This is the sixth feature article on physicians in various parts of the world, picturing their endeavors and their achievements. In each case the physician is interviewed on the spot by a member of MD'*s editorial staff. Photography by Tore Johnson.*

No. 6

Dr. Finn Rud of Bergen

DR. FINN RUD CROSSING BERGEN FJORD ON ONE OF HIS REGULAR VISITS TO THE MENTAL HOME AT FLOEN.

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IN A LARGE ROOM with picture windows overlooking a fjord, a Norwegian psychiatrist sits and dreams of a group of modern buildings where scientists can research into mental illness while their colleagues treat patients with all the latest forms of therapy.

He is Finn Torgeir Rud, physician and professor of psychiatry at Bergen University, who has for many years been planning to give Bergen one of the finest psychiatric clinics in Scandinavia.

Dr. Rud was born on June 14, 1907, in Fredrikstad, a lumber center and port in southeast Norway, on an inlet of Oslo fjord. He was one of four sons of a civil servant, and after the usual secondary schooling, he was graduated in medicine in 1934, having completed eight years of medical studies.

There was no doubt in his mind from the start that he wanted to specialize in psychiatry. Says he: "I was then and still am fascinated by the problems of mental illness."

Special studies in psychiatry were done at the 500-bed Valen county mental hospital, the private clinic of Dr. Dedichen, and the psychiatric clinic of two hospitals. He obtained a doctorate in medicine in 1948 with the thesis *The Eosinophil Count in Health and Mental Disease* which brought him into prominence.

After serving for ten years in the Psychiatric Clinic of Oslo University, Professor Rud took over as director of the Neevengaarden Sykehus, the municipal psychiatric hospital in Bergen.

This consists of some twelve buildings on a wooded hill overlooking the Byfjord that leads into the busy harbor of Bergen; three of the buildings resemble the architecture of a French *manoir*. The hospital grounds comprise about 50 acres, including a farm that grows vegetables, raises about 200 pigs, some 50 hens and as many sheep. About 15 patients work on the farm, and a similar number give their time to the garden.

The hospital was opened in 1891, which means that the buildings are not as modern as Dr. Rud would like them to be. Nevertheless the wards and corridors are painted in bright pastel shades, scrupulously clean, and every attempt is made with colorful curtains and carpets to avoid the dreary atmosphere of some mental institutions.

The hospital population is around 440 inpatients, about 500 men and women are treated as outpatients in a year, mostly for neurasthenia, depression, psychoneuroses. Inpatients include constitutional psychoses, manic-melancholics, schizophrenics, epileptics and involutional psychoses, psychosis *ex vitio cerebri* and cases of mental deficiency.

From 1949 the hospital performed about 150 lobotomies, but this technique was given up in 1955. Treatment today includes electroshock and insulin coma; drugs used are mostly in the Rauwolfia and phenothiazine categories, also anti-depressant drugs.

Men and women are encouraged to work in a variety of departments: in addition to the farm and garden work, patients work in the laundry, make furniture, bind books, weave cloth and do needlework. Their products are sold to the public and the proceeds help to improve or extend various hospital facilities.

During the last war, Dr. Rud was assistant physician in charge of the state university psychiatric clinic in Oslo. The clinic received several patients who had lost their reason after being tortured by the Gestapo.

Researcher. As a young physician, Dr. Rud was one day struck by what appeared to be an antagonism between certain mental diseases and some allergies. His first thought was to attempt a correlation between these two states, but this proved to be impossible inasmuch as there were no data on the frequency of allergies among the normal population of Norway; moreover, in a country with such differing climatic conditions the distribution of allergies would have been erratic.

Previous investigations had established a relationship between some pathologic conditions and the eosinophil cell count. Eosinophilia was observed in a variety of diseases such as myeloid leukemia, scarlatina, helminthiasis, bronchial asthma, blastomycosis, muscular rheumatism; conversely, eosinopenia was observed in almost all acute infectious diseases, the early stages of all intoxications, in all important surgical procedures, pernicious anemia and a variety of internal secretory disturbances.

