Belgeo

Revue belge de géographie

1-2 | 2005

Human mobility in a globalising world

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Electronic version

URL: <http://journals.openedition.org/belgeo/12440>

DOI: 10.4000/belgeo.12440

ISSN: 2294-9135

Publisher:

National Committee of Geography of Belgium, Société Royale Belge de Géