

nature

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Every company a teaching company

BRITISH industry is in a pretty bad way. Its share of the world market and of the domestic market has declined steadily for many years, and there is no feeling that anything is coming along to save it from even further decline. The per capita output of British industry is only half that of industry in France, Germany, Japan and the United States; every other statistic tells the same gloomy story.

There are a hundred and one remedies offered, many of which are directed at increasing investment or improving labour relations, and in the past few years the Science Research Council (SRC) has itself looked increasingly at the problem of the intellectual input into industry. For it is undeniable that British industry has consistently failed to attract enough bright graduates and PhDs, and has not given enough scope and status to those it has employed. In efforts to stimulate the university-industry links, which seem to come much more naturally in other countries, the SRC and associated government departments have launched a variety of ideas: 'Bosworth' courses, Cooperative Awards in Science and Engineering (the CASE scheme), Total Technology, joint SRC/Social Science Research Council postgraduate training, academic-industrial collaboration schemes, a revamped PhD . . . and now, the teaching company.

In a report just issued (*The Teaching Company*, available from the SRC, free) a joint working party of the SRC and the Department of Industry propose that two or three companies should be added annually to a list of those in which postgraduate students could spend, say, two years working towards a higher degree with a mixture of formal courses and on-the-job projects planned to improve the company's manufacturing operations. Perhaps half a dozen students would be involved in each company; already plans are being made to start experimental operations in four companies. The students will not be doing research in the strict sense—they will be learning about manufacturing technology from practical examples while keeping one foot in a university. Proponents of the teaching company idea freely admit that it is largely modelled on the teaching hospital concept.

The hope is that a corps of well equipped graduates will emerge from the scheme, with experience of running an industrial show and ability to talk to universities about industrial needs in manufacturing technology. These graduates would then start, as one member of the working

party put it, to create oases within the present industrial desert. Those who have passed through a teaching factory should be obvious candidates for posts as production directors, or even managing directors, of companies before too long.

One's first reaction may well be surprise that this sort of thing is not happening already. Surely, in view of all the plans with which SRC have regaled us over the past few years, graduates ought to be moving more freely between university and industry. The problem seems to be that manufacturing technology has always been lowly rated both by hide-bound industry dubious of the need to hire graduates and by universities which find that the subject does not sit too easily among other more academic pursuits. But is the teaching company the answer? There are some serious objections to be considered, and most of these are a matter of scale.

If a mere handful of companies are to be so designated, and these participate voluntarily, indeed willingly, they are already set apart as remarkably enlightened organisations which, quite rightly, probably stand to profit substantially from their involvement.

Embryo manufacturing engineers also need to know about the just-average companies and even the appalling ones. Otherwise there is a danger that on emerging from the programme they will recoil in horror at the general industrial landscape and return to work at the teaching company! There must also be some doubt that even the best run company can provide a continuous flow of good projects to which students can contribute significantly in two years without feeling that the whole thing is being trumped up and is irrelevant to the company's real operations. Finally, many recent initiatives to bring universities and industry closer together have only met with real enthusiasm in new universities; the older ones have viewed innovative programmes as not their concern. Unless the idea of the teaching company can be as acceptable in Oxford as it is in Salford, the proposal will have a diminished impact.

Industry's problems in getting and using graduates are, at root, social ones. Class distinctions, (even within the professions, let alone between workers and management), attitudes of school-children to engineering, the prestige of pure science, anti-intellectualism, pay scales—these all contribute to the bind in which industry finds itself. A handful of teaching companies is not enough. Should not every company be prepared to help train graduates?