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Selective mobility: it depends which groups you compare with

Paul Norman

School of Geography, University of Leeds

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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
### SIRs for Social Class transitions, 1971 to 1991

#### 1971

<table>
<thead>
<tr>
<th>1971</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>V</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>54 (41-61)</td>
<td>60 (50-70)</td>
<td>61 (50-70)</td>
<td>111 (89-131)</td>
<td>78 (52-104)</td>
<td>140 (71-205)</td>
</tr>
<tr>
<td>II</td>
<td>69 (56-80)</td>
<td>74 (61-77)</td>
<td>76 (62-84)</td>
<td>100 (78-110)</td>
<td>107 (86-118)</td>
<td>120 (67-143)</td>
</tr>
<tr>
<td>III</td>
<td>72 (57-77)</td>
<td>71 (60-80)</td>
<td>77 (63-81)</td>
<td>111 (89-131)</td>
<td>111 (90-130)</td>
<td>114 (88-130)</td>
</tr>
<tr>
<td>IV</td>
<td>85 (68-100)</td>
<td>87 (64-93)</td>
<td>85 (69-91)</td>
<td>117 (93-137)</td>
<td>120 (94-140)</td>
<td>130 (90-160)</td>
</tr>
<tr>
<td>V</td>
<td>102 (76-130)</td>
<td>104 (80-124)</td>
<td>91 (74-109)</td>
<td>140 (112-163)</td>
<td>150 (122-175)</td>
<td>143 (121-166)</td>
</tr>
<tr>
<td>Total</td>
<td>52 (37-67)</td>
<td>77 (62-88)</td>
<td>61 (50-70)</td>
<td>118 (97-138)</td>
<td>128 (93-153)</td>
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- **Leading diagonal of stable is strongest gradient**
- **Health differential by destination less strong than stable**
- **Health of the mobile tends to be between that of the group they left & group they joined**

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SIRs for Social Class transitions, 1971 to 1991

- Leading diagonal of stable is strongest gradient
- Health differential by destination less strong than stable
- Health of the mobile tends to be between that of the group they left & group they joined

SIRs for Social Class, 1971 & 1991

- Ratio between the SIRs in Social Class I and V decreased slightly from 2.21 in 1971 to 2.12 in 1991
- No evidence that the health gap widened by Social Class
- Results are consistent with studies which suggest mobility constrains inequalities
SIRs for deprivation transitions, 1971 to 1991

<table>
<thead>
<tr>
<th>1991</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
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</thead>
<tbody>
<tr>
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<td>87</td>
<td>107</td>
<td>131</td>
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<tr>
<td></td>
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<td>(74-75)</td>
<td>(87-85)</td>
<td>(107-114)</td>
<td>(131-124)</td>
</tr>
<tr>
<td>D2</td>
<td>67</td>
<td>79</td>
<td>94</td>
<td>116</td>
<td>133</td>
</tr>
<tr>
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<td>(67-71)</td>
<td>(79-83)</td>
<td>(94-89)</td>
<td>(116-121)</td>
<td>(133-141)</td>
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<td>D3</td>
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<td>116</td>
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<td>156</td>
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</tr>
<tr>
<td>D5</td>
<td>75</td>
<td>68</td>
<td>117</td>
<td>146</td>
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- Leading diagonal of stable, strong gradient
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<tbody>
<tr>
<td>D1</td>
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<td>88 (86.93)</td>
<td>88 (83.103)</td>
<td>117 (110-122)</td>
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</tr>
<tr>
<td>D5</td>
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- Leading diagonal of stable, strong gradient
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**1971**

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- Evidence here that the health gap did widen by deprivation
- Ratio between the SIRs in quintiles 1 and 5 increased from 1.52 in 1971 to 2.17 in 1991

### SIRs for deprivation, 1971 & 1991

- Patterns of the deprivation transitions similar to social mobility, but …
- Deprivation mobility does not appear to have constrained the gradient which has become steeper

- Evidence here that the health gap did widen by deprivation
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


Dorling D (1997) Death in Britain: How Local Mortality Rates have Changed. York: Joseph Rowntree Foundation


