

Being statistical with the truth

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The Radical Statistics Group was set up for a wide variety of reasons - including: a (vaguely left-wing) critical perspective on the analysis and interpretation of data; a concern to question the role played by statistical information; and a commitment to use statistical skills, where possible, for rather than against the disadvantaged. Not all of these were shared by the founders nor should they be seen as binding on the current 'members' (itself a rather vague status). But one principle was seen as fundamental - that statistical data should not be abused in the service of politics.

It was therefore with great sadness¹ that I saw the recent article "The Black Report in Socio Economic Inequalities 10 years on" in the BMJ by three people all of whom have been associated at one time or another with the Radical Statistics Group or with the Health Sub Group. Once again they repeat without qualification the old chestnut that "mortality differentials had widened from 1971 to 1981" (p373). They do acknowledge, about two thirds through the article, that there has been an alternative explanation: "that as the size of the lower class groups decreases these groups will come to contain a greater proportion of people at high risk of dying" (p375). They dismiss this because "The use of alternative measures of socio-economic position allows for the definition of larger groups that are nevertheless found to have similarly raised mortality" (p375); and they give the SMR of men without access to a car and in rented accommodation as an example.

Their reply focusing only on one time point² has, of course, nothing to do with the issue of whether or not the widening differential between occupationally based social classes is attributable to shifts in relative size of those classes. They have also chosen to ignore the demonstration of the potential impact of these shifts by both Illsley (1986) and myself. For example, the relative sizes of class V to class I has changed from 7.2 in 1931 to 3.6 in 1951 to 1.7 in 1971 and equality in 1987 (see Table 1). The shifts have been even larger in the at-risk age group: thus between 1951 and 1981 the relative size of occupational class V to class I among 55 to 64 year old males changed from 8.2 to 1.7. These are hardly negligible changes.

1. Given that subscription constitutes membership and there is no formal membership of a subgroup it seems inappropriate to make too much of a fuss about it.
2. Note also that the proportion living in rented accommodation shrank rather dramatically in the 1970s; and I realise that those in the prosperous South East may not realise it, but there were significantly more without a car in 1971 than in 1981.

TABLE 1

Distribution of Economically Active Men by Occupational Class, England and Wales 1931-1981 (row percentage).

	I	II	III	IV	V	All classes
1931	1.8	12.0	47.8	25.5	12.9	100
1951	2.7	12.8	51.5	23.3	9.7	100
1971	5.0	18.2	50.5	18.0	8.4	100
1981	5.7	22.3	45.6	15.9	5.8	100

Source: Illsley (1986), and own calculations from OPCS.

Moreover, if one attempts to estimate the size of the effect by comparing groups of equal size over time - rather than droning on about the Working Class like a fin-de-siecle Marxist - it looks as if the relative

mortality rates at the top and bottom have remained approximately parallel. An illustration is provided in Carr-Hill (1990), where quintiles are constructed using education status: the ratio of rates in the first and fifth quintiles (respectively, the top and bottom groups) moved from 1.84 in the 1950s to 1.74 and 1.79 in the 1960s and 1970s.

Furthermore, their discussion of the selection explanation is totally inadequate. First, they 'ingenuously' associate the proposed explanation with eugenicism: second, their 'reply' refers to Goldblatt's (1988) demonstration that mobility between 1971 and 1981 does not account for mortality differentials in the 1980s, which is irrelevant to the issue of intergenerational selection which is the focus of the argument. Whilst no one has claimed that health selection would account for all social class differences, the data in Table 2 demonstrates that the effect is not marginal. A gap of 3% in prior health status has more than doubled to 7% by the process of mobility. Power et al (1986) - very reluctantly - came up with a very similar estimate of about 50% of the adult differential was due to social mobility.

TABLE 2

Percent seriously ill when a child by social class of 'origin' and of 'destination'.

Percent seriously ill when a child broken down according to	Non Manual		Manual	
	Numbers in group	Percent ill	Numbers in group	Percent ill
Social class of family of origin	1239	14	837	17
Social class at age 26	1314	13	757	20

Source: Adapted from Wadsworth, Table 4.14.

In a journal review, I would point to other disagreements. But these particular issues of how to measure trends and how to account for continuing inequalities are crucial. For they bear on an assessment of the impact of forty years of a nationalised health service. It is moreover important to emphasise that these are willful misrepresentations. Both points have been made to two of these authors on several occasions and never rebutted. Hence the sadness. I think these authors would rather be associated with a Convenient - rather than Radical - Statistics Group.

References

Carr-Hill, R. A. (1990), *The Measurement of Inequalities in Health: Lessons from the British Experience*, Soc. Sci. Med., vol. 31, pp 393-404.

Davey Smith, G., Bartley, M., and Blane, D., (1990), *The Black Report on socio economic inequalities in health 10 years on*, British Medical Journal, vol. 301, no. 1, 18-15 August, pp 373-377.

Goldblatt, P., (1988), *Changes in Social Class between 1971 and 1981: could they affect mortality differentials among men of working age?* in Population Trends, vol. 57, pp 9-17.

Illsley, R., (1986), *Occupational class, election and the production of inequalities in health*, Quarterly Journal of Social Affairs, vol. 2, pp 151-165.

Power, C., Fogelman, K., and Fox, A. J., (1986), *Health and Social Mobility during the Early Years of Life*, National Child Development Study User Support Group, City University, London, (Working Paper No 8).