How spatial segregation changes over time: sorting out the sorting processes

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AQMeN – Applied Quantitative Methods Network

- *Applied Quantitative Methods Network (AQMeN)*
  - Crime & Victimisation (McVie - Edin)
  - Education & Social Stratification (Ianelli - Edin)
  - ***Urban Segregation & Inequality*** (Pryce - Sheff)

- Spatial segregation
  - How segregated are our cities and is this increasing?
  - What drives segregation?
  - What consequences for individuals and for society?

  - ***How does spatial segregation change over time?***

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How does spatial segregation change?

- Conventional theory: spatial segregation created and maintained by selective migration
  - Maintains segregation in face of residential and social mobility
- Grounds for scepticism
  - Demographics cut across this – young adults move down the hierarchy, older adults move up
  - Place attachment – reluctance to move
  - Some evidence from Census on weakness of selective migration

(Bailey and Livingston 2007, 2008)

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Data and methods

- Limitations of other data (Census, longitudinal survey)
- Data from SLS on individual in 1991 & 2001
  - Social status at each time (education, employment, occupation) – social mobility
  - Residential location at each time – spatial mobility
    - CATTs : Consistent Areas Through Time (Exeter et al 2005)
  - Link to population registers (births, deaths)
- Analysis
  - Measure change in spatial segregation 1991-2001
    - Index of Dissimilarity
  - Decompose change in segregation by process of change or flow

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Population flows for working age (25-64)

Population present in 1991

- ‘Exits’
  - Deaths
  - Age out [55-64 in 1991]
  - Other [Leave Scotland or fail to match]
- ‘Core group’ present 1991 and 2001
  - Change social status
  - Change neighbourhood
- ‘Entries’
  - Age in [15-24 in 1991]
  - Other [Migrate in or failed to match]

Population present in 2001

1. Present in households, aged 25 – 64 in 1991	**129 324**	
Exits	*47 186*	*100*
2. Percentage who die before 2001	7 627	16
4. Percentage who age out of sample	19 192	41
5. Percentage who make other exit	19 979	42
6. Core	**82 138**	
(% of 1991 total)	(64)	
Entry	*49 767*	*100*
11. Percentage who age into sample	25 273	51
12. Percentage who make other entry	23 965	48
13. Present in households, aged 25 – 64 in 2001	**131 905**	
Percentage change 1991 – 2001	2	
Valid cases	**179 091**	

(Bailey, 2012)

Table 2: Size of flows – migration and status change

	Degree or similar
% in group in 1991	20%
% in group in 2001	27%
% changing group	**10%**
- % move into group	9%
- % move out of group	1%
Net change in status by age in 1991	
All	
25-34	
35-44	
45-54	
% moving, of which:	
- % move down	
- % move up	
- % move sideways	
- net (up - down)	
Net change in status by moving:	
- moving down	
- moving up	
- not moving/move sideways	

- More status change for younger adults
- Net upward migration (result of ageing)
- BUT similar status change for ‘down’ and ‘up’ movers

Table 3. Change in segregation through exits and entries (source: Scottish Longitudinal Study).

	Educational attainment: degree or similar qualification
Indices of dissimilarity	
1991	40.0
2001	32.1
Change in indices of dissimilarity	
Overall	*−7.9*
Exits	*0.0*
Deaths	−0.4
Age out	0.0
Other exit	0.5
Change for core group	*−4.4*
Status change	−4.9
Selective migration	0.5
Entry	*−3.5*
Age in	−3.1
Other entry	−1.4

(Bailey, 2012)

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How does segregation change? Scottish Longitudinal Study

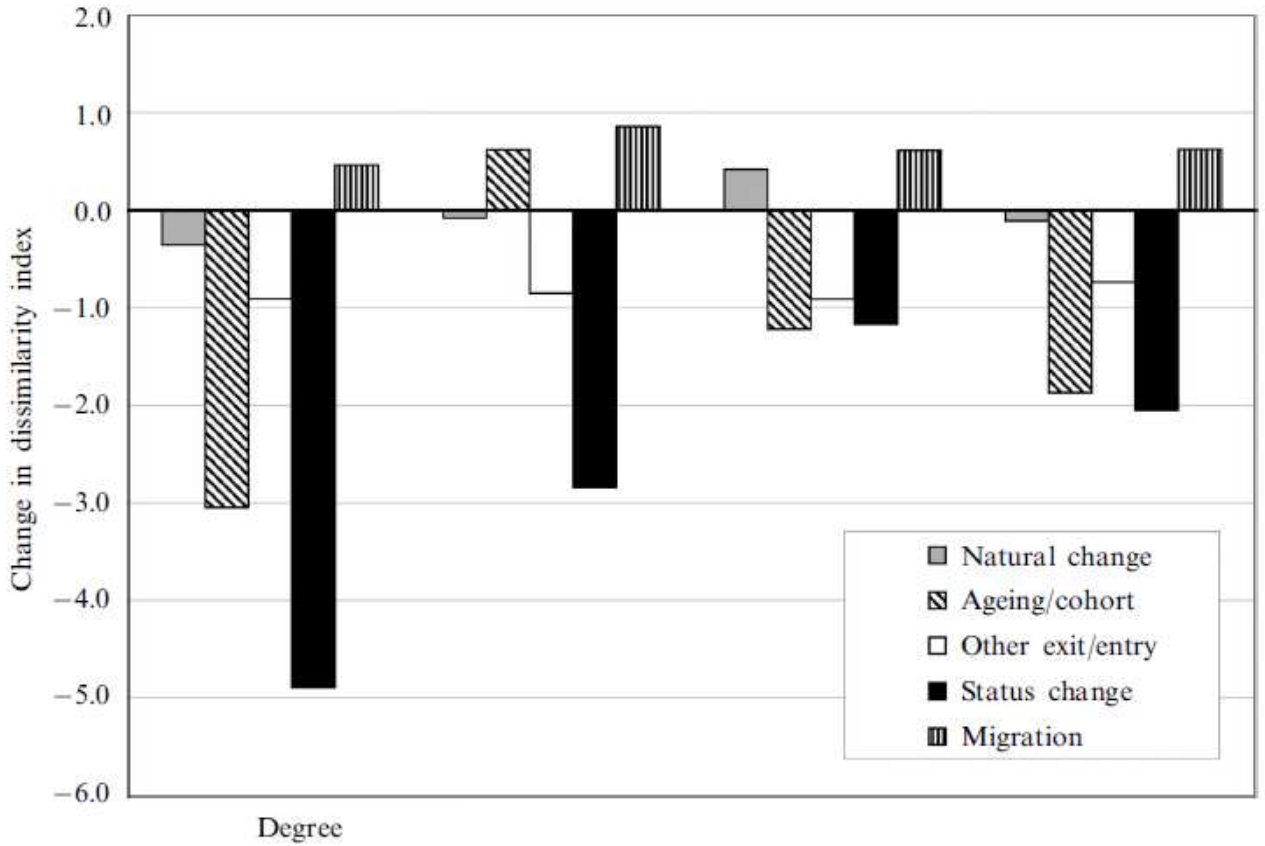

Figure 2. Net changes in segregation through main flows (source: Scottish Longitudinal Study).

(Bailey, 2012)

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Summary

- Results challenge assumptions about how segregation changes
  - Weakness of selective migration as adjustment
  - Importance of demographic processes
- Strengths of SLS data but also limitations
  - Limited measures of social status – no income
  - CATTS vary in size
  - 5% sample – can't look at individual neighbourhoods
- Repeated study using Dutch population register data
  - Full population coverage; status includes income; analysis down to neighbourhood level
  - Similarities and differences in findings

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