R. Wilkinson (ed), CLASS AND HEALTH; RESEARCH AND LONGITUDINAL DATA, Tavistock, London, 1986.

This boook contains a collection of articles which present research findings on a number of areas of inequalities in health by various authors and a review of longitudinal studies in Britain relevant to inequalitiies in health by Mildred Blaxter. The articles add new data both to specific areas such as the effects of income and unemployment on health and to fundamental issues such as the gap in health between classes. Overall, these articles demonstrate the basic soundness of the Black Report's findings and this book therefore represents an important development in the study of inequalities in health.

In his chapter on socio-economic differences in mortality, Wilkinson is concerned with the ways in which it is possible to interpret the observed class differences in health, particularly those concerned with selection and social mobility. Using recent research, he demonstrates conclusively that: illness has little impact on social mobility and makes a marginal difference to mortality differentials; a selective-mobility factor operates in early adulthood which makes a small(10%) contribution to differentials in infant mortality; the effects of selection on class differences is heavily outweighed by the effect of the socio-economic heterogeneity of classes and that as a result the mortality differentials attributable to socio-economic inequalities are probably understated; mortality differentials between classes have increased while the lack of any dramatic increase in the rates of social mobility suggests that neither selection nor revision in occupational classification are responsible for this. Having tackled selection and social mobility Wilkinson argues that the real task is to identify 'the mortality risks attributable to the separate aspects of the socio-economic differentiation of the population' and he takes this argument up in a later chapter when he examines the influence of incomes on health.

Marmot uses data from the Whitehall study of civil servants in his article on social inequalities in mortality in middle ages. These civil servants are all men, working in a sedentary occupation in London. Marmot's study found that differences in mortality between classes were more marked than is the case nationally with a greater than three-fold difference between the lowest and the highest grades. By looking at this group of workers, the study overcomes the problem of the heterogenous make-up of social classes and indicates that inequalities in health between classes may be understated. In attempting to establish whether social class differences have a general explanation or are the result of the combined effect of a number of specific factors, Marmot's evidence suggests both; for example, he found that smoking is strongly associated with a number of specific causes of death but that a marked gradient in mortality between classes persists from Coronary Heart Disease and other causes(excepting cancer) among non-smokers, in mortality from CHD and lung cancer when controlling for smoking and in mortality from diseases not associated with smoking. Marmot mentions aspects of culture which he feels may play a role in the class differences in mortality but his evidence is weak.

A number of critics of the Black Report argued, mainly on theoretical grounds, that numerator-denominator biases (due to the occupation reported at the registration of death not necessarily being that reported at the census) and selection effects (selective movement between classes of the sick and healthy) influenced the extent of social class differentials in mortality. Using data from the OPCS Longitudinal Study (which is free of numerator-denominator biases), Fox, Goldblatt and Jones confirm earlier estimates of social class differentials in mortality (eg in the Black Report). Further, their data on men dying at aged over 65 years demonstrates that, contrary to widely held beliefs, the differential is almost as steep amongst older men and that this has to be due to their material and social environment and not to their changing social class as a result of ill-health. The mortality of men towards the end of the working age range shows a similar gradient again suggesting that health-related mobility between social classes is far less important than accumulated life experiences.

In his article on serious illness in childhood, Wadsworth finds evidence to support the view that health, 'to some extent', influences social mobility. (Wilkinson has indicated the extent of this in a previous chapter) His study indicates inequalities in health between classes from birth to age 26 with boys suffering from more serious illness than girls and a significant association between falling social class and serious illness for boys but not for girls. This pattern persisted into early adult life. Childhood illness affected the relative height of both boys and girls and had a short-term effect on educational achievement. Wadsworth acknowledges the difficulty in interpreting much of the data but an important finding is that seriously ill boys in all social classes are more likely to experience downward movement as indicated by social class. The need for further research into 'coping' with serious illness in childhood is recognised as is the need to bear in mind the 'cohort' effect when extrapolating the findings of this study.

