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PSYCHIATRIC EVIDENCE IN COURT*

BY

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I shall endeavour in this short lecture to recall a part of my experience in giving evidence in court on a wide variety of topics and interests. My work has been confined to Scottish courts. If, therefore, I should trespass on or differ from the practice of English courts I trust you will forgive my parochialism. Those of you who have had extensive court experience will no doubt excuse the somewhat platitudinous nature of my remarks.

Whenever I am asked to enter the witness-box and to repeat after the judge the solemn words, "I swear by Almighty God that, as I shall answer to God at the great day of judgment, I shall tell the truth, the whole truth, and nothing but the truth," I am impressed and subdued by the majesty of the occasion. But likewise I am fortified by the knowledge that the trial will be conducted in a fair and dignified manner according to the standard and tradition set by British justice. Bench and Bar have always accorded me the most courteous and considerate treatment, and that also, I believe, has been the experience of most of my professional colleagues.

In the Sir Alexander Morison Lecture for 1954 I commented on the great change which has occurred in the increasing frequency with which the psychiatrist is consulted in relation to controversial medico-legal work (Henderson, 1955). That change, in my personal experience, extends over the last twenty-five years. The court and public opinion are not nearly so antagonistic to psychiatry and psychiatrists as they used to be. They have come to appreciate that the art and science of psychiatry is an accepted and important part of medical practice, and is capable of making a contribution to the understanding and motivation of conduct disorder, whatever form it may take and however it may have been determined. The action which requires to be investigated, for instance, may be one of criminal conduct—for example, murder, assault, housebreaking, theft, sexual offence; or else the scene of the trial may be in the civil court and may be concerned with the legality of the admission and discharge of patients from mental hospitals, contracts, torts, testamentary capacity, the Matrimonial Causes Act, the appointment of a receiver or curator bonis, and compensation cases. That list is by no means complete, but it is comprehensive enough to prove that forensic psychiatry is a wide and intricate field of work, dealing with formidable problems of great importance.

In addition, the work of the psychiatrist is often closely associated and integrated with that of the probation officer, the psychiatric social worker, and the teacher. That is particularly so in the case of children in relation to the determination of levels of intelligence, and the consequent and often most difficult and responsible decision whether a special school, mental-defective colony, approved school, or Borstal institution is most likely to be successful in meeting the needs of the particular case. I am afraid I often think that referral to such agencies is too easily and readily applied, and that more conservative measures should be persevered in longer than is the case. That point deserves some emphasis. Many persons have a great repugnance to and fear of nursing-homes, or hospitals, or of any sort of establishment which controls their freedom and independence. We require to bear this very much in mind when we are making arrangements for continued treatment, because I have known many cases where such forms of in-patient treatment may add to and complicate the original clinical state; and it is much more difficult to cure two conditions than one. In consequence, in many cases—and this is particularly so in relation to adults—we can with reason and confidence recommend the more extensive use of probation. Children often regard probation merely as a "let off," but adults respect its significance.

A Common Purpose

In all the above matters doctors, lawyers, school-teachers, and all other decent-minded citizens have the same common purpose—to do what is best for the individual, and to look after and safeguard the health and welfare of the lieges. That dual responsibility should never be divorced. It may be, on occasion, that the balance of sympathy, of sentence, and of treatment sways more in one direction than in the other, "but if we are prepared to make allowance for the particular imperfections of our respective training" and practice then we may come to work together more harmoniously and helpfully—and more justly too. And in any case, the law court, in the middle of a trial, is the last place in which we should try to iron out our difficulties and put each other right: such matters can be dealt with in a more dignified manner by private meeting and discussion.

