women from all forms of cancer show widely differing trends. In a little over a decade, the age adjusted rates have fallen in seven countries, increased in four and remained stationary in two (see Table). The largest declines in death rates from cancer were among American white women, Norwegian women and American non-white women, and the largest increases in rates were in Israel, Denmark and Japan. Japanese and Australian women seem to have the least chance of dying from cancer whereas Danish women have the highest chance. Does this mean that there is a very much greater risk in the Danish way of life, or are the diagnoses made and statistics kept in Denmark more reliable? This question clearly bedevils any comparison between countries. In the United States, on the other hand, the striking difference between cancer deaths among white and non-white women no doubt reflects the better social and economic position of the former rather than inherent racial tendencies.

Deaths from cancer of the digestive organs have declined in most countries, but the wide variations in the statistics suggest that they are not very reliable and there is, of course, great difficulty in diagnosing the primary site of cancer in these organs. In all countries, however, deaths from lung cancer have predictably increased, as have deaths from leukaemia. In Japan, the leukaemia death rate increased by 125 per cent in the decade, but the country still has the lowest rate, which suggests that previously undiagnosed deaths are now being included. Whether the increased rates of death from leukaemia in general are real or just the result of better diagnosis is an open question. What does seem certain is that deaths from uterine cancer are decreasing and much of this reduction can be attributed to early detection and treatment. In the United States, however, despite the large decline of uterine cancer in non-white women, death among them is still twice that among white females and well above that of any of the other countries in the survey. Undoubtedly these deaths could be prevented by adequate medical services. There has, however, been no real progress in reducing deaths from breast cancer in any of the countries in the survey.

No Education without Representation

So far, student unrest in Britain has not begun to rival the stirring events in other parts of the world. Only the University of Essex and the London School of Economics have suffered the kinds of disturbances which have been widespread in the United States, France and West Germany. British students have retained their reputation for stolidity, and the National Union of Students, devoted to gradualism, can still claim the loyalty of the majority. But in the universities this week there seems to have been no feeling of self-congratulation, but rather of relief tempered by concern that more should be done soon to make students feel involved in the organization of their universities.

The immediate way in which this can be done is by appointing students to university committees, a process which was launched in Britain by the trouble at LSE, and now seems well under way. At the University of Sussex at Brighton, for example, disciplinary problems are dealt with by a committee on which students are in a majority. The committee has an investigatory function, and the vice-chancellor remains responsible for determining the punishment. Experience seems to suggest that students are unexpectedly severe on their fellows, and the staff members of the committee find themselves trying to counteract this. The latest development at Sussex is the establishment of an appeals procedure to give students the right of appeal against disciplinary decisions. This committee will include student representatives.

Elsewhere similar developments are taking place, and the new universities are well to the fore. Two former colleges of advanced technology, now the City University and the University of Bradford, are said to be particularly forward looking. Disciplinary problems are generally thought to be the most urgent, but other universities are also thinking of introducing student representatives on to academic and administrative committees. One of the difficulties seems to be that students are ignorant of the ways their own universities are run, and there have been cases where students have turned down arrangements which would in fact have offered them more effective power than they were asking for, simply because they did not understand what was being offered. In some cases liberal vice-chancellors have had to push through changes in organization against the opposition of their governing bodies, who tend to be less willing to involve students in university government.

Other academics suggest that this process alone will do little to remove the causes of unrest. There is the suggestion, for example, that the appointment of a few students to a committee will make those few feel happier, but will leave the rest as detached as ever from university government. There is also some pressure in the universities to reduce rather than increase the number of committees, in the hope of improving university "productivity". There comes a point, one university scientist argued this week, when the claims of efficiency have to give way to humanity. A balance must be struck between the need of the students—and the staff—to feel involved, and the need to avoid the proliferation of committees which have no real function to perform.

But it is still not clear that this gentle process of democratization will be enough to satisfy student aspirations. The consensus seems to be that there will always be a small minority (particularly, some say, at universities with large social science departments) who will never be satisfied with less than a full-blown cultural revolution. The great majority, though, will be happy with very much less. This is probably a realistic assessment. Only a radical change of educational policy, such as the replacement of student grants by loans, would turn a sizable part of the British student population into radicals. Until that happens, the National Theatre is unlikely to be stormed by a student army.

Technology in School

THE Schools Council subscribes to the belief that it is important to introduce technology to school children, both for their own benefit in helping them to understand the increasingly complicated environment and to encourage them to take up scientific or technological careers. These conclusions emerged from a pilot project in 1966 which investigated the technological activities in sixty schools, and a three-year project was set up in

© 1968 Nature Publishing Group

1967 with the overall objective of helping all children "to get to grips with technology as a major influence in our society and as a result to help more of them to lead effective and satisfying lives". A working paper (No. 18: *Technology and the Schools*, HMSO, 5*s*.) which has just been published describes the present situation in schools and what Project Technology is all about.

