

Each of the Union's autonomous republics has its own Ministry of Health which controls the whole of the Health Services within that republic—preventive, diagnostic,

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curative, medical education and research. In the region you have the same set up with a Director of Health responsible to the Director of Health of the Republic, and of course the Director of Health of the Republic in turn is responsible to the Ministry of Health of the U.S.S.R. in Moscow, which works out policy and directs and coordinates the work of the sixteen republics. Even in the smallest unit—the district—which may be but a limited area in a city the set up is the same; and it is laid down by law that each district must have its own Health Department. At the head is the Director of Public Health for the district with over-riding powers, and responsible for all health services in his district including hospitals, polyclinics, sanitation, midwifery services and control of epidemics. It will be seen that in the U.S.S.R. there is nothing like our three great divisions in the National Health Service—Hospital Services, Local Authority Services, and General Practitioner Services, each with its own controlling and directing administration. Nor is there the same divorce between administrative work and clinical work. The Director of Health of the district is not only responsible for the smooth running of the administration in his area but he does clinical work well and takes his turn at the polyclinic.

From what I was told emphasis in the Soviet Union seems to be on (1) Preventive Medicine, (2) Maternal care and child health, and (3) Industrial medicine.

(1) PREVENTIVE MEDICINE

By this they mean B.C.G. vaccination, routine examination of workers, diphtheria inoculation, the wide use of antibiotics in prophylaxis, with less emphasis on sanitation and clean food than in this country. Since nearly all babies are born in hospital, B.C.G. is given compulsorily within two or three days of birth. Administration of the vaccine is repeated at 7, 12, 15 and 18 years of age. Incidentally the medical profession in the U.S.S.R. is very proud of the spectacular fall in their death-rate from tuberculosis during the last decade. They do not seem to be aware that this is something which is happening throughout the civilized world and has nothing to do with the superiority of Soviet medicine over that of other countries in Western Europe. In many ways they still show all the arrogance of their insularity.

(2) MATERNAL CARE AND CHILD HEALTH

They make a great deal of this in U.S.S.R. The child is all-important and his protection starts in the ante-natal clinic. In the first weeks of life he attends a paediatric clinic, and later if his mother is at work he is very well looked after in a crèche attached to the factory. School children are examined regularly until the age of 17. Large holiday camps and health resorts are available for the young. We visit one where on the wooded slopes of the hills above the town 1,300 children were spending about four or five weeks in camp during the school vacation.

(3) INDUSTRIAL DISEASES AND THEIR TREATMENT AND THE IMPROVEMENT OF INDUSTRIAL CONDITIONS

I was struck by the emphasis on physiotherapy and hydrotherapy, especially at the polyclinic attached to the factory, and the importance given to rehabilitation of the need to get the worker back to his job at the earliest possible moment. We visit one light engineering factory which employs 8,500 workers, 60 per cent. of them being women. The large polyclinic, which is part of the factory organization, has a staff of twenty-five doctors who work in three eight-hour shifts. The first half of each shift the doctor spends in routine examination of workers or in treatment of minor illnesses; the second half of the shift he spends in the workshop examining workers under conditions—working out schemes for the improvement of conditions of work. This is incidentally, but most important in the U.S.S.R., for the speeding up of production. Many of you may think this strange work for a doctor but you must remember that in Soviet Russia a doctor prides himself on being a member of his trade union. The "Statutes of Trade Unions of U.S.S.R." state that trade unions exist to "organize

competition for the maximum growth of productivity of labour" and even a doctor is proud to make his contribution towards this end. Trade Unions in Russia do not exist to press wage claims on behalf of their members but to "develop competition for the fulfilment and over-fulfilment of production targets".

We were told that due to the improvement in industrial hygiene, illness and industrial accidents have decreased by three times in recent years. But it must be remembered that Soviet Union industrial standards are much below ours and we saw conditions in a ball-bearing factory which would have been condemned out of hand by our Factory Acts of the nineteenth let alone those of the twentieth century.

SOCIAL INSURANCE

The Soviet Union has a Ministry of Social Insurance responsible for the care of workers and their families who are unable to work for any reason. Pensions are provided for three categories (1) Those incapacitated by disease or injury; (2) Old age pensioners; (3) War pensioners. There are a number of differences from social insurance in our country, for instance disablement pensions are non-contributory; old age pensions are not fixed but range from 50 to 60 per cent. of wages, the pension being computed on the basis of the average earnings over the last five years. Another difference is, if a man is killed at work his widow gets a pension only if she is unable to work, while the children get a pension apart altogether from the mother's earnings.