It has always been the practice of British courts to seek the advice and help of experts in dealing with difficult scientific and technical matters. For instance, in trade disputes, in matters affecting shipping, engineering, architecture, and so on, specialists may be called to assist and guide the court so that a fair decision can be arrived at. It is all the more important that this practice should be applied and extended to human affairs and problems. This has been done, and certain American cities such as New York, Boston,

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and Chicago have appointed court psychiatrists who advise the judge in regard to cases demanding an expert explanation. But if acute disagreement should arise the judge may advise the jury to rule out the medical evidence and to try the case on its merits; or he may ask for another independent medical opinion. In that way friction and personal animosity, which can be so upsetting, especially when a great deal of time has been expended in carrying out examinations and in attendance at court, may be avoided. But even in these circumstances some doctors refuse to take part in cases involving court procedure. That is a pity; they miss a lot. A great deal of interest is lost and the court may be denied the benefit of the best opinion. Personally, I have always regarded the privilege of giving expert testimony as an important public duty. It has added enormously to my understanding of the vagaries of human nature; it can be fascinating, exciting, and absorbing. The fact, too, that one's evidence may influence judge and jury to come to a fair decision entails an added responsibility which may be reflected, beneficially, on the individual, his family, and society.

While forensic psychiatry, therefore, is a wide, highly specialized field, yet it can be utilized to an even greater extent; there is no reason to suppose that, as our knowledge increases, it cannot be applied more specifically and successfully to understanding the affairs of life. Our techniques and our ability to interpret can be improved. For instance, we must admit and realize that, on the one hand, disorders of conduct may be conceived and perpetrated at a conscious level in a deliberate intentional way with a malicious purpose, but, on the other hand, the springs of action may be centred in the instinctive life, and may originate from motives and forces of a complex nature which result in disordered ideation and conduct—for example, katathymic crisis. The common factor, of course, in making this differentiation is the man himself who requires to be considered and understood in the light of his ancestors, and his background and circumstances. It is, I believe, the inability to accept that there are such opposing points of view which has been the stumbling-block in effecting a common purpose in dealing with the medico-legal and medico-social disorders which occupy the law courts. The law, the Church, public opinion, and large numbers of our own profession are happy enough to regard any transgression of the social or moral code as bad, as wicked, and as meriting condign punishment. They never seem to consider motivation or circumstances. They have never heard of the unconscious. They have never seemed to realize how narrow the margin is between the bad, the good, the unsound, the abnormal, or how impossible it is to separate conduct disorder into categories which are subject to rigid laws.

The Open Mind

It might seem as if I were straying from my remit, but my object in making the above remarks has been to show how imperative it is for the psychiatrist in dealing with such matters, in directing his inquiries, and in formulating his report to keep an open mind as free from prejudice and preconceived ideas as possible. That may not be so easy as it seems. Your opinion will have been enlisted on the side of the prosecution or defence (except in those rare instances where you are invited to arbitrate between two opposing views), and it may appear a little churlish and rude not to support the employing authority. But do not let that influence you too much. Remember you are taking part in the proceedings so as to assist the court to come to a fair judgment; you are not there to fight the case to gain a verdict as it is the duty of opposing counsel to do. Medical evidence should be non-partisan, unbiased, and based on an accurate assessment of the medical facts. On numerous occasions, after my examination has been completed, I have informed my employing authority that it would be injudicious and inadvisable to call me as a witness because I would be unable to support their client,

and would do their case more harm than good. That attitude has been appreciated and respected; it has assisted materially in the rapidity with which a case may be settled, and indirectly, I believe, it has resulted in an increase rather than in a diminution of one's forensic practice.

The Aim of Examination

Never hesitate to request permission to make several examinations; one may be quite insufficient. Your aim will be to obtain a comprehensive accurate clinical picture of the individual in relation to all the surrounding circumstances, and therefore in addition to your examination of the patient you may find it essential to seek information from relatives, friends, business associates, doctors, ministers, teachers, social workers, or any other persons. All of them are nearly always willing to be most co-operative.

