



Deposited via The University of Leeds.

White Rose Research Online URL for this paper:

<https://eprints.whiterose.ac.uk/id/eprint/132404/>

Version: Accepted Version

Conference or Workshop Item:

Norman, PD Selective mobility: it depends which groups you compare with. In: Health and Mobility, 08 Jun 2018.

<https://doi.org/10.13140/RG.2.2.25881.72805>

Reuse

Items deposited in White Rose Research Online are protected by copyright, with all rights reserved unless indicated otherwise. They may be downloaded and/or printed for private study, or other acts as permitted by national copyright laws. The publisher or other rights holders may allow further reproduction and re-use of the full text version. This is indicated by the licence information on the White Rose Research Online record for the item.

Takedown

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.

Selective mobility: it depends which groups you compare with

Paul Norman

School of Geography, University of Leeds

Acknowledgements

- Permission of ONS to use the Longitudinal Study
- Help by staff at CeLSIUS, particularly Chris Marshall
- The published paper doi:10.1016/j.socscimed.2009.02.051 was cleared by the ONS LS (LS30033B)

Selective mobility: changing social & deprivation gradients of health

Background

Evidence that health & mortality inequalities widened in the UK over the last few decades

Social Class: between SCI (professionals) & SCV (unskilled)

(Hattersley 1999; Blane *et al.* 1997; Drever & Whitehead 1997; Blane & Drever 1998)

Geographical area

(Dorling 1997; Levin & Leyland, 2005; Leyland 2004; Shaw *et al.* 2005)

Deprivation of areas

(Boyle *et al.* 2005; Raleigh & Kiri 1997; Norman *et al.* 2005)

Background

Reasons for widening inequalities less well understood

'Social selection': debate about cause/effect, but ...

- Healthier people more likely to experience upward social mobility
- Less healthy people more likely to move down the social hierarchy

'Deprivation selection': similar cause/effect debate, but ...

- Healthier people more likely to move to less deprived areas
- People in poorer health more likely to move to more deprived areas

Selective mobility: gradient constraint

For social mobility to **increase** social class differences

- Health of those moving **into** higher classes at least as good as those they **join**
- Health of those moving **into** lower classes needs to be at least as poor as those they **join**

Bartley & Plewis (1997; 2007) do not find this:

- Health of those who are mobile somewhere between the group they **left** and the group they **joined**
- Conclude that social mobility acts to **constrain** rather than increase social class differences

Selective mobility study: social & deprivation

ONS Longitudinal Study sample

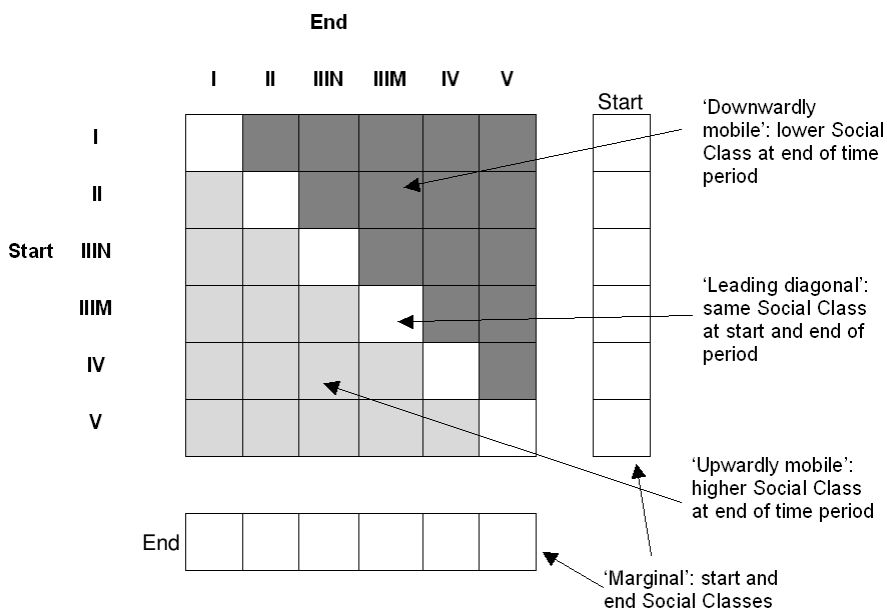
- Household residents present in both 1971 & 1991 Censuses
- Aged 0-49 in 1971; 20-69 in 1991
- Excludes international migrants & permanently sick in 1971
- Age (10 year groups), sex & whether reported limiting long-term illness (LLTI) in 1991