THE CARE OF THE AGED

I was speaking just now about the importance of ante-natal care and the care of children in the Soviet Union. In direct contrast to this is their attitude to the old. Pension schemes are said to operate after sixty years of age but we saw many who were over sixty or who must have been prematurely old doing work which would only be undertaken by able-bodied men in this country. We saw old women sweeping the street that four o'clock in the morning (most of this type of work is done by elderly women); we also saw younger women working at furnaces, driving cranes, working as plate-layers on the railway, and working as brick-layers alongside men.

On our way to Russia we spent a day at Helsinki, and on our return a day at Copenhagen. In both cities we were given a civic luncheon and afterwards taken on a sight-seeing tour of the city. In both countries we found them very proud of the provision they were making for the care of the elderly, whether in the provision of special blocks of flats or special homes or Geriatric Hospitals. We saw nothing of this in Russia. Saratov which has a population of 600,000 makes no special provision for the elderly or the chronic sick and does not have a single Geriatric Hospital. When I asked about this I was told that there were now several Geriatric Hospitals in U.S.S.R. and that Saratov hoped to build one during the sixth five-year plan, that is during the next five years. One learned, however, that when in Russia they say they hope to do a certain thing, it indicates it is not on the priority list and no special plans have so far been made.

MEDICAL EDUCATION

After the revolution of 1917 the need for reorganizing medical training was acute and great efforts were made to increase the quantity and the quality of medical personnel. At first the entrance requirements were exceedingly low, in some cases a mere formality, and as a result, there grew up a generation of poorly equipped medical practitioners. At this time the training was the responsibility of the Ministry of Education, but in 1930 training was made the responsibility of the Ministry of Health. Under the new Ministry the aim was to produce three types of physician.

- (1) Practitioners for general medical, surgical and prophylactic work.
- (2) Public Health physicians.
- (3) Specialists for protection of mother and child.

Medical Schools therefore divided into three corresponding faculties:

- (1) Faculty of General Medicine (4-year course)
- (2) Faculty of Hygiene (3½-year course)
- (3) Faculty for Protection of Mother and Child (4-year course)

This new system, however, proved unsatisfactory and later in the 1930's they reverted to the five-year curriculum common to medical schools in this country. In 1945 the curriculum was extended to six years, the final year to be used for practical work in hospital, polyclinics and medical centres. Before the Second World War the great problem was the inadequate pre-medical education of students. The standard of general education in Russia is (in theory at least) of ten grades from 6 to 16 years of age or 7 to 17 years of age. It was found, however, that many of the students wishing to start a medical career had only completed seven grades instead of ten and even today such is the shortage of schools and teachers that many schools work in a two-shift system, half the children attending in the morning and the other half in the afternoon. The Russians got over this difficulty of inadequate pre-medical education by admitting students to a "secondary Medical School" from which they graduated as "feldsher" nurse or midwife after a three-year course. They then practised for three years, as feldsher, nurse or midwife after which they applied for admission to a medical school. Other students below entrance standard went to work in a factory in the daytime and the same time attended special night schools where they studied a foreign language, mathematics, physics, chemistry and political science so that in three years time they might meet the entrance requirements of the medical schools.

As has been indicated the entrance examination to the Medical School consists of a foreign language, mathematics, chemistry, physics and political science. German used to be the most popular language but now by far the largest number of students take English. This we were told is the case, not only in the medical but in all the other faculties as well. There is a great drive to learn English. The extraordinary thing is that of all the doctors whom we met in Saratov from the Director down to the doctor in the clinic we did not meet one who seemed to know any English. A member of the British Embassy staff in Moscow had to go to the principal Moscow hospital for an emergency operation the other month and an interpreter from the Embassy had to go with him as not one of the surgeons or members or the staff of the hospital knew English. One wonders how much of the required examination standard is like so many things in Russia "on paper only".

On the general question of education it has to be remembered that before the revolution of 1917 the standard of literacy in Russia was very low and more and more there seems to be a desire to follow what is best in the education system of countries like England. Perhaps the most startling innovation is that proposed by Krushchev in his speech to the Twentieth Party Congress in February 1956. I quote from the official copy of the speech which I purchased in Moscow. "It is now expedient," said Krushchev "to start building Boarding Schools. Children should be enrolled in these boarding schools at the request of their parents. They will live in the schools and their parents will visit them on holidays and during vacations. Children whose parents do not earn much should be fully maintained by the State. Parents with higher earnings should pay part of the cost of the education of their children. Finally some parents could contribute fully the outlay made by the State on the education of their children in the boarding school."

