civil servants may be to see that the Post Office operates legitimately, their efforts are bound to seem unconvincing to outsiders. In other words, the Government may not yet have recognized all the difficulties of allowing a nationalized industry to compete freely with private companies.

These, however, are immediate problems. Ten years from now, they could easily seem trivial and even pedantic. By then, time sharing computers will be commonplace. Businesses of all kinds will be dependent on computers not merely for huge parcels of data processing but for the solutions of smaller problems as well. This is why the enterprise of the Post Office in moving quickly into data processing should not tempt it to overlook its primary responsibility for efficient communications. Some computer users complain that the Post Office network is overloaded, and that more people would be using computer services already if there were more land lines available. Although the Post Office has been able to multiply the number of computer terminals by three in the past two years, and although complaints about the service now being offered may be exaggerated, it is hard to be confident that planning for the more distant future is being undertaken on a sufficiently ambitious scale.

What, for example, will be the contribution of lasers to communications in the future? What kinds of switching systems will be necessary to handle the gigantic loads on the telecommunications system ten years from now? What use will by then be made of satellites for domestic as well as international communications? Will it make sense to continue operating telephone networks without pulse code modulation? The research programme which the Post Office has in hand seems only inadequately to match the real and urgent needs which are now apparent. It is not reasonable to object that the Post Office is proposing to take a hand in data processing, but there will or should be trouble if it neglects to pursue the improvement of the communications network with the vigour which circumstances require. Even the most cursory examination of the way in which the Federal Communications Commission has been dazzled and even bewildered by the prospect of radically new means of communications should serve to show the Post Office that the problems are not all technical and that few of them are simple.

COMMITTEE AND AEC

THE relationship between the Joint Congressional Committee on Atomic Energy and the Atomic Energy Commission in the United States has changed a great deal since the time, a decade ago, when the annual examination of the AEC budget seemed more a public spectacle of enmity than an orderly contribution to good government. At the beginning, of course, the AEC was prevented by a combination of arrogance and innocence from learning quickly how to get on with Congress. The Joint Committee also had to make its reputation in what must then have seemed an exceedingly difficult technical field—and in the event it has succeeded so well that it has not merely become a power in the land on its own account but has also become a model to other committees of Congress which have somehow to make themselves effective critics in technical fields.

The American Constitution is a great help, of course. Congress is as jealous of its independence from the Administration as the British House of Commons is jealous of its independence of the monarchy. In Washington, one result is that the committees of Congress responsible for the detailed scrutiny of legislation are invested with all the prestige and authority that Congress has to muster. Even if the chairman of a committee, who may find that he owes his appointment to nothing but seniority, turns out to be a wayward eccentric, Congress as a whole will not willingly let the Administration make a monkey of him. The committees which make the pace in Washington, however, are those which can somehow establish an authority of their own. The Joint Committee on Atomic Energy has done this, and its success derives almost exclusively from its diligence. Since the early fifties it has been building up an enviable reputation for understanding of and discernment in the operations of the AEC. A decade ago it was largely responsible for persuading the AEC and the other government agencies concerned that there are more problems in regulating the safe use of radioactive materials than could be solved by setting rigid numerical limits for the kind of dose which should not be exceeded. By now, the committee has become expert on a host of technical matters. It can be relied on to know what the AEC is getting at when it says that one type of reactor is less promising than another. It can take a line of its own on the importance of plasma research. It has views on nuclear propulsion for rockets. Its competence has clearly won the respect not merely of other committees of Congress but of the AEC as well.

How has all this come about? Committees elsewhere —the Select Committee of the House of Commons on Science and Technology, for example—should be asking this question. When the prestige of Congress is discounted, the secret of the Joint Committee's success is principally to be found in the way in which it has been able to employ a full-time staff of able people willing to devote themselves to a continuing study of one branch of government administration. One striking proof of how this works is that the man who was for several years the committee's chief of staff, Mr James T. Ramey, became three years ago a member of the AEC. But this, of course, is also a proof of how close has now become the relationship between the committee and the AEC.

But could it be that the relationship is now closer than it should be? There is certainly something in the view that a certain tension between congressional committees and agencies of the Administration is desirable as well as unavoidable. One danger is that

if a committee and the agency which it is supposed to superintend live too closely in each other's pockets, there will be no means of making sure that their combined attitude to the outside world is sound. Another is that a committee which is too knowledgeable and too winsome may find itself persuading a government agency to particular lines of development which become, in retrospect, unwise. In other words, there is a danger that too expert a committee might find itself able to exercise power without responsibility.

