Personal Paper

On the integration of expert knowledge into the machinery of government

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To those who were members of the Medical Planning Commission of 1941-2 the present state of the National Health Service cannot but give rise to concern. That a plan, essentially similar to that then produced, should have sufficed in 1948 to get such a radically new undertaking off the ground, and sustain it for more than a decade, is a good indication that, so far as it went, it was on the right lines. Over more recent years, however, the Service has experienced a diversity of difficulties.

This state of affairs is usually attributed primarily to financial stringency. That is a comforting thought, for it implies that our difficulties will largely disappear when this ameliorates. But is not this too facile a diagnosis? Shortage of funds may create problems *for* a service; but it does not create problems *in* it. It merely aggravates those that, actually or potentially, were already there. Is it not possible, therefore, that the difficulties under which the NHS is now labouring derive from something more fundamental? Might it not be that those who originally planned the service, in their preoccupation with what seemed to them the most pressing questions, overlooked some basic requirement and that the consequences of their having done so are now coming home to roost?

Looking back with this possibility in mind, I have been repeatedly reminded of a consideration which that wise old man, Dawson of Penn, persistently pressed on our attention. This was, so he contended, that "the greatest problem facing modern civilisation is that of integrating expert knowledge into the machinery of government." At the time, however, we were so obsessed with overcoming the obstacles to transforming what was then a parochially based service into a national one and ensuring that this provided a full career in clinical, as distinct from administrative, medicine that the significance of what he was saying did not register with us. As a result we failed—or so I now think—to pay sufficient attention to the central organisation required by the service we were bent on creating. Accordingly, even at this late date, it may be worthwhile to look again at this aspect of the matter.

A trinity of skills

If a country's needs for a service which depends on the deployment of expert knowledge are to be met then the organisation responsible for providing this must be so devised as to give expression to the political, expert, and administrative considerations involved in doing so. It is for the politician to say what he believes the country would like to see happen and what, in the Government's view, it is prepared to accept to bring it

about. It is for the expert to say what is professionally feasible and, if something is, what measures are required to realise it. And it is for the administrator to enable the expert to obtain the means to fulfil these requirements. These three skills are all necessary if effective policy for an expert service is to be formulated. The difficulty is to devise an appropriate organisation to effect the requisite synthesis between them.

In principle, this is no new problem. It is one that has faced nations since time immemorial in the context of their military needs. But there are conspicuous differences between the situations with which those in the military and civil departments of government have to deal.

There is no disputing a lost war. Moreover, the connection between success in battle and military expertise is too obvious to be denied. In contrast, failure in the civil sphere is seldom either immediate or incontrovertible. In consequence relations of cause and effect are less easy to identify. Furthermore, it is only in the last century that expert knowledge relevant to any of the civil concerns of government has developed to the extent that its implications for national policy are beyond the capacity of an intelligent layman to grasp. It is hardly surprising, therefore, that it was in the military context that the form of organisation required to integrate expert knowledge into the government machine first emerged. Nor is it surprising that progress lags behind in this respect in the civil sphere.

Yet in principle the problem is the same in both. Might we not derive some useful lessons, therefore, from an examination of the policy-making machinery which has evolved in the military department of government?

The military model

Originally, of course, a country's organisation for military purposes centred on the person of the King. With the appearance of the hereditary principle in kingship, however, it became apparent that political and military talent did not necessarily go together. In consequence, the monarch was increasingly driven to depute the command of his armed forces to one who had proved himself in war. In Britain this led to a form of organisation in which, under government, executive responsibility for naval and military services was vested respectively in a Lord High Admiral and a Commander-in-Chief. In the course of time this system changed significantly. Both these offices were replaced by a Board of Admiralty in one case and an Army Council in the other. In part this was due to public fear of an overmighty subject. But there was another factor at work. As warfare became more sophisticated and its organisation correspondingly more complex the expert knowledge required to direct the operations of an armed service became more than any single individual could handle. A form of organisation, like that which came into being, would consequently have emerged in any event.

