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## Engineering—big issues and little issues

THE Finniston Committee to enquire into the engineering profession is just about to get underway. The committee will be able to investigate pretty well whatever it wishes under the general headings of the needs of industry, education and training, the institutions, and registration and licensing. Many hope that this committee will be the first step along the road to affording engineers their rightful status, whatever that may mean, and that a more prestigious profession will attract and retain better talent, thereby contributing to a revival in British industry.

There is no doubt that at present the engineering profession is not a remarkably well-paid one, that its institutions are in a state of considerable disarray, and that it suffers from association with the perennially bad news that is put about concerning British industry and industrial relations. As a result of all this people are hardly falling over each other in an attempt to become engineers.

Take, for instance, the institutions. Undeniably an engineer is not created the moment he (or very occasionally she) emerges from higher education, and a period of development needs to be watched over by some form of peer review, for which the institutions serve admirably. And for a rather small number of engineers the institutions serve a continuing function of education. But to meet these needs there are 15 institutions, each with its own traditions, bureaucracy and fine distinctions (as to, for instance, what a technician is and whether a technician can be a member). And now there is another layer, the Council of Engineering Institutions, born in considerable travail and watched very carefully by the individual institutions. It would be easy for the Finniston Committee to spend much of its time sorting out these institutional problems of engineering; what is more, the institutions on the whole favour some form of registration and licensing of engineers (this is not done at the present) and the committee could equally get bogged down in trying to produce a blueprint that was acceptable to all parties—when it is not at all clear that registering, licensing and thereby more effectively disciplining engineers is anything other than a sideshow generating bureaucracy to relatively little purpose.

Instead, there are two very clear and major problems that the committee should face. The first is that of recruitment into engineering, meaning not the choice

made on graduating as to which company to join, but the choice made in school, maybe as early as 14 or 15, to opt for engineering as opposed to the natural sciences. Arguably this decision is forced on students too young, with most universities singularly unhelpful in allowing students to defer their choice until they have experienced a year or two of higher education. But whatever time it is made, it seems remarkable that anyone selects engineering at all in the present educational environment. Few teachers have any industrial experience, and if they have had such experience, as likely as not they have been discouraged enough by it to turn to teaching instead. Few schools have a decent and open relationship with local industry—and where there is no local industry (as in the rural environment of most public schools) contact with industrial life may be non-existent. Small wonder then that a life of engineering is seen by many young people as a poor alternative to a life of scientific research.

The second problem is that nobody really knows what the shape of British industry will be in ten or twenty years. In a completely cut-throat environment, many industries would shed vast numbers of workers, opting for much more automation at severely reduced manning levels, while other industries, such as shipbuilding, steel-making, and car manufacture might capsize because of foreign competition. In a more protective world, the government, aware of electoral implications, will fear to grasp any of these nettles but will prop up ailing industries and stand in the way of mass redundancies in the name of social policy.

In these circumstances it would be valuable to have a chart of possible paths for steering industry through to what is bound to be a totally different world by the year 2000. Economics and politics are bound to have major roles, but the engineering profession has a central part to play. Thus the Finniston Committee could provide a valuable service to the profession and to the nation by taking a longer-term view than governments ever seem to be able to take. It could also try to establish some general view of where industry will be by the end of the century. Some will carp that this is beyond the committee's remit, but if the needs of industry for engineers is one of the terms of reference then presumably the very character of that industry is rather germane to such discussions. □