On the face of things, the Joint Committee tends towards errors of the second kind. Its report on this year's budget application by the AEC (see page 116) shows how carefully the committee picks over the details of the budget, subtracting a few thousand dollars here and there, and sometimes even adding a few thousand. On one view, this is a splendid illustration of the democratic control of public institutions. On another, it is a sign that Congress and the Administration are too closely entangled.

There is no reason to believe that the committee's work has been unreasonably intrusive in the recent past. On the contrary, the chances are that the prodding needed to make accurate calculations of the cost of running particle accelerators before constructing them, and the campaign for better regulations to protect the health of uranium miners, have helped to make the policies of the AEC more sensible. But what if the question should arise of whether the AEC in its present form should continue to exist? Would the Joint Committee take kindly even to the much more modest proposal that responsibility for high energy physics might be transferred to the National Science Foundation? There is bound to be a suspicion that the Joint Committee, for all its expertise, would resist too radical a change. The trouble is that the time has probably come for a detailed re-examination of the function of the AEC. The best proof the committee could give of its resolution would be to begin an investigation off its own bat.

PINK SPOTS GALORE

It is now five years since Friedhoff and Winkle first suggested that the urine of schizophrenic patients may be characterized by something which yields a pink spot in a fairly standard chromatographic procedure (*Nature*, **194**, 897; 1962) and the interval has been crowded with ups and downs. At the beginning, of course, there was great excitement. The finding of the pink spot chimed in well with an accumulation of evidence to suggest that the metabolism of schizophrenic patients is biochemically distinctive. Five years ago, however, it must have seemed almost too much to hope for that the appearance of a single chemical substance, identifiable by a comparatively simple technique, might serve to distinguish a substantial proportion—ten per cent or so—of those who suffer from schizophrenia. Obviously a simple pink spot would have great value in diagnosis, although this was almost the least exciting of many possibilities. Naturally enough there was talk of seeking out people who might be biochemically prone to schizophrenia, but in whom the symptoms had not become overt. But there was also every reason to hope that when the chemical responsible for the pink spot had been properly identified, a means would have been provided for understanding something of the biochemical character of schizophrenia, and possibly of its causation as well. No wonder, then, that hats were thrown in the air when, in 1963, it seemed as if the chemical responsible for the pink spot might be β-3,4-dimethoxyphenylethylamine, or DMPE for short, for it is entirely plausible that such a chemical could have arisen by an error of tyrosine metabolism and that its pharmacological effect might be something like schizophrenia.

Those happy days now seem a long way off. Doubts about the identification of the pink spot with DMPE persisted from the beginning. One difficulty is the obvious problem of working with tiny quantities of material. In circumstances like these, chemical identification is necessarily rather indirect. But there were more serious problems bound up with the difficulties of knowing whether subjects examined for pink spot in the urine were schizophrenic or otherwise, for this is not a field in which diagnosis is easy. Predictably it was not long before apparently normal people were found to yield pink spot. Yet another difficulty was that the substance responsible might be produced by the metabolism of some drug used in the treatment of patients. Finally, a year ago it was demonstrated more or less conclusively that whatever pink spot might be, it was certainly not DMPE. The tale has now taken another turn with the report that the substance responsible is probably *p*-tyramine, and that the material which is responsible for the schizophrenic pink spot also occurs in urine from many patients with Parkinson's disease (see this issue, page 132). Boulton, Pollitt and Majer seem to be quite confident that the pink spots they have been able to find in the urine of patients with schizophrenia and Parkinson's disease are caused by *p*-tyramine. With the benefit of hindsight, it now seems likely that the schizophrenic pink spots reported in recent years may often have been caused by *p*-tyramine and not DMPE. Moreover, while the difficulties of diagnosis must still leave doubt about the association of the pink spot with schizophrenia, it is much more probable that it is causally related to Parkinson's disease. Already speculation has begun about the ways in which errors of metabolism in parkinsonism may account not merely for the *p*-tyramine but for the abnormally high concentrations of dopamine in some brain tissues from patients with Parkinson's disease. The suggestion that there may be a biochemical link between some forms of schizophrenia and Parkinson's disease will not come as a complete surprise. This said, it is bound of course to be a long time before the precise significance of the pink spot is clear, but it is something important gained if its chemical identity is now assured.