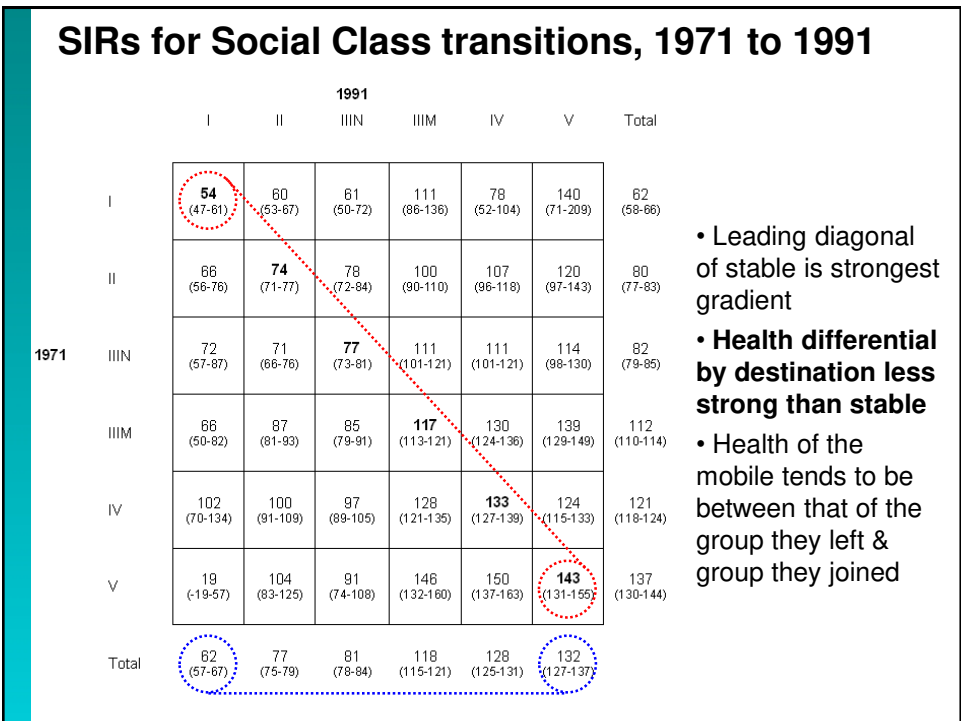
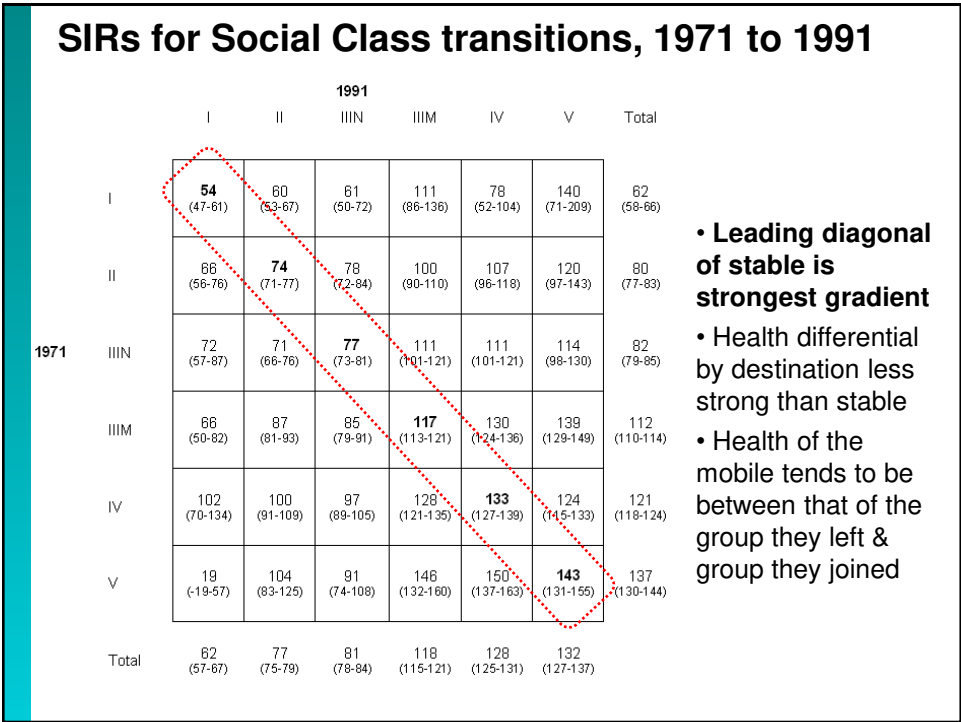
- 247,520 persons had a Social Class in both 1971 & 1991
- 283,707 persons had a Carstairs deprivation quintile of their ward in 1971 & 1991

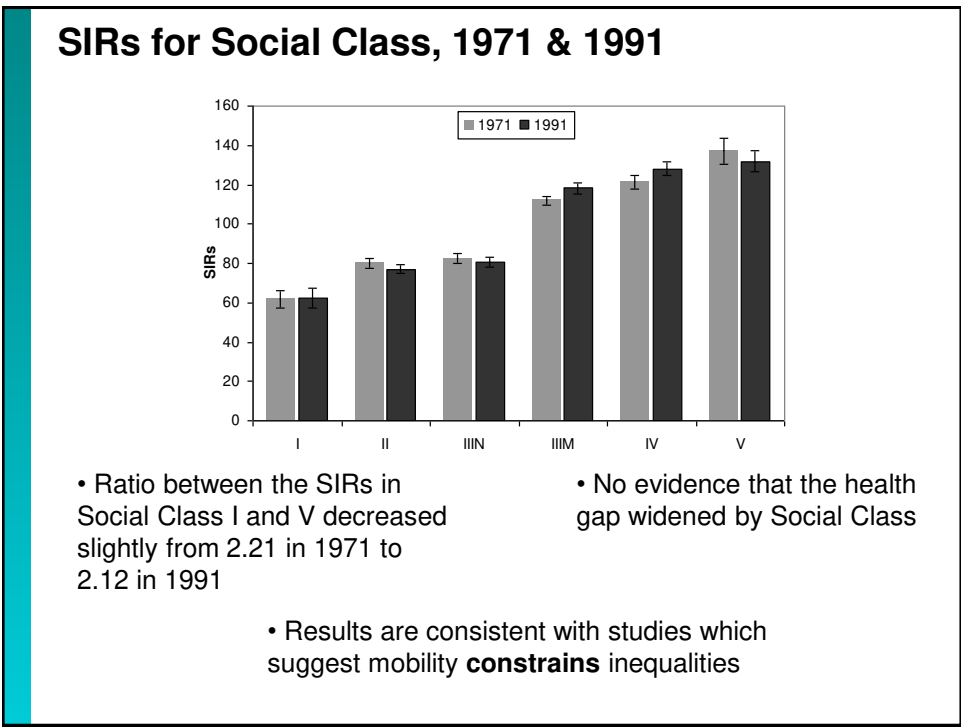
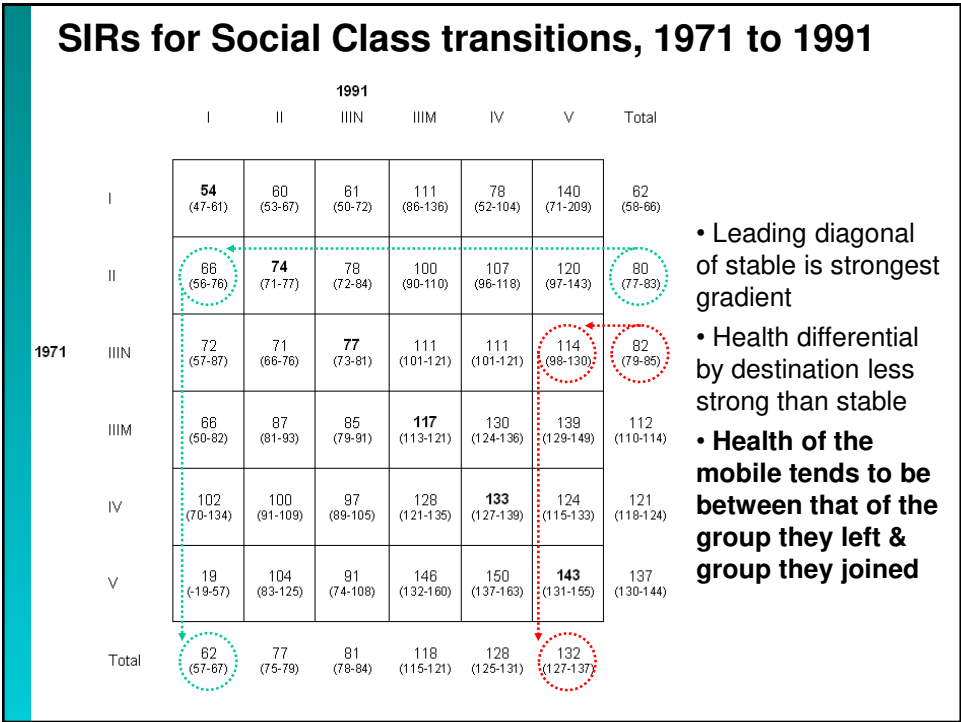
Since the study sample is 'closed', we compare (indirect) Standardised Illness Ratios (SIRs) of the same group of people by their Social Class or deprivation circumstances at two points in time

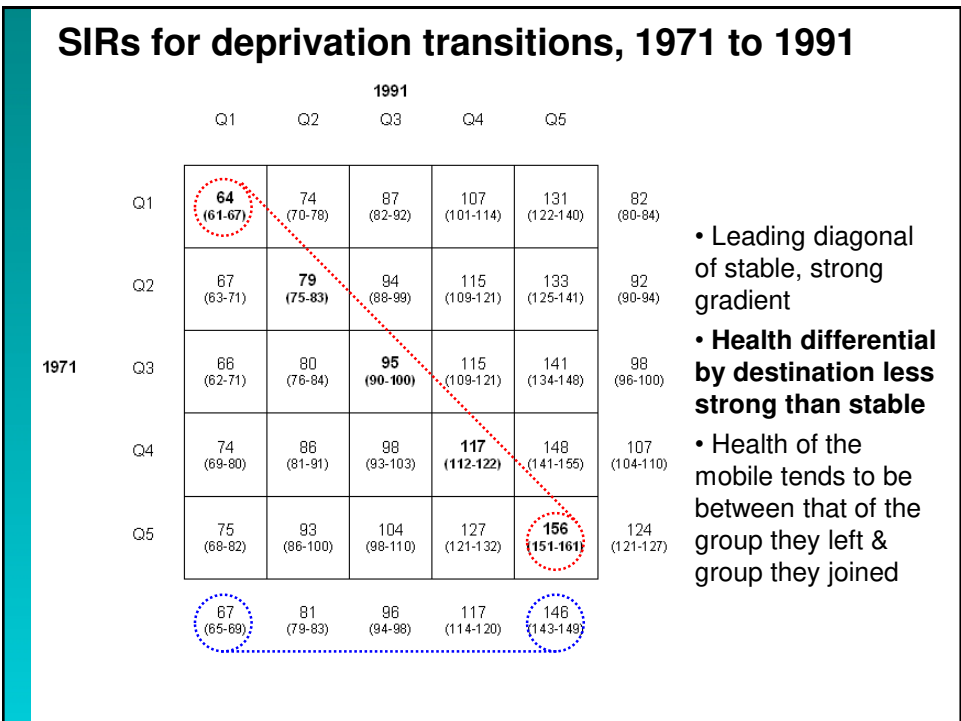
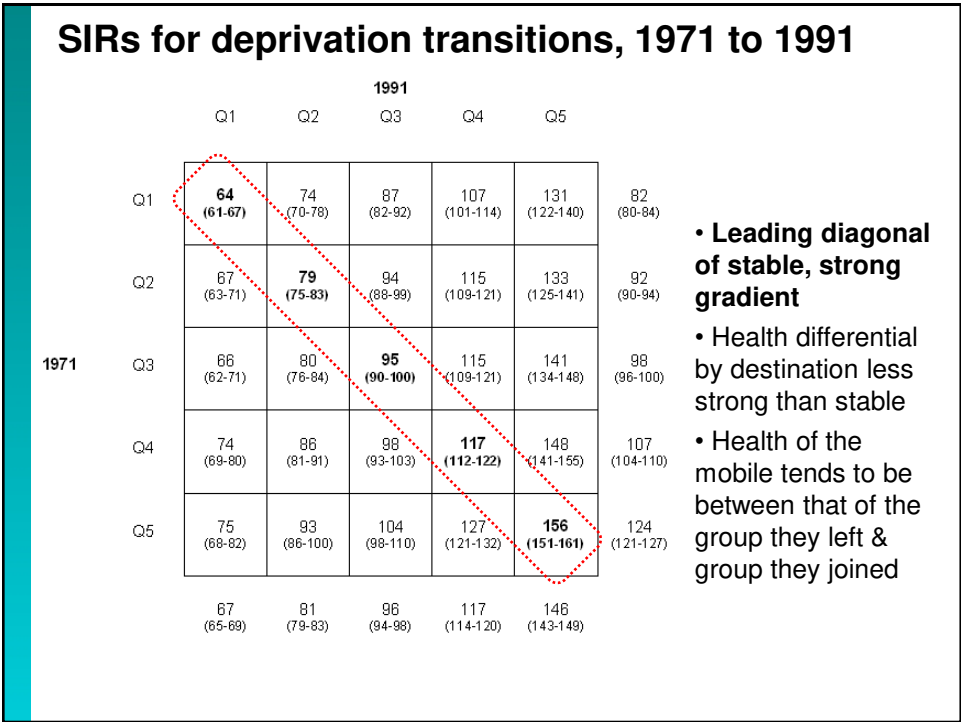
- 'Social mobility' = changed Social Class
- 'Deprivation mobility' = changed deprivation quintile

