

# A PSYCHIATRIC STUDY TOUR OF THE U.S.S.R.\*

By

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## INTRODUCTION

HAVING written a review of Soviet psychiatric literature some years ago without being able to see things for myself, I was eager to avail myself of my first opportunity to visit the Soviet Union, which came in the summer of 1959. Though the visit was not undertaken in any official capacity, preliminary correspondence secured a number of cordial invitations to visit a series of leading Soviet institutions, and soon after our arrival in Moscow permission was received from the Ministry of Health to pursue our visit on a "business" basis, which meant a reduced rate without benefit of personal guide services. My wife and I were thus for the greater part of our sojourn in the U.S.S.R. free to move about the cities of our choice and to seek out and visit hospitals, research institutions and child care facilities that interested us. My conversational Russian, though elementary, was sufficient for this purpose and in most institutions there were staff members who could speak English, French or German. With the single exception of Odessa, where the local health officer did not permit me to visit a chronic psychiatric colony some distance from the city, I was extended every possible courtesy and plenty of opportunity to see what I wanted. During the summer months unfortunately many of the leading research workers were away on vacation, schools and Pioneer Palaces were closed and almost all child care facilities moved out to the country, so that I was unable to get much first-hand information on the care and education of handicapped children, and missed some important people I would have liked to meet. On the other hand, several heads of institutions returned from their summer retreats to meet me in the cities and sometimes urged me to stay on or return again to see more things. Official autos were sent to pick us up and return us to hotels, staff members sometimes awaited us on our arrival in new cities and several festive tea parties culminated our institutional visits, with gracious and cordial exchange of toasts; we were constantly presented with books and gifts, and huge bouquets were given to my wife. Russian hospitality is typically warm and heart-felt, and was at this time especially motivated by the wish to form friendly ties with America and the West. Like most visitors, we could not fail to be impressed by all of this, and did what we could to respond in kind.

In nearly 7 weeks we visited 8 cities: Moscow, Leningrad, Kiev, Kharkov, Tiflis, Sukhumi, Yalta and Odessa, and enjoyed a pleasant few days on a Black Sea cruise. We spent almost all our time visiting institutions, some of it visiting sights, saw all kinds of Russians, and spoke with scores of them.

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I shall attempt to describe things as I saw them, postponing more detailed description and deeper analysis for some later occasion, after more information is gathered.

#### MOSCOW

Actually the first contact we had with Russia was on the jet plane which carried us from Paris to Moscow in a little less than three and a half hours. The plane left promptly on the minute, and arrived almost as promptly in Moscow, with a ride that was smooth, sure, and comfortable. Surprisingly enough, only about one-third of the seats were occupied. After having been badly cramped in an economy seat for the transatlantic crossing, it was a pleasure to have a little extra space in the tourist class of this Russian jet plane. The appointments of the plane, though by no means lavish, were comfortable, and the interior of the plane was fitted out in rather home-like style. I noted that nets were used, for example, to hold the baggage overhead, which kept the baggage from slipping out, as it sometimes did in our sleeker American planes with metal baggage racks. The galley was amidships, sealed off with drawn curtains, larger and more comfortable than ours, and I think this made cooking conditions much easier for the three competent and pleasant stewardesses, who conducted themselves with quiet home-like efficiency. The meal served was good. I had my first taste in a long time of Russian caviar, followed by delicious roast chicken, better than the cold chicken served to us on the foreign line transatlantic crossing; and the portions were ample, with particularly large servings of bread.

Arriving at the Moscow airport after a smooth landing, I was impressed by the large number of people awaiting the relatively few plane passengers, and the unusual warmth of the reception some of the Russian passengers were accorded by their families, who arrived with bouquets of flowers and greeted them in royal style. The airport terminal itself was a drab structure; the large waiting room had pretensions to a spacious classical style, but here, as elsewhere in Moscow, the details of the workmanship were not up to the grandeur of the plan. There were a number of porters around, some of whom stood sheepishly about, waiting for things to do or perhaps not expecting anything to do, which seemed an inefficient waste of manpower. I could however observe the energetic capabilities of the young women who acted as officials in various capacities. These were the equivalent of some women union organizers I had met in New York; with a competent eager manner, remarkable facility in the use of American vernacular English, and a general aura of efficiency about them. There were a number of manoeuvres in which we surrendered our passports, only to retrieve them again after half an hour's wait, a procedure that was later repeated in every hotel we visited.

Our movement into the city was in a large Russian auto, fitted with some shabby carpeting and chauffeured by a rugged Russian, who dealt with us rather casually, answering questions put to him directly, but making no effort at conversation. Here, as elsewhere, the people with whom we had dealings were friendly, though there was never any sign of servility or obsequiousness. The porter who carried our luggage to the ninth floor of our hotel room waited in the anteroom in obvious expectation of a tip. We had no Russian money on our persons, and were furthermore taught to believe that tipping was abolished in the U.S.S.R. I thanked him with a "Spasibo, tovarishtch!" to which he responded with alacrity and left.

We met a couple of New York friends in the lobby. This lobby was also conceived in the noble classical style that we met later in the subway, with plentiful use of marble, though the furniture seemed sparse and rather inadequate, making it all look much like a spacious new apartment where the furniture had not yet arrived. The dining hall, which we later visited, was similarly grand; a mediocre band was playing inferior jazz, apparently to satisfy the taste of foreign visitors. The chandeliers were large and crystal, but the table cloths were spotty and the floor much in need of a good sanding and shellacking, since it was marred by a variety of stains, and we saw one waiter toss a piece of undesirable meat to the floor. The waiters looked a little bit on the shabby side, though they were also friendly enough and fairly efficient for we did not have to wait unduly long for our service. Later we developed a conversational relationship with our waiter, gave him a souvenir picture post-card of New York, which he seemed to appreciate very much; he evinced a special interest in the U.N. Building, wanting to know how many stories high it was, and asking some rather well-informed questions. Our first dinner was a lavish meal of sturgeon, borshtch, shishkabab and ice cream, supplemented by a good bottle of Russian wine, though the cost of the meal exceeded our quota of roubles for an evening meal, and we decided to go easier on our food intake next day to make up for it.

Our first impression of Moscow was of a real working class city still raising itself through energetic efforts from the devastation of the war. We had seen block upon block of construction of new apartments as we approached the city, some of them already occupied, but with the pavements in front of the houses still unfinished. There were very few private autos, quite a few buses, and a general seriousness and perhaps drabness in the appearance and clothing of the people. Our first impressions were on the whole favourable. The large new radio in our hotel suite however did not work, our shiny television set was good at reproducing sounds, but we could not get a picture out of it. Here at the hotel, as in the airport and in the limousine, the details of workmanship were not up to the pretensions of the planning, but we decided not to draw any conclusions too quickly and looked forward to the accumulation of further impressions.

Next day, Wednesday, 9 July, we had a busy and hectic day, starting with persistent efforts all morning to contact some of the people we wished to see, and especially to make contact with the Ministry of Health, so that I could prolong my stay. The hotel telephone, though a dial phone like ours, seemed to be far less efficient. Repeated calls had to be made before a response was secured and "engaged" signals were frequent. Since no phone book is available for the city a phone number is a kind of card of entrée passed on to a person you know. We finally succeeded in reaching Professor A. R. Luria, who was working that day at the Burdenko Neurological Institute. Before visiting, however, our guide thought it would be well for us to take a small tour of the city, especially to see the Metro, which she proudly displayed to us by taking us through half a dozen different stations. The Metro itself is certainly a notable achievement, the population makes great use of it and is justly proud of it. The ornate conventionally classic style of the stations seems to correspond to the tastes of the deposed upper classes, contributing perhaps to the psychological feeling that the workers now have the best, not only in the riches but also in the living style that the titled aristocracy once enjoyed. The Russians seem to like gilded cornices, crystal chandeliers, marble halls and classical columns, all contributing to the kind of architectural

style that we in America tend to relate to our more lavish movie houses or large banking institutions.

The people seen in the subway were remarkably similar in appearance, dress and manner to each other, all of them serious, businesslike, plainly dressed, the women usually in cotton dresses, the men in working clothes without jackets, and seldom with a tie. They looked like a hard working, intent crowd, who had borne the heavy burdens of revolution, famine, devastating wars, the cold war, and the difficult reconstruction period of recent years. Where the large throngs came from in the middle of the day I could not guess, since they all seemed to be busy working people. The crowds conducted themselves with polite decorum, observed all the rules for pedestrian traffic, always standing on the right of the escalators, for example, to allow others who wished to move more quickly to use the left side.

We saw the Kremlin, the Red Square, the G.U.M. Department Store, and the line of people blocks long waiting to pass through the mausoleum of Lenin and Stalin. The general architecture of the city, with its stucco faced buildings, was reminiscent of Vienna, and seemed to be typically East European. The structures were mostly old and dull but all adequately clean and in good repair. But there were a few larger structures that were rather imposing and ornate, like the Moscow University and our own Hotel Ukraine.

The Neurosurgical Institute was far from ornate. It was a shabby old building, but clean within. There we met Professor Luria and found him a friendly, businesslike, efficient, and very helpful person. He quickly set about listing the institutes we ought to visit, making a number of phone calls to contact the authorities involved. He spent about one and a half hours with us, but our conversations were interrupted constantly by return phone calls and messages to arrange our visits for the next succeeding days. In addition to these preparations, he spent about half an hour sketching for us the position of psychology in the scientific scheme of things, describing briefly his own activity and point of view in the field of retardation, drawing diagrams and sketching notes for us as he proceeded. He made it clear to us that he was professionally a psychologist and not a physician (in spite of the fact that he also had medical training) and described his role as descriptive and analytical, not even diagnostic. He said the role of a psychologist is to do basic research, and to describe and analyse data so that the physician can be aided in his work of diagnosis and treatment and the teacher helped in educational problems.

He was particularly emphatic in his rejection of the I.Q. concept and again he drew a little diagram for us to show how an I.Q. of 65 might mean quite different things in 4 children: (1) an intrinsic biological brain defect, (2) a state of general asthenia of the nervous system due to malnutrition or some debilitating illness which could be compensated for in later life, (3) the presence of some sensory or motor defect, such as a partial deafness which could hamper speech development, which in turn would hamper psychological development, or finally (4) an I.Q. of 65 might be encountered in a physically normal child whose education had been side-tracked or postponed by some incident or disease, which might take him out of school, so that he would fall behind his peers in school work and general intellectual development and might suffer thereafter educationally as a consequence. So that, he said in conclusion, the I.Q. can never give us more than quantitative results. For significant information we need to go into other types of analyses. He repeated the figure that the British psychologist Dr. Tizard had quoted in a recent article—that less than

one per cent. of the school children displayed a backwardness that could be ascribed to some biological deficiency, and added that there was perhaps another one per cent. whose backwardness might create some special educational problems, though the deficiency was not basically a biological one. But, he warned, this is a field in which specific statistical information was hard to get and he was only making approximate estimates.

That evening we spent a few hours at the Gorky Park, or Park of Culture and Rest, enjoyed its spaciousness and noted that the shabby workers we had seen during the day appeared at the park in clean clothing, evidently relaxed and happy, enjoying the excellent outdoor music bands and exhibits, or moving about in family groups. We spent an hour at a small circus, which we enjoyed thoroughly. All of the acts were very skilful, the rapport between the audience and performers was excellent. It was a pleasure to see the thorough enjoyment and loud laughter of the audience at the pranks of the clowns. The clowns traditionally spoke their Russian in a British or American accent, and some of their skits lampooned the manner, pretences and jazz interests of Americans. Unfortunately we had to leave the circus to meet our taxi just at the conclusion of one of these mildly anti-American spoofing acts, and the girl usher looked at us with concern, thinking we had been offended, since she seemed embarrassed by our abrupt departure. We were not offended, however, and regarded the period spent there as one of the pleasantest so far in Moscow. We found our taxi chauffeur reading a Russian translation of a George Sand novel, and he discussed Dreiser, Jack London and Hemingway with us on the way home.

#### INSTITUTE OF HIGHER NERVOUS ACTIVITY

Next day we arrived at the Institute of Higher Nervous Activity at about 10 a.m. according to arrangements made by Professor Luria. We found a group of some 6 or 7 physicians and research workers waiting for us in the office of the acting director, with a young Dr. Aslanov, the scientific secretary of the Institute taking an especially helpful interest in us. The discussion was competently translated by a young woman physician with a good command of English. Unfortunately our limitations of time permitted only a quick review of the activities of the clinic and only allowed discussion of a few major points of interest. We were told that a great variety of projects were currently under way. Particular interest was now being paid to the analysis of the higher nervous functions in the psychoses, in the neuroses and alcoholism, and a series of studies had been undertaken to study the effect of the newer drugs, particularly chlorpromazine and reserpine, on higher nervous activity, with a view to determining some rules of dosage other than the empirical ones now prevailing. I was interested to hear from Dr. Aslanov that they too in their work had found a phasic change in the chlorpromazine effect, depending on dosage and on the condition of the organism, but with a reversal of its effect on higher nervous activity at about 4 hours after administration of the drug, which suggested that something similar may be happening on this level to what we had observed in the reversal of the inhibitory effect of chlorpromazine on brain oxidations in our rat experiments. In addition to experiments on human subjects, we were told that a number of problems were being pursued in animal work.