I had the opportunity of visiting the Medical School in Saratov which is called the Medical Institute. It is not part of the University buildings, and I got the impression that it was not looked upon as part of the University. It is said to be one of the oldest Medical Institutes in the country dating back to 1909. Four hundred and fifty students graduated from the Institute this year. This is a staggering number when you think of Saratov as a city just somewhat bigger than Bristol. But it gives an idea of the enormous technical drive and the tremendous educational expansion which is taking place in Russia. The figures given for the increase in the number of doctors are interesting

At the Revolution there were 20,000 doctors in the whole of Russia.

In 1928	..	..	..	63,000
1932	..	..	..	76,000
1938	..	..	..	112,000
1941	..	..	..	130,000
1954	..	..	..	300,000

The curriculum is much like the medical curriculum in England with some striking exceptions. For instance, 246 hours are given to clinical surgery but 250 hours to the study of the principles of Marxism-Leninism. When the student goes on to his clinical studies at the bedside, he attends the Institute in the morning for theoretical training and the Hospital for clinical teaching in the afternoon. Sixty per cent. or more of the students are women. When a student graduates he has no free choice as to what work he will take up or where he will go. In general young graduates are sent for several years' practice (usually three) to the rural districts and the sparsely populated areas. At the moment there is a great drive to open up virgin land for agriculture and an attempt to develop vast areas in Siberia and put them on an economic basis. There are schemes for afforestation and wheat growing, with hydro-electric power schemes on a scale never attempted before. Thousands of young technicians having just passed their final examinations are being drafted into these areas. More and more collective farms are springing up, and they all need doctors. It is in such conditions that the young medical graduate learns to become a general physician, to depend on his own resources, to develop self-confidence—in a word, to learn the hard way.

After three years he may return to the city and apply for a position in the polyclinic or enter hospital and specialize, or if he has been a particularly brilliant student, with special aptitude for scientific work, he may on the recommendation of his teacher become a research worker. What are doctors paid? The young doctor is paid 600 to 800 roubles per month. To assess how much that is worth it is necessary to compare with the wages of some other workers. A washer-up in a canteen gets 400 roubles and a fitter may get 1,200 roubles. A cook in a large canteen gets 2,000 roubles, a manager of a canteen 3,000 roubles, a reporter 3,000 roubles. On the other hand a higher medical qualification may mean 1,700 roubles a month, a professorship 5,000 roubles, and at the top of the tree is a Director of Research with a maximum of 11,000 roubles a month. It will be realized that whatever kind of society they may have in U.S.S.R. it is by no means a class-less society. It would appear that although all do equal work some salaries are more equal than others. It follows that there are those whose standard of living is a question of making ends meet; there are others who can afford to buy a house (and it is now possible to buy a house in U.S.S.R.) or a motor-car, or to invest surplus money in Government stock at 3 per cent.

HOSPITALS

I will now try to describe what I saw of clinical medicine and my impressions of the different hospitals I was allowed to visit when in Saratov. Saratov is a large industrial city 500 miles south-east of Moscow, lying on the right bank of the Volga, north of Volgograd. The town was founded early in the sixteenth century on the left bank of the Volga; later it became a small fishing centre and was transferred to the right bank of the river. It is surrounded by hills from one of which (the Sara Tov or yellow mountain) takes its name. Its geographical position and its natural resources settled the town's economic position in the country, and by the middle of the seventeenth century it had become a trading centre. In the eighteenth century it became a regional town but its industrial resources were not developed till after the revolution of 1917. The increase in the industrial side in the past forty years has been phenomenal. During the last five-year plan (the fifth) it more than doubled its industrial output and today it is one of the largest industrial centres on the Volga. The gas supply of Moscow comes from Saratov, which is rich in natural gas. A 500-mile-long pipe-line carries the gas from Saratov to Moscow.