Dr. Rud had to contend with a number of findings and hypotheses on the function of the eosinophil cells: it was indisputable that they performed a phagocytic function, being particularly attracted to *Staphylococcus aureus;* some relationship was found between the eosinophil leukocytes and the normal breakdown of albumins in the intestinal canal, particularly after the ingestion of protein-rich food. Also postulated by some was that eosinophilia was connected with the body's immunologic mechanism, being a line of defense against the invasion of foreign proteins. From this premise Dr. Rud accepted the general view that the eosinophil cell is a protective factor in the organism. The question remained whether any alteration in the organism during mental illness would be reflected in the leukocyte count.

Previous work done on the relationship between emotional states and the leukocyte count had produced inconclusive and in some cases contradictory results: some researchers found that psychic disturbances caused a leukopenia, others found leukocytosis. One investigator induced strong emotions in his subjects through hypnotic suggestion, such as joy, sorrow, anxiety, rage, found a correlated increase in the number of leukocytes.

Dr. Rud's first practical task was to find an improved method of counting the number of eosinophil cells. In place of the classic eosin, he used naphthylaminrose which colored the eosinophil granules a deep pink, even in great dilutions, leaving the neutrophil cells almost unstained.

The control group used by Dr. Rud consisted of 97 women and 53 men, drawn from the staff and students of the psychiatric clinic at Vinderen, near Oslo, on whom more than 13,000 observations were made. At that time Dr. Rud carried on a private practice among the clinic's staff, which helped to establish a friendly and cooperative attitude between the investigator and his subjects. Every volunteer was given a thorough

Women patients at Neevengaarden Sykehus weave and embroider many articles that are sold to the public. Dr. Rud admires a tablecloth.

During ward rounds, Dr. Rud stops to kibitz with a group of patients playing cards. Atmosphere of hospital is informal and friendly.

In the well-equipped printing shop and book bindery, Dr. Rud explains how the clinic's annual report is to be printed.

physical examination, including a complete anamnesis. The group was further subdivided into the "absolute normals" and those who either suffered from allergies or who had a familial history of allergy. Dr. Rud had hoped to include athletes in his study but this was made impossible by the German occupation of his country.

The first finding was that in both men and women the number of eosinophils was higher in the morning, decreased during the forenoon, increased again as the day went on, giving the impression that there was a distinct diurnal rhythm. Fasting was found to disrupt this rhythm, causing a considerable decrease in the number of eosinophils. Another interesting finding was that the eosinophil count increased considerably during the night, evidently forming part of the restorative function of sleep. The seasons altered the count in a random fashion, appearing to follow no discernible yearly rhythm.

The earliest observation on the relation between psychic illness and the blood picture appears to have been made at the Bicêtre hospital in Paris in 1847 where it was noted that "small blood balls" increased in some cases of mental disease; it was theorized that this probably caused "congestion of the brain" and thence the psychosis.

In subsequent decades a large number of investigations were made into the eosinophil count in schizophrenia (previously dementia praecox), manic-depressive psychoses, epilepsies. The results were inconclusive and in many cases bewilderingly contradictory, largely because the investigators had not first established the normal variations in the eosinophil cell count.

Dr. Rud's psychopathologic subjects comprised 402 patients suffering either from neuroses (hypochondria, depression, hysteria, anxiety, obsessive-compulsive) or psychoses, including schizoid types, cyclothymiacs, sexual perverts, manic-depressives, mythomaniacs, schizophrenics. Included were cases of psychogenous mental diseases released by the war, also sufferers from organic brain diseases.

As in the normal control group, the allergies studied included vasomotor rhinitis, hay fever, bronchial asthma, serum disease, angioneurotic edema, and a variety of allergies to drugs and animal bites.