A great deal of research, we were told, was still being done on the experimental production of neuroses. The Director, Professor Rousinov, who

was away on vacation, spends much of his time doing related research work at the Neurosurgical Institute, with a broad interest in the interrelationships between cortical and subcortical activities. There is a busy laboratory for electroencephalographic studies, and they were especially interested in demonstrating to me the rather remarkable encephaloscope, which is a newly developed apparatus, which permits the simultaneous recording of 100 points on the cortex by means of an ingenious cathode ray oscilloscope technique that projects the points of activity in illuminated dots and represents the voltage intensity by gradients of vertical lines, so that interesting correlations of synchronous activity can be made in various types of study. We witnessed a rabbit being investigated in that manner. When I complimented them on their technology they promptly told me that the apparatus was based on an American model.

Another field of current interest is the physiological and pathological effects of ionizing radiation both on the foetal and mature organism. The effects of chlorpromazine on various types of conditioning were also being studied. There is a separate big institute and laboratory dedicated to the study of the normal neural activity of children of school age. Because of my expressed interest in some of the clinical aspects of their work, I was driven over to the Neuropsychiatric Clinic of the 8th Moscow District, one of a number of district clinics of this sort, which because of its proximity to the Institute is used as a clinical branch for investigative work. The experimental setting there is described as a laboratory for the study of the pathology and therapy of the higher nervous activities of man, and it has available for this purpose a male and female in-patient service totalling 100 beds. This portion of the research activity is amply staffed, and the staff includes several former pupils of Pavlov. The main current interest of this group of workers was described as a study of the interrelationship between the 1st and 2nd signal system, as well as the study of the interrelationship between cortical and subcortical activities. Several of the projects are concerned with the effects of psychotherapy and with analysis of the mechanisms of psychotherapy, although the group was at some pains to explain to me that their conception of psychotherapy envisages all psychological factors that can be thought to bear therapeutically on the patient, including the effect of group activities, group influences, and the direct therapeutic influences brought to the patient by medical personnel. We were told of an interesting new vasodilator and hypotensive drug of complex composition, described as SDK, said to contain saponines, which appears to have an ameliorative effect on mental disorders associated with hypertension and arteriosclerosis. We were told that this agent reduced headaches, dizziness, tinnitus, relieved excitement, elevated the emotional state, improved sleep, work capacity, hearing and memory, lowered the blood pressure and was currently under review by the Health Ministry to determine its suitability for general use. A number of patients, we were told, recovered sufficiently to return home after use of the drug.

In connection with schizophrenia, we were told that special attention is now being paid to studies of paranoid and catatonic forms. Schizophrenia in the Soviet Union is now regarded generally as a specific disease entity, though it is recognized that a schizophrenic-like syndrome can occur in response to a variety of aetiologic agents. Interest is being focused on the reduced autonomic responsiveness found in schizophrenia, especially in the chronic forms. Both insulin and sleep treatment are being used. A favoured technique for sleep treatment consisted of a course of 8 to 10 days of protracted

sleep induced by a mixture of medinal, sodium amytal, allonal and pyramidon, used in minimal doses so that there is no real danger of pneumonia; antibiotics are not regarded as necessary. The patient is permitted to sleep for 22 hours of the day and is roused for a 2 hour period daily. In recalcitrant cases this treatment may be combined with electroshock, which is given just before the initiation of the sleep treatment and is followed by a 36 hour period of sleep. This course is repeated 4 or 5 times, and the results are described as satisfactory in severe chronic cases, especially in catatonic forms. We were told that the medicinal induction of sleep is generally superior to the electro-narcosis type of sleep, which is also used but cannot easily be protracted beyond a 3 hour period. In general, we were told that insulin treatment is the treatment of choice, especially in acute cases, and is usually preferred to the use of drug treatments. Insulin coma treatment was described to us as practically in universal use throughout the Soviet Union, but it was emphasized to me that treatment must always be individualized and that no one treatment is necessarily the best for all individual cases. In response to my question, I was told that about 60 per cent. of the cases of recent onset go into fairly protracted remission lasting for at least 2 or 3 years, with the treatments presently being used.

We had an opportunity to visit several of the wards of the Neuro-psychiatric Clinic. The building itself was an old one, the quarters for the patients were cramped and cluttered, by our standards. There was a good deal of crumbling stucco, unfirm carpentry, and worn flooring. First priority, we were told, must be given to housing construction after the devastation of the war: institutional construction must wait another two years. In spite of this, the places were kept clean, free of odours, and the atmosphere among the patients we saw, including some very disturbed patients, seemed excellent. We were there at meal time. The patients welcomed us and invited us to join them at their dinner. We noticed two nurses sitting beside a young catatonic patient, coaxing her to eat with great patience, kindness and persistence. We were told that forced feeding is almost never used. If necessary, a sodium amytal injection would be given, combined with caffeine, to calm a disturbed and frightened patient so that he could be coaxed to eat. Restraints are not now used anywhere in the Soviet Union. We saw the most disturbed ward and found it relatively quiet, with several asleep. In a ward where we counted 8 patients, there were 2 nurses and 2 nursing aides—a ratio of 2 patients to 1 nursing person. These rooms too were spotlessly clean, and our impression of both the medical care and the psychiatric atmosphere was quite favourable.

#### INSTITUTE OF PSYCHOLOGY

Later in the day we visited the Institute of Psychology, which is a part of the Pedagogical Academy of Sciences. The Institute is a separate building located in the grounds of the old university and here too, through the good offices of Professor Luria, we were cordially received by the acting director, Professor Shevarev. This institute was formerly directed by Rubenstein, and is also the place where Professor Teplov is now active, though he was away on vacation when we were there. Here too a great variety of projects are being pursued by a large staff with extraordinarily fine, complex and varied equipment. Professor Shevarev said that in general they are developing their work along Pavlovian lines, though he said things are now found to be more complicated than Pavlov thought, from his animal experiments: Pavlov's so-called

“weak” types for example can no longer be regarded as abnormal, but should rather be regarded as basically hypersensitive types, and this hypersensitivity involves quite a few assets in human psychology. Human beings, concluded Professor Shevarev, are far more complicated than dogs. Psychological work at the Institute basically consists in the analysis and interpretation of human behaviour, particularly in its relationship to the learning process. Much interest is being expended on the study of native talents or potential capacities. Teplov and others are quite convinced, we were told, that musical talent is basically inborn; opinion still differs on whether mathematical talent is similarly inborn, though Professor Shevarev thought this was highly probable, particularly if we speak of the inborn lack of mathematical talent. He was not certain that there was such a thing as native linguistic ability, and spoke cautiously about the native differences in general intelligence. It is probable, he said, that the potential for intelligence is inborn, perhaps in part because of the damaged brains of some individuals, but in every case the development of the potential depends on many things in addition to the native intelligence, not only education in the strict sense of the term; a variety of other influences, including some fortuitous ones, may influence intellectual development significantly. He was not prepared to say how wide the range of normal differences might be in human beings, and said the matter is still obscure.

Much of their work, in addition to its relationship to teaching, has relationship to applications in industry. Professor Shevarev was glad to tell us that in one project they undertook in one factory, involving multiple studies of the work activities of the individuals, their fatigability, etc., production could be increased by 20 per cent. When I asked whether this increase was due to a change in production methods or by more specific psychological techniques, he said the two cannot be distinguished. Once you analyse a problem, all factors enter into its solution, and they are glad to contribute to such a helpful analysis.

We met Professor Zaparozhets, who spoke to us at some length of his very interesting work on habit development and the learning process. He was emphatic in declaring that habit formation in normal children cannot be reduced to a direct study of the activity involved, but also involves a second factor: the general exploratory activity of the individual. These two factors, the general vigilance or exploratory interest of the individual, plus the actual work activity itself, are interrelated in complex ways, and are sometimes even antagonistic in their action. He has conducted many studies on these interrelationships and feels that they amount to a general theory of learning. The nature of this exploratory activity is bound to the stage of development of the child. In earlier life the exploratory activities tend to be more concrete, tactile, as well as visual and auditory. In the older child they are frequently comprehended in the visual activity alone.

When I asked about the general status of psychology in the Soviet Union, I was told that approximately 1,000 qualified psychologists can be found in their national organization, most of these being teachers and experimental workers. Psychologists, said Professor Zaparozhets, are not actually at the present time placed in the schools and do not participate in any capacity in dealing with problems of conduct. Our main task, he said, is to study and improve methods of teaching at schools. We hope, he added, to develop a profession of applied psychology, and we picture it as being involved primarily in problems of work, both in and out of school, and we would welcome greater opportunities to deal directly with the individuals. We do not anticipate that



there can be any conflict of interest with psychiatrists or other physicians or to practice psychotherapy. In time our professional activities will no doubt expand. In response to my query as to whether any of the Russian psychologists were interested in problems of sex psychology, he responded simply with a polite "No" and Professor Zaparozhets added that there is no interest in Freudianism in the Soviet Union at the present time. In response to another query of mine on instinct, Professor Zaparozhets told me that Professor Basin, a psychiatrist in Moscow, is currently interested in instinct theory. I was then presented with the newly published first volume on the Psychological Sciences in the U.S.S.R., and was told that this includes a comprehensive bibliography which would be of help to me in my further studies.

#### INSTITUTE OF DEFECTOLOGY

Professor Luria invited us to meet with him again, this time at the Institute of Defectology, on Friday, 10 July. We arrived promptly and found ourselves in the company of Dr. O'Connor, a British psychologist associated with Dr. Tizard, and we all had an opportunity to meet with some of the staff while awaiting Professor Luria. We did not meet with the Director of the Institute, Dr. Brakov, though we spoke briefly with a motherly, composed and intelligent woman named Natalia Morizova, who was introduced to us as the vice-director in charge of scientific work. We were told there was another vice-director charged mainly with administrative duties. Dr. Morizova described briefly to us the administrative organization and some of the activities of the Institute until Professor Luria arrived, apologizing for his lateness—only 10 minutes—by saying that the arrival of the Emperor of Ethiopia in Moscow had produced quite a traffic jam. Dr. Luria seemed to be the most "Western" in manner and temperament of all the scientists we met. He spoke a rather fluent English, seemed to enjoy wide international contacts, and was surprisingly alert to our special interests. Dr. Luria now took over the description of the Institute from Dr. Morizova, told us that it was part of the Academy of Pedagogical Sciences and that it was divided into 12 sub-divisions charged with various responsibilities in dealing with the research aspects of different defects. It was described as the only institute in the Soviet Union that deals with problems of abnormal development or, more correctly, with the psychological problems connected with abnormalities such as deaf-mutism, speech disturbances, blindness, mental deficiency, etc. Dr. Luria said that almost all psychology in the Soviet Union is connected with pedagogy; only a few psychologists are assigned to work in the medical or philosophic institutes or in some of the medical or other related fields. Though the Institute has a purely research function, and does not itself engage in the training of special teachers, it maintains close ties with teaching institutions and is closely allied with a special school for the handicapped, where special teachers were trained—though this was now unfortunately closed for the summer vacation period, when children are expected to be out in the country. All of the various departments of the Institute of Defectology are concerned with the basic problem of analysing the needs of these children so that both better diagnostic methods and improved teaching techniques can be developed. Much emphasis is placed on the improvement of diagnostic skills in these areas and occasional consultations are requested by other institutions for the study of especially complex or serious cases. Dr. Luria said there was a total of 60 scientific

workers active at the Institute, of whom some 10 or 15 were psychologists, some 7 or 8 neuropsychiatrists, and 20 could be described as "pedagogical scientists"; these were scientific workers recruited from the teaching profession. Actually the research activity of these various professional groups is scarcely distinguishable. In answer to a query of mine, he said only 1 or 2 pediatricians were involved in their work, mostly in a consultative capacity, and that the institute has no close tie to pediatrics. Dr. Luria's own area of interest currently centred around problems of diagnostic differentiation. Here he distinguished three main sets of problems: first, the problem of distinguishing between the truly feeble-minded with organic deficiencies and the pseudo feeble-minded whose educational backwardness had other than organic causes. The second group of subjects with whom he dealt were those with various sensory defects—visual, auditory or others. The third group were those with cerebral palsy or motor defects. In elaborating his description of his work, Dr. Luria declared that Dr. Eugene Sokolov, working at the Institute, had succeeded in measuring one important feature of mental deficiency for the first time in an objective way. He went on to explain that a child might fail at a learning task for any of several different reasons: possibly because of lack of specific experience, or because the child was actually organically feeble-minded, or because it had a sensory defect, or because there was some failure of attention. The work of Dr. Sokolov now made it possible actually to measure the intensity and extent of the attention or the orienting activities of the individual by means of EEG tracings and plethysmographic records, involving changes in the vascularity of the fingers and changes in the dilatation of the vessels of the scalp, especially the temporal artery. These simultaneous records now made it possible not only to measure the span of attention but also to gather data on the point of sensory discomfort experienced by a subject when his attention is over-extended or over-excited. These measurements have thus proven to be very useful in the design of various types of equipment for the use of these handicapped individuals so that for example the design and adjustment of hearing devices can be more rationally planned. The psychogalvanic reflexes, Dr. Luria added, are also of some use in these measuring techniques, but the other three measurements appear to be more basic.