The boards that thus arose (and that which was later created

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for the Royal Air Force) were constructed on the same principle. Each was under the chairmanship of the relevant Government minister. Each included a lay administrator. But the professional element in its deliberations, on which the board depended for its ability to fulfil its particular purpose, was provided by a number of senior serving officers, all of whom had had recent first-hand experience of the service in operation. Each of these represented a major, as distinct from an ancillary, branch of military expertise. Moreover, the period for which they were appointed was limited so that the board was repeatedly refreshed by the infusion of up-to-date experience.

The merits of such a system are self-evident. Not only does it bring together in one executive body the trinity of skills needed to formulate effective military policy, but it ensures that the department in question commands the necessary public and professional confidence.

Compare this with the form of organisation that prevails in a typical civil department of Government.

The civil model

The position of the ministerial head is the same. Below this level, however, things are different. Here all executive authority derives from the chief administrator. He has the final say in deciding what shall, or shall not, be done to put expert knowledge into practice. The role of the expert, on the other hand, is restricted to that of a technical adviser, who, without administrative authorisation, is debarred from implementing any course of action or even, in most cases, from representing his advice to the Minister. That is the formal position, and, although this may be mitigated by good personal relationships, it remains a force in being that materially influences departmental thinking on all matters.

In a subject where expert knowledge is still rudimentary this arrangement may be the best we can do. When the original civil departments of government were taking shape this was the case in all. But once knowledge in a particular field has progressed beyond a certain stage, the traditional form of organisation in such departments becomes increasingly anachronistic.

It was doubtless a tacit appreciation of this trend in the course of events that lay behind the setting up of the Fulton Committee on the Civil Service. In view of the outcry that greeted its report in 1968 its recommendations are therefore of considerable interest.¹

Fulton Committee's recommendations

To the evident discomfiture of its members, the Fulton Committee was precluded by its terms of reference from inquiring into the machinery of government. In consequence the members had to take the form of organisation existing in the civil departments for granted and confine themselves largely to questions concerning the type of staff needed to operate this. As a result, they devoted their main attention to the recruitment, previous education, "in-house training," and terms and conditions of service of those who elected to pursue a career within the existing structure.

Nevertheless, this did not prevent the committee from challenging the "generalist" philosophy on which the present organisation of the civil departments is based. In effect, this philosophy is that administration is an art in itself and that, given experience in operating the system, an intelligent layman is competent to administer anything.

This view the committee forthrightly rejected as "obsolete at all levels and in all parts of the Service." Instead, it advocated that, in future, civil servants should become broadly specialised, in the sense that they would no longer move between widely different departments (as the "generalist philosophy" requires) but remain within those of the same general type.

Clearly such a radical rejection of the principle on which the

present system is founded entails a series of consequential changes in departmental organisation. And it was in this connection that the committee introduced something in the nature of a Trojan horse into its recommendations. It advised that in most civil departments there should be a chief policy adviser, supported by a planning unit, to assist the Minister. "His prime job," it said, "would be . . . to ensure that the present policy decisions are taken with as full a recognition as possible of likely future developments." To this end, he would "know the other experts in the field . . . both at home and abroad . . . be aware of all important trends in new thinking and practice that are relevant" to the purposes of his department; and "have direct and unrestricted access to his Minister, both personally and in writing."

These recommendations cut at the very root of the present system of organisation in a civil department, by which a "generalist," in the shape of a chief administrator, the Permanent Secretary, is the Minister's final adviser on policy matters. It is hardly surprising, therefore, that the members of the Fulton Committee (doubtless mindful of their terms of reference) shied away from following them through to their logical conclusion. Instead, they acquiesced in the existing arrangement by which the Permanent Secretary has "over-all responsibility, under the Minister, for all [*sic*] the affairs of the department" and, more important, "for accounting to Parliament for expenditure."

Whether this arrangement would ever work (tending as it does to polarise interests within the department between policy and administration) is doubtful. But this should not blind us to the reality of the problem it was designed to solve.