The largest General Hospital has 630 beds—270 surgical beds, 130 medical beds, 230 gynaecological beds. Each department is housed in a separate building, the buildings being about 50 yards apart. Structurally the buildings are poor and outside in a bad state of repair. Both inside and outside they resemble our Law hospitals of 25 years ago rather than a modern general hospital attached to a medical school. The beds are very low and of poor quality. I had a look at some of the temperature charts and got the impression that charting was perfunctory and inadequate. They do not seem to have any difficulty in obtaining nursing staff, there being far more nurses than in the wards of a hospital in England. I did not see any male nurses. The nurses do not wear uniform but a white gown over indoor clothes. I could not obtain much information about the standard of their training although I tried to understand the course for nurses and midwives is three years. Nor could I find out how efficient was the nursing. In this connexion, however, it must be remembered that there is no nursing tradition in Russia as in England, and up to 1917 there was no profession of nursing at all. I was not allowed to see any of their sluices or lavatories—although I asked to. Lavatories are things they do not want you to see and on one occasion when we were permitted to see two workers' houses all the rooms were closed to inspection save the lavatory which was locked and the key removed. The wards in this hospital were small having four to eight beds and the ventilation was very poor indeed. This ventilation problem was one which we observed in practically every building in Saratov, and everywhere was the Russian smell. The vitiated air may be due to the use of double doors and windows because of the extreme cold in the winter. On the other hand in Helsinki all the windows and doors are of the double variety and ventilation is excellent by English standards. Equipment and methods of treatment presented strange contrasts. Dry cupping, and leeches in the treatment of neuritis, heart failure on the one hand, and lavish equipment for physiotherapy and a wide range of antibiotics on the other. Electrical equipment seemed to be all over the place. One gadget demonstrated to me was in the form of a cage about 6 ft. high, inside which the patient sits on a wooden stool and round him is created an electromagnetic field. I was told it was used in the treatment of melancholia, migraine and tic douloureux.

I gathered that they used most of the antibiotics in use in this country but I was informed that a new antibiotic called Biomycin had recently been developed by Soviet research workers. I was given a sample with the requisite literature which I submitted to Messrs. May and Baker on my return to England. May and Baker tell me that it appears to be identical with or closely related to Chlortetracycline. Russian doctors do not seem to worry about acquired resistance to antibiotics and use them on a far greater scale in prophylaxis than we do. A special line of their own is to use penicillin or other antibiotics by inhalation in the prophylactic treatment of upper respiratory diseases. I was told that this prophylactic treatment is used at the beginning of any infection of the influenza type. Workers in the factory are encouraged to attend for this treatment at the onset of an acute rhinitis or if they have a sore throat. They use the sulphamides in the same way. P. K. Bulatov in his book "*Modern Methods of Treating Bronchitis and Asthma*" which I purchased in Moscow says "In the case of 32 patients affected with chronic non-specific pneumonia when prophylactic treatment with one grain of sulphanilamide two or three times a day was recommended attacks of bronchial asthma which generally set in after the inhalation of various odours (smoke and dust, moist cold air, etc.) were prevented for a period of two to three months." They claim following the teachings of Pavlov that sulpha drugs act on the central nervous system and have a desensitizing effect. Bulatov claims that sulphonamides exercise a desensitizing as well as a bacterostatic influence. They also treat bronchial asthma with intravenous injections of a 25 per cent. solution of novocaine, sometimes giving intra-tracheal injections of novocaine as well. Another method in the treatment of bronchial asthma is by means of what they call bilateral jugular vago-sympathetic and intra-cutaneous blocks.

In the surgical unit of the General Hospital they have one X-ray room and one X-

ble. I saw only one operating theatre but it had three operating tables and it appears to be customary for three surgeons to be working in the theatre at the same time. The room for sterilizing equipment was not on the same floor as the operating theatre. The wash basins which the surgeon used for scrubbing up had the ordinary domestic tap handles. An orderly turns the taps off and on as required.

They do not make the same use of general anaesthesia as in this country but appear to have reached a high standard in the perfection of local and nerve block anaesthesia. The Hospital kitchens and methods of feeding were unimpressive. The food is carried to the wards in standard, old fashioned bucket shaped utensils and there was no method of keeping food hot in its transit from the kitchen to the ward.

I asked about blood transfusion units and was told they have a blood donor service and blood banks as in England. The Russians have apparently perfected technically the use of cadaver blood. They say that in twenty-five years they have had no complications and no deaths by the use of this method. The procedure is very simple. The vein is disinfected with iodine, two cannulas are introduced into the internal jugular veins and the corpse is brought into such a position that the blood flows freely. About two or three litres of blood are extracted in this way and can be preserved in an ice box for 28 days.