Then followed a rather detailed description of Luria's own work in the measurement of attention reactions and its relationship to verbal reinforcement. Though the attention reaction may be reinforced by verbal means in the normal subject, Dr. Luria found it was characteristic of mental defectives that this verbal reinforcement tends to fail. On the other hand, the mental defective is readily reactive to a strong external stimulus, which fits in with some of our clinical knowledge of the distractibility of some defectives.

Dr. Lubovski, one of his associates, elaborated on some of his current work, which singles out the characteristic inertness or lack of plasticity of the higher nervous processes as one of the most important peculiarities of the feeble-minded. Here too, a good deal of experimental evidence was described to develop this concept of the lack of plasticity among the feeble-minded. Dr. Lubovski, in answer to a question, said he anticipated that this inertness would prove to be a physiological or psychological factor, rather than a result of pathological anatomical defect in these individuals. Dr. Luria made mention also of the successful use of some new anti-cholinesterase drugs for the relief of motor disabilities.

Dr. Pevsner, a psychiatrist whose new textbook on mental deficiency was

soon to appear, spoke with us for a while, and she too emphasized the importance of narrowing the concept of mental deficiency or oligophrenia, as Soviet physicians prefer to say, to those children who can be presumed to have suffered an actual brain injury in intrauterine, paranatal, or early infant life. She said it was reasonable to assume that the most characteristic pathological basis for this group of true feeble-minded cases was a diffuse lesion of the cortex. She felt one ought to exclude from this group epileptic, schizophrenic, or children suffering from other medical disabilities. She also felt that one should exclude those cases where the disability is really a debility or asthenia of the nervous system, that neurotic children should be excluded and those normal children who have an uneven tempo of development and who may get off to a slow start. Also, the group of children with sensory or motor defects should be excluded from the group of true feeble-minded. Dr. Pevsner acknowledged that there were some hereditary forms of mental deficiency, such as tuberculous sclerosis and other rare entities, but felt that the primary factors should be regarded as exogenic.

In further discussing her notion of the importance of the pathology of diffuse cortical injury, she acknowledged that certain other associated factors may be encountered, mainly of two kinds. She felt that hydrocephalus was a common associated factor in mental deficiency and felt too that a superimposed focal lesion may complicate a diffuse brain injury. Physiologically, Dr. Pevsner also felt that the crucial factor in the understanding of the pathogenesis of mental deficiency was the inertness or immobility of the feeble-minded child's reactions. Dr. Luria interposed that things may not be quite so simple, and Dr. Pevsner acknowledged that the element of permanent anatomical defect must enter into our thinking too, though the anatomical defect may well express itself, Dr. Pevsner thought, by contributing to the physiological inertness or lack of plasticity. From an evolutionary point of view, Dr. Pevsner emphasized that the mammalian brain has successively gained in plasticity, and the lack of plasticity could be regarded as a lower stage of brain development. From a clinical point of view, a leading symptom among mental defectives is their lack of capacity for abstraction or conceptual generalization. Three types were distinguished by Dr. Pevsner where the lack of plasticity could be described along Pavlovian lines: one type in which there can be found a weakened capacity for both excitation and inhibition; a second type in which the inhibitory functions are weak—these are the restless or excited children; and a third type in which the excitatory processes are weak. These are the torpid, indolent children. In dealing with these types, the hyperactive child is first taught inhibition by external restraint, so that a teacher may actually hold her hand over the mouth of a child or restrain hypermotility. At a later stage the child may be expected to impose, so to speak, his external restraint upon himself by clapping his own hand over his mouth, and at a still later stage the restraint becomes subjective, and this is an important gain for the child.

In answer to a question, Dr. Pevsner said that these various types are not segregated in special classes, but the special teachers are instructed to individualize their understanding and approach to these children. Dr. Pevsner felt that some of the newer drugs, including both stimulants and tranquillizers, could be usefully employed in correcting faults in these children, but she felt that the most important work is in the educational field and laid special emphasis on the correction of personality faults, such as impulsiveness. She also emphasized the regulatory role of both speech and activity.

Many of the experiments described at the Institute of Defectology were difficult to follow in detail, though they seemed important, and certainly worth more leisurely and detailed study. I was supplied with a number of books by our kind hosts, which are now being carefully studied at home.

In conclusion, Professor Luria indicated that much remains to be done to develop the work and importance of psychology in the Soviet Union. "There is a big discrepancy," he said, "between what we do in Moscow and what they do in Siberia, for example, where they may not even have psychiatrists available for their schools." He felt confident that in a matter of years these shortcomings would be corrected. Though Professor Luria insisted that psychologists do not and should not do clinical work or make clinical diagnoses, he felt their services could be much expanded and better utilized by both schools and psychiatric institutions.

#### KASHCHENKO HOSPITAL

One of our most enjoyable and interesting days in Moscow was spent visiting the Neuropsychiatric Clinic No. 1 of Moscow, known as the Kashchenko Hospital, whose director, Dr. Alexander Laurentievich Andreyev, was our host for the better part of the day. This gave us an opportunity to visit the children's section of the institution where we met the eminent child psychiatrist, Professor Sukhareva and her associate, Professor Simson. This hospital is another one of the eight Moscow district hospitals, one of which we had previously seen in connection with our visit to the Institute for Higher Nervous Activity. On this occasion Dr. Andreyev, a serious and elderly man, with some knowledge of my interests and work, received us most cordially in the usual manner by asking us into a conference room with a long green covered table. He sat at the end of the table with an associate woman physician at his side, and proceeded to read from a document in systematic style, giving us the past history of the institution, acquainting us with some of its traditions, and particularly emphasizing the huge contrast in the quality and size of the facility since the October Revolution. Built originally in 1894, with contributions from the Moscow population under the sponsorship of a certain Alexandreyev, the Moscow mayor of the time after whom it was first named, it later became known as the Konochikov County House, because it stood on the estate of that name, and is still so known to the local population. In pre-revolutionary days it had 805 beds, and a total staff of 168, including 6 physicians, 14 nurses, and 143 aides and attendants. It then operated on an annual budget of 200,000 roubles. Of particular interest was the fact that the present ratio of staff to patients was almost one to one, with a staff of 2,210 for a patient load of 2,400, the staff consisting of 168 physicians, 600 nurses, the equivalent of our registered nurses, and over 1,000 attendants or aides, as well as over 300 technical assistants, mechanics, cooks, etc., exclusive of housekeeping personnel. The annual budget now amounts to 40,000,000 roubles a year. In terms of commodities, the rouble is roughly equivalent to 10 cents—the tourist rate of exchange. In terms of salaries, the rouble is worth much more, since 1,000 roubles a month can pay for the services of two maintenance workers, and 1,200 could pay for a physician.

The hospital is mainly an acute service. Patients are usually not kept there longer than a few months or a year; chronic cases are then transferred to chronic hospitals. Of the 2,400 beds, 240 are reserved for children.

It was a pleasure to look through this well kept hospital. Though the

structure was by no means new, it was pleasant and extremely clean, the rooms were homelike, with plentiful use of potted plants and ferns, and the patients were obviously made to feel welcome, were accorded kindly and most adequate nursing attention and, from all that I could see, excellent medical care. The disturbed ward was relatively quiet, the sedated patients seemed to be sleeping easily in bed, and other patients were quite well controlled. In the convalescent wards the patients were beaming, and in the outside gardens a number of them were seated or strolling. They looked quite normal to us, and a group of them on a bench, with Dr. Andreyev's encouragement, agreed to sit smilingly for us while I snapped their picture.

Particularly enjoyable was the visit to the children's building some distance away from the main hospital building. There we were joined by Professors Sukhareva and Simson, two rather large short women; Professor Sukhareva gave an impression of maternal competence; Professor Simson, a large and mild woman, also seemed serious and competent, and both of them were extremely friendly to us. We met a large group of the children out in the gardens, since none of the children were indoors on this pleasant day, and here too we could scarcely detect any abnormalities of attitude or behaviour in the group of some 30 children that we saw. They ran eagerly to us when my wife offered to distribute a few picture postcards with New York scenes, and since so many of the children seemed disappointed not to have pictures, we were tempted to distribute some of the shiny copper American pennies we had brought along. After a quick conference between Drs. Sukhareva and Simson, Dr. Simson said mildly it was probably best not to distribute the money.

We then sat in the garden arbour for about an hour, exchanging views, sipping tea, eating open sandwiches, cakes and oranges, and the occasion proved to be delightful. Actually in the exchange of views nothing very new emerged that I had not been previously acquainted with from the literature. They had a number of queries to address to me about the state of American psychiatry, but I find I have very few notes, no doubt because very little new information was offered to me.

The workroom of the children was most interesting and amusing to us, since it consisted almost entirely of small animals, pigeons in cages, goldfish in their tanks, hamsters, hedgehogs, rabbits and mice, all of them well kept in their enclosures, almost entirely free of unpleasant odours. Professor Sukhareva said simply that children love animals and added that an autistic child that would not relate to any human being would often relate very well to a pigeon that was placed in the child's care. Outside in the garden there were other caged animals, including a monkey, and everybody seemed to enjoy the menagerie. I recall Professor Sukhareva mentioning that autism was a symptom encountered in a variety of conditions; in her opinion it apparently did not correspond to an entity. I also recall some mention of the use of insulin in a child with schizophrenia. She made much of a particular common neurotic syndrome that interested her, in which the children refused to eat because they want to remain thin. I assume details of these interests of hers will be found in her writings.

Dr. Andreyev insisted on presenting my wife with some samples of the patients' handicrafts, taken from a display case. At another point, as we proceeded through the gardens, my wife was presented with a large bouquet of flowers. The period of exchange of views came to an end, we thanked our hosts and departed after an afternoon that was unusually pleasant.

## KORSAKOV INSTITUTE OF PSYCHIATRY

Two days later I met with Professor Popov, who returned to his empty clinic from his vacation to meet me. I have full notes of his remarks, since he delivered them to us in his small office in deliberate professorial style in rather good German, and I also found that his remarks to me corresponded pretty fully to the remarks addressed to Dr. Zigmund Lebensohn and reported in Dr. Lebensohn's recently published report. He conducted us through the empty teaching hospital, which is not used during the summer vacation period, since it is primarily a teaching hospital where patients are seldom kept more than a month or two during the active school year and are usually transferred to other hospitals after their teaching and research uses are over.

Professor Popov explained that at the Korsakov Psychiatric Clinic neurology is separated from psychiatry, and that the two specialities have been separated in the medical schools since the Revolution, though hospitals unaffiliated with medical schools still treat both kinds of cases. Nevertheless the term neuropsychiatric is preferred for psychiatric hospitals like the Korsakov Clinic, since the word "psychiatric" still sounds forbidding.

Medical schools in the U.S.S.R. are no longer medical departments of the Universities but are now established as separate Medical Institutes throughout the U.S.S.R. except for the smaller provincial universities. Medical schools have separate divisions: public health, pharmacology, dentistry, etc. All medical students receive a basic training, supplemented by additional training in one or more of the special divisions. Korsakov Clinic has responsibility for medical student instruction, postgraduate training, research and treatment.

We got along very well. I found Professor Popov's views in general congenial, though they seemed, as is so often the case, to be a little too formally Pavlovian, with a tendency to neglect more refined psychological description and diagnosis, and a tendency also to underestimate and to neglect chemical considerations. On the whole, his views on treatment could be matched in most essentials by those of many psychiatrists in the States; his interest in the use of sleep treatment and insulin treatment contrasts with our current practices, though I myself would like to see a much wider extension of the use of both these treatments.

Professor Popov spent considerable time describing the different varieties of sleep treatment, making a sharp distinction between sleep treatment and prolonged narcosis, emphasizing the danger of the latter. "While the patient sleeps the doctor cannot sleep well." In the 1930's prolonged narcosis with Cloetta's mixture was very widely used but proved to be dangerous and fatalities were too common. For that reason prolonged sleep with smaller doses of sedative was substituted. Hypnotically induced sleep, based on different kinds of rhythmic stimulation, is also used, but seems not to be so effective in schizophrenia. Prolonged sleep gives excellent results in certain neuroses and in neurasthenia, where the characteristic weakness of internal inhibition is strengthened by the sleep. Sleep treatment is also helpful in obsessive and compulsive states. Sixty to eighty per cent. of the psychasthenic obsessives respond well, though relapses are common. Transient obsessive states occurring in otherwise normal people respond extremely well, and 9 out of 10 cases remain permanently cured. The treatment can also be used for obsessive states occurring as an incident in other psychoses. Sleep treatment also gives excellent results in reactive depressions, but results are not so good in endogenous depressions.

He discussed the theory and practice of Giliarovskii's electrosleep treatment and declared that all of the sleep treatment modalities, since they differ in their mechanisms and therapeutic effect, must be used with judgment and skill. "It's not the fiddle but the fiddler that makes the music," he said.

In recent years, said Popov, there has been increasing criticism of electroshock treatment. Giliarovskii wanted to eliminate it entirely, but Popov thought it had value as a last resort, especially in chronic resistant cases of depression or schizophrenia. It should be contraindicated in neuroses. The small haemorrhages it is known to produce, the memory difficulties, the delay in establishment of conditioned reflexes after treatment, all indicated that the treatment has certain undesirable consequences.