Unemployed men have been shown to have high mortality and possible explanations for this are that: health suffers due to unemployment; poor health may lead to unemployment; this is a reflection of the distribution of ill-health between classes before unemployment. In their study, Moser, Fox and Jones found that the mortality of unemployed men was raised in all social classes and that this excess could only be partly explained by their class distribution. They found little evidence of a selection effect though the data was thin here. Moser, Fox and Jones examined the health of women married to unemployed men for any adverse effects on their health are more directly attributable to the effects of unemployment and they found a higher mortality rate than would have been expected. A serious limitation on this study, however, is that it is based on men, unemployed during one week in April, 1971 and consequently there is no informationon how long they had been (or remained) unemployed or on their health prior to becoming unemployed.

Little research has been carried out on the association between income and health (though fairly obvious examples abound on ways in which they are related, eg pensioners dying from hypothermia because they are unable to heat their homes adequately) and this is partly due to the difficulties in collecting and using data on income. Wilkinson's paper examines four areas

concerning income and mortality and the first is the relationship between relative changes in incomes and mortality rates of selected occupations over a twenty year period. His results suggest that income differentials are likely to make an important causal contribution to the health experiences of different classes. However, while it is possible to accept his findings at this level, there are many processes going on within occupational categories which would make the relationship much more complex, for example, the effect of changes in work practices (handling more hazardous materials, shift work) may be more important than changes in income on health. Further, there may be significant income differentials within occupational categories and there are probably regional variations. Also, the causal relationship may not be so direct; for example, in an industry where incomes are low, younger, fitter men may leave resulting in an older, sicker workforce. Wilkinson goes on to identify a relationship between the changing real value of state old-age pensions and death rates of people of pensionable age and suggests that aspects of smoking and diet are the important factors in this relationship. During the 1970s, a narrowing of class differences in postneonatal mortality took place and Wilkinson believes that this was related to a narrowing of class differences in living standards. The data he presents indicates an overall rise in living standards within the working class during the 1970s which would have improved the living standards of their children, though he reconises that data is unavailable on changes in the home environment and the causes of death that they might have affected. With rising unemployment and a growth in the level of poverty in the 1980s, one would expect to see a reversal of this trend and research into this would be very valuable. Also, to validate the arguement it would be useful to look back to other periods of narrowing differentials in income to identify any corresponding drop in postneonatal birth rates. In the last part of his article, Wilkinson looks at the likely effects of changes in income distribution on mortality rates and on the basis of his data argues that a transfer of income from the rich to the poor would have little effect on the health of the rich while bringing substantial health benefits to the poor and, in Britain, there is plenty of room for redistrubtion. Longitudinal evidence on life expectancy and standards of living in Britain and data on other countries lends further weight to his case and he concludes by posing the question of whether in Britain increases in top incomes are detrimental to the poor. The answer, suggested by this study, is that in relative terms they are.

In his article, Le Grand sets out the key issues he believes should figure on a research agenda concerned with inequalities in health and health care. He identifies many key issues which require research though it must be said that improvements in health and health care could be acheived on the basis of the knowledge that has been accumalated so far, if there was the political will to implement them.

Mildred Baxter's review of longitudinal studies in Britain relevant to inequalities in health is in two sections and the first offers tabulated, summarised information on these studies and represents a useful guide to them. The second section offers a thorough assessment of the achievements and potential of longitudinal studies in finding causal mechanisms and examining the process by which inequality is created. Her review illustrates the value of longitudinal studies and describes some of the most important findings of which there are far too many to mention here.

She concludes by indicating the areas in which longitudinal studies could fruitfully pursue further research. What comes out of this review is the wide scope of the research that has been carried out and the potential for areas of further research. It is essential to recognise that longitudinal studies are only one of the 'tools' that can be used in exploring inequalities in health and that because of their scale they need to be carefully directed rather than becoming an end in themselves.

This book is important because it presents new findings on inequalities in health and because it lends weight to the findings, conclusions and recommendations of the Black Report. A number of criticisms levelled at the Black Report have been examined and shown to be far less important than had been suggested. Most of the articles indicate that it is social and material factors such as income and unemployment which have the most significant influence health and that health is not the determining variable. There is therefore a need for a shift in emphasis to examine how these factors exert their influence and to developing ways to prevent this occurring. The studies in this book draw on national data bases and, like the Black Report, present broad conclusions which are subject to many 'localised' variations. These studies need to be complemented by small-scale detailed studies which can offer a wealth of examples of the interrelationships between social and material factors and health. This apart, these studies generally provide strong empirical evidence in support of the view that the 'materialist' approach offers the best explanation of inequalities in health.

Graeme Betts
Lewisham Social Services