

HEALTH GROUP

The Health Subgroup has met three times. Various issues such as pollution statistics, reporting of industrial accidents, statistical competence of articles appearing in medical journals such as The Lancet, have been raised. The group heard from Anne-Lise Goetzsche, a medical journalist, about the use and misuse of statistics in the fluoridation controversy which was particularly interesting. Contact has been made with the Medical Sociology group of the British Sociology Assn.

I would suggest that the group could profitably examine and bring together statistics on social class (and other deprivation measures) differences in health and health care, and how these are or are not changing over time. The General Household Survey provides some data on this, but it is interesting to see how little is to be found in Social Trends which presumably should be highlighting these data. This is an issue which needs to be discussed further, after the summer.

Ian Plewis

(Ian has been ill, with glandular fever, this past month; we hope he is feeling better soon.)

Radical Statistics Education Group

This group has been meeting to discuss the five volumes which describe the 'Educational Priority Area' projects (HMSO, 1972-5).

These projects arose from the Plowden report's concern with positive discrimination in primary education. Five deprived areas were chosen and in each of these, 'action research' projects were set up. They were intended to experiment with programmes designed to 'improve' schools in these areas, and an integral part of the research was an evaluation of the success of each programme. In Professor Halsey's words (Preface to Vol. I) the evaluations "constitute a pioneering effort in the use of the action-research method in Britain".

The evaluations, it turns out, consisted of pre- and post-test administrations a year apart, to groups of children given 'treatments' consisting of measures such as special language training courses. In most experiments control groups of children were chosen, and in others the researchers attempted to use national test norms as control information. In addition, a number of surveys of teacher, parents and schools were carried out, mainly reported in volume II.

When the group came to study these experiments in detail, two things were evident. First, the technical statistical competence of the analyses was poor, and secondly, the experimental designs were generally so bad that the results of the evaluations were pretty useless. For example, attrition of the sample between pre- and post-test administrations was sometimes as much as 50% with no attempt made to study possible resulting biases. The confusion which exists at the technical level is illustrated by the following footnote (Vol.II, p.84):

"Although the parental survey sample cannot be regarded as a truly random one because of the confusion over the replacement procedure, χ^2 with one degree of freedom has been used within areas to test whether observed differences in the sample reflect differences in the total population of EPA families in that area. Unless specified otherwise a 0.05 level of significance on a one-tailed test has been accepted. The reader may if he wishes disregard the reports of the significance tests."

We are now interested in trying to discover why the action part of the research should be so poorly supported by the evaluations. Are there important political implications, and what are the lessons for future evaluation research projects? One of the group is presently drafting an article intended for publication, perhaps in New Society or Times Educational Supplement.

H. Goldstein

Reference

Educational Priority (1972-5) Vols. I - V, HMSO.

STATISTICIANS AS EMPLOYEES SUBGROUP

The subgroup began as just 5 or 6 of us, mainly from central or local government, meeting now and then for a chat. We were thinking about trying to write and promote a code of ethics for statistical work, as a means of starting some controversy over ^{our} position as employees. We decided that we didn't have a wide enough range of experience to write the code.

More recently more contacts in government were made, and there were a couple of meetings with more people, though different people each time. We talked about Radical Statistics in general and what the subgroup could do, but didn't come to an agreement on either. Everyone had come along to find out from everyone else what it was all about. There seemed to be a great variety of interests and political aims. A number of people were interested in the use made of government social surveys.

It was agreed that people would send in their suggestions for the subgroup to be put together as a discussion paper for the next meeting, but nothing was received and only two people turned up at the meeting. (There are several people outside London who cannot easily come to meetings) Perhaps there is no basis for this subgroup yet, and people can take part in other subgroups according to their interests.

I suggest that anyone interested, whether or not they have so far been in touch, write to me their views, ideas, experiences on the position of statisticians as employees, and what activity (if any) they would like to see the subgroup undertake. If there is a sufficient response, I'll put together what I receive into a bulletin to send round to those interested, and call another meeting to try to agree on some specific activity.

It was decided by the convenors of the groups on teaching and on methodology that these two groups should initially meet together. A first appraisal of the groups' objectives seemed to yield some commonality - indeed they shared a common core of members. The concern of the teaching group was not so much with aspects of teaching technology or technique, but rather with questions about where 'Statistics' fitted in, what should be taught as 'Statistics' and in what way should it be presented. These questions soon lead to the consideration of general methodological problems. On the other hand, most of those in the methodology group were involved in the teaching of Statistics and further the nature of Statistics makes it unclear what directions are most appropriate for a group looking at methodology abstracted from any substantive associations.

The first meeting spent some time in discussion of whether a commonality did, in fact, exist and it was agreed with reservations by some, that the two groups should meet together until such time as distinct and diverse objectives might emerge. The intent was to follow the pattern of questions arising from the teaching interest and to leave the methodological problems and discussions to evolve from these. We also hoped that if any other group threw out methodological problems these might also be discussed.

The issues raised at the meeting included the following:

What is the position of Statistics within "scientific method"? What are the implications of different positions in the philosophy of science? (Books and articles by Hindess, the Willers, Lakatos, Popper, etc. were suggested.)

'Equifinal' is a name for alternative models leading to equivalent empirical results. Is it possible to catalogue such equivalent models?

In what way do "non-objective" factors intrude into the research process - in sampling decisions (e.g. the trade-off between precision and cost), choice of data-collection method, measurement procedure, inference?

What is the nature and extent of Bayesian "subjectivity"? Are the important value judgements made more explicit than in classical Statistics?

How important is the centrality of the notion of "probability" in the various Statistical programmes?

Should methodology be taught separately from a substantive area of application? What differences in teaching strategy are appropriate in the education of "budding" statisticians, natural scientists, social scientists, the public-at-large (e.g. shop stewards)?

How should we get involved with institutional strategies (e.g. related to the manner in which Poly degrees are approved), or with questions of educational policy (e.g. student grants)?

The second and third meetings focussed on the problems of introductory courses for social science degrees. Jeff Evans described the objectives and institutional context of the 'Methods and Models' course at Middlesex Poly (Enfield) - and briefly contrasted this with the approach described by C.R. Rao ("A Multidisciplinary Approach for Teaching Statistics", Int. J. Math. Educ. Sci. Technol., vol. 2, 295-312 (1971)). Paul Chalmers-Dixon and Roy Carr-Hill described the history of a course offered within the School of Social Sciences at Sussex University, again indicated the institutional problems, and presented a detailed syllabus of a recent version of the course.

The fourth meeting began a series of discussions on the role of probability in Statistics programmes, by looking at the Bayesian approach. We shall also consider to examine teaching programmes and problems presented by members.