I tried to get some information about mental hospitals. Russians doctors were shocked when I mentioned the percentage of beds given over to mental illness in this country. They assured me that the 100 beds they had for mental cases in Saratov were more than enough and that in the Soviet Union there is no such thing as anxiety neurosis. Since they still think that England today is the England of Charles Dickens, that they have widespread unemployment, that children go barefooted to school, they are not surprised that anxiety neurosis is fairly common in England. When I tried to correct one Russian's false impressions of England she told me she knew what she was talking about. Had she not read *Oliver Twist* and *Mrs. Warren's Profession*.

Two other hospitals were visited in Saratov—the Orthopaedic Hospital and the principal Maternity Hospital. The Orthopaedic Hospital was opened in 1945 to accommodate and treat men returning from war with severe damage to limb. Before being taken over as an Orthopaedic Hospital it had been a school. The building was therefore an adapted one and not at all suitable for Hospital purposes. During the war about one-third of the school buildings in Saratov had to be used for hospital purposes. Cases demonstrated included neurological surgery, plastic surgery, and orthopaedic surgery. Several cases of rickets were being corrected by orthopaedic surgery. They seemed surprised when I told them we did not now see rickets in England.

The principal Maternity Hospital has 80 beds with 2,000 cases per year. There is domiciliary midwifery, all confinements taking place in Hospital. The appalling housing conditions may have a great deal to do with this. We were not able to obtain figures about housing, and overcrowding is not a subject the Russians are prepared to discuss, but it was obvious to us that in some parts of this great provincial city people were housed like animals rather than human beings. Moscow which has a higher standard than other cities in U.S.S.R. has stepped up new buildings so that now they can offer one room per family.

An antenatal clinic is attached to the Maternity Hospital, and there being no domiciliary midwifery there is no district midwifery service. Health visitors, however, visit the homes when the mothers go home and encourage them to keep in touch with the clinic. Altogether there are six maternity hospitals in Saratov with a total of 500 beds. The still-birth rate, I was told, was 1 per cent., forceps cases 2 per cent., Caesarian section 1 per cent. They do medical but not surgical induction. When I asked about this and sketched a Drew Smythe Catheter they had not heard of it. In toxæmia they say is rare and the eclampsia rate 0.008 per cent. Sedatives are seldom used. They do not use either triline or pethedine and have no use at all for general anaesthesia. I visited the labour ward. There were three beds in line about two feet

apart and a woman in an advanced state of labour on each. The Pavlov method of painless labour was demonstrated. It appears to be part hypnotism and part taught relaxation on a woman well conditioned beforehand. The instrument was a shock. A table about three feet square covered with oil cloth but no sterile drape. The equipment consisted of a small sterilizer with a few instruments, a dome-shaped saucpan containing sterile water and one kidney dish. The attendants were wearing sterile gowns or gloves. There, as in the other Hospitals which I visited, formed the opinion that Russian Hospital standards of cleanliness and sterility are very much below ours.

POLYCLINICS

There is no General Practice in Soviet Russia as we understand it. An individual does not have someone whom he looks upon as his doctor, nor is there such a thing as a family doctor—a practitioner who looks after father, mother and children as well. A Russian citizen sees himself much more in relation to a group than we do, the group being the factory, the school or a block of flats. In this country a man will say "If I am well, I must go to my doctor"; a man in Russia will say, "I must go to the polyclinic." It may be that father attends the polyclinic at the factory, mother, perhaps pregnant, under the care of the clinic obstetrician, a sick child at home is being visited by a paediatrician while another young adult in the family may attend the district polyclinic. There appears to be much more specialization outside the hospital than in England. Each polyclinic has a wide variety of specialists though specialization does not necessarily confer consultant status.

I visited the Central Polyclinic in Saratov which again is an old building in a state of repair outside. Inside, a wide dirty iron staircase leads to the consulting rooms on the first floor. The woodwork is painted a dark-brown workhouse-looking brown. The floors are dirty and there is a general absence of ordinary cleanliness let alone special polish. Admittedly many of these places are old but could without much expenditure of money be made bright and cheerful and at least they could give them a general feeling of cleanliness if they but tried.