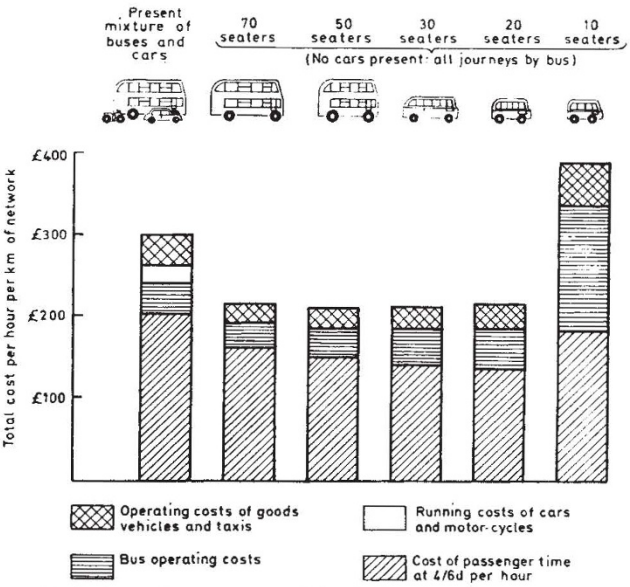
The project is involving more than 600 schools in the preparation of a wide range of teaching material, in co-ordinating the general efforts and bringing outside organizations—universities, colleges, industry and other schools—into the scheme. Run by Mr Geoffrey Harrison and his assistants from the Loughborough College of Education, the project team also has many field workers—teachers who will be working on actual teaching material. The schools involved will either be trying out new material or will be providing advice as consultative schools; in addition, any schools which are interested in the project can receive advice on how best to present technology to the children. The vital part of the whole project is the practical side, with school children devising their own experiments and apparatus. The working paper gives many examples of projects which have been devised so far. Project Technology aims to provide boys and girls of all ages and abilities with an opportunity of developing talents other than the academic ones which are demanded by the traditional examinations. The problem is that it is difficult for an outsider to gauge a pupil's ability from the project work which has been done.

Regional groups are being organized for discussions and encouragement of links with universities and industry. Contact between individual teachers in schools involved in the scheme will be maintained in this way and schools outside the scheme will be encouraged to participate through these regional groups. The knowledge and attitudes of teachers are obviously important in projects of this kind, and it is hoped that universities and training colleges will develop courses which will provide the right background for future teachers. Help from industry is being sought in the form of equipment, either lent or given, in-service industrial experience for teachers, or, of course, money. The project has set its sights high and co-operation from a large number of people will be necessary for its success. To help it on its way the Schools Council is providing £180,000 for the first 3 years and the possibility of extension of the project will be considered in 1969.

More Buses, Less Bustle

JOURNEY times in central London would be significantly reduced if private cars were replaced with buses, according to a study by Dr F. V. Webster of the Ministry of Transport (*Road Research Laboratory Report LR* 165). A system relying solely on double-decker buses would be £20 million a year cheaper to run than the present mixture of buses and cars, most of the saving accruing from the cost of passengers' time. Although based on figures from London's traffic, the results of the study are probably also relevant to other large cities.

Passenger mileage during peak hours in central London is carried by a mixture of buses (73 per cent), private cars (22·5 per cent) and motor-cycles (4·5 per cent). The remainder of the traffic consists of taxis and goods vehicles. Leaving the taxis and goods vehicles as they are, Dr Webster has considered the economic effects of removing the private cars from the roads and filling the gap with various systems of buses.



Costs (including passengers' time) of various bus systems.

JOURNEY TIMES (MINUTES) WITH PRESENT AND BUS-ONLY SYSTEMS FOR 1, 3 AND 5 MILE JOURNEYS

Present bus/car mixture			Large buses (70 seats)		
1 mile	3 miles	5 miles	1 mile	3 miles	5 miles
23	45	67	16	32	47
Medium buses (30 seats)			**Minibuses (20 seats)**		
1 mile	3 miles	5 miles	1 mile	3 miles	5 miles
14	28	43	13	28	42

Bus systems considered ranged from the 70-seat double-decker bus in present use to 10-seat minibuses. Calculations of average journey time were made for each system of bus, assuming that the freedom of the roads from private cars allowed optimum routing and frequency of the buses. The calculations (see Table) included estimates for the time spent walking to and from the bus-stop and in waiting for the bus. All systems gave a shorter average journey time than does the present one.

On the basis of journey times Dr Webster has calculated the operating costs of the various systems, valuing passengers' time at 4*s*. 6*d*. an hour. This figure derives from the assumption that 15 per cent of passengers are on business and worth 13*s*. 6*d*. an hour, and 85 per cent, travelling in their own time, are worth 3*s*. an hour. Other elements in the cost structure (see figure) are the operating costs of the various types of vehicle. Estimates for each system signify operating costs only, and do not include the capital cost of a new bus fleet. Nor are such contingent factors considered as the decrease in revenue from petrol tax which would accompany the banning of private cars from central London.

The calculations suggest that all-bus systems would reduce the average journey time by up to one-third. Changing from the present system to all 70-seat buses would give a saving of £80 per hour per kilometre of road network. Assuming 200 kilometres of main road in central London, 5 hours a day of peak traffic and

© 1968 Nature Publishing Group