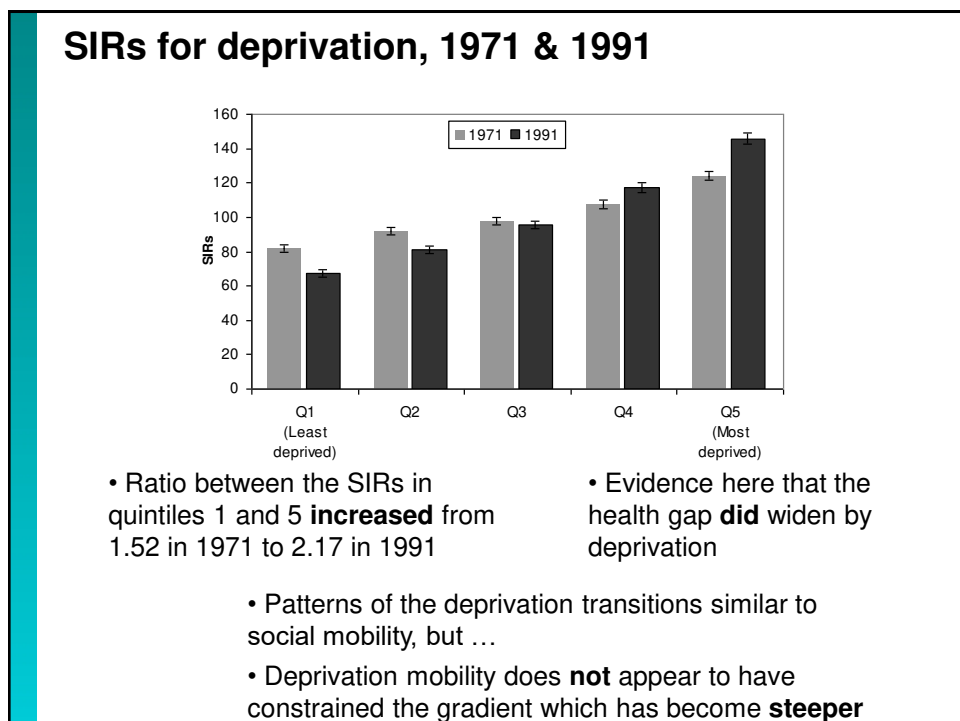
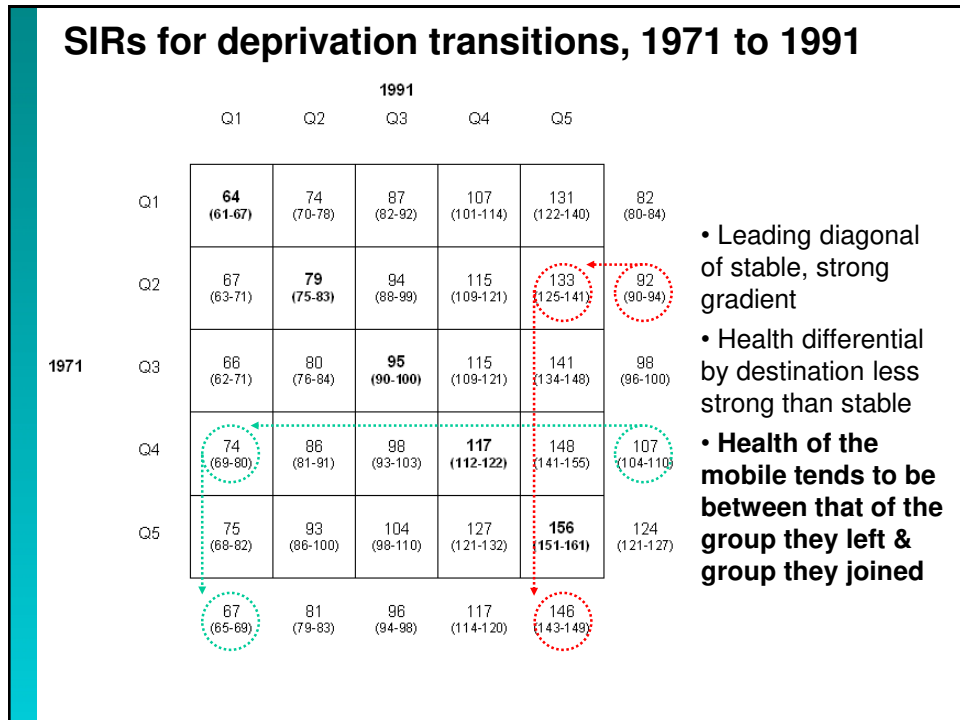
Analysis framework: social mobility matrix