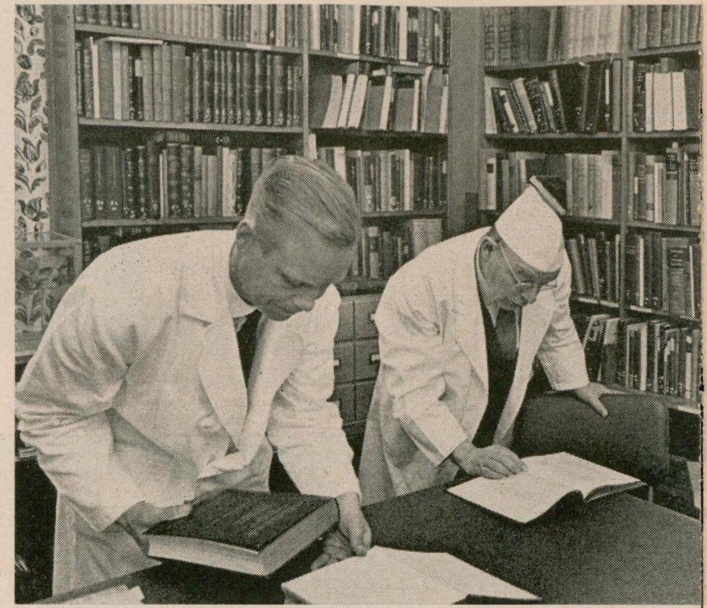
The first results of Dr. Rud's investigation demonstrated that there were no appreciable changes in the level of the eosinophil cell in the bloodstream of the neurotic patients. Neither could he demonstrate any variations in the number of cells during attacks of hysteria.

In the manic-depressive group, Dr. Rud found a distinct increase in eosinophils when the psychic condition improved. An important finding was that there was a sharp fall in the number of cells during attacks of epilepsy or migraine.

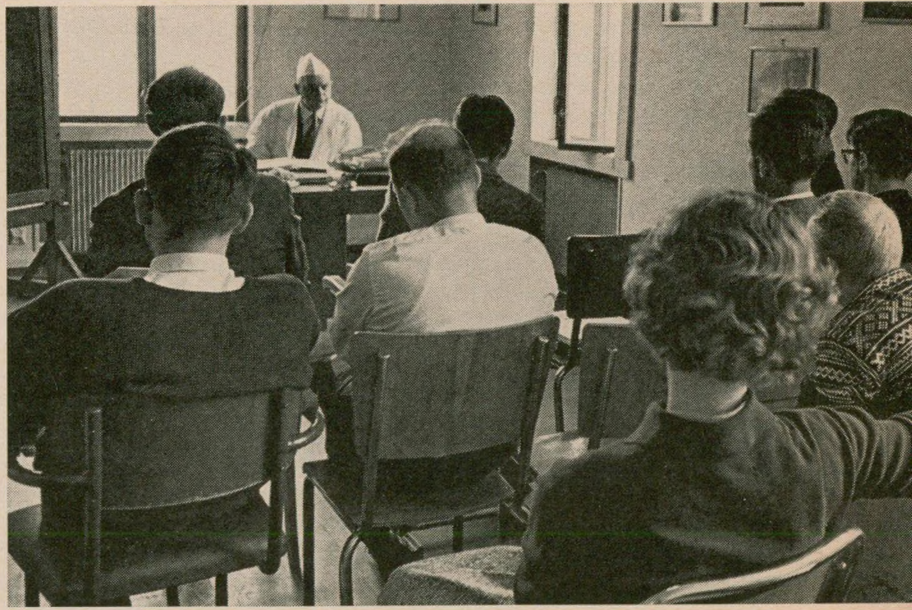
The mean values of eosinophil cells in psychotics were generally somewhat higher than in the normal group: this could indicate that homeostasis is maintained at a different level in psychotics. Dr. Rud also concluded that central nervous system factors must in-

Part of the laboratory of Gerhard Hansen, with some of the instruments he used in studying the bacillus of leprosy (opposite).

The clinic has its own small but well-stocked research library. Another library is maintained for the patients.