Professor Popov was well acquainted with the newer drugs, but thought some of them, like Marsalid and Tofranil, needed more careful physiological analysis. In schizophrenia he preferred insulin to the newer drugs and suspected that their vogue in America and Switzerland was influenced by economic and commercial considerations. He felt that the newer drugs tended to be more symptomatic than basic in their action. He thought chlorpromazine could often best be used after insulin or sleep treatment, which often obviated the need for prolonged medication. Of psychosurgery he said, "It does nothing that cannot be accomplished by other methods."

He discussed their system of rational psychotherapy with me, as well as their use of hypnosis and suggestion, agreed that psychotherapy had an important place in psychiatry, and conceded that "We have too few books and articles on the subject of psychotherapy". But, he went on to say, not every human problem should be dealt with psychotherapeutically. "If a woman is not true to her husband that is a misfortune, but not a disease . . . Read Makarenko [the famous Soviet educator]. Those children he described were not psychopathic but just poorly trained. You should speak of education, and not of treatment."

Professor Popov then conducted us through the empty hospital, demonstrated the sound-proof room in which the sleep treatment is sometimes administered, and showed us the small ward where, with dim lights and low voices, patients undergoing sleep treatment are shielded from extraneous stimulation. Later, when I asked to take a snapshot of him, he suggested that he stand before the statue of Korsakov in the courtyard, grabbing our arms while someone photographed us, in a sincere demonstration of friendly feeling.

#### A CHILDREN'S HOSPITAL

On 18 July we visited the Municipal Hospital in Moscow for Sick Children, Hospital No. 1, and were again hospitably received by the Director, Professor Prokhorovitch. He was a kindly man with a slow and deliberate manner, who kept his eyes almost completely closed while talking. We were later told that this was a residuum of an encephalitis he once had. The discussions were conducted mostly with the aid of an assisting woman physician who spoke French. We were told that this hospital serves the entire city of Moscow and serves as a teaching and training institution. Though there are two other paediatric polyclinics in the city, this apparently is the most important paediatric institution and is a model for other hospitals in the outlying areas. Eighteen per cent. of all hospital admissions for children in the entire Soviet Union are said to take place here.

The hospital and its affiliated suburban sanatorium are divided into 20

sub-departments or pavilions, to serve special needs such as nutritional diseases, infectious diseases, rheumatic diseases, etc.; unfortunately the chief of the psychiatric service was away on vacation. There was some preliminary discussion of the relationship of neurology to psychiatry, and a young paediatric neurologist asked us about the current use of the Salk and Sabin vaccines in the United States. We were told that about 50 cases of polio are admitted each year to this hospital and that a separate pavilion is kept for these cases. We visited several of the pavilions where the buildings, as usual, were not new nor up to the polished, finished standards of the better American hospitals. The wards were nevertheless extremely bright, pleasant and spacious, and practically all of the older children had their beds moved out into the open air gardens which surround the buildings, or were out of bed busying themselves with toys or simple games outdoors. We were impressed by the big ratio of staff to the children. Women physicians seemed plentiful, and nurses were everywhere at hand, and no child lacked individual attention. I was told that even children who are febrile are kept outdoors in good summer weather, and there is a general belief in the importance of fresh air. The younger children in other pavilions, up to the age of six months, were more often than not found with their mothers at their bedside. Arrangements are made for mothers whose homes are distant to actually live in the hospital while their child is there. We saw other elaborate isolation and quarantine arrangements. The quarantine arrangements are made even in the case of normal healthy children who have been exposed to some infectious illness. These children are kept in large, light rooms opening on the garden. Their mothers were frequently found with them. Food was served to them through a special arrangement of double glass doors, so that no direct contact is made with the child or mother. We saw plentiful supplies of toys and equipment for the children, and we heard constantly of the great importance of having the young infants nursed by their own mothers. We were told that in general 90 per cent. of the children are so nursed. In those few cases where this is not possible, actual mother's milk is provided. We commented on the warmth of the atmosphere, and Professor Prokhorovitch made no bones about saying explicitly that the first requisite for suitable hospital arrangements and good paediatric care is that one must love children. On leaving, we were asked to make some entries in their guest book, and we wrote some friendly words, noting that the book also contained some friendly comments by Milton Senn, who was there some time ago, and that he was especially impressed by the emphasis on direct maternal care. We also saw an entry by the Bakwins, who had also been there.

I was interested in Professor Prokhorovitch's observations on their attitude toward normal but weak children. Whenever children are encountered who have no specific disease but who seem to be in poor condition, they are given special attention and encouragement, and regimens are provided to build them up, without relation to any specific disease.

On the afternoon of 20 July, the day we left Moscow, we met again with Dr. Dimitri Benedictov at the Health Ministry, together with Dr. Serebriakova, the assistant to Dr. Babaian, Chief of the Psychiatric Section, who was away in Cambodia. We asked a number of questions on the organization of psychiatric care, but Dr. Serebriakova, through considerations of caution I believe, in the absence of her chief, asked me to leave copies of my questions and said she would mail the information to me (P.S. It never came.)

The role of the psychiatric section of the Health Ministry was described



to us as mainly administrative, though it contributes, in close co-operation with the scientific specialists, to the making of psychiatric policies. The present tendency and practice in the U.S.S.R. is to separate the professions of neurology and psychiatry. The psychiatric specialist is required to have two years of general medical training after medical school graduation, followed by three years of special training. If he pursues a research career three additional years of scientific training are required for the attainment of professorial rank, which in the U.S.S.R. signifies a senior research worker as well as a teacher. When I commented that Soviet psychiatry seems relatively uninterested in mild or borderline disorders, I was told that on the contrary, because of their interest in prophylaxis the mild conditions have always interested them, and that their psychiatric hospitals have special in- and out-patient departments for the neuroses.

We spent the remainder of the time discussing the general question of improving contacts between the psychiatrists of our respective countries. Dr. Benedictov had a number of complaints about the formal difficulties his Ministry was encountering while I, for my part, also made a few complaints about the complexity and awkwardness of communication when somebody like myself tried to arrange a trip with a sincere wish to study their facilities. Dr. Benedictov emphasized the necessity for preserving the formalities of inter-governmental arrangements, in view of the fact that a treaty for scientific exchange has been signed between the countries, and said in a convincing manner it would be difficult and undesirable to circumvent official channels in making arrangements for professional contacts. He gave me considerable useful advice on sources of printed material, and in general the contact proved to be a useful and friendly one. I was impressed by the clipped British pronunciation of one of the assistants, a Mr. Brook, who spoke so impeccable an English that I could have sworn he was British himself, though he assured me he had never visited either America or England. If he hadn't been wearing that brightly patterned sport shirt I said I would have taken him for an Englishman, and he laughingly told me that the shirt happened to be of English manufacture.

#### LENINGRAD

##### BEKHTEREV NEUROPSYCHIATRIC INSTITUTE

Arrangements to visit this institute were made by prior correspondence with Professor Miasishchev, who promptly returned from his vacation residence to meet us at his Institute soon after our arrival in Leningrad. Professor Miasishchev proved to be an older man of dignified and quiet bearing, who showed us every attention and consideration. He asked whether we could spend two days at the Institute, but unfortunately we did not have time enough for this. Professor Miasishchev invited half a dozen of the key people on his staff to join with us in a preliminary conference before we toured the Institute. Here, as elsewhere, we were promptly briefed on the historical development of the institution and specifically on its relationship to Bekhterev. The curator of the small but well-developed Bekhterev Museum conducted us through it, laying particular emphasis on the breadth and humanity of Bekhterev's interests, showing us with special pride the contemporary account of Bekhterev's espousal of a Jewish victim of unjust charges in a Russian equivalent of the Dreyfus case, an advocacy of an unpopular cause which brought prompt recrimination to Bekhterev.

Professor Miasishchev expounded his general views on psychiatry as follows:

“Physiology is the basis of our psychiatry, but it cannot be its only basis because it is not sufficiently developed; we must also depend on empirical clinical observations. We must also reckon with the greater complexity of human material compared with Pavlov’s experimental animals. We have reason to believe, for example that when we implicate the secondary signal system of man, we will find it necessary to recognize more than the classical four types described by Pavlov. The thinking process in man is very varied: mathematical thinking, constructive thinking, artistic thinking must all be quite different things. We do not want to overlook the physiological basis, but we are obliged to depend a great deal on psychology in our clinical thinking. Before the Revolution our psychiatry was mostly oriented in the direction of philosophic idealism; after the Revolution it was mixed, with some tendency to become mechanistic. We now have the task to bridge the gap between personality study and its physiological basis.”

In addition to Professor Miasishchev, the Director of the Institute, there is an administrative director who carries all the routine administrative burdens with the help of an administrative staff. The three other main divisions of the Institute are a clinical or hospital section, a polyclinic or dispensary, and a research or laboratory section. The clinical section has 400 beds and 40 physicians, and is divided into separate departments for male and female adult patients and for children, with separate sections for cerebro-vascular disease, and a section for milder border-line cases or neuroses. In addition, there are three neurological sections, one for epilepsy, one for cerebro-vascular neurological disease, and one neurosurgical section. The hospital deals mainly with acute case material, generally keeps patients for two or three months, does its own follow-up work in the out-patient department, and transfers chronic cases to a chronic psychiatric hospital on the outskirts of the city.

The research section had separate laboratories for anatomy, pathological anatomy, electromicroscopy (we saw two electron microscopes there) biochemistry, bacteriology, pathophysiology, electrophysiology, and psychology. There is also a separate laboratory for the neurophysiology of nervous activity. The Institute has several facilities for animal research. The research section is staffed by 40 scientific workers and 40 technical assistants.

The out-patient department has a separate staff of six physicians, but the hospital staff also assumes assignments for out-patient work (though Professor Miasishchev said the assignment is not popular with the doctors). The out-patient facility does a good deal of consultative work for other medical referral sources, does clinical research, and is used for post-graduate teaching. In most cases the actual follow-up work is done in the local district clinics nearer the patient’s home.

Staff physicians are also expected to do a certain amount of popular educational work and will visit factories to give lectures on preventive aspects of psychiatry, on alcoholism, etc. In response to my question, Professor Miasishchev said these assignments were also not very popular with the doctors, and added with a smile, “Our physicians like best of all to work on the wards with our in-patient cases”.

Professor Miasishchev said, in response to a question, that he regarded schizophrenia as a clinical disease entity, but recognized that it is difficult to differentiate it from certain other conditions which produce a similar clinical picture. He regarded schizophrenia as an “autotoxic degenerative process”

but added that other Soviet psychiatrists believe it may represent an infectious or post-infectious condition. He felt that the genetic factors were not being adequately studied in the U.S.S.R. at the present time. He did not believe that there was one specific treatment for schizophrenia; one must try various methods. In a typical acute case of catatonic excitement without specific aetiological factors in a young man, for example, treatment might begin with 300 mg. per day of chlorpromazine (or with reserpine). Chlorpromazine dosage is kept at more moderate levels in the U.S.S.R. than in the U.S.A. and seldom exceeds 500 to 600 mg. per day. Professor Miasishchev said that insulin treatment is being used somewhat less often lately. Deep coma is induced for about 30 minutes, and the total treatment period lasts about four hours. Coma is terminated with intravenous glucose. Tube feedings are avoided because of the danger of pneumonia. If the patient does not arouse at once after intravenous glucose, he is given a little sodium amytal. There are no fatalities from insulin treatment. Sleep treatment is also used, generally in modified form, with 13 to 14 hours of sleep a day for about 10 days. Sleep is induced with a barbiturate (sodium amytal, Medinal) sometimes combined with chlorpromazine. Suggestion is also used to reduce dependency on drugs. Electrosleep is used in milder cases. In insulin resistant cases sulphamide and carbutinide are used (2-3 g. per day), as described in the French, German and Italian literature. Electroshock treatment is used in the treatment of depressions and involuntal psychoses, as well as in combination with insulin or with chlorpromazine. The chlorpromazine is given in a single dose at the same time the electro-shock treatment is administered; with this method of combined treatment the complication of vascular collapse does not occur.

Professor Miasishchev felt that sleep treatment had been over-stressed in recent years in the Soviet Union. He believes that Pavlov was misunderstood in this regard. Though Pavlov recognized its importance, Soviet psychiatry exaggerated its claims. Furthermore, said Professor Miasishchev, drug-induced sleep is not the equivalent of natural sleep—and the induction of natural sleep presents very difficult problems. At any rate, sleep treatment has been used less often lately. The mechanism of electro-sleep was obscure. Professor Miasishchev thought it improbable that it operated by direct action on the brain, and was inclined to emphasize the factor of a rhythmic sensory stimulus to the skin. He also felt the surrounding atmosphere and suggestive influences played a role.

Professor Miasishchev told me there were then 4,600 psychiatrists in the U.S.S.R. The number of hospitalized psychiatric cases had declined in recent years. Dr. Zenevich, a member of his staff, told us that recent studies in Leningrad which he had undertaken revealed that there were 1.1 active cases of schizophrenia per 1,000 population. Dr. Zenevich said that careful registration is maintained of all cases either in the hospitals or in local dispensaries, where the cases are followed up for at least five years before they are closed, so that the reliability of the statistic cannot be questioned. A few weeks later in Georgia, 2,000 miles away, a similar statistic was given to me by Professor Zurabashvili of 1 to 1.5 per 1,000 in Tiflis. This can be compared with the figure cited by Lemkau (*Mental Hygiene in Public Health*, 2nd ed., page 143) of 2.9 per 1,000.

