technology "fully to bear on the formulation of national policy' ? The first need is that they should acknowledge their own limitations. They cannot hope too often to bite the hands that feed them without being fed less well. Yet there are some issues on which the academies' unprompted advice would be helpful and even welcome. Both in Britain and in the United States, there is thus a need just now for an independent examination of the relationship between academic research and commercial exploitation. Harvard's problems with genetic manipulation (see *Nature* 4 December) are likely to crop up elsewhere, and in different fields. The academies are better placed than either universities or governments to say what should be done, but they have been slow to devise an agenda for discussion. (Are they, by any chance, afraid of offending their members?) Similarly, there is an urgent need (and not only in Britain and the United States) for an independently formulated policy on higher education in science, and on the problems of professional people thrown on the scrap-heap before retirement age because of chopping and changing of government policy. If they chose, the academies could be more directly influential than they are.

Further nonsense on product liability

The United States Supreme Court, which does not often make an ass of itself, handed down a decision in October which will already have denied sleep to a host of manufacturers, especially to pharmaceutical manufacturers. The Supreme Court had been asked to rule on the legality of a decision made last March by the Supreme Court of California in the preliminary stages of a suit for damages. Two Californian litigants were suing because of the congenital damage they had suffered because their mothers took diethylstilbestrol during pregnancy. The original claims were faulty in that the plaintiffs did not specify the manufacturers of the diethylstilbestrol from whom they sought damages, but the Californian court helped out by suggesting that any damages eventually awarded might be shared among the suppliers of diethylstilbestrol in proportion to the various manufacturers' shares of the Californian market. The United States Supreme Court has now confirmed that this device is permissible, at least at this early stage. Whether the original suit (which has not yet been heard) will succeed, and will then survive the inevitable circuit of the appeal courts, remains to be seen. But the law on product liability, more stringent in California than elsewhere, is in danger of being made a nonsense. It also promises to be a serious impediment of innovation.

The issues are not complicated, even though the law may be. A manufacturer designs a product, say a mousetrap, sells several copies to the public and makes himself a profit in the process. As time goes on, the mousetraps are used to catch a host of mice, a benefit to the purchasers. But, sooner or later, a clumsy user will impale a finger on a piece of metal or have it broken because the trap goes off prematurely. Who, then, is to blame? In the old days, the law in most countries coincided with commonsense. A person buying a mousetrap intended to injure mice who managed to injure only himself had no cause to sue the mousetrap manufacturer. If he did so, the manufacturer would have been able to plead "contributory negligence" or something of the sort, and the only beneficiaries would have been the lawyers. In future (but already in California), the hapless mousetrap manufacturer will not be able to rely on that defence. First, he must design his mousetrap so that foreseeable accidents cannot take place. Mousetraps that cannot catch fingers will be more expensive and may be less efficient at catching mice, part of the price of product liability. What will keep manufacturers awake at night, however, is the fear that their designers have not thought of every accident. Is there is a risk that in emptying the trap of mice, an innocent user may suffer some unsuspected damage? May he contract cancer, for example? For, if that happens, the manufacturer will be liable for damages under the law of strict product liability.

The Supreme Court's decision shows that the vigorous application of this principle offends against natural justice. If all manufacturers of diethylstilbestrol are to be joined in the suit in proportion to their sales revenue in the 1950s from the synthetic hormone, the implication is that no aspect of their behaviour can diminish their share of the liability. Yet some may have been more diligent than others in seeking out unwanted side-effects. Some may have made more profit than others. And some may have gone out of business, leaving the others to carry a greater share of the liability. The reasons why the drug manufacturers are especially alarmed is clear — identifying unknown side-effects is an open-ended problem, for which reason it seems unfair that virtue is no defence. Strict product liability thus seems inequitable as between individuals. It is too soon to know how many drug manufacturers will turn to making mousetraps because the risks are better known, but strict product liability is a deterrent from doing anything for the first time. The community at large will not in the long run benefit.

This is the manufacturers' case against strict product liability. The other side of the argument is also telling. In the past thirty years, all kinds of manufactured products have turned out to be less safe in use than their salesmen promised. Motor cars have caught fire without warning, or have careered off highways. Aircraft have fallen from the skies unexpectedly, for reasons attributable (with hindsight, easily enough) to faulty design. Electrical appliances have electrocuted their users. And drugs have caused damage as well as bringing benefit, often in the most tragic ways. The wave of product liability legislation springs from the fund of reasonable grievance by innocent consumers against manufacturers who have frequently been slipshod in design or even guilty of telling lies. Manufacturers should not think their troubles will go away spontaneously. In Britain, for example, in the past three years, one royal commission (the Pearson Commission) and two law commissions (one for Scotland, one for England and Wales) have advocated the principle of product liability. How is a line to be drawn between the interests of manufacturers and consumers?

In Europe, the issue is lively just now because of the draft directive on product liability promulgated by the European Commission, and likely to compel national legislation in the next few years. The question is obviously within the interest of the European Commission, for without common legal principles, member states could use product legislation as a way of favouring their own manufacturers. But what should be the common standards? In the past few weeks, the British government (which accepted the principle of strict liability two years ago) has said that it will press the European Commission to allow as a defence by manufacturers the plea that a new product is as safe as the "state of the art" allows. The diethylstilbestrol manufacturers of California would be delighted with such a lifeline in their own case, but it is unlikely to satisfy either the European Commission or European consumers. The snag is that such a defence does not provide manufacturers, either collectively or singly, with an incentive for investing in research and development intended to improve the safety of their products. Indeed, used mischievously, the state of the art defence could become a refuge for the complacent. But is it entirely beyond the lawyers' wit to design a form of words that would allow a manufacturer to defend himself, if something goes wrong with a new product, by pointing to steps prudently taken in the research laboratory to investigate the safety of what he makes? Unless some such device can be found, there is a serious risk that innovation, especially adventurous innovation, will be inhibited. Whatever happens, the drug industry is bound to feel unfairly put upon because its new products have to be tested under government supervision. Should not such a procedure in itself be a defence against a product liability suit?

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