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Statistics today

Urgent need to depoliticise official figures

Earlier this month the Royal Statistical Society held an open meeting to discuss the erosion of public confidence in official statistics. Concern about the statistics prepared by the government has been grumbling throughout the decade: two recent events are thought to have triggered this unprecedented meeting. The first was a Channel Four documentary, *Cooking the Books*, shown in January and April this year; the second was the completion of a report, *Accessibility and Other Problems Relating to Statistics used by Social Scientists*, by Professor Bernard Benjamin, Emeritus Professor of Actuarial Science and former chairman of the Statistics Users Council. Commissioned by the Economic and Social Research Council, the unpublished report has been circulating among members of the Royal Statistical Society.

Cooking the Books provided 10 case reports (half of them taken from the NHS) to support its allegations that the government had deliberately suppressed, manipulated, or distorted statistics or timed the release of unfavourable statistics to minimise their impact. Professor Benjamin's inquiries, begun in 1988, found that researchers had similar complaints. Changes in the staffing and funding of the Government Statistical Service "seemed to be designed to reduce knowledge of social conditions and needs and therefore to reduce also the chances of government policies being criticised on grounds of failure to meet needs." Researchers argued that the service's statistics were "likely to represent Government and administrative achievement in the most favourable light and to, at best, delay publication of, or, at worst, to conceal information that might be embarrassing or known to be publicly manipulable." With changes in categories, questions, and coding systems over time, conducting longitudinal studies has become almost impossible.

What evidence is there for these claims? How reluctant has the government been to provide data that could be used to contradict its claims that its policies have led to a better deal for all?

Take the statistics of those who would seem to have benefited least—the unemployed, the poor, and the homeless. According to the Unemployment Unit, an independent source of information on the labour market, there have been 30 changes since 1979 in the way the unemployed have been counted, with all but one change (made in October 1979) decreasing the total. Despite this creative accounting the unemployed are still with us—1·63m of them on the most recent count. The poor, however, are not: they have been defined out of existence. In 1979 the newly elected government decided to collect statistics on low income families every two years instead of annually. Delays between collection and publication became longer and longer. It was then announced that the figures for 1985, published in 1988, were to be the last. When the Secretary of State for Social Security claimed earlier this year that real poverty in Britain existed only in history books he was at least technically correct.

To "lose" two bits of controversial evidence may look like carelessness, but a third? When it comes to homelessness no one knows how many people are affected. Figures for homelessness are collected by household rather than individual, and they exclude most young, single homeless people.

The government has accepted that divisions between social classes have increased during its term of office but has resisted from the beginning that this may have medical consequences. In 1980 instead of publishing Sir Douglas Black's report on inequalities in health it made only 260 duplicated copies of the typescript available, sending a few copies out to selected journalists on the Friday before an August bank holiday.[1] And the latest decennial supplement on occupational mortality,[2] prepared by the Office of Population Censuses and Surveys, was as coy as the government about allowing any relation between social class and mortality, burying the key table on this among thousands of others on microfiche. (It was left to others to point out that the difference in mortality between the manual and non-manual groups had widened.[3]) This was a marked departure from the previous decennial supplement, which was quite explicit about an association. The next supplement is likely to be different again, with the category of social class dropped entirely.[4] (Not only will class disappear from future analyses, but it is rumoured to be retroactive—all the way back to 1911.)

Bad news diversion

The release of the Black report immediately before a bank holiday weekend began a sequence of releasing bad news when people's attention was diverted. Most notoriously, the day before the royal wedding in 1986 was chosen to publish the already delayed *Health and Personal Social Services Statistics for England*, which showed that 196 non-psychiatric hospitals and 36 000 hospital beds—nearly 10% of all beds—had been lost between 1979 and 1984. On the same day the National Radiological Protection Board increased by 60% the risks of radiation induced leukaemia from Sellafield's radioactive

discharges. This year budget day was chosen to publish the worst hospital waiting list figures for four years and the worst homelessness figures ever. Chance alone could not account for the number of reports, unfavourable to the government, that find their way into the House of Commons library just before the end of a parliamentary session.

What can be done? Government statisticians at the Royal Statistical Society's meeting obviously felt maligned. Why, asked Mr Jack Hibbert, the government's chief statistician, was a distinction so rarely made between the statistics produced by the Government Statistical Service and the uses to which others—both inside and outside government—put them? By posing the question like this Mr Hibbert seemed to be indicating a way out of conflict. Few statisticians at the meeting and, one suspects, few members of the public, doubt the integrity of the government's statisticians. But few doubt that decisions about which statistics to collect and how they are interpreted and released rest almost entirely with their political masters.