In our tour through the Institute, we were especially impressed by the arrangements for work activities for psychiatric patients, including those in follow-up care. We saw three large work sections, fitted out for real factory production, one of them for the spinning of yarn, with bobbins attended by

active workers, a second for the weaving of Jersey cloth, and the third equipped for the manufacture of fountain pens, two samples of which were given to my wife and me (and have been in use since). We were told that 20 per cent. of the patients working in these factory units were feeble-minded. All of them are paid for their work, 200 roubles a month is a minimum, and earnings may be as high as 1,000 roubles a month. Patients who for any reason are not receiving a pension (a woman who had never worked, for example) are provided with a basic 250 roubles a month, while they are ill in the hospital, and may earn several hundred roubles in addition, by working in the shop. As long as a patient is in the hospital he may retain only 30 per cent. of his work pay, 70 per cent. going back to the hospital for the expansion of work facilities. As an out-patient, he gets full pay. When he is well enough to do normal work he transfers to a regular factory. We noted that each worker had a production norm, based on his ability to work, which was posted on the bulletin board. The patients appeared to work happily and eagerly, and we were favourably impressed by this work programme.

Professor Miasishchev was good enough to telephone the Institute for Experimental Medicine to arrange some appointments for me next day, 25 July, 1959. This gave me an opportunity to again see the Director, Professor Biriukov, whom I had previously met several years ago (together with the late Professor Bykov) at the International Physiological Congress in Montreal. I was again received most cordially. One of the staff engineers, D. Menitsky, a handsome intelligent young man with half an ear shot off, served as interpreter. I was told that each of the some dozen sub-divisions of the Institute had its own engineer and technical assistant to help in the development of special instrumentation and that the Institute has its own instrument factory, where 70 workers are employed. I was fortunate to find Professor Kupalov at the Institute that morning, since he had come in from his vacation for a special conference the day before. He was a charming, elderly person of mild and rather subdued manner, who spoke English well, and is generally regarded as the most distinguished living pupil of Pavlov. He demonstrated to me a German shepherd dog with bilateral fistules of the lower jaw which permitted unilateral stimulation of the tongue for conditioning experiments. Professor Kupalov explained that they were thus able to produce a conditioned unilateral salivary response by touching the exposed portion of the posterior region of the tongue with acid and that they observed a persistence of this unilateral salivation for long periods after the unilateral conditioning ceased. Furthermore, a general tendency to increased salivation after all types of stimulation was noted in such dogs, so that this type of unilateral stimulation was apparently associated with an unusual persistence, inertness and radiation of excitatory tendencies. In another example of unilateral conditioning, Professor Kupalov demonstrated a pathologically abnormal persistence of flexion of the front paw for several years, initially in response to a mild shock, but later in response to simple binding of the front paw.

In another series of experiments, visual rhythmic stimuli were applied at different rates to each eye simultaneously, 5 per second to the right eye, and 7 per second to the left, over a period of several weeks. Spike waves were observed to develop on the EEG over both the visual and motor cortex, associated with clonic epileptic motor manifestations. These changes develop at first in direct association to this complex stimulation, but later would develop in response to all kinds of stimuli as a generalized undifferentiated response pattern.

In discussion of this work Professor Kupalov said it would be premature to relate these experiments to human clinical problems: "There are still too many big gaps between physiology and psychology." Professor Kupalov agreed with Professor Miasishchev that Pavlov's four basic types should not be uncritically applied to human beings. "We have trouble enough understanding the behaviour of dogs—with man it is unfortunately even more difficult." Nobody in the U.S.S.R., he added, has achieved a satisfactory statement of the application of Pavlovian principles to human pathology and psychology.

Professor Kupalov told me he was working on a general textbook on Pavlovian physiology, which he hoped time and strength would permit him to finish. When I spoke of the general quantity and quality of the output of the research institutes he said somewhat sadly, "We have been through so much and so much time has been wasted. So much more could have been accomplished if conditions had permitted."

Professor Kupalov showed me around a little, and had me sit in a booth to observe some conditioning experiments with a dog involving spatial orientation. The procedure involved the shifting focus of a sensory stimulus—a metronome beat in a movable box, which the dog had to scratch with the paw in order to release a food pellet elsewhere in the room. By shifting the box to various positions on the floor and finally hanging it on the wall, the dog's ability to discriminate a stimulus in a changing context could be studied. I was able to take a few snapshots of the procedure. Professor Kupalov told me that Pavlov worked in this Institute for a long period and that its name was only changed to the Institute of Experimental Medicine some years ago, as one of the consequences of the Orbeli-Bykov differences. He led me to Pavlov's former office, which is preserved unchanged, and unlocked it to show me in, saying with a mild smile that he still feels overcome with emotion whenever he enters the room. He allowed me to take his picture in front of Pavlov's desk and I snapped another picture outdoors of Professor Kupalov, before the famous statue of the dog in the courtyard. I felt fortunate that I had the opportunity to meet with him.

Professor Biriukov, upon my return to his office, went to considerable trouble to arrange for a quick visit to the Pavlov Institute at Koltushi, since this was already the afternoon of Saturday, and we were scheduled to leave Leningrad on Monday. He made a number of phone calls, rounded up a car and chauffeur, and I was driven forthwith some 30 or 40 miles outside the city to Koltushi, passing en route through several small old villages of the sort few American tourists see.

Koltushi is a rather extensive area, where a good deal of the animal work in conditioning is done, while the Leningrad section of the Pavlov Institute is more oriented to problems of medical interest and human physiology. The grounds looked neglected, by American standards, and the older buildings seemed drab, but a large new laboratory was being erected, and was actually the only new institutional construction that we saw in the Soviet Union. Though most of the important scientific workers were away on vacation, we were met by Professor V. K. Federov, the brother of the well-known psychiatrist, who very kindly showed me about and demonstrated some of his work to me. Professor Federov's special area of interest was the study of physiological types, and he was currently conducting special studies to see if certain neurophysiological types in the white rat stood in any relationship to susceptibility to malignancy. Professor Federov also agreed that the problem of types is unsettled, even for animals. Even when certain tendencies or con-

stellations are encountered in certain animals, we cannot always say to what extent they are genetically determined and to what extent due to post-natal causes. In his animal work Professor Federov said he found that influences during the first three months proved to be especially important. In his current work he used both small and large rats of the Wistar strain and said he found significant statistical differences in relationship to cancer development between fast learning and slow learning rats. He stated that in one series of experiments his results were negative, but in two other experimental series, positive correlations were found and that he could confirm these correlations in rabbits and in bats as well. He added that somewhat similar work had been done by Bagg in New York back in the 1920's.

We briefly visited Pavlov's old office and study, now preserved intact, commanding a broad view of the grounds through large surrounding windows; I then thanked my hosts and returned to Leningrad.

On Monday morning, 27 July, I called upon Professor Soloviev, Director of the Leningrad Pavlov Institute, and spent part of the day visiting the laboratories under the guidance of Dr. Lanii. I was told that the main areas of interest of the Institute at the present time represented a continuation of Bykov's work on cortico-visceral relations in both man and animals. Work was also proceeding on the problem of experimental neurosis along classical Pavlovian lines, and studies were also being conducted on problems of the secondary signalling system. In response to my questions, I was told that hypertension was regarded as basically a nervous disease: the endocrine involvements were regarded as secondary. When I asked about their view of the role of the nervous system in tumour development, I was told "The question is not so simple; we are studying it further".

The combined Pavlov Institute—in Koltushi and in Leningrad—had a total of 28 separate laboratories. There were a total of 700 scientific workers in the Institute, 220 of whom were on the level of Professor, Candidate, or Scientific Worker (which is the rank just below Candidate). The rest were qualified and specially trained technical workers. The budget of the Pavlov Institute currently amounts to 12,000,000 roubles a year. We visited the Electrophysiological Laboratory (Director Dr. Jelloff), where Dr. Adamovich explained some of the current work on the problem of ulcerative colitis. It was believed that ulcerative colitis reflected a pathological imbalance between sympathetic and parasympathetic innervation, with vagotonia predominating. They believed the condition was a result of life experiences and not due basically to constitutional factors. I was told that Professor Kurtzin (he was away on vacation, though I had met him a year before in New York with Professor Bykov), had produced both peptic ulcers and ulcerative colitis by inducing classical neuroses.

Dr. Adamovich was currently engaged in studying the electrical activity of afferent nerves (splanchnic plexus and pelvic nerve) in response to changes in the condition of visceral organs. An experimental urinary cystitis was induced by coli infection, for example, and the electrical changes were then recorded. The instrumentation and techniques were sensitive enough to record changes when a visceral organ was full or empty, when it was exposed to mechanical or other types of stimulation, when different types of food were ingested, etc. We spent considerable time with Professor Balakshina who was working in Professor Kurtzin's laboratory on the relationship between gastric secretion and experimental neurosis in dogs. She told me that the secretion is increased after a neurosis is induced, especially in the small stomach. An

interesting research conducted by Professor Balakshina demonstrated that the production of visceral conflicts—analogueous to external conflicting stimuli—could also produce a classical neurosis in dogs. Professor Balakshina provided me with some published material describing her work and also told me that Dr. Carson, a physiologist from the University of Kansas, had spent considerable time there last year.

#### KIEV

##### INSTITUTE OF PHYSIOLOGY AND HIGHER NERVOUS ACTIVITY

This Institute was organized in 1944 by the late Professor Protopopov, a pupil of both Pavlov and Bekhterev. At the present time it has a staff of 300, of whom 100 were described as senior level. At the Institute I had an opportunity to join in a group discussion with Drs. A. Z. Kolchinskaya, S. D. Rasin, and R. C. Zlotin. Dr. Rasin told me that Protopopov and his associates had cultivated a special interest in the problem of schizophrenia for the past 20 years. They have also done a good deal of work on the problem of sleep treatment. Various methods of sleep treatment were employed, including both prolonged and interrupted sleep, induced by sodium amytal, Medinal and other barbiturates. Electrically induced sleep was also used, but I was told that a naturally induced or conditioned sleep was always preferable. Dr. Kolchinskaya told me that for the past eight years special interest was being given to the hypoxic theory of schizophrenia and methods of treatment had been developed involving acclimatization to low oxygen tensions, both in low pressure chambers and at high altitudes. In a series of 30 predominantly chronic cases, I was told that some of the results were "very encouraging". Before I left I was shown a motion picture film depicting the changes in behaviour in some of these chronic schizophrenic patients after a month at 4,000 metres. There was no doubt that a number of them had improved as a result of the experience, but it was difficult to determine exactly how much of the improvements could be directly attributed to the low oxygen tension. A control group treated similarly at sea level showed no comparable improvement. Dr. Rasin told me that they felt the benefits of electro-shock treatment could also be ascribed to the compensatory stimulation of oxygen uptake that followed the shock treatments. In general, they were reluctant to use electro-shock treatment, since they found that even as few as three to five treatments could produce harmful changes in patients. I was told that insulin coma treatment is still very highly regarded in the management of schizophrenia. One of their staff doctors, Dr. Kamarsorinko, has for some years taken a special interest in insulin treatment, did a number of studies of cerebral metabolism, and visited America several times.

Dr. Kolchinskaya described some studies on the toxic effects of protein foods in dogs. Dogs with an Eck fistula would remain normal so long as they were kept on a meat-free diet, but would develop a schizophrenic-like syndrome when meat was added to the diet: the development of the syndrome was associated with a diminished cerebral metabolism. I was also told that even normal sleep is associated with a reduced cerebral metabolism. When I queried this, I was shown what looked like an authoritative statement to that effect in Harris's *Mode of Action of Anaesthetics* published in England in 1951. I was told that in Kiev most psychiatrists regard schizophrenia as a specific disease entity, but that opinion on this subject is sharply divided elsewhere in the U.S.S.R.

Another worker, Biriukovich, has found that manic depressive psychosis is associated with abnormalities in carbohydrate metabolism, and that a tendency toward a diabetic type of glucose tolerance is found. If routine studies of glucose tolerance are made during a period of remission, it is found that these abnormalities can be detected before the actual onset of a psychotic period. Manic depressive psychosis is treated with small doses of insulin, an alkalinizing diet to combat acidosis, sedatives such as chlorpromazine, and a special Russian preparation called Lipokayin, which promotes the conversion of sugar to glycogen and prevents fat deposition. I also heard here for the first time of the "Triad of Protopopov" found in manic depressive psychosis: tachycardia, mydriasis and constipation.

Marsilid was regarded as a very effective drug. Chlorpromazine dosage is kept moderate, by our standards, with a usual maximum dosage of 500 mg. per day.

In response to a question, I was told that the Bogomolets antireticulocytotoxic serum was now used only as an auxiliary treatment, though used fairly often, especially to prepare patients for other more active forms of treatment. It was found to increase sensitivity to insulin, and in general to increase the reactivity of the patient. The Bogomolets serum was still being widely used in the treatment of osteomalacia, for example, to promote callus formation, as well as in other medical conditions.