The extent of your inquiries will be some indication of your thoroughness, and of your anxiety not to leave anything to chance. At all times and on all occasions maintain high professional standards, and in your examinations do not depend too much on the help of others. There is a certain sting in the tail of that remark, because I am disturbed by the knowledge that the art of good history-taking—an art which has been developed by the psychiatrist—is passing out of his hands into those of the social worker. Please do not misunderstand me. I have the highest respect and admiration for psychiatric social workers; some of them are the salt of the earth, and they do most excellent work. But, as I see it, I believe that the doctor should carry out all examinations and the interviewing of relatives and others by himself. It is only by doing so that he gets that intimate feeling for the case which will help him so much both in diagnosis and in treatment. The psychiatric social worker can be employed for more detailed inquiries, but always under the doctor's direction. Your prepared report should seek to do justice to all the relevant facts, which no doubt you will have grouped in an orderly manner and expressed positively. You should be ready to explain and elaborate your report whenever called upon to do so. Be as concise and free from ambiguity as possible. It is a sheer waste of time to introduce negative statements or to enter upon a highly technical differential diagnosis of clinical entities or embark on controversial theoretical formulations that can be boring, exasperating, and bewildering to a superlative degree.

Framing a Report

Write your report in language which is easily understood, and when technical terms are introduced it is advisable to define them at once. It is surprising, for instance, how perceptions and beliefs so different as illusions, hallucinations, delusions, and obsessions are referred to as if they were synonymous. We know that each has its own peculiar significance, which may affect prognosis, diagnosis, and treatment, and with a little care they can all be defined easily enough and made understandable. The same sort of difficulty applies to the interpretation of schizophrenia, hysteria, psychopathic personality, and even more so to the language of the psycho-analyst involving such terms as the super-ego and the id, and such mechanistic phenomena as sublimation, projection, displacement of affect, introjection, dissociation, and so on. That was all brought home to me several years ago when Dr. Douglas Adams and I got into hot water when speaking on behalf of a motorist who was charged with the death of a pedestrian. We suggested that the defendant was suffering from "temporary mental dissociation due to toxic-exhaustive factors so that he was unaware of the presence of the deceased on the highway and of his injuries and death, and was incapable of appreciating his immediately previous and subsequent actions." The defence, I may say, was upheld, but we did not have an easy passage—and probably to-day we would not have postulated such a formidable diagnosis, or been so long-winded.

And now let me try to be a little more explicit. In framing your report you should state at whose instance you are acting, and where and when you have carried out your examination. If information—for example, police reports, a history from lawyers or relatives—has been supplied to you, you should state so before giving the details of your own observations. After you have given the individual's personal particulars you should describe his appearance, his manner, his ability to co-operate, and whether or not his answers are relevant and to the point.

That great man Sir Thomas Clouston used to advise us in our examination of a patient to describe "what he looks like, what he says, what he does." That can still be your guide to-day. You must at once determine whether he knows the charge against him, or the reason why he has been referred to you for your opinion. In case there may be any doubt in the examinee's mind you should always explain who you are, and what is the purpose of your examination. There must be no element of subterfuge, no attempt to cloak your identity. From the answers given you will be able quickly to come to an opinion whether the person can plead to the charge against him, and whether his mind is in such a state he can understand the evidence, instruct his counsel, and follow the court procedure. During this time you will, of course, be noting emotional reactions, ideational clarity, and even, to a certain extent, the intellectual standard. It is important that the examinee should tell his story in his own words, and that you should listen with infinite patience and incorporate examples of his spontaneous account (where important or necessary). Interrupt as little as possible, and try to avoid asking leading questions. Naturally one's method of approach will vary depending on the particular case, but it may be a useful plan to make a list of any complaints that are expressed, and to test the emotional and intellectual level by means of appropriate questioning. During your examination you will have been able to gain an impression of the personality type, and to form an opinion on his insight and judgment, and whether or not his response and his bearing are appropriate to the circumstances. You should also be able to form a tentative estimate regarding the changes that may have taken place in your patient's condition since the court action was raised.

