

audiences. Sociological problems of the cinema were examined by Group 3: the 'stereotypes' of the popular film, the intentional and unintentional propaganda of films, and the possibility of collecting material to provide a statistical basis for further sociological research. Group 4 dealt with the film as an instrument of teaching and research. Group 5 considered laws in relation to the cinema, the classifying of films according to their possible effects on viewers, and problems of censorship. Comparison of the film with other forms of expression was carried out by Group 6, and specifically with the medium of television by Group 7. The presidents of these six groups were M. Ponzio, M. J. Flaud, F. Buytendijk, G. Calo, B. Knipping and A. Marzi, and the chairmen at their various sessions were M. P. Fraisse, G. Friedmann, O. Klineberg, R. Lefranc, R. Bonnardel, R. Meili, E. Souriau, P. Francastel, H. Gratiot-Alphandery and H. Dieuzeide.

Not the least important filmological experiments reported during the Congress were those to do with modifications of the electro-encephalograph during cinematograph projection. These experiments have been carried out in France by J. Bert, G. Cohen-Séat, J. Faure, H. Gastaut, G. Heuyer, S. Lebovici, Mme. Rebeillard, Mlle. Daveau, and others, and some of the experiments have already been reported in an issue of the official journal of the Institut de Filmologie, *Revue internationale de Filmologie* (January-March, 1954). Sound films containing news-reel type items have been used, and into these films have been infrequently inserted strips of film which leave the screen suddenly lighted but blank for a short period. In one experiment a 'western' adventure film and a film of strong emotional content—showing delinquents—have been used. The subjects of the experiments have been various, and in one experiment have included animal subjects (dogs). The effect on the electro-encephalograph of the fluctuation of light intensity during projection, isolated from the effect of representation, has been examined; and breathing and other physiological effects have been recorded.

Present knowledge is insufficient to permit defined interpretations of the electro-encephalograph. There were factors apart from those to do with the film projection which may have caused some of the observed modulations, and the experimenters themselves do not claim to have arrived at sure conclusions. Nevertheless, these experiments represent pioneering work of a kind that may eventually lead to important advances in knowledge not only of the effects of film projection, but also in electro-encephalograph techniques and in the study of the brain. The film provides the research worker in this field with a convenient instrument. It may be that at length the film will provide the research worker in his laboratory with the means of presenting actual-life situations to the subjects of his experiments, and of studying the effects produced by such situations. First, however, it has to be established that reactions and thought processes similar to those that occur in ordinary life (when not watching films) can be brought about by film representation, and by what kind of film method. In relation to this, C. Denis Pegge maintained that there are two fundamentally different modes of mental reception from films, depending particularly on the use or non-use of speech; and he suggested that electro-encephalographic experiments might profitably be carried out to test this hypothesis.

A criticism made at the Congress of the electro-encephalographic experiments so far accomplished was that some of the observed effects might have resulted from forms of representation other than that of the film; also, the primary need of establishing a classification of spectator reactions was discussed.

The object of this Congress, as of all international congresses—to make known what is being done in different countries—was admirably fulfilled, and not the least of its benefits were the personal contacts it allowed. Much of the material of its communications must probably remain unco-ordinated; but some clarification as to the best way of sub-dividing the large subject of filmology may well follow the arranging of the material for publication. This considerable task is now being tackled by the Congress Committee, and should result in an important book. Thanks are due to those who organized the Congress, including the general and administrative secretaries, Mme. Bianka Zazzo and Mme. Chantal Loiseau; these latter were responsible for detailed arrangements which contributed to making this Congress not only valuable, but also most enjoyable. C. DENIS PEGGE

## COMMONWEALTH FUND, NEW YORK REPORT FOR THE YEAR 1953-54

THE thirty-sixth annual report of the Commonwealth Fund, which covers the year ended June 30, 1954\*, lists more than forty appropriations made during 1953-54. Of the nineteen appropriations for medical education, thirteen were new grants. These grants fall into six general groups: those aimed at encouraging the better integration of professional and school or college education; those to assist the integrated teaching of the basic sciences to medical students in their first and second years; those to develop broader and more satisfactory relationships with patients by encouraging integrated teaching in the clinical years of the medical curriculum and better relations between the outpatient department, home care and the community; those in mental health, where the integration of psychiatry and clinical medicine is being encouraged, and the Fund is this year assisting a programme in preventive psychiatry, both teaching and research; those in nursing activities, chiefly to clarify the place of nursing in health activities and the training required for it; and those concerned with educational research and evaluation. The last, it is hoped, will lead to the development of improved techniques for assessing particular accomplishments or changes in students, better methods of selecting students for admission to medical schools, and the better definition and clarification of the objectives of the medical faculties themselves, as well as the provision of factual information as a basis both of administrative decisions and of the judgments that students are called upon to make about their future careers.

Five grants were made for experimental health services, the largest being a three-year grant to the Mary Imogene Bassett Hospital, Cooperstown, New York, towards the provision of a psychiatric service for a scattered rural constituency. Another was

\* Commonwealth Fund. Thirty-sixth Annual Report for the Year ending June 30, 1954. Pp. ix+42. (Commonwealth Fund, 1 East 75th Street, New York, 1954.)

towards the cost of a survey of the incidence and nature of long-term illnesses in a cross-section of the population of Baltimore, Maryland, and a third for a survey of the Rochester regional hospital programme. The other two were for a study of family experience with medical care in an urban population group and for planning and organizing programmes to improve medical care in selected Tennessee communities.