An interesting person we met at the Institute was a handsome and serious woman, Professor H. B. Lauer, the author of a book on problems of hypoxia in disease, who showed us through her laboratory. She was well acquainted with the work of American authors, especially Dr. Harold Himwich, and gave a copy of her book, expressing the hope that Dr. Himwich would get to see it. She also showed us a new heart-lung apparatus that was being used in her studies.

The film we were shown gave an impressive account of striking remissions in chronic catatonic cases ill for three years or more, after a month's exposure to mountain life at an altitude of 4,000 metres. A similar group of patients, given a similar vacation experience in a lovely scenic spot at sea level, failed to respond. Schizophrenic patients, we were told, have a remarkable tolerance to low oxygen pressures. All of this work was initiated under Professor Protopopov and is now being continued by Academician Serotinin.

#### A HOSPITAL TOUR IN KIEV

Through the co-operation of our Intourist Office, I was able to meet with Professor Pietr Danielovitch Leschenko, an epidemiologist and recent Ukrainian delegate to the United Nations, who was Acting Minister of Health for the Ukraine. Though he did not use a word of English, he received me with the greatest cordiality, and we spent 20 minutes maintaining a disjointed conversation in Russian, which earned me the dubious compliment of being told "You know a great many Russian words", until an interpreter came to our rescue. We continued our conference after being joined by Konstantin Mikhailovich Pavlienko, his non-medical administrative assistant, and Dr. Raissa Vasilieva Medianik, the paediatrician in charge of the child care programmes of the Ministry. Professor Leschenko asked me what I wished to see and immediately made provision for me to see everything I desired, asking Dr. Medianik to assist in the arrangements. He spoke of two recent visits from American delegations, one of biochemists, one I believe of endocrinologists,



and obviously welcomed these contacts and attentions. He wanted to send me back to my hotel in his limousine, offered it to me for use next day, and telegraphed ahead to Kharkov to Professor Kovalenko, Chief Psychiatrist in the Ukraine, to arrange my reception there.

Next day, 31 July, Dr. Kirilova, a pediatrician from the Health Ministry, called upon us in the morning, as agreed, and we spent the day with her, accompanied by an interpreter, visiting various facilities.

The first of these was the Pediatrics Department of the Polyclinic of the Shevchenko District, one of nine regional polyclinics in Kiev. We met with the woman director, Dr. Eugenia C. Kavolovskaia, who explained some of their procedures and policies to us. Preventive health work is actually begun before the birth of the child during the second half of the mother's pregnancy, when the mother begins to get advice on child care while her maternity status is under surveillance. After the seventh month of pregnancy the mother gets leave from her work with full pay. After the delivery of the child in the obstetrical service, the pediatrician from the clinic visits the infant several times before mother and child are discharged, "to get acquainted". After discharge the infant is seen three times a month, either at home or in the clinic, depending on the child's condition, though clinical visits are generally preferred. After three months, examinations are continued at monthly intervals. From the age of one to three years, there is an examination every three months, and after the age of three, there is an annual examination, if the child is healthy. In the event of illness or of special medical problems, the services are of course increased.

The Polyclinic serves a population of mostly healthy babies, but will also take care of milder disorders suitable for out-patient service, and will sometimes call in consultative help. For more serious illnesses, the child is hospitalized. Kiev, which has a population of 1,100,000, has 22 similar dispensaries in the city, and 20 children's hospitals. Each clinic doctor and nurse together serve a specific geographic area and will meet their cases either at the clinic or through home visits. Children continue to attend this pediatric clinic as long as they attend the 10 year school, which means until they reach the age of 16 or 18. Thereafter, they attend the adult clinics.

This particular clinic services a population of 16,000 children, and is staffed by 53 physicians and 113 nurses. There are also five dentists. In response to my question, I was told that there are two neuropsychiatrists on the staff, one neuropsychiatric nurse and a consulting *Dozent*, who is at the clinic once a week. Actually, most of the work of the neuropsychiatrist is neurological, and there appears to be a relatively little psychiatric activity. Psychiatric problems, we were told, consist mainly of neuroses, such as autonomic dysfunctions. I was told that mental retardation is "very rare" and that in the past four years only one case of schizophrenia was encountered. One case of mongolism is found among 500 children and tends to occur among the older mothers. Mongoloid children are kept in separate groups in the nursery schools and in kindergarten, and later attend special schools. They usually live in these nurseries, but may be at home for week-ends; later, in kindergarten, they may live either at home or at school. The director knew of only one case of phenylketonuria that had been discovered at her clinic. She was evidently embarrassed to admit, in response to my questions, that she did not know of the existence of any special dietary treatment; "I forgot", she said and then quickly jotted down the information which I gave her.

Prematurity is defined, as we define it, as a birth weight under 2,500

grammes. A rate of two per cent. prematurity is encountered among the children served at this clinic, and a rate of 4·7 per cent. of prematurity is found in the city as a whole. The stillbirth and neonatal death rate (i.e., death during the first seven days after birth) is 0·8 per cent. for the whole city in 1958. The overall death rate from all causes, including stillbirth, for the first year, is 2·5 per cent. Seven per cent. of all prematures are stillborn, or die in the first year.

In response to another question, I was told that children who present problems of delayed or defective speech are usually referred to the speech therapists for help, after certain special examinations—neurological, etc.—are given, as the case requires.

We were much interested in visiting the Scientific Research Institute for Maternal and Child Care. This is a special service for premature infants attached to a large obstetrical service which we also visited. We were very much impressed by the complete quiet, decorum, composure and relaxation of the mothers during childbirth, though several deliveries were in progress. The only noise on the obstetrical service came from the newborn infants, though we were told that there were 72 obstetrical cases at that time. The obstetrical-gynaecological unit had 304 children's beds and 100 adult beds (60 obstetrical and 40 gynaecological beds). The director said the service happened to be overcrowded at that time with obstetrical cases. When I remarked on the unusual quiet of the delivery room, the director said, "It is always so". This particular service handles about 2,000 births a year. The special bassinette section for prematures is supposed to serve the entire city, but only ten of the bassinettes were occupied.

Later in the day we visited the Regional Hospital in Darnitza, a newly constructed hospital in a pine grove on the outskirts of the city. It was a two-storey construction with long wings built along simple functional lines, with spacious halls, extremely quiet atmosphere, and spotlessly clean. The main entrance opened directly into the visitors' waiting room, which was furnished with a number of large upholstered chairs and settees covered with light cotton slip-covers. The walls were hung with six or seven large oil paintings, done in adequately good realistic style, depicting the medical profession in various honourable tasks—a woman physician bending over a sick child with warmth and devotion, another physician (female) trudging through a snow-storm to visit a patient, and a handsome portrait of a young female nurse or doctor of obviously high character. The Director of the institution, V. F. Anishchenko, explained to us that these pictures were intended to instil hope and confidence in the minds of families who visited the hospital. He showed us the screen of a closed circuit TV placed in the room, with a loud speaker overhead, which allowed families to see and communicate with patients who could not be visited on the wards because of quarantine or for other reasons.

The hospital was both an acute and chronic hospital, serving the adjacent industrial area of Kiev. In addition, it had out-patient departments for both adults and children, as well as several auxiliary clinics placed in the local factories. The new construction supplanted an earlier 1,000 bed hospital that was destroyed during the war. At present it had 300 beds, but was to be enlarged to double that capacity. It had a simple children's unit, a separate 30 bed hospital unit for tuberculosis cases, as well as a separate 150 bed so-called "therapeutic" hospital for internal diseases. The hospital had a total staff of 102 physicians and served a population of 30,000 people in its region. The region was sub-divided into seven sections, each of which had two "therapists" (i.e., internists) and one paediatrician who took care of the patients in their

district, both in the out-patient facilities and in their homes. The hospital had five neuropsychiatrists on the staff, but their work was almost entirely in the field of neurology. There appeared to be little attention paid to the milder neuroses, to the psychiatric aspects of psychosomatic disease, or to psychotherapy. If a more serious mental disorder such as a psychosis was encountered, a psychiatrist would be called in as consultant from the central psychiatric clinic in the city.

We were impressed not only by the remarkable quiet and cleanliness of the hospital, but by the apparent comfort and relaxation of the patients. The wards opening on to the corridor each had no more than four to six beds. There appeared to be an ample supply of nurses as well as doctors at hand, with no physicians of youthful house-staff age in evidence. There were a number of ingenious devices that reflected a solicitous regard for the patients. The physiotherapy room, for example, had ear-phones hanging near each physiotherapeutic device connected to invisible tape recorders, which allowed patients to hear scientific explanations of the apparatus and treatment procedures while they were being treated. In the wards a push-button beside each bed allowed the patient to signal the nurse, by setting off a quiet recording which the nurse would hear at her desk which kept saying, "You are needed in Room —" until the nurse flicked her switch and appeared in the room.

We saw one darkened room where patients with peptic ulcers were being treated by sleep treatment. We were told that the sleep treatment is also used for the management of earlier stages of hypertension, for the treatment of post-concussion syndromes, and for causalgia. The dimly lit room had a few twirling radiometers which exercised a hypnotic effect, as well as an illuminated tank of goldfish, for the same reason. Another room with a sign over the entrance, saying "Microclimate" proved to be an ingenious imitation of a porch, furnished with wicker furniture, illuminated with ultraviolet light, with a false window at one end opening on to a painted mountainside. The room was equipped with various contraptions to produce ozone, etc., intended to duplicate both the physical and psychological atmosphere of a resort area. I asked the director whether the treatment worked, and he said very seriously, "It is too new to know the answer". He added that it was mainly intended to promote convalescence. When I suggested that its effect might be merely psychological, he was inclined to agree. On the upper floor we inspected the operating rooms, which seemed modern in their equipment. The director was particularly glad to show us the special sinks where the surgeons washed up, which were provided with automatic electronic devices that turned the faucets on as soon as the hands were brought close to them. He laughed with evident satisfaction when I said I had not yet seen these in America. We noted that the sterilizing equipment was manufactured in Rumania. The dental equipment was really streamlined and looked equal to the best equipment I had seen in New York City, but was of Czechoslovakian manufacture.

When—out of personal interest—I asked how they treated slipped discs or nucleus pulposus herniations, I was told that they were treated conservatively, "with good success".

#### KHARKOV

#### NEUROPSYCHIATRIC INSTITUTE

This is a central institute for neuropsychiatry for the Ukrainian Republic, and its woman director, Professor Kovalenka, is the chief neuropsychiatrist

for the Republic. The Institute was founded in 1921 and in 1939 was made a constituent part of the Academy of Medical Sciences. It was so badly damaged during the war that it was completely restored thereafter. Like all Soviet institutes of this type, it is almost purely a research institute, and has nothing directly to do with teaching. It is the Medical Institutes which are charged with the responsibility for medical instruction. Since much of the research work depends on patient material, the Institute relies upon the related Kharkov Neuropsychiatric Hospital, under the direction of Dr. Stepenko, which is an administratively distinct unit, but found on the same grounds. The hospital has 1,615 beds, of which 1,315 are psychiatric and 300 neurological, with an allotment of 30 beds in each of these departments for children. This is the only psychiatric hospital for the entire urban area of Kharkov. It functions mainly as an acute hospital, where patients are either successfully treated over a period of months, or transferred to chronic provincial hospitals in the outlying areas. These provincial hospitals also service acute case material from their own local areas. The provincial hospitals also transfer to this hospital their more difficult or complicated cases. When we were there the facilities of the hospital were being taxed and almost all of the beds were occupied; new construction would soon provide 300 additional beds. But, we were told, "Even this will not be sufficient", so that many patients will have to be treated in local dispensaries. Though alcoholism is regarded as a common and serious problem, most alcoholics are handled on an out-patient basis, though a number were admitted to the hospital, and a new separate institution for alcoholics was to be opened in a few months.

We were told that the three basic units in the provision of psychiatric services were: (a) the local dispensaries, (b) the acute hospitals, and (c) the chronic colonies. The local dispensaries are regarded as the most important because of their strategic relationship to prophylaxis. The number of dispensaries has been increased in the post-war period and more of them have been provided with *statsionar* beds for local, temporary bed care. In Kharkov the local dispensaries do not need *statsionar* beds, since the presence of a local hospital makes them superfluous. In the Ukraine there is one psychiatric bed provided for every 1,000 persons, on the average, or about 40,000 psychiatric beds for the Ukrainian Republic. We were told, however, that a number of milder cases come under the jurisdiction of another agency of government, which controls the sanatoria and rest homes. The details of local psychiatric management are left with the local authorities. Once funds are budgeted for a certain area, the allocation of these funds becomes a local responsibility.

I was particularly interested in the problem of alcoholism, and questioned the staff closely about it. Though they could not provide me with reliable statistics, it was felt that alcoholism had probably increased in the post-war period. It was exclusively a problem of the vodka drinker, and the sale and consumption of vodka is being actively discouraged. It was said to be the only product the price of which had gone up consistently over the years, and a recent law limited the sale of vodka to 100 g. per person in any public eating place. Though the emphasis is on out-patient care of the alcoholic, hospitalization is resorted to if the patient is acutely excited or has developed an alcoholic psychosis. Chronic alcoholics may be remanded to chronic colonies where they will remain for at least six or seven months under a work programme.