After you have completed a physical examination, with particular reference to whether or not there is any organic disorder of the nervous system, you may request that special examinations be effected—for example, E.E.G., blood and cerebrospinal fluid examinations, radiographic findings, and so on.

In your final summing-up the relevant points will be grouped and emphasized, and a particular clinical entity will be described which will be correlated with the family history, the personality type, and the environmental circumstances. In certain instances it may be both wise and necessary to suggest a diagnosis, and even to consider the prognosis and probable effect of treatment. You may even in the most humble and tentative way venture to suggest to the court how the case might be best disposed of—for example, homosexual cases.

If there is any doubt in your mind you should not be afraid to express it, but at the same time you must realize that it is quite reasonable to talk in terms of probability rather than of certainty. Since your original examination other information regarding the case may have come to your knowledge which may lead you to modify or change your opinion. In cases in which the plea of insanity is entered in bar of trial or sentence—for example, murder—you will require to state whether the accused, because of his mental state, is unable to plead, or at least is so affected that mitigation of sentence may be expected on the basis of diminished responsibility. In the majority of cases, however, we have to be sure that the accused has a full knowledge of the position in which he is placed, knew what he was doing at the time of the occurrence, and is able to

instruct counsel and follow the evidence which may be led in court.

I have always had great courtesy and co-operation from the prison personnel, and every facility has been provided whereby an adequate examination can be carried out. I have never thought it was necessary or indeed advisable to transfer or remove a prisoner to a psychiatric clinic for intensive or prolonged observation; such a course may easily create complications which are best avoided. For instance, one requires to be wary in relation to the possibility of simulation, and to the evaluation of what so many prisoners refer to as "black-outs" or loss of memory. They soon become knowledgeable of psychiatric terms. Prisoners who use such an excuse or evasion, especially when previously there has never been anything to substantiate such a state, should be regarded with grave suspicion. It should be remembered that the "fear period" previous to trial and sentence is apt to colour the clinical picture, but that it becomes modified and rapidly fades away once the position is clarified and the trial met.

In my examinations I endeavour to come to a fair estimate of the patient's intellectual capacity. In this I am influenced much more by the person's educational opportunities and work record than by the determination of his I.Q. (especially in the case of adults); the latter is essential in the case of young people so that the most suitable arrangements can be made for education and training. Your report is always submitted on Soul and Conscience.

In the Witness-box

When you enter the witness-box you must be prepared to testify to the truth of your report, to maintain your opinion, to answer all questions in an unequivocal manner, and to speak in a clear, confident voice so that both judge and jury know what you are saying. If you have told the truth, and nothing but the truth, and if you know your work, and can vouch for what you have said, then you need not be disturbed by your examination-in-chief, by your cross-examination, or by any special questions which the judge may ask you. It is the cross-examination which so many witnesses fear. An astute and clever counsel may make you uncomfortable by querying your opinion, by pointing out flaws and inconsistencies in your argument, by criticizing the form of your examination, the extent of your inquiries from outside sources, and the actual time you have been engaged on the case. Do not become either irritated or flustered—the cooler you are the better—and never try to score off counsel, for he is usually a good deal more nimble-witted than you are. Never mind if you have to concede a point here and there, but never allow your opinion of the main issue to be disturbed. Above all, you will be wise to avoid being patronizing or presumptuous so that no one can accuse you of trying to ape the Almighty.

If you are asked questions which you are unable to answer, admit your ignorance, and if you don't know your work you had better keep out of the witness-box altogether. If, on the other hand, you don't understand the questions asked, appeal to the judge, who is always ready to clarify the question and to advise and direct counsel. It is important, no matter how strongly one feels, not to overstress the situation, not to overplay your hand, but to strike a reasonable balance between sense and sentimentality; the one is, to a certain extent, complementary to the other. If you have been so indiscreet as to write papers and textbooks you must be prepared to have them quoted against you. It may be advisable to ask that the passage referred to should be shown to you, as a statement may often be taken from its context. You can always counter the suggestion made by saying that opinions previously expressed are always susceptible to change and modification. And certainly you need never hesitate to state, when a medical colleague's opinion is quoted against yours, that he is entitled to his opinion but that you are perfectly satisfied with, and indeed prefer, your own.

