explaining anything to an acceptable standard of rigour; and to this outsider, at least, the practical pay-off of the psychoanalytic approach has been meagre. So I do not see this as a valid way of escape from the complexity of neurobiology.

When we come to the clinical level, there are great difficulties in taxonomy and in the ascertainment of outcomes. I am not, of course, beguiled by the wilder extravaganzas of Laing or Szasz, which see psychiatric illness as a sort of Red-Queen dream in the mind of physicians; but there are real problems in the characterization of disease entities and in the evaluation of therapeutic measures.

Consideration of these difficulties, together with the immensity of the clinical load of mental illness, could lead to the making of excuses for not embarking on a research career in psychiatry. I would like to think that such an attitude will be seen as plainly wrong. These things must be seen as challenges. And there is the further consideration that real progress has already been made in the alleviation of mental illness.

Directions for research

I am not, of course, going to give 'directions' in any prescriptive sense. On the contrary, my message is that research related to mental illness must come from a considerable variety of disciplines, in other words be in many directions, though not perhaps quite in all directions.

The neurobiological base, already well-developed, needs further strengthening, exploiting more sophisticated biochemical and electro-physiological techniques as they become available; and also applying them so far as possible, to abnormal as well as to normal states of mind. Basic psychology and sociology are also capable of providing insights applicable to mental dysfunction. General medicine and geriatric medicine can make a contribution to the understanding of the organic dementias. Neuropathology is a discipline which calls for special encouragement, in view of the prevailing shortages of adequately trained workers in that field.

At the clinical end of the spectrum, there are still problems in the natural history and in the classification of mental disorders which call both for detailed study of individual patients and for systematic analysis of larger groups. The interactions between the patient and his family, and between the patient and society, require further study to supplement the progress which has already been made in social psychiatry.

When we were looking at the biochemical approach to psychiatry, we were impressed by the importance of what we called 'bridging disciplines', by which we meant studies which applied neurobiological concepts to the clinical field. Psychopharmacology is a notable example, from which spring both important theoretical concepts and practical benefit to patients.

On a more pragmatic level, we identified the need for a more satisfactory career structure for research in psychiatry, from the encouragement of training through to the establishment of career posts. Another practical question which we had to face was the physical location of major effort in psychiatric research. Should it be in the large mental hospitals, where there are masses of patients; or should it be in a university environment, with smaller number of patients but readier access to a wide range of disciplines and to the general facilities of an institute of advanced study? Without in any way denying the importance of clinical studies carried out in large hospitals, we came down firmly in favour of the university environment.

My outside view, while recognizing the difficulties of research relating to mental illness, is one of cautious optimism. I think that real progress has been made, and that it will continue. It can only be enhanced by greater contact between research-workers in this and other areas of medical research.

Can Planning Change the State of Research? The Experience of the Wellcome Trust

By Peter Williams, Director, The Wellcome Trust

For the past 24 years during which time I have been concerned with the management and financing of medical research, either at the MRC headquarters or the Wellcome Trust, I have heard it said that psychiatric research is backward and something ought to be done to improve the situation. My earliest memory of something being done was in 1959 when Professor (now Sir) Denis Hill, as a member of the Medical Research Council, wrote a report making the recommendation that the Council should set up research units, and the universities should establish more academic departments in medical schools. The reasons for these recommendations were fairly obvious. Unless established posts are available one cannot expect to recruit potential research workers to the field. The proposition accepted that even if the perfect head of department was not initially available, the next generation would have the right experience. Professor Hill's recommendations were, I think, very largely implemented. Between 1957 and 1962 the Medical Research Council set up five new units and one new research group. Only two of these units still exist but others have been established since. A number of university departments were also created.