The polyclinic is in many ways like the out-patient department of one of our hospitals. They have X-ray rooms, a pathological laboratory, a large department of physiotherapy, a whole basement given over to hydrotherapy and a small operating theatre for minor surgery. Emphasis I felt was on treatment rather than diagnosis. Treatment primarily aimed at getting men and women fit for industry again. A doctor attitude struck me as having something of the football trainer about it—"I must get this man fit in the least possible time". I have it on reliable authority that Moscow now has a polyclinic for private patients where you may pay for treatment. The advantages are said to be saving of time for the patient to whom time is important and a more individual approach on the part of the doctor.

There is a special Central Dental Polyclinic in Saratov, which is the training centre for dental students. Most of the students are women. We saw quite a lot of dental work going on, extractions, fillings, fitting of dentures and making dental bridges. They make very few dentures and those we did see were not very attractive. Like the dentures sold in the shops the quality and finish were poor. There was no attempt made to make teeth or make the dentures look like natural teeth. Dental bridges are constructed of stainless steel and when you get a patient with a mouthful of teeth made of stainless steel the result in our eyes is grotesque. But tastes differ: I was told the Russians think steel teeth an aid to beauty especially if you have added a gold filling or the remainder of your own teeth which hold the steel bridge together.

No general anaesthetics are used for major dental surgery. Resection is done with 2 per cent. novocaine. No more than two teeth are extracted at a time and extensive work is made of antibiotics both prophylactically and locally for infected cavities and the

These were some of the things I saw in Saratov. But you cannot learn a great deal in a fortnight especially if you have to share the services of an interpreter with others.

urgent questions which were asked remained unanswered. I was told that cholera, so rare in the old days in that part of Russia, is now so rare that students go through the whole of their training without seeing a case. There are only sporadic outbreaks of typhoid now and no malaria. They have only a few cases of diphtheria per year and no deaths. There are occasional outbreaks of poliomyelitis but practically never with paralysis, but so far they have not been able to start inoculations although a start was made in Moscow this year.

Yet there were the many questions unanswered. The birth-rate, the death-rate, the infant mortality rate: measures to ensure a pure water supply. (The tap water in my bedroom was a nice rusty colour due, according to one of the doctors, to work going on near our hotel, but due according to a member of the local Soviet to the amount of soluble iron in the water supply of Saratov.) Do you have a system of chlorination or filtration? What are your methods of sewage disposal? These were a few of the questions asked and asked again but in the end they remained unanswered. Medical statistics are not a strong point in U.S.S.R. and I believe it was only about two years ago that the first medical statistics for the country as a whole were issued from Moscow. I doubt if there are any local statistics for a city like Saratov. If they exist at all they are probably mostly guesswork.

SOCIAL PROBLEMS

(1) *Housing*. In 1917 Russia had not in many ways changed for generations. It was largely the Russia of the mid-nineteenth century novelist with 80 per cent. of the population illiterate peasants, either the children or grandchildren of serfs, engaged in agriculture of a very primitive kind and living for the most part in the thousands of peasant villages of the country. Today nearly half the population works in towns. The population of Saratov has increased by 100,000 since the war. No wonder they have a housing problem. So far as we could see such has been the concentration on heavy industry that only in recent years has any attempt been made to meet housing needs. We saw the two extremes—the modern blocks of flats begun no more than a few years ago and the tumbledown wooden houses with their tiny fret-work windows and corrugated iron roofs without plumbing or modern sanitation which must have been built before the revolution. Even the modern houses are overcrowded by our standards. One we saw had a single bedroom for father, mother, grandmother and one child of about four years old.

(2) *Food*. Another problem is food. There is just not enough food in the country—even now—to go round and during the hard times anyone who was high minded enough to insist on living on his rations simply died. So far as I could judge from what I saw in Saratov, Russia has a black market in food run with the connivance of the State. In Saratov the market is housed in a building provided by the State and the various stalls are rented from the local authority. In the market you can buy meat, fish, fowl, vegetables, fruit, bread, all at prices ranging from 50 per cent. to 100 per cent. above the fixed price in the State shops. Why then not stick to the State shops? Because there is not enough to go round. The market is really a black market. Where does the food come from? Well, collective farms must produce a certain amount of food as laid down by the local authority, but by working hard and working longer hours they produce a little more than their quota which they can then take to the market and sell at whatever price the customer is prepared to pay. Then there are workers on the State farms who have to give x hours of work to the State. But when they do $x+1$ hours the produce from the extra hour is their own which can be sold in the market for what it will fetch.