Informal conference in Dr. Rud's office. Third and fourth from left are Drs. Sören Rimestad and Eivind Ose, on the clinic's staff.



Dr. Rud lectures on psychiatry to a group of students studying psychiatry at the University of Bergen.

fluence the higher level and lability of eosinophil cells in mental disease. Higher levels might also indicate that eosinophil cells are being mobilized for detoxification, lending support to the current notions that mental diseases may have a biochemical basis, the subject of numerous investigations.

Clinician. The problem of mental illness in Norway is comparable to that in other countries, the incidence being five per thousand of the population, making an average of 17,000 mentally ill persons. This number is growing slowly but steadily, most probably owing to better diagnosis, new forms of treatment and the increasing life span which raises the number of senile psychoses.

In Norway, the care of the mentally ill is paid mostly out of public funds, six-tenths by the patient's own province or municipality and the remainder by the national government. In 1961 the government passed a new act making mental health care part of the over-all national health service; today no private contribution is expected from any patient, whatever his circumstances.

An interesting feature of the Norwegian approach to mental illness is that a large proportion of patients are tended in private families outside any institution, what is called private care. In 1959, half the total number of mental cases were hospitalized, while more than a third were cared for privately. Explains Dr. Rud: "Private care developed about two generations ago to take patients out of the institutions and nursing homes which were in some cases inhumane."

The hospital that Dr. Rud directs in Bergen, and two nursing homes under his supervision, are as comfortable as it is possible to make them considering the age of the buildings and their outmoded structural details. The Sykehus was one of the earliest to institute a regime of interesting work programs undertaken in a relaxed and friendly atmosphere. For this reason it was at one time one of the showplaces in Norway, visited by mental health experts from many parts of the world and a model for similar institutions.

In the course of his clinical work Dr. Rud has made a special study of schizophrenia and has published a number of works on the subject. He became particularly interested in the social aspects of the disease, the manner in which it affected the sufferer's relations with other human beings.

He noted that the phobic fear of social contact in the schizophrenic often results from a fear of not being able to meet with the conventional demands of sociability. In some sufferers this builds up an unbearable tension which has to be released in some way, frequently in violence.

In many cases the schizophrenic develops a strong contempt of society. He no longer feels the normal need of the individual to be acknowledged by other people; when he does try to impress his fellow men he does it by some outlandish means that leads to total social failure. Says Dr. Rud: "In studying schizophrenics the social-psychopathologic element must be evaluated equally with the purely intrapsychic phenomena. And the social-psychologic factor must be evaluated in relation to the total life situation.

Life and Work. Dr. Rud is married to Sigrid Elisabet, one of five sisters whose parents died in the 1918 epidemic of what was then called Spanish influenza. They have one daughter, Hilde Elisabet, who teaches Latin, French and history in the cathedral school. She is studying for a degree in philology (*lector*) which will entitle her to teach at what in the United States would be junior college level. Their 17-year-old son, Finn, is finishing his high-school studies (*gymnasium*) and will possibly enter law school in Oslo.

The Ruds live in a large house at the foot of the small rise on which the hospital stands, overlooking the wide expanse of fjord that leads into Bergen's snug harbor. Past their wide windows sail ships from all the world,* including some that continue to the north to Norway's land of the midnight sun.

Not far from their house is Old Bergen, a collection of characteristic wooden buildings from the last century, a miniature town complete with streets, market place and a small park. Bergen is in fact the most historically minded town in Norway, and Dr. Rud is himself deeply interested in his country's ancient history.

He likes to show his visitors the old clapboard St. George's Hospital, built in 1411 on foundations reaching back to a monastery in the 11th century. The present building was built in 1702 and is badly in need of repairs.

It was at one time the principal leprosarium in Norway, a country that a mere century ago counted some 2800 lepers.† It was in this building that the Norwegian physician Armauer Hansen performed most of his laboratory experiments that led to the isolation of *Mycobacterium leprae*. Dr. Rud explains: "It was at one time known as Hansen's bacillus, and in America there is a movement to have leprosy called Hansen's disease to overcome the age-old repugnance that the word leprosy evokes." Dr. Hansen's memorabilia, including his old microscopes and many culture flasks, are preserved in the town's Rehabilitation Center.