Why then, twenty-odd years later, is the problem still with us? Why are we still concerned about the state of psychiatric research? Presumably the College feels concerned or it would not be holding this meeting today, and the Wellcome Trust must feel concerned or it would not have established a Mental Health Programme four years ago. What, I wonder, are we concerned about? Is it that there is *not enough* research being conducted? Is it that there are *not enough psychiatrists* interested in research? Is it that the research that is being conducted does not seem to be aimed in the direction that is likely to give practically useful answers, or is it simply a feeling that the problem of mental health is so large and intractable that more research is surely needed to change the situation?

One estimate of concern is illustrated by the extent of voluntary support for various forms of medical research. It is striking, for instance, how relatively low is the support for research in mental health compared with cancer. Clearly people who give money for research are more concerned about death and physical disability than a lifetime of mental illness.

After the 1959 study, although the new departments and units provided careers—an extremely important step—there were unfortunately insufficient trained research workers available to lead those departments in such a way as to change the outlook of academic psychiatry, and give leadership to the research workers who would succeed those appointed to the new posts.

Also, I think that the new departments were too small and had too much routine work to do. The initial policy was sound but it needed to have built-in growth over many years to achieve its aims, and this was not available during the later years of financial stringency.

If this examination of the state of psychiatric research is to have any purpose other than to air long established truths, it must lead to some practical action being taken to improve what, I assume, is still considered to be the inadequate state of psychiatric research. I therefore think an analysis of the problem is well worthwhile, but a starting premise is that we cannot plan on the basis of substantially greater funds being made available.

Let me make it clear that I do not believe that the approach should be to set up committees to consider what research needs to be done and then try to encourage people to do it. What I believe is that one can encourage the development of neglected subjects by analysing their defects and actively promoting a course of action designed to repair these. The only other course is to do nothing and wait for the right man with the right idea to turn up.

At the Wellcome Trust, a few years ago, it was decided to see what could be done to help certain subjects which were considered to be neglected in terms of research activity. The subjects were selected largely on the basis that the Trust did not receive the number of applications it would have expected to receive considering their significance as part of the overall load of illness.

The main subjects that the Trust has tried to help at various phases are dermatology, mental health, tropical medicine and veterinary medicine. In each case it consulted various advisers, either informally or at meetings held for the purpose, and then decided on a programme of support which aimed at tackling the deficiencies that appeared to be the most significant. Some subjects required long-term substantial support, e.g. tropical medicine,—units overseas and long-term appointments. Most seemed to be best served by offering training and research fellowships *either* generally *or* in selected centres, e.g. dermatology. Others were helped by advertising competitive major awards usually aimed at linking the classical subject to some basic discipline. In three areas, mental health, tropical medicine and veterinary medicine, the Trust's programme and policy are under continual review through advisory panels under the chairmanship of individual Wellcome Trustees.

Has this experience anything to tell psychiatry about its problems? Are there comparisons with other neglected fields that can give a lead? One generalization can, I think, be made. The level of activity of research in any field turns more strongly on the history of that subject in the academic and social scene than on its intrinsic difficulty, although I have to admit that research into the aetiology of mental disease has special difficulties because of the inaccessibility of the brain, the likelihood that lesions will be at microscopic or molecular level, as well as the absence of animal models and the difficulty of experimenting on man. These difficulties do not, however, seem to me to be an excuse for psychiatry failing to get closer to the basic sciences that are clearly essential to the advance of the subject.

I will focus my comments on the way in which psychiatrists can become more involved in aetiological research and influence the development of the field of mental health, and yet I am bound to say that the fundamental advances needed to alter the face of the subject are likely to come, in the first instance, from laboratory scientists pursuing fundamental research on the activity of the brain. Psychiatrists need to keep in close touch with these research workers and encourage them to apply their interest to the mental health field. Those organizations that support research must see that these basic scientists are well supported.

In an analysis of the reasons for psychiatric research being backward, the first question must be, is there something in the character of the doctors who are selected, or select themselves, for a career in psychiatry that is incompatible with the character required for research? Are they, in fact, just the sort of doctors who, in general, do not do research and does the subject select recruits or the recruits select the subject simply because it is not scientific and not research orientated.