To round out the picture, I asked specifically, "How would a 30-year-old heavy drinker be handled if he got into recurrent difficulties?" I was told that

he would only be punished if he actually created some public disturbance. Ordinarily he would be admitted to some O.P.D. facility or to a hospital, or to a so-called sobering-up station. Here he would be bathed, given a stimulating shower, some sedatives if necessary, and sent home next day after paying for the board and service. His factory director would be informed, and he would be required to report back daily for the next few days. He would also probably be contacted by his youth organization, trade union, or by his local physician, and he might have to meet with a visiting delegation of fellow workers or Komsomol associates in his own home.

When I asked about the general incidence of psychiatric disease, I was told the following: In 10 major psychiatric hospitals in the Ukraine, a comparison was made between the pre-war and post-war periods. In the post-war period, there appeared to be a slight increase in the number of schizophrenic patients, and 52 per cent. of all hospitalized psychiatric patients were now so diagnosed. Only 21 per cent. of the schizophrenics, however, were first admissions, 22 per cent. were second admissions and most of the others third admissions. The number of first admissions of schizophrenic patients had actually decreased slightly. The main problem is that of the relapsed and chronic cases. The average age of all the schizophrenic cases was getting higher, though the age of first admissions remained unchanged. General paresis had increased sixfold in the post-war period, but it still comprised only 1.1 per cent. of the hospitalized population. In pre-revolutionary days general paresis comprised 38 per cent. of the hospitalized population. General paresis now runs a more benign course than it formerly did. There has also been a general decrease in acute toxic psychoses, and in post-partum psychoses (which were now said to be very infrequent). No malarial psychoses are encountered now. Though the exact incidence of mental deficiency was not known to my informants, they told me that cases of oligophrenia had greatly decreased.

The most common and important treatment for schizophrenia was Sakel's hypoglycaemic insulin treatment. Insulin is also used in smaller doses in combination with sulphur—as a fever-producing agent—for chronic cases, and this combination was highly regarded. Chlorpromazine was used in the treatment of schizophrenia, especially when anxiety or other affective components seemed prominent. Electro-shock treatment was regarded as harmful to the brain and it was now used infrequently, though it was sometimes resorted to in cases with persistent depression and anxiety. Both prolonged (about ten days) and interrupted sleep are used in the treatment of schizophrenia, as well as electro-sleep in some cases. For the induction of sleep various sedative mixtures are used, consisting of combinations of chlorpromazine and other sedatives, alcohol, glucose, etc. Details will be found in a paper by Dr. Richter of the Institute staff.

In the management of neurosis, a variety of procedures may be used, including modified sleep treatments, chlorpromazine, insulin (sometimes in combination), electro-sleep, narcotic suggestion, rational psychotherapy and hypnotherapy.

Professor Kovalenko herself appeared to be primarily involved in neurological work, with a special interest in the problem of rheumatic diseases of the central nervous system. She and her staff conducted us through her large institution, where a great variety of research activities were under way, many with the typical Pavlovian preoccupations. One of the staff spoke disparagingly of the hypoxic treatment I had heard about in Kiev, and I gathered there was the normal amount of professional rivalry among their psychiatrists.

A very friendly party, with lavish refreshments, was held for all of us, and my wife was again presented with a large bouquet, to the accompaniment of friendly exchanges. Professor Kovalenko urged us to stay on for the Ukrainian Psychiatric Conference which was to take place soon, but we had to move on to Tiflis.

#### TIFLIS

Professor Zurabashvili was good enough to inform me that he could meet with me at the Institute of Psychiatry. There we met with the Professor and with some of his staff members, including Docent Nina Georevna Vishapelié, the child psychiatrist specialist on his staff. Professor Zurabashvili was a completely charming personality with Georgian temperament and vivacity, mellowed by his advanced years. He was short of stature, ruddy of complexion, with a large white moustache, sparkling eyes, constant smile, warm responsiveness and great modesty—altogether an attractive individual. As in the past, my wife and I were invited to sit at a conference table, where we could ask as many questions as we liked and write our notes. Professor Zurabashvili told us the following:

“Georgian psychiatry is a part of Soviet psychiatry and operates according to the same general principles. We have been especially interested in the problem of schizophrenia, which is the main problem of psychiatry. We are often asked by foreign psychiatrists whether or not we regard schizophrenia as a disease entity. Schneider, the German psychiatrist, has written extensively on this problem; he regards schizophrenia as a large group of diseases, though among this group a single distinctive disease must be recognized. Part of our difficulties are due to our neglect of long term studies of the course of this disorder. I regard it as a single disease, but feel that we need to define it strictly. I have reached the conclusion that it is not an infectious disease, nor an inflammatory process, but is basically a degenerative process. Though no specific pathological anatomy has so far been disclosed, I believe, as a morphologist, that a slow degeneration at the synapses takes place, which may be functional at first and only later becomes organic.”

We were told that 35 per cent. of the mental illness encountered is schizophrenic. Professor Zurabashvili estimated the incidence of schizophrenia in this locality as 1 to 1½ cases per 1,000 in the population. But he explained that he does not have the precise figures available to him, since this is a research institute and the exact records are kept in the clinical department. He added that his estimated figure would include recovered cases (which would make this correspond approximately to the figure given me in Leningrad). All types of clinical pictures of schizophrenia would be included under the term. The main methods of treatment for schizophrenia were insulin, sleep therapy, chlorpromazine and sulphur. Professor Zurabashvili thought that insulin combined with chlorpromazine gave the best results. In addition, rational psychotherapy, group therapy and work therapy are used. The psychotherapy and work therapy are adapted to individual needs. The psychotherapeutic sessions are conducted in the local dispensaries after the acute phase of the illness is over. These sessions might last 20 to 30 minutes, but vary in individual cases. In conclusion, Professor Zurabashvili agreed that schizophrenia is likely to prove to be basically a chemical disease, with secondary morphological changes.

In response to a comment of mine, Professor Zurabashvili denied that

Soviet psychiatry neglects minor disorders, though he admitted that articles on this subject are scarce, but he added that these minor disorders have in general decreased under the new social conditions, and agreed they were often dealt with by non-psychiatric means. "But," he added, "our interest in this area inevitably emerges from our general interest in prophylaxis."

To help concretize the picture, I asked what would happen in the case of a 30-year-old worker whose work began to slump, who suffered from insomnia and irritability, fought constantly with his wife, etc.? I was told that such an individual would either himself go to the factory dispensary to seek help and advice or would be induced to go by friends and relatives. There he would at first be seen by the regular physician, who would certainly call in a psychiatric consultant, who would then probably diagnose a neurosis or neurasthenic state, and treat the patient accordingly. Treatment of this type of problem would be conducted typically at the out-patient level, and management of a case of this sort would also be considered part of their prophylactic interest. Professor Zurabashvili said that he would probably classify such a case as neurasthenic. "Suppose," I said, "the real cause was marital incompatibility?" Everybody laughed. Professor Zurabashvili said, "In that case, this would be regarded as a misfortune, not a disease. They would probably go to the courts to settle this difficulty."

My wife and I then spent considerable time asking questions in the area of child psychiatry, particularly of Docent Vishapeli. "How does it happen," I asked her, "that the kindergarten director in Kiev, who handles 250 children, told us that in 40 years she had never called in a psychiatrist?" Dr. Vishapeli replied, "That is quite typical. One would rarely need a psychiatrist in a kindergarten setting. Even if a psychiatric problem should arise, it would be dealt with in the district dispensary. There we are constantly alert to problems of prophylaxis. If the examining paediatrician at the dispensary suspects a psychiatric disorder a psychiatrist is called in for consultation. Otherwise there is no specific preventive psychiatric examination."

"In Tiflis the psychiatrists are separated from the neurologists in medical practice. All children have a general medical examination at least twice a year. At this psychiatric institute all psychiatric consultations are referred to us, and we see, as a rule, about 25 to 30 such cases a week. We now very seldom see psychoses in children. Although we have 15 beds at the psychiatric hospital connected with the Institute for the in-patient care of children, only a few are usually occupied, and we have only 30 admissions of children a year. (The population of Tiflis is about 650,000.) Moreover, these children generally stay only a few weeks or months. In the case of a chronic psychiatric disability in a child, the child would be transferred to a residential setting at the chronic hospital or resort at Suranai, about 75 miles from Tiflis. At Suranai there are 30 or 40 children with chronic psychiatric disabilities, recruited from the whole state of Georgia, which has a population of about 4,000,000. This institution is also used for convalescent care, for which an additional 30 beds are provided."

When I asked what kinds of cases would be found among the 30-odd consultations requested each week, I was told that the two most common reasons for referral were (1) psychiatric disorders associated with epilepsy and (2) suspected cases of mental deficiency. In addition, various reactive states, including reactive states in mental defectives, were referred. Toxic infectious psychiatric disorders and schizophrenia were very rarely encountered. Of these 30 referrals, a number are not seen again after the initial consultation, and others may be seen for follow-up services.

When I asked how many feeble-minded children were in Tiflis, I was told that there are two schools for the feeble-minded in Tiflis, each of them with 200 pupils, or 400 in all, "and these are quite enough". In all of the past year, three cases of mongolism were encountered.

In addition to the special schools for mental defectives, there are special educational facilities for the blind, and for the deaf and dumb. Speech therapy is made available to all children who need it. Severely disabled cerebral palsied children live in special sanatoria, the mildly disabled cerebral palsied children attend regular schools. In general, cerebral palsy is regarded as a rarity and only a few such cases are encountered each year. For children with severe orthopaedic handicaps but without psychiatric disabilities, there are two sanatoria in Georgia, each of which houses 250 children.

When I asked what is the later fate of a feeble-minded child who finishes school, I was told that they go to work in regular factories, collective farms or state farms, where special and appropriate tasks can be assigned to them.

In response to another inquiry, Professor Zurabashvili and Docent Vishapelie declared that neither of them had ever seen a case of school phobia.—"And I have practised for 35 years", added Professor Zurabashvili.

In conclusion, Professor Zurabashvili said, "I have always insisted that psychiatry is an integral branch of medicine, but that does not mean that we can neglect psychology. We pay a lot of attention to psychology here, and I teach my students that they cannot make a diagnosis without giving due attention to clinical psychological factors. We base our work on the physiological teachings of Pavlov, we study electroencephalography, skin galvanic reflexes, the pathophysiology of the receptor system, especially of the eye, we study biochemistry, the vegetative nervous system, endocrinology (I correspond with Manfred Bleuler), serology and morphology (following Bekhterev's teachings), and finally all of these interests converge in our practical clinical work. That represents the general range and direction of our interests."

By this time our friendly hosts began to show signs of weariness and I apologized for questioning them so hard and keeping them so long, and began to prepare to go. Professor Zurabashvili again with self-effacing modesty said that we were quite welcome to stay a little longer, if we had the time, and opened the doorway to an adjoining room, where a table was bedecked as for a banquet, and we sat down and enjoyed a most delicious repast of Georgian tea and food, combined with a delightful rose liqueur served to us in little silver cups.

At the end, Professor Zurabashvili presented me with his book on schizophrenia, and reminded me how interested he would be to hear further from me

#### SUKHUMI

We called at the branch of the Institute of Experimental Pathology and Therapy of the Academy of Medical Sciences in Sukhumi (in the autonomous republic of Abkhazaiia), a celebrated monkey colony in this subtropical Black Sea resort town, where considerable experimental work is done. We were received hospitably by Dr. (actually Candidate) B. A. Lapin, a young experimental pathologist who was director of this branch of the Institute. He told us it was originally founded about 30 years ago as a monkey nursery to supply experimental animals needed for research, mainly for the Institute of Endocrinology in Moscow. It was later integrated into the Union Institute



for Experimental Medicine in Leningrad, and many of Pavlov's students worked in Sukhumi for a while when Pavlov was still alive. At first these research workers would spend six or twelve months at the colony and then return to their own institute, but later the Institute acquired its own permanent scientific staff. Two years ago it finally became an independent institute under the Academy of Medical Sciences of the U.S.S.R. and was designated as the Institute of Experimental Pathology and Therapy. Its earlier research programme involved the study of the physiology of higher nervous activity, but it later moved into the area of disorders of the nervous system, experimental neuroses, etc., using Pavlov's methods. But it was soon realized that the classical Pavlovian methods used with dogs could not be applied to monkeys. The older classical techniques could indeed be used to induce mild disorders in the monkey, but the typical conflict situation induced by positive and negative conditioned reflexes had relatively little disturbing effect on the *Macaca mulatta* and baboons. Beginning in 1949 the scientific workers at the Institute began to use other methods which proved more successful in developing conflict situations, and which were dependent on unconditioned reflexes, along lines similar to the experimental approach of Masserman, though the Russian workers did not know at that time of Masserman's work. They based this research work on Pavlov's finding that deeply fixed reflexes involving both cortex and sub-cortex could best be found in the unconditioned reflex. The food reflexes apparently did not affect the monkeys deeply enough, and reflexes had to be used involving sexual activity or the unconditioned defensive reflexes.