(3) *Shortages and Crime*. The shortage of consumer goods has led to other social problems—problems with which we were not unfamiliar ourselves just a few years ago. During the whole of the six five-year plans Russia has concentrated on the development of heavy industry at the expense of consumer goods and what we would call the ordinary needs of a civilized society. The result is that even if one can afford the prices asked for goods in the shops they are in such short supply that persistent queuing is the only way

to get them. As a result Soviet Russia has her speculator or contact man in such things as housing materials, living accommodation and motor-car spares, and at the other end of the scale the spiv who deals in stockings and household goods. There is also the natural revolt of restless spirits against the drab monotony of bad housing, absence of consumer goods and nothing but hard work. As a result you have the juvenile delinquents, the hooligan gangs and the Teddy Boys, some of them in Edwardian jackets and drain-pipe trousers just as in England. Recent visitors to U.S.S.R. have made much of these features of modern Russia but I think they have been exaggerated out of proportion to their importance. Human nature being what it is shortages will always produce the economy of "below the counter" with the appearance of the contact men and the spiv. But I think they are less evident in Russia than they were in England a decade ago. There is even a bright side to this, for such is the demand for learning there is a black market in books—not "curious" books or banned books but the Russian classics. The works of Lenin and Stalin are printed in millions: of these there are always enough. Although the pre-revolutionary classics are published in editions ranging from 15,000 to 100,000 there are never enough to meet the demand. *War and Peace*, Chekhov's plays, the works of Dickens, *The Forsyte Saga*, the plays of Bernard Shaw—there are never enough of these to go round, and only a handful of the hungry multitudes are fortunate enough to secure a copy. And in the winter time the principle library in Saratov serves 1,000 readers a day.

CONCLUSIONS

What final impressions are left in the mind after this brief stay in Russia?

(1) First and most important the impression of a country in many ways like Victorian England must have been. A nation, virile, industrious and confident of its own destiny. When we landed in Saratov we did not touch down at a modern airport with offices, control tower and long runways; we came down on what was no more than an open field. The fleet of cars which took us to our hotel drove through a network of unmade or badly made roads. The city looked at first sight like a familiar set from a Wild West film and one said "This is what America must have looked like when the Middle West was being opened up." Russia is in the throes of her industrial revolution and she has all the certainty the Victorians had in the virtues of human and material progress. There is the same sense of purpose, the same confidence in the future. There is also the same strain of puritanism running right through society, the same moralistic so revealing in their attitudes, their newspapers and their films. There is no parading of sex, no kissing in public; you never see young people walking hand in hand in public. The photograph on the front page of the newspaper is not a film star, nor the latest divorcee but some worker who has laid more bricks than his fellows or a manager who has raised production from fulfilment to overfulfilment in his part of the five-year plan. I did not see a country preparing for war. I saw a people to whom war would be a disaster: who are confident that given time by economic expansion alone they will become the most powerful state in the world.

(2) Secondly I saw medicine being developed along lines which made me afraid. In Western civilization the healing art has always been touched by the spirit of humanism or the spirit of Christianity. In Soviet Russia I saw a science and an art which had in some ways become subservient to the requirements of the State. Healing was pursued in pity for the less fortunate without reference to the patient's usefulness to society or the economy of the country. It is not so in Russia. Hence the emphasis on industrial medicine and treatment aimed at fitness for employment as early as possible. Hence the absence of vital statistics, the absence of Geriatric Hospitals, the neglect of mental health. Human beings do not matter as human beings. While human safety on all European air services demands the provision and strict use of safety belts on aeroplanes, in most Russian planes they are dispensed with altogether. It is a striking illustration of the different emphasis on the importance of human life. I may be wrong but the stark realism of Marxist materialism when applied to medicine makes me afraid.

(3) My last impression is that Soviet medicine must suffer because of its lack of flexibility. The methods and teaching of Pavlov are sacrosanct. This, I feel, is not because the Pavlov teaching of conditioned reflexes is superior to other theories in physiology, but because it is politically convenient to make it so. It is not its scientific accuracy that makes it the one true faith in Russian medicine and all others spurious, is because it is politically correct and fits so well with the principles of Marxism-Leninism. In the building of a Communist society the conditioned reflex is a weapon of the greatest possible power; if it can be proved to be scientifically accurate, as well as politically convenient, all the better. One can only hope that the contact being made with the outside world since the death of Stalin will lead Soviet medicine into broader paths and make the deviationist doctor a force within the borders of the U.S.S.R.