We all know that as a broad generality the specialties of medicine select recruits of different character. We all have a

mental picture of a surgeon, dogmatic, determined and decisive, the general physician, contemplative and questioning everything he is told, the neurologist, fascinated and satisfied by his patterns and inter-relations, the ophthalmologist and oto-rhino-laryngologist focussed on a localized part of the body to the exclusion of the rest. What is the psychiatrist like? He has to rely very largely on the history and behaviour of a patient for his diagnosis and his speculations on aetiology. His opportunity to become philosophical and to build theories on his experience rather than scientific facts is enormous. Could it be that an experience of this sort mesmerizes those who enter psychiatry into speculation rather than the accumulation of hard facts. I do not think this element can be ignored but I do not have the experience to weigh its significance.

The second question is what are the factors that appear to be common to most of the neglected subjects that we have identified and how many of these apply to psychiatry? I think the main ones are if—

1. the subject is regarded as specialized and primarily postgraduate.
2. the institutions where it is practised or its academic centres are isolated from other disciplines and especially undergraduate medical schools and basic science departments.
3. the image of the subject is bizarre, unpleasant or dull.
4. the subject is denigrated as unscientific or ridiculed by the middle of the road medical teachers.
5. the impression is created that its problems are too difficult for ordinary people to tackle or that treatment is not satisfactory.
6. the patient load of those who practise it is so great that the staff do not have time for research.
7. the regulations of its licensing body are so rigid that freedom to think originally is deferred too long.
8. its leaders let other subject specialists attract away the best graduates by failing to make a positive effort to recruit them early.

There are also some general factors that apply to all research, such as the relatively high pay of clinicians compared with academics, but these factors cannot explain the neglect of particular subjects. Psychiatry suffers from most of these problems.

A number of these problems are, of course, the result of the decisions of previous generations and were made with the best of reasons. The isolation of our mental hospitals was of course one, and I couple with that the development of separate institutions of postgraduate medicine and, in particular, a separate Institute of Psychiatry. When specialism means geographical separation the academic development of a subject suffers in the long run.

It is not possible to change the image of a subject overnight, but the responsibility for doing so clearly lies with its leaders who will recruit the next generation. If psychiatry wishes to recruit people who will do scientific research in this field, the subject has to be seen to support science, and its leaders must teach the subject to undergraduates in a scientific manner. I am in no position to say that this is not the way psychiatry is taught today—it certainly was not when I was a student.

These personal factors cannot be affected by a grant-giving organization. What such a body can do is to try and define what are the apparent weaknesses in the system and then try to provide some of the back-up that encourages the development of the subject.

The Wellcome Trust, following a meeting in 1976, developed a programme with five main parts.

1. The provision of extra lecturers in understaffed undergraduate departments to encourage research and scientific undergraduate teaching. Such support has been given at Oxford, Cambridge, Newcastle, the Royal Free, St George's and Guy's.
2. The advertisement of major awards in a variety of subjects:
   Neuroendocrine factors and mental disorders
   Genetics of schizophrenia
   Conditions causing loss of intellect
   Mental subnormality
   Eating and drinking disorders

   Through these advertised awards the Trust has encouraged linkage of mental health research to other disciplines and has encouraged new work that would not have developed had not the awards been advertised. Twelve awards have been made at a cost of £800,000.
3. The provision of fellowships for research and research training—the number provided has grown yearly and 19 are now in post.
4. The support of workers in various aspects of schizophrenia research and provision for regular meetings as members of the Schizophrenia Club, the establishment of which the Trust instigated.
5. The provision of *ad hoc* grants—have also enabled us to support a significant amount of research.
   The Wellcome Trust has allocated £2,490,000 to psychiatry during the past four years.