In Bergen University, where Dr. Rud teaches psychiatry, he sometimes likes to pay visits to the antiquarian section that is internationally known for its collections of artifacts from prehistoric times, and for its rich contributions to the lore of the Vikings.

A short distance from the university are the remnants of what was once a seat of the powerful medieval Hanseatic League, restorations of medieval warehouses and of the Bergenhus where Norwegian kings held reign until the middle of the 14th century.

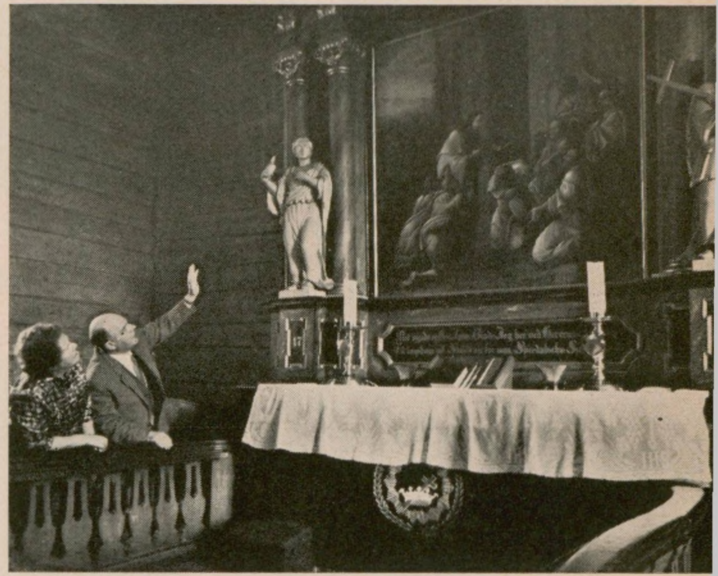
The cultural life of Bergen, in which the Rud family takes a part, includes concerts by the Harmonien Symphony Orchestra (now in its 199th season) and recitals at Troldhaugen, the home of Edvard Grieg, a few miles from Bergen where the famous composer was born.

Dr. Rud's mornings are devoted to ward rounds in the hospital, a task that he performs with good-natured calm, somewhat like an indulgent uncle dealing with difficult children. He has known many of the patients for

*Bergen is the main shipping center of Norway.

†Today there are only two cases of Hansen's disease left.

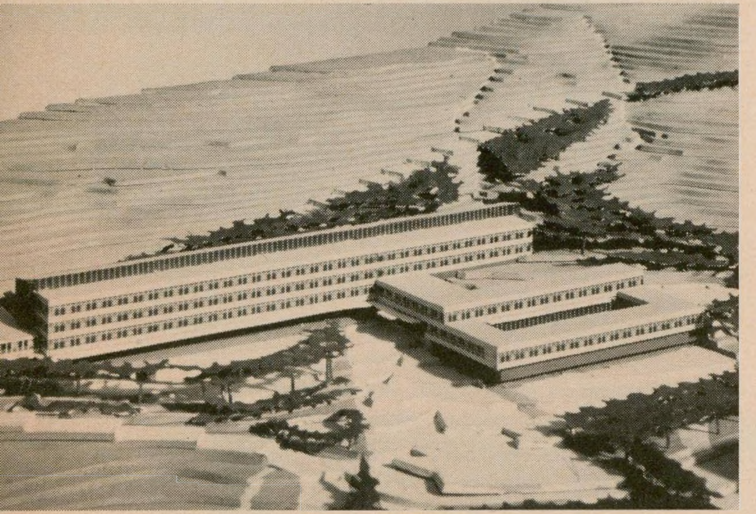
Dr. Rud with his wife and daughter, who is a teacher, stroll through the quaint streets of Old Bergen, not far from their home.