It is true, of course, that the members of the Fulton Committee, in advocating the creation of a chief policy adviser, were primarily concerned with the need of the service to develop more specialised administrators. But they recognised in this context that "in some of the big technical departments there may be a need for a further senior post: a chief scientist, engineer, or other specialist." They also recognised that such experts as already exist "are frequently given neither the full responsibility and opportunities nor the corresponding authority they ought to have." In a department whose purpose is to provide an expert service, however, it is expert knowledge that primarily determines the feasibility or otherwise of any projected policy. Shortage of money or manpower or political considerations may prevent what is possible from being realised; but these considerations become relevant only *if* something is technically feasible. Should the Fulton Committee not have seen, therefore, that in such a department the chief policy adviser must himself be an expert on the knowledge the department aims to apply? It should have seen that he would have to be "one who has a fundamental knowledge and deep familiarity with the subject that enables a man to move with ease among its concepts," for, unless he is so equipped, how can he provide his minister with an informed assessment of the likely outcome of any projected course of action?

We should accordingly recognise the organisational implications of the fact that although, in Western countries, every man has the right to express an opinion on any subject, now that expert knowledge in many spheres has developed so greatly, not everyone is competent to form one. This consideration is particularly important in the case of those civil departments of government who find themselves faced with the task of giving effect to a growing body of scientific knowledge. Of these the health departments are a notable example. It is in this context, therefore, that we might usefully consider the form of organisation required if an established body of expert knowledge is to be integrated into the machinery of civil government.

Expert knowledge for the health departments

The health departments came into being in 1920. Until the coming of the National Health Service some 30 years later their functions were essentially confined to the relatively narrow field

of hygiene and public health, perhaps the one branch of medicine that lends itself to organisation on traditional civil service lines. But medicine in so far as it concerns sick persons was for all practical purposes outside their remit. Is it not here, perhaps, that those of my generation erred? Did we not assume too readily that a form of organisation which had sufficed to cater, in the then state of knowledge, for one special branch of medicine, would, if suitably expanded, be able to cater for all? But is this happening? True, some adjustments have been made in departmental staffing, and advisory committees have multiplied. But the executive structure remains unaltered. And it is questionable whether this is, or ever was, adequate to sustain an expert service.

Consider, therefore, what might have happened if, before the inception of the NHS, we had given adequate thought to this aspect of the matter. Should we not have seen that the traditional method of organising a civilian department of government, in which executive authority derives from a lay administrator, was inappropriate when it came to providing a service aimed at translating an ever-growing and increasingly sophisticated body of expert knowledge into practice? Should we not then have seen that the first requisite was to reorganise the departmental hierarchy so as to ensure that expert considerations were adequately brought to bear at the level where policy decisions are taken? In short, should we not have seen that a central organisation more akin to that in the military departments of government was required to deal with the new situation?

On this basis, there would be a board, meeting under the chairmanship of the responsible Minister and including among its members his political deputy. The post of chief medical officer in its present form would cease to exist. In its place a small number of experts would be appointed to the board, each of whom would be an acknowledged authority on one of the major divisions of medical knowledge. These expert members would serve for a limited period and not be immediately eligible for reappointment. A new kind of chief medical officer's post would then be created. The occupant of this would serve as secretary to the board and be the department's chief executive and accounting officer. Normally, he would not be recruited from within the department but from among those holding senior medical posts in the field. The present post of chief lay administrator would now become that of second secretary. He would attend the board as of right in order to advise on the administrative conventions that govern the workings of the government machine in any particular case. His executive role, however, would be reduced to managing, after consultation and

in agreement with the new type of chief medical officer, the non-medical concerns of the Health Service.

Lessons of history

To propose that the post of chief medical officer in its present form should cease to exist is not to be taken as a criticism of those who, over the last three decades, have striven to discharge the now impossible task of supplying the necessary input of expert knowledge into the trinity of skills required if effective health policy is to be formulated in this day and age. It is simply to recognise the facts of the situation and the lessons of history. For the time has gone when a single mind, however able and however many advisory committees of external experts it can draw upon, can appraise sufficiently the range of expert considerations that must be taken into account if available medical and scientific knowledge is to be applied to most effect. And this is particularly so when financial stringency imposes an ordering of priorities.