"We tried for a while to induce conflicts by using positive food stimulation in conflict with an inhibitory electro-shock, but this always led to a rather complicated defence reaction rather than a simple neurosis, and the behavioural pattern became so complex that the positive-negative stimulation conflict became only one item in the complexity." If, however, a male and female monkey were kept in the same cage for a period and the female was then removed, this could induce very serious disturbances in the male. In response to a comment of mine, Dr. Lapin said laughingly, "I don't think it is so hard with us humans." Neuroses were also induced in the leading male figure—the king—in the polygamous monkey colonies, when the normal order of feeding was disturbed, since the king is always the first to eat, while the others await their turn. If conditions are created whereby the females feed first, the male becomes seriously neurotic (though no disturbance develops in the female).

When I remonstrated that this order of feeding must be *learned* behaviour, rather than unconditioned, Dr. Lapin said, "I believe these tendencies are inborn and not the product of experience, and amount to a rule of nature."

Monkeys in whom these neurotic disturbances are induced develop a number of somatic disorders over a period of time, such as hypertension, coronary insufficiency and eczema. Fatal coronary occlusions sometimes occur in these monkeys, and myocardial infarcts were twice observed at autopsy. In the series of 25 neurotic monkeys that have thus far come to autopsy, two cases of apopleptic insults were also encountered.

The most consistent and common way of inducing neurotic symptoms in the monkey is to disrupt his daily routine. Conversely, the neurotic monkey develops a disruption in his normal physiological rhythm. Detailed experimental studies have been conducted at the Institute on the effect of interference with normal routine of higher nervous activity.

When I asked about their findings in regard to therapy, Dr. Lapin said that treatment is very difficult, especially after a full-blown neurosis has developed. In its earlier stages it can be cured by the cessation of the disturbing factors, and a return to normal routines. No attempts have been made to handle these disturbances by other psychiatric means, such as sleep treatment or drug therapy. Dr. Lapin said he believed that the characteristic daily routine of the monkey is based on inborn tendencies, and therefore again involved unconditioned mechanisms. Feeding activities, for example were typically confined to daylight hours; if monkeys were consistently fed at night but not by day, neurosis were induced. Susceptibility to neuroses varied with the age of the monkey. It was more difficult to induce neurosis in younger monkeys, but once induced it proved to be more persistent. The offspring of neurotic monkeys were now being studied, to see whether any neurotic tendencies were inherited, but no definitive answers have yet been found.

I was interested to hear that there was no psychologist on the staff, though occasionally in the past some psychological work had been done. Dr. Lapin regretted this deficiency in staffing, and explained that their main interest had been in the area of medical problems. He thought however that the large monkey colony could lend itself very easily to psychological work as well. No general psychological studies of instincts, nor of sex behaviour, had ever been undertaken there.

At the present time the colony had about 1,000 monkeys, 250 of which were kept for breeding purposes. About 150 monkeys are born there each year, and an additional 500 are imported yearly. There were 55 scientific workers at the Institute of graduate level, including three physicians, and there were 150 assistant technicians. Laboratory helpers and others increased the total on the staff to about 300. The annual operating budget was 6,000,000 roubles a year.

All animals are autopsied at death. The fatal illnesses of captured animals are quite different from those raised in captivity. In the former, infectious illnesses prevail, in the latter we encounter diseases similar to those of humans, such as arteriosclerosis, hypertension, coronary insufficiency, and cholelithiasis. These diseases are especially common among those raised in cages, compared with those raised in fenced-in ranges. Dr. Lapin conceded that diet may be a factor, though he thought the physical constraint was probably most important.

Considerable work was being done on the effect of ionizing radiation on higher nervous activity, and a special conference on this topic was to be held in a few months.

In the oncological section, sarcomata were being induced in monkeys by using a combination of subcutaneous silver pellet implants with simultaneous administration of oestrogens and progesterone. Neither factor alone was sufficient to induce tumour growth.

Our guide made some telephone inquiries for us, and reported that in the city of Sukhumi, with a population of 64,000, there were only 30 children in special classes for mental defectives. This, we noted, corresponded closely to the ratio reported to us in Tiflis.

#### YALTA

#### SANATORIUM UKRAINE (FOR CLIMATOTHERAPY)

The attractive young Armenian physician in charge was Dr. Maya Gregorian, who conducted us through the institution. Patients are admitted

to this institution upon the recommendation of a physician, usually the industrial dispensary at the individual's place of work. It is apparently not too difficult to get such a certificate, since the health sanatoria are supposed to function as convalescent centres and not as hospitals. Sanatoria of this type were formerly administered by the various trade unions, but have, since 1956, come under the jurisdiction of the Health Ministry. Many of the sanatoria specialize in particular types of convalescent care, such as arthritic conditions, respiratory disorders, convalescence from tuberculosis, orthopaedic disabilities, etc. This particular sanatorium accepted workers who suffered from, or had recovered from, respiratory disorders such as pneumonia, bronchiectasis, asthma, silicosis, etc., except for tubercular cases which were not accepted here. It was staffed by twelve physicians, 30 nurses, and 40 orderlies or practical nurses. At the time we visited, it was filled to capacity of 350 patients, drawn from all over the Soviet Union, "Anybody from Ministers to workers and peasants". A typical stay lasted 24 days, which cost 1,020 roubles, 70 per cent. of which is paid by the individual's trade union or collective farm. A patient usually pays 30 per cent., but even this charge may be waived if the individual has a large family or is otherwise not easily able to pay. Transportation to and from the sanatorium is usually paid for by the worker, but here too the union may sometimes pay for transportation. Different unions are allowed different quotas for admissions to sanatoria; unions involving hazardous work, such as mining, have higher quotas. This particular sanatorium was built by the woodworkers' industry for its own use in 1955, but its administration was taken over by the Health Ministry soon afterwards.

The sanatorium remains open all year. In addition to the cases with respiratory disorders, 200 beds in this sanatorium are allotted for neuropsychiatric cases, 50 or 60 per cent. of which are mild neurasthenic or neurotic cases, the remainder being more strictly neurological cases, such as radiculitis or neuritides. Five or six per cent. of the cases have a diagnosis of hysteria, two or three per cent. psychasthenia, and a considerable group were diagnosed as neurasthenics (all "according to the classification of Davidenkov and Lichterman"). Most of the patients came here without their spouses, though 30 couples were there at the time and I was told that many more couples come together in the winter. Strictly speaking, the spouse is supposed to need a medical certificate too, but policy in this matter is fairly liberal. I was told that many such couples go to a rest home rather than a sanatorium. No children are allowed at this sanatorium. The building, though new, was not architecturally modern, by our standards. It was amply proportioned, with large walls and rooms, spacious views overlooking the cliffs and sea, with a lot of superfluous gingerbread woodwork, Corinthian plaster columns and plaster scrolls. The rooms we saw opened on to verandas, where the patients were encouraged to sleep. There was the usual emphasis on fresh air and outdoors; even during the mild winters outdoor sleep was encouraged unless the weather was bad. We visited the huge enclosed swimming pool, saw a big pier, at the foot of the hill, jutting out into the water, all covered with beds where patients slept. There was a big physiotherapy department; a great many different types of bathing were used, with mud brought in from a choice locality nearby for the apparently popular mud bathing. Patients were given five rather lavish meals a day, averaging 4,500 to 5,000 calories, unless they needed a low calorie reducing diet. Other special diets were available. I was told that four of the staff physicians were neuropsychiatrists, but their work appeared to be mainly neurological, since we were told that only a "small number of patients" get

psychotherapeutic sessions once or twice a week for an hour or so. Two or three patients get hypnotherapy; various modalities of sleep therapy, including electro-sleep, were used. These psychiatric therapies were described as quite adequate by the director. More elaborate psychiatric treatments, I was told, were given at a special psychiatric sanatorium in Simferopol, or at similar psychiatric sanatoria elsewhere in the Soviet Union.

#### ODESSA

I had little opportunity to see much in Odessa of a psychiatric nature since the Neuropsychiatric Institute was closed, though I visited the associated neuropsychiatric dispensary, where I met with the amiable chief physician, Dr. Kravchenko and with Docent Benisovitch. Dr. Kravchenko told me that most of the work in his clinic was neurological, and only a small percentage psychiatric. He agreed that psychology and psychotherapy were relatively neglected in Soviet psychiatry, and told me that he had read with interest in Russian translation the book on neuroses by the American, Dr. Joseph Furst. He told me that in this region, with a population of about 2,000,000, only 120 to 140 active schizophrenic cases were known; a ratio of less than one case per 10,000 population.

In spite of the efforts of Dr. Kravchenko the Public Health Director for the district, whom we both visited, refused to grant me permission to visit a chronic psychiatric hospital, out in the country near Odessa. He said it was too far, time was too short, I could meet their chief psychiatrist here in the city, etc., but I suspect he viewed me with distrust, since I had no credentials and he did not know who I was. This was the only refusal of this type I encountered in the U.S.S.R., and it probably would have been avoided if I had been better prepared. I did, however, meet with Dr. Ernst Hammerschlag, the New York psychoanalyst who had just previously visited a large chronic psychiatric facility outside of Leningrad, which housed a population of about 1,000 patients. He described the buildings there as old, partly wooden, and rather crowded, but very clean and with an ample number of physicians, a large number of nurses, orderlies and other help around. Both older and younger patients seemed indiscriminately mixed. Chlorpromazine treatment appeared to be extensively used, and there were special facilities for insulin shock treatment. Dr. Hammerschlag had also heard that a unique method of treatment by prolonged starvation was sometimes used. He reported with interest that the head physician, whom they interviewed, declared that neuroses were not common in the U.S.S.R. because basic living conditions were so good. If irrational discontents arise, he was quoted as saying, these can either be corrected through rational discussion, or else might have some psychotic basis.

#### SUMMARY AND CONCLUSIONS

These travel sketches cannot give a complete or even typical picture of Soviet psychiatry, for the time was too short and the contacts too few for that purpose. These glimpses of scenes and people do, however, contribute to a picture and satisfied the curiosities my earlier study of Russian psychiatry had aroused. How did this reality compare with my earlier picture? On the whole the theory and character of service corresponded to what I tried to depict in my book ten years ago. But there were differences. In spite of the broad and thorough coverage of psychiatric and other health services there was a certain lack of finish and efficiency to the services I could observe. Buildings

were often dilapidated and old, treatment wards sometimes seemed crowded, homey and unorganized. Hospital tempo was slow, with manpower lavish and wasted. In spite of theory and research, the treatment methods, like ours, were too often largely empirical. Pavlovian formulae were repeated with stereotyped monotony, and other approaches seemed secondary in comparison. In Leningrad some forward elements were interested in medical psychology and psychodynamics, but in the dispensaries and general hospitals of Kiev or Odessa, minor neuroses and psychosomatic mechanisms seemed to be neglected, and psychotherapy was practically non-existent. Russian psychiatrists know much more about us than we know about them, but in spite of their obvious interest they have only spotty and second-hand information about psychiatric development in the U.S.A. and in the West.

Soviet psychiatry is not all of one piece. I found interesting, at times amusing, and basically healthy evidence of differences in point of view as I moved from place to place. Professor A calls Professor B a "so-called scientist" and thinks Professor C is a great showman. So-and-so thinks electro-narcosis is specifically electrophysiological, but—says my informant—it probably works only by producing rhythmic sensations on the skin. Dr. X thinks highly of sleep treatment but Dr. Y says it is over-rated. Pavlov was a great man, but he was wrong in some important matters, says another. In Kiev a newly developed treatment is praised, but in Kharkov they tell me it is a failure.

In spite of what seemed like a strict hierarchical organization there was scope to manoeuvre, and both differences and discontents found expression. Research scientists appear to have comfortable salaries, are anchored and well supported in their research and committed to long careers. There was more separation of research, teaching and clinical service than we usually see in our country, and I had the impression that more research should be done in the clinical settings, and that more clinicians should be doing research. Experimental design tended to be looser than we like, and public health statistics, or large population studies, too infrequent. Much of the research could be described as attempts at detailed description and analysis of phenomena. I was troubled to see distinguished scientists, heads of institutions, bothered with the necessity of writing their own correspondence or making appointments and handling minor chores because, with some exceptions, they have no secretaries. Psychiatric research is too uniformly Pavlovian. Even granting its basic importance it is not always necessary nor desirable to build up knowledge from a base of conditioning studies. One would welcome more approaches from other directions; population and epidemiological studies, more large-scale and systematic therapeutic undertakings, more follow-up and clinical studies, or EEG, endocrine, pathological, anatomical, genetic, chemical, and other approaches.

But there were strongly positive impressions too. The hospital atmosphere always reflected kindness, humanity and an orientation to the needs of patients. The patients—children and adults alike—looked secure in the hospital setting and I did not see any of the forlorn neglected creatures so often found in our own public hospitals. For all its monotony, Soviet psychiatrists had a point of view, probably a correct one, and it permeated their thinking. Their neurophysiological research was on a technically high level, scientifically sophisticated, and likely sooner or later to produce big results. Many of their most talented youths were given splendid opportunities for life-time research careers. Their science, moreover, is advancing very rapidly in pace with their

general economic advance. In comparison with their recent past their present accomplishments should give them every reason to feel proud. I think the finish and refinements will come soon, but already Comrade Ivanov of Moscow fares quite well as a psychiatric case, even by our standards.

Certainly there is everything to be gained from further contact and exchange: the inevitable rivalry that is developing between us is all to the good, for this is a contest where there are no losers.