

One difficulty is that those best qualified to provide it may not in future always be physicians bound by their professional duty to patients. That code may need to be extended.

Do genetic data gathered for 'legal' purposes raise ethical problems? There are two separate issues. To the extent that DNA fingerprinting is a means of identifying individuals, it is no different for other forensic techniques, fingerprinting with ink on paper or the use of blood-group categories which are but genetic markers of low resolution). So existing rules (which differ from one jurisdiction to another) should still apply. The isolation of forensic data bases from others is the best solution. The more serious difficulty is that, in the absence of information about the distribution of variant alleles in the general population, misidentification of individuals is possible (as Lewontin and Hartl have recently argued). The remedy is the still more vigorous collection of genetic data.

The implications for employment and insurance of genetic data are too often misunderstood. If it emerges that there are occupations in which people's susceptibility to unavoidable hazards (say vinyl monomer in PVC manufacture) is genetically determined, does it not make good and even humane sense that employers should seek to exclude those who are susceptible? The required safeguard is that genetic screening should not be used as a blind for more general discrimination, to which end employers should make their objectives explicit — and should be denied access to other genetic data that may be gathered at the same time. The same principles apply in applications for insurance contracts: if it is fair to weight insurance premiums against those who smoke cigarettes, should not the same apply to those with aberrant genes? The safeguards required are that insurers should not be free to cancel existing contracts in the light of new knowledge, and that liberal societies should acknowledge an obligation towards those for whom commercial insurance is declined.

Does (or will) stigma attach to those perceived to be genetically disadvantaged? The precedent of those contracting AIDS is salutary, but misleading. Prejudice against those with AIDS in the early 1980s (which still, regrettably, persists) was partly engendered by homophobia and partly by fears of infection by unproven routes. Stigmatization on genetic grounds is much less likely, especially if tight rules on confidentiality are followed. Moreover, the implied fears of genetic knowledge suppose that the construction of a person's entire genetic profile will soon be child's play, which is far from being the case.

As now, most genetic investigations will continue to be prompted by the personal anxiety of prospective parents about susceptibility to familial diseases; the promise is merely that a greater range of diseases will be open to investigation and that the quality of the data will allow more definite conclusions. Such evidence as there is suggests that those concerned welcome knowing the truth; an investigation in the 1970s among London's Greek Cypriot community of people's attitudes towards the occurrence of thalassaemia genes (partly supported by the Nuffield Foundation, as it happens) discovered that knowledge (as it has

been throughout history) is an effective antidote to unspoken anxiety. That is one reason why the present spate of new knowledge in human genetics deserves the warmest welcome. □

Not on the agenda

British science may benefit from next week's election by the impatience engendered by its studious neglect.

THE frustration of the British scientific community with the election campaign now under way may itself become a force to be reckoned with in the weeks after polling-day on 9 April. The two major parties' separate decisions not to make an issue of the state of the research enterprise and the uncertainties of higher education may be explicable by their unspoken beliefs that what Britain needs is technology and not science (as if that were possible), but the result has been a spate of letter-writing. This journal has published some of them, predominantly about academic pay (see for example page 374). The London *Times*, meanwhile, has struck a rich vein of round-robin letters, one from a distinguished group of academic researchers led by Dr Paul Nurse (University of Oxford) and, more recently, from several members of the organization called 'British Scientists Abroad'. At one stage, even the minister at the Department of Education and Science responsible for higher education, Mr Alan Hawarth, intervened with emollient reassurance.

The trouble with the argument about the condition of the research enterprise in Britain is that it cannot be conducted numerically, by comparing research support now with that in previous years, or in other countries. Notoriously, 'output' measures (usually bibliometric indices) are also misleading. As several correspondents have noted over the past several months, while there are structural difficulties in the organization of the research enterprise (the difficulty of founding research groups of critical mass, the lack of a career structure for researchers and even matters of academic pay), the true iron in the soul is that much of the British research community is demoralized, and perceives itself to be in that state. The way that recruitment to science courses at British universities has faltered suggests that the condition may persist.

If the current election does nothing for British science, the impatience that neglect engenders may itself be worthwhile. This week's letter argues that, in one respect, research institutions could do much to help themselves. That should by now be abundantly clear. Much of the present difficulty is that British universities and research laboratories brood about their parlous condition, but do less than they should to define how matters should be put to rights. Yet there is no reason to believe that research councils, the chief sources of support for basic science, are unsympathetic and every reason to expect that clear and cogent public statements of the problems that need solving would cause them to change their pattern of activity. The best outcome of the election would thus be a clear demonstration of impatience. □