It will, of course, be argued that no medical man could hope to possess the requisite administrative skill to discharge the duties proposed for this new form of chief medical officer. But the academic community is capable of producing vice-chancellors and the scientific secretaries of the research councils. Furthermore, during both world wars numerous outsiders came to occupy senior positions in the Civil Service who previously had no experience of this. Perhaps, therefore, administration is not such an arcane subject as it is sometimes made out to be.

Accordingly, unthinkable as the foregoing suggestions may appear at first sight, they would seem to deserve serious attention, not only in the medical field, but in others where expert knowledge has reached a comparable stage of development. For unless a service has at its centre an organisation with the necessary in-house capability for policy formation and executive action it cannot function effectively. And in a field such as medicine, where knowledge has developed to the extent that it imposes specialisation on its exponents, I cannot see how, without some such central organisation as that suggested, this requirement can now be met.

References

- 1 Royal Commission on the Civil Service. *The Civil Service*, Vol 1. London: HMSO, 1968. (Fulton Report. Commd 3638.)

Can disease of the thyroid gland cause dysphagia?

There are several causes for dysphagia in the patient with thyroid disease—the commonest cause of difficulty being anxiety. With a goitre anxiety is often focused on the neck, and the patient may complain of choking feelings, discomfort, and difficulty in swallowing. If the goitre is large, however, especially if it is substernal, true extrinsic compression of the oesophagus may occur. This may be detected on barium swallow. Reduction in goitre size resolves the symptomatology. In severe hypothyroidism dysphagia may result from pharyngeal oedema, which usually resolves with restoration to the euthyroid state. In infants with hypothyroidism the combination of an enlarged tongue and reduction of volume as well as increased viscosity of saliva may lead to swallowing difficulties. Impairment of oesophageal motility may not be sufficient to give rise to symptoms, however. In the initial phase of subacute (de Quervain's) thyroiditis dysphagia may be a prominent symptom along with fever, sore throat, and neck pain. It may also be noted in association with several myopathic disorders associated with hyperthyroidism, such as chronic thyrotoxic myopathy, myasthenia gravis, or periodic paralysis.

In chronic thyrotoxic myopathy dysphagia is seen rarely, and when weakness extends to ocular and bulbar muscles myasthenia gravis should be suspected. The co-existence of myasthenia gravis and hyperthyroidism occurs in less than 1% of patients; however, the

myasthenia does not differ from that in euthyroid subjects. Therefore, muscles subserving mastication and deglutition as well as ocular movement and speech are principally affected. There is no definite relation between the onset of myasthenia and that of hyperthyroidism. Myasthenia gravis can be differentiated from chronic thyrotoxic myopathy by the following features—involvement of bulbar and ocular muscles predominantly, a lack of definite muscle atrophy, and beneficial effect of prostigmine. Periodic paralysis occurs rarely in association with hyperthyroidism, usually in individuals of Oriental extraction. Although, classically, attacks of flaccid paralysis of the arm, legs, and trunk with areflexia occur, rarely, muscles of mastication and deglutition may be affected. These attacks generally respond favourably to treatment of the hyperthyroidism. An "acute thyrotoxic myopathy" has been described. This syndrome consists of acute paretic dysarthria and dysphagia developing simultaneously with the symptoms of thyroid storm. Many of these patients have associated acute myasthenia gravis or periodic paralysis, and its classification as a distinct entity is debated. If dysphagia is noted in any patient with thyroid dysfunction who does not have any of the described syndromes, unless there are other indications it would seem appropriate to render the individual euthyroid before further investigation is undertaken.

Werner SC, Ingbar SH, eds. *The thyroid—fundamental and clinical text*. 7th ed. Hagerstown: Harper & Row, 1978.