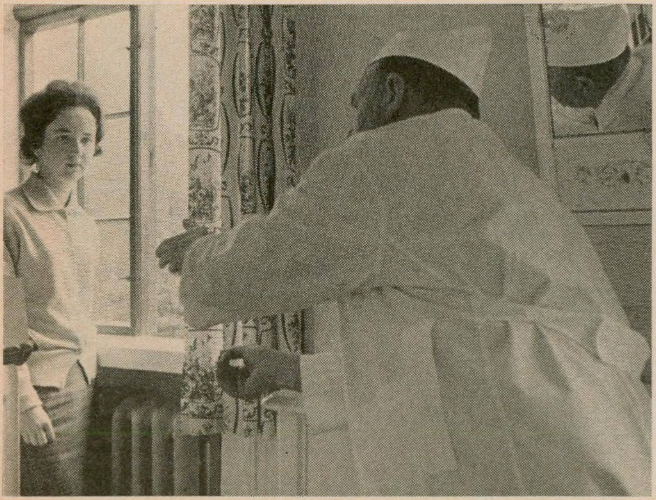
The chapel in the old and now disused leprosarium in Bergen, built on the foundations of an 11th century monastery.

In the garden of his home Dr. Rud with his wife and daughter look out over the fjord toward Bergen harbor.

Dr. Rud with one of the weird paintings done by a grateful schizophrenic patient. Others hang on the wall.



Architect's rendering of the new psychiatric clinic and research center planned for Bergen, of which Dr. Rud will be the director.



One of the hardest tasks in the hospital is preparing a patient for a return to a family or to outside care.

years, talks to them about their work and personal problems.

After a snack at noon, Dr. Rud is available for conferences with the relatives of patients, one of the most difficult aspects of his work. The prejudices about insanity are as strong in Norway as in other parts of the world, and the greatest difficulty a psychiatrist has is in persuading a family to accept a relative who is considered to be capable of functioning in society, under medication and proper supervision. Says Dr. Rud: "It is often far more difficult to deal with a patient's family than with the patient himself."

The main meal of the day in Norway is taken around four o'clock: after that Dr. Rud relaxes with a book, listens to music, or occasionally looks at television. The programs of the only station he can receive in Bergen have in recent times been greatly enriched by transmissions from the United States via the telstar satellite relay system.

Dr. Rud has taken part in many of Norway's scientific activities: he was president in 1956 of the Norwegian Psychiatric Association, president of the Bergen division of the Norwegian Association for Social Work, vice-president of a society that combines physics and humanism (Selskapet til Vitenskapenes Fremme), president for two years of the Medical Society of Bergen, member of the Gerontological Society.

The Dream. Norway has a serious shortage of institutions for psychiatric treatment, the total being just over twenty, with beds for about 8500 theoretically, but in practice there is about twenty percent overcrowding. In addition to these official institutions there are private nursing homes for mental patients.

What Dr. Rud hopes to see is a hospital and research center that will probably be called the Department of Psychiatry of the University of Bergen. It will be a self-contained unit combining a mental hospital with facilities for specialized studies. Dr. Rud will be its director, and one of the principal areas of study will be juvenile delinquency and criminology among the young. Two other special areas of the study will be the relationship between genetic traits and environment and the physical and psychic effects of stress.

Foreign scientists will be welcome at the new center, as they have been for many years at Dr. Rud's present clinic, whose visitor's book is a miniature *Who's Who* of clinicians and psychiatrists from most European countries, North and South America, the Soviet Union and Asia. Says Dr. Rud: "There are so many areas where existing knowledge needs to be coordinated. I hope that our new center will enable scientists and clinicians from all over the world to pool their knowledge and experience."

Gazing over the waters of the fjord where once sailed the proud longships of the Vikings and the rich merchantmen of the Hansa towns, Dr. Finn Torgeir Rud looks back on his thirty years devoted to the study and treatment of mental illness, looks forward to many more years of helping his less fortunate fellow men.