Of the thirteen grants for medical research, four were new, one of these being a survey of the work of the Child Research Council of the School of Medicine, University of Colorado. Much the largest grants in this group are those for studies of neural correlates of mental activity at the University of California School of Medicine and for the study of personality development at the Child Study Centre, Yale University; but large grants were also made for studies of resistance and susceptibility to experimental tuberculosis (Henry Phipps Institute, University of Pennsylvania School of Medicine), histochemical studies of the sub-microscopic organization of cells and extracellular substances (Department of Anatomy, University of Chicago), studies of cerebral function (New York University College of Medicine), a twin study of the hereditary and environmental factors in body build (Institute for the Study of Human Variation, Columbia University) and a study of the biological role of steroids (Worcester Foundation for Experimental Biology).

For advanced fellowships in medicine and allied fields, the Fund appropriated 100 million dollars, and the eighteen awards included eight for interdisciplinary study, five for special work relating to psychiatry, two for training in research and three for special experience and study. In the field of international education the major appropriation in 1953-54 was 685,890,000 dollars for a two-year budget for the established programme of the Commonwealth Fund fellowships for advanced study and travel in the United States. New awards under the programme, which also provides for the maintenance of Harkness House, London, included twenty general British fellowships, three Home, six Dominion and two Colonial Civil Service fellowships, and three journalism fellowships, while a two-year grant was made to the Institute of International Education and a one-year grant to the Salzburg Seminar in American Studies.

## BLOOD COAGULATION AND THROMBOSIS

TWO main difficulties are immediately recognizable in research on blood coagulation. Only two or three of the dozen or so components of the blood-clotting system have been obtained in a state approaching purity, but the continued application of physico-chemical separations will probably improve this situation in the course of time. The second difficulty is the multiplicity of terms for components which can only be recognized by their effect on a clotting system, and thus it is very welcome news that an International Committee on the Nomenclature of Blood Clotting Factors is being formed to resolve the existing confusion. The editor and panel of contributors to the recent issue of the *British Medical Bulletin* (11, No. 1; 1955) are therefore to be congratulated on maintaining the high standard of

review associated with the journal in a field where there are exceptional difficulties.

In his introduction, R. G. Macfarlane points out that research in blood coagulation, which for more than a century has moved at a strictly academic tempo, has recently acquired a remarkable acceleration which he attributes partly to studies of hæmorrhagic states (defective coagulation) and partly to the introduction of anticoagulant therapy for thrombosis (excessive coagulation). Tests of clotting efficiency, discussed by Dr. Rosemary Biggs, contribute both to the diagnosis of hæmorrhagic states and to the control of anticoagulant therapy.

Recent advances in the understanding of hæmophilia and allied disorders are presented by W. R. Pitney and J. V. Dacie. C. Hougie discusses another group of coagulation defects—those due to the development of anticoagulant factors in the blood. J. F. Ackroyd contributes two articles on the role of platelets in normal and pathological conditions, and J. B. Duguid discusses mural thrombosis in arteries.

Dr. Catherine Burt gives a very practical review of the clinical uses of anticoagulant drugs, discussing the heparin type of anticoagulant which acts directly on the blood-clotting system and also the coumarin type which acts by reducing the formation of blood-clotting factors. A table clearly sets out the doses, the times to obtain an effect and to return to normal afterwards, for the various coumarin-type drugs; the effect of the heparin type is obtained immediately after injection. Contra-indications and the results of therapy in various diseases are very thoroughly reviewed.

K. Bailey and F. R. Bettelheim discuss the conversion of soluble fibrinogen to insoluble fibrin by the enzyme thrombin. Here the picture of coagulation is clearer since fibrinogen and thrombin have recently been prepared in what appear to be pure forms. The discovery that the N-terminal group of fibrin differed from that of fibrinogen led to the isolation of a peptide split off from fibrinogen by the action of thrombin during clot formation. These facts, first discovered with bovine fibrinogen, are being confirmed for human fibrinogen by current research. R. A. Kekwick describes the large-scale separation of some of the clotting factors from human plasma. These factors are generally required in a very pure state for diagnosis and research; but for clinical application moderate purity suffices.

A careful analysis of the mode of action of coumarin drugs is presented by A. S. Douglas, who concludes that the serum of patients under therapy with these drugs is defective in its ability to form thromboplastin. R. B. Hunter and D. M. Shepherd contribute an interesting article on the chemistry of coumarin anticoagulant drugs in which they point out that it is still not possible to define the minimum structural characteristics that are required to confer anticoagulant powers on the molecule. The relationship between anticoagulant activity and the opposing vitamin K activity is discussed, and it is pointed out that competitive inhibition between coumarin anticoagulants and vitamin K exists only over a very limited dose-range. Vitamin K is a growth factor for certain micro-organisms, and a compound with anti-vitamin K activity in this respect may or may not be an anticoagulant.

A very comprehensive review of the chemistry and mode of action of heparin and related compounds is provided by K. W. Walton. After tracing the history of the purification of heparin through to present-day