Illustrative Cases

Every medico-legal case presents its own particular problem, but provided the above principles are kept in mind they can be applied to either a civil or a criminal action. It is obvious that it would be impossible to illustrate every sort of situation, but for the purpose of this lecture I have drawn examples from a few recent cases. Davidson (1947) gives a much more detailed account.

Testamentary Capacity

You are also familiar, I have no doubt, with the points which require to be kept in mind in deciding whether or not a person can make a valid will. It is not especially difficult to decide when the person is still alive. But it not infrequently happens that when a will is contested the testator is already dead, and your opinion will require to be founded on the history of his health, on various documents and actions, and on whether, at the time the will was made, it was probable that his mental faculties were so intact that he knew his intention, was not unduly influenced, and did no injustice to those who might normally be entitled to benefit.

Such questions arose in the case of a lady, 80 years old, who had made a new will five days before her death. For many years she and her husband had been cared for by one of their sons, James. James, however, found his burden too difficult, and asked his brother, who was unemployed, and his wife to assist. They agreed to do so. But just at the time when the testatrix suffered from her last illness, diagnosed as senility and myocarditis, James was certified as of unsound mind and removed to a mental hospital, from which he eventually made a good recovery. On returning home he found that the previous will, which had been in his favour, had been overturned, and that a second will had been made in favour of his brother. At the time of the second will it was admitted that the testatrix was confined to bed, that she was so enfeebled that everything had to be done for her, that she could not sign her name, and could only record her approval or dissent by a nod or a shake of the head. I had no hesitation in forming the opinion that the testatrix was so incapacitated mentally that for some time previous to signing the second will it was most improbable that she was able to execute a valid legal document. That opinion was upheld. During the court action, however, the opposing counsel tried to prove that the family doctor who had been in attendance was much more likely to express a more convincing opinion than someone who had not seen or examined the testatrix. I agreed readily enough, and said I would be satisfied if I knew the extent and nature of the family doctor's investigations, but such information was not forthcoming.

Compensation

The difficulty the psychiatrist is faced with in cases of compensation is the long interval which has elapsed between the accident and the psychiatrist's examination. Months or years may have elapsed, and during that time the claim, instead of getting less, has usually become greatly increased, and the claimant's condition aggravated and set. It is difficult to strike a reasonable balance. The pursuer's claims may be as grossly excessive as the defendant's disclaimers are inadequate, and a dispute is entered into which prevents an adequate compromise or a just settlement. Often the alleged disability is entirely out of proportion to the precipitating cause, but it may be difficult to prove that the accident has not been the main factor, especially when the person has been in employment until the time of the accident. For instance, a man 28 years old, who had suffered no serious physical injury but experienced a degree of shock, claimed four years later, when I examined him, that he suffered from "turns" and had had a serious loss of memory. In fact, his memory disturbance was a massive amnesia only compatible with a diagnosis of hysteria: the

accident had been the precipitating factor, but it was not easy to convince a judge and jury of the true position.

A somewhat similar case was that of a man 37 years old who claimed a massive amnesia as a result of head injuries. Actually, in 1938 he had experienced a transitory loss of memory due to a serious injury; but in 1942 he returned to work, and continued steadily until 1947, and again from 1948 to 1951. In 1953 he sustained further injuries, reacted in a similar way to 1938, but was not referred until 1955. He failed to co-operate in treatment. The assessment of appropriate compensation was most difficult to determine.