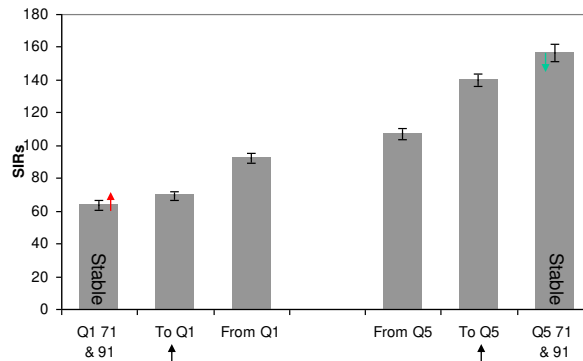








Transitions affecting changes in quintiles 1 & 5, 1971 to 1991

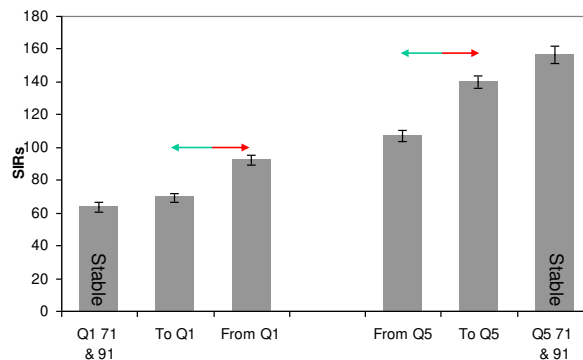


- This upwardly mobile group **not** healthier than the stable group they join

- This downwardly mobile group **not** less healthy than the stable group they join

- This **should** apparently act to constrain, but inequality **widened**

Transitions affecting changes in quintiles 1 & 5, 1971 to 1991

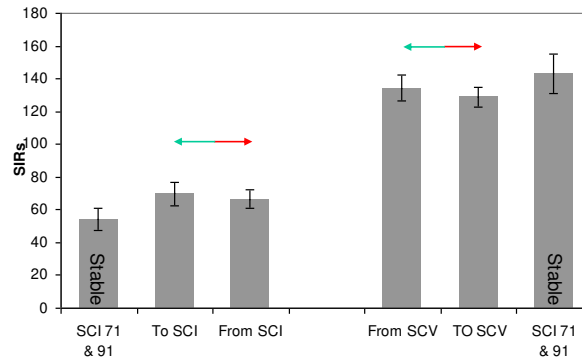


- The exchange of groups to & from quintile 1 affects the mix of people. Health of the **upwardly** mobile better than those they **replace**

- The exchange of groups to & from quintile 5 affects the mix of people. Health of the **downwardly** mobile worse than those they **replace**

- This acts to widen the inequality

Transitions affecting changes in Social Class I & V, 1971 to 1991



- The exchange of groups to & from SC1 affects the mix of people. Health of the **upwardly** mobile **worse** than those they **replace**
- The exchange of groups to & from SCV affects the mix of people. Health of the **downwardly** mobile **better** than those they **replace**
- This acts to constrain the inequality