The suggestion to set up a National Statistical Council to oversee the use of statistics, first floated by Sir Claus Moser in 1979,[5] has surfaced again, although the experience of the Press Council, Arts Council, Sports Council, and Health Education Council in the 1980s does not inspire confidence that a council would provide the answer.

How other countries organise their services may well provide a guide—many seem to manage their statistical services without Britain's current discontent. The *Handbook of Official Statistics in ECE Member Countries,* which summarises each country's legal and operational framework, shows that many grant their statistical services greater independence than does Britain, in some cases making them answerable to the head of state rather than to the government of the day.[6]

The 1980s was not a happy decade for official statistics in Britain, and some way of depoliticising them needs to be found, and fast. Statisticians at the meeting who believe that their profession has fallen into disrepute were the first to endorse this, but it is in everybody's interests to have a reliable source of data on which to base their actions.

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1 Black D. *Inequalities in health.* London: Penguin, 1988:3.
2 Office of Population Censuses and Surveys. *Occupational mortality decennial supplement England and Wales* 1979-80, 82-3. London: HMSO, 1986.
3 Marmot MG, McDowall ME. Mortality decline and widening social inequalities. *Lancet* 1986;ii: 274-6.
4 Delamothe T. Class dismissed. *Br Med J* 1989;**299**:1356.
5 Moser C. Statistics and public policy. *Journal of the Royal Statistical Society* 1980;**143A**:1-31.
6 Conference of European Statisticians. *Handbook of official statistics in ECE member countries.* Geneva: Economic Commission for Europe, 1988.

Saving children's lives by vaccination

Much achieved but much more could be done

Three quarters of the world's population lives in the developing countries of the South. A decade ago, $40 billion flowed every year from the North to the South. Now $20 billion flow annually in the opposite direction. In the North at least four fifths of all born are likely to enter retirement at the age of 65. In the South there are still many communities where three quarters will die before the age of 65—and half of these deaths will be in childhood. Ten years ago the median figure for health expenditure per person in the North was $220, whereas in the South it was just $4 each year. Over the past 10 years Unicef has shown that in the poorest 36 countries this spending on health has halved and that in some countries infant mortality is rising.[1] Yet spending on armaments has continued. Can we hope that the changes in Eastern Europe will lead to a worldwide decline in military expenditure? Just one fifteenth of the world's military spending would provide all basic health care needs for developing countries.[2]

Not all is gloom, however, for health care in developing countries. A quiet public health revolution has been taking place, instigated by a resolution of the World Health Assembly in 1974 to provide immunisation for all children of the world by 1990. At that time less than 5% were immunised. The expanded programme of immunisation now prevents around 2 million deaths from measles, pertussis, and neonatal tetanus and almost a quarter of a million cases of paralytic poliomyelitis each year.[3] There are still, however, nearly three million children who die, 200 000 who are paralysed, and 150 000 who are blinded by diseases that can be prevented through immunisation.

Population growth

Preventing these child deaths has wider implications. No country has reduced its population growth without first reducing child deaths. In Africa, the current average family size is 6·7 children, and the World Bank has calculated that this must be cut to 3·4 to keep in step with growth in agriculture.[4] Demographers have shown that halving the child mortality in the next 10 years would substantially reduce the final stable world population.[5] Population growth in relation to resources available remains the greatest ecological threat for the future.

The eradication of smallpox fired the imagination of the international community. Out of this arose the enthusiasm for the programme of worldwide immunisation against six diseases: diphtheria, pertussis, tetanus, poliomyelitis, measles, and tuberculosis. With able guidance from the World Health Organisation an effective cold chain and training and management programmes were set up in every country. Unicef played its part in funding and social mobilisation, gaining political commitment through heads of states and popular publications such as the yearly *The State of the World's Children.* Many other organisations such as the United Nations Development Programme, the Save the Children Fund, and the Rotarians played their parts, but success depended heavily on individual governments. In the early years few believed the 1974 resolution could be more than a pipe dream. Improvement has been rapid, however, and the current projection is that by 1990 four fifths of children in the most populous countries—India, China, Nigeria, Bangladesh, and Indonesia—will have received their third dose of oral polio virus and diphtheria, pertussis, and tetanus vaccines.[3] This year there will be fewer than 30 cases of paralysis from wild poliomyelitis in all the Americas, and possibly both they and Europe will achieve eradication by the end of 1990.

Deaths from measles

Measles continues to kill at least 1·6 million children a year, and new research suggests that this is an underestimate. After severe measles mortality is increased for many months from other causes, particularly diarrhoea and respiratory infections. The increased mortality is related to the size of the infecting