What has been found out is that taking an interest in a field and letting this interest be known leads to more applications of better quality being received. The Wellcome Trust deals with applications by seeking referees' opinions and then submitting the proposals to its mental health panel which has a membership of scientists as well as psychiatrists. This type of committee creates a formidable screen for applications. The result is that 48 grants, totalling £940,000 have been made over the past four years. Awards have been made at a rate of 58 per cent of the applications received, 50 per cent of the total funds requested. The awarding rate in other less neglected fields is approximately the same. Since the number of awards made by the MRC during this time has also risen this is evidence that stimulus to a field bears

fruit. I do not believe that any good applications have been declined for lack of funds.

I consider that the result of the competitive major award scheme has been to improve the relationship of certain subjects, e.g. genetics, to mental health, by insisting that the application should be jointly submitted. In a number of cases it has been difficult for a basic scientist to find a suitable psychiatrist as a collaborator. In others the psychiatrists who have submitted applications did not seem to realize that they needed sophisticated help to satisfy the panel that their proposals were valid.

This leads me to suggest that what psychiatry ought to be concerned about is how it can establish a sufficient number of individuals with a good training and experience of psychiatry as well as real knowledge of a basic science that may be applicable to interdisciplinary research in this field. This is, of course, the situation in other neglected fields, especially those in which the training starts after a fairly full grounding in general medicine. There would seem to me to be a special case for selecting entrants to psychiatry very early in their careers and tailoring a programme of training so that they get a thorough grounding in some branch of science as well as psychiatry. For them to wait until they have finished their clinical training puts an unreasonable delay and financial burden on them.

I believe that suitable fellowships could be made available on condition that the sponsors of such highly selected individuals would take personal care to organize an appropriate training, both in the UK and overseas, and see that the person they sponsored is placed in a suitable post at each stage to develop his or her own research. If we are to accelerate the pace of development of research in psychiatry the responsibility will lie with our senior academic psychiatrists who will have to find and sponsor the new entrants and groom them to future leadership. This is what general medicine did so that it could flourish as a research subject. Maybe this is a role for the College to think about.

A meeting arranged by the Wellcome Trust in February 1979 made a number of recommendations which are for the most part included in this paper. It was also suggested that other useful adjuncts to improve recruitment to research in psychiatry would be for elective periods and intercalated BSc courses to be related to psychiatry and that even more encouragement should be given to research as a requirement for the MRCPsych.

What the Trust has not discovered as a result of starting its Mental Health Programme is whether it will create a long-term change. It is too early to judge, and the critieria are even more difficult to define.

How can the Trust's impact be judged? I do not think it will be by the results of the particular programmes supported. The subject may change through a discovery made by someone supported by the Trust, but even though it tries to select well the course of new ideas is unpredictable. However, a regular appraisal of the success or failure of the support given will, the Trust believes, lead to improved policy. What is most likely to be achieved is the attraction of more curious individuals to do research in the field and that they will do inter-disciplinary work which will lead to a level of activity commensurate with the significance of their subject.

It will take a long time, but the Trust believes a shorter time than if it simply waited to see who and what turned up.

A major factor in trying to sponsor research is the way in which the programme is managed. Just as it will be the enthusiasm of the senior member of staff that will recruit the next generation, so it will be the attitude of the programme director at the office of the grant-giving organization that can encourage or discourage those who need grants to pursue their research ideas or recruit new entrants.

The programme administrator has to be interested and constructive in the development of the subject for which he or she is responsible, and must deal sympathetically with those who apply for support and be flexible in his or her approach. We have been very fortunate at the Wellcome Trust in having in Dr Edda Hanington just such a person to manage the programme on which the Trustees receive advice from their mental health panel which sits under the chairmanship of Professor Peart.

It is my conclusion that our concern is that psychiatric problems are such a major factor in the health of our population and that we feel relatively powerless to change the situation. We believe that the change must come from new discoveries and we do not honestly see much likelihood of these arising from research being undertaken at present. We are therefore striving to see if we can change the situation. I have described how one organization that accepted the challenge has tried to affect the situation. It is my thesis that it is possible to change and improve the state of medical research by mounting a positive programme; it is not sufficient to sit back and wait for the man with the right idea to turn up and ask for support.