Selective mobility: changing social & deprivation gradients of health

Gradient constraint

“Social mobility may moderate, rather than create or amplify, social class differences in health.” (Blane *et al.* 1999: 68)

Comparison of the **mobile** groups with the **stable** groups suggests health gradients are constrained

For example:

Stable in Q1 (64) + Up to Q1 (69) = Q1 (67)

Stable in SCI (54) + Up to SC1 (70) = SCI (62)

Using the ‘stable’ as a comparator an ‘ideal’

This reveals health if nobody mobile

Selective mobility: changing social & deprivation gradients of health

The net difference?

- The most important comparison in our deprivation analysis is between the **incomers** and those they **replace**

Deprivation inequality increases

- Health of those into less deprived areas is **better** than those they **replace**

Q1 in '71 (82) – From Q1 (92) + To Q1 (69) = Q1 in '91 (67)

- Health of those into more deprived areas is **worse** than those they **replace**

Q5 in '71 (124) – From Q5 (107) + To Q5 (140) = Q5 in '91 (146)

Selective mobility: changing social & deprivation gradients of health

The net difference?

- The most important comparison in our Social Class analysis is between the **incomers** and those they **replace**

Social Class inequality decreases

- Upwardly mobile into SCI have **worse** health than those they **replace**

SCI in '71 (62) – From SCI (66) + To SCI (70) = SCI in '91 (62)

- Downwardly mobile into SCV have **better** health than those they **replace**

SCV in '71 (137) – From SCV (134) + To SCV (129) = SCV in '91 (132)

Why different effects?

Current deprivation & **previous** SC most influential?

Frameworks need to take care with comparison groups (Norman 2018)

References

- Bartley M & Plewis I (1997) Does health-selective mobility account for socioeconomic differences in health? Evidence from England & Wales 1971 to 1991 *Journal of Health & Social Behaviour* 38 376-386
- Bartley M & Plewis I (2007) Increasing social mobility: an effective policy to reduce health inequalities *Journal of the Royal Statistical Society A* 170 469-481
- Blane D & Drever F (1998) Inequality among men in standardised years of potential working life lost 1970-1993 *British Medical Journal* 317 255
- Blane D Bartley M & Davey Smith G (1997) Disease aetiology & materialist explanations of socioeconomic mortality differentials *European Journal of Public Health* 7 385-91
- Blane D Harding S & Rosato M (1999) Does social mobility affect the size of the socioeconomic mortality differential? Evidence from the Office for National Statistics Longitudinal Study *Journal of the Royal Statistical Society A* 162 59-70
- Boyle P Exeter D Feng Z & Flowerdew R (2005) The widening suicide gap among young adults in Scotland *British Medical Journal* 330 175-6
- Boyle P Norman P & Popham F (2009) Social mobility: evidence that it can widen health inequalities. *Social Science & Medicine* 68(10): 1835-1842
- Dorling D (1997) *Death in Britain: How Local Mortality Rates have Changed* York: Joseph Rowntree Foundation
- Drever F & Whitehead M (Eds) (1997) *Health Inequalities* London: The Stationery Office
- Hattersley L (1999) Trends in life expectancy by social class – an update *Health Statistics Quarterly* 2 16-24
- Levin KA & Leyland AH (2005) Urban/rural inequalities in suicide in Scotland 1981-1999 *Social Science & Medicine* 60 2877-2890
- Leyland AH (2004) Increasing inequalities in premature mortality in Great Britain *Journal of Epidemiology & Community Health* 58 296-302
- Norman P (2018) Clarity in research frameworks for studying 'health selective migration'. Commentary in *Journal of Epidemiology & Community Health* [DOI:10.1136/jech-2018-210678](https://doi.org/10.1136/jech-2018-210678)
- Norman P Boyle PJ & Rees PH (2005) Selective migration health & deprivation: a longitudinal analysis *Social Science & Medicine* 60 2755-2771
- Raleigh VS & Kiri VA (1997) Life expectancy in England: variations & trends by gender health authority & level of deprivation *Journal of Epidemiology & Community Health* 51 649-658
- Shaw M Davey Smith G & Dorling D (2005) Health inequalities & New Labour: how the promises compare with real progress *British Medical Journal* 330 1016-1021