In such cases we are asked to estimate the prognosis, and the probable effect of treatment. The matter is almost too hazardous, and it is usually better to state that we cannot tell or that we can only venture on a probable estimate.

Divorce Cases

The issues in such cases are quite numerous—for example, cruelty, desertion, chronic alcoholism, inability to consummate the marriage, insanity. It is the last-mentioned issue with which we as psychiatrists are most frequently concerned. Many of us believe that divorce on the basis of five years' continuous treatment in a mental hospital is neither a wise nor a just act, but it has been incorporated into our legal statutes, and it is our duty to interpret it in a reasonable manner.

Most of us have experience of patients who have made a reasonable recovery, spontaneously, long after a lapse of five years, but such cases are by no means common. Post-leucotomy cases may present a special issue, but we should remember that all we are required to do, medically, is to state that there is little or no probability that the defendant is ever likely to fit into social life. We should learn to be broad-minded and reasonable in such cases, and not allow our therapeutic optimism to run away with our judgment.

The above comment also applies to the treatment of sexual offenders. We have really very little success in treatment to offer, and in giving evidence in court we should be very careful not to promise more than can be justified by the actual facts.

Criminal Cases

Here we deal with dramatic and tragic issues which are headlined in the newspapers, and which may so inflame public opinion that justice is not always easy. Irrespective of the nature of the atrocity, it is our duty to examine every aspect of the case with the same scrupulous care and consideration that we should give to any other, and not to express an opinion until we have come to a firm decision whether or not the accused is of sound mind and able to plead to the charge against him. This is not easy: the ability to plead and soundness of mind do not always go together. I have had experience with many persons whom I have considered fit to plead, but I have not regarded them as of sound mind. It was because of the frequency of such cases that our Scottish courts came to accept, in murder cases, the plea of diminished responsibility—a plea which was narrowly rejected for incorporation into English law by the Royal Commission on Capital Punishment. Its acceptance is now being advocated by a Committee of the Inns of Court Conservative and Unionist Society under the chairmanship of Sir Lionel Heald, Q.C., M.P., a former Attorney-General.

This modification of the law has proved valuable, and makes allowance for states of disordered mental functioning which border both on sanity or insanity—the afflicted person is not "clean daft" but "just not quite right"—"not in the number one category." It is of interest that the above committee of eight barristers, four of them M.P.s, should have come round to this point of view. In a manner it is a triumph for psychiatry and an indication that we are no longer merely foolish sentimentalists who are eager to defeat the ends of justice. We abominate crimes of violence just as every decent-minded citizen does, but many of us are convinced that no deterrent or other useful purpose is

served by fierce denunciation from the bench, by flogging with the cat, or by capital punishment. If all criminal conduct was deliberate and purposive then a case might be made out for such procedures, but in the majority of instances the criminal act is usually instinctive and emotionally determined, or else it is the result of the distorted reasoning of a mentally abnormal person. The difficulties, however, are very great, and as doctors it is our duty to assist the courts and not produce reports testifying how we think the law should be administered. It may, however, be respectfully and tentatively suggested that the plea of diminished responsibility could be extended to other criminal actions—for example, sexual crimes.

The whole matter is far from easy; it is much more complicated, as has been pointed out by Simpson (1948), than merely to base your decision on whether or not the accused would have committed his offence if a policeman had been at his elbow. If the answer is in the negative then drag him to the scaffold; if in the affirmative, make arrangements for him in a suitable State institution.

Conclusion

I apologize if I have wandered about a good deal in presenting some of the experience I have had in court work. I am impressed by the increasing co-operation between doctors and lawyers, and I have wondered how we might get even closer together. By the time we are fully qualified and have gained considerable experience we have become almost too set in our respective points of view. It has seemed to me that it might be a constructive suggestion if lawyers, doctors, the clergy, social workers, and even scientists, on whom intellectual and cultural progress largely depends, could have a common basic training, and then later branch off into their respective specialties. My basic training course would consist of an intensive programme whereby it might be possible to blend the pursuit of knowledge for its own sake, which we call disinterested intellectual curiosity, with a greater understanding of the fundamental facts of human nature, of which there is such abysmal ignorance. Technically this might entail a course of instruction in philosophy and psycho-biological principles, but perhaps if we took some of those with deep psychological insight and humanitarian instincts as our guides—men like William Shakespeare and Robert Burns—than we might learn to do greater justice to our common humanity.

But the final word would be with the Apostle Paul when, in the Epistle to the Romans vii. 1, he inquires: "Know ye not, brethren, (for I speak to them that know the law,) how that the law hath dominion over a man as long as he liveth?"

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A forecast that the number of older men and women in the United Kingdom in 1971 will be over 37% more than in 1951 and the number of young people will be 6½% less is given in a report published by the Organization for European Economic Co-operation with the title *Demographic Trends in Western Europe* (H.M.S.O., 9s.). There will be 281 older men and women per 1,000 persons of working age in 1971 compared with 212 in 1951. The number of young people per 1,000 of the working population will change from 350 in 1951 to 359 in 1961 and 316 in 1971. The total population of this country is expected to increase from 50½ million in 1951 to nearly 53½ million in 1971, an increase of 6%, though this is reduced to 5% if allowance is made for a net rate of emigration of 25,000 a year. The report points out that in most of the fifteen member countries of O.E.E.C. the population will be higher in 1971 than in 1951.

SOME RECENT ADVANCES IN ENDOCRINOLOGY*

BY

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The increase in knowledge of the subject of endocrinology, like that of so many other branches of medicine, has been so rapid in the past decade or two that it is most difficult, even for one professedly engaged in the specialty, to keep abreast of all the advances made. How much more difficult, therefore, must it be for the general practitioner, not, of course, to keep really abreast of recent advances, for that is scarcely possible, but merely to have an awareness, and some appreciation, of the more important of these. This account attempts to review some of the recent advances in endocrinology which are likely to be of interest to practitioners—and, incidentally, which are of special interest to me.

The selection of material for inclusion in this review has not been easy. For example, an enormous literature on the thyroid gland has developed within the past few years, to summarize which is quite beyond my ability. To say nothing of advances in clinical knowledge, especially relating to diagnosis and treatment of thyroid disorders, there have been developments of fundamental importance in the physiology of thyroid function, outstanding among which is the work by Pitt-Rivers and by Gross leading to the discovery of 3:5:3-l-triiodothyronine, a part of the circulating thyroid hormone of much greater activity than thyroxine itself (see Gross and Pitt-Rivers, 1952). Another advance of great clinical importance has been the introduction a few years ago of the new insulins, but with this, as for example with recent progress in bone disease, in its endocrine context I am not well qualified to deal. It is proposed, therefore, to confine the following account to three main topics: some aspects of the adrenal cortex; pituitary insufficiency in the adult; and some recent developments in our knowledge of intersexuality.

The Adrenal Cortex

It is now generally agreed that the adrenal cortex produces three main groups of steroid hormones. These are often referred to as: glucocorticoids, mineralocorticoids, and sex steroids. It is probable that each of these groups contains more than one steroid, and that some contain several different steroids.

Glucocorticoids

These are so called because, *inter alia*, they influence carbohydrate metabolism, encouraging gluconeogenesis from protein and the deposition of glycogen in the liver. They therefore cause protein catabolism. Another important property, of which much clinical use is made, is their anti-inflammatory action. They reduce the number of circulating eosinophils in the blood. It is probable that the principal steroid of this group secreted by the adrenal cortex is hydrocortisone (compound F, 17-hydroxycorticosterone or cortisol), the actions of which are essentially the same as those of cortisone (compound E, 11-dehydro-17-hydroxycorticosterone). Kendall (1952) reviewed in synoptic form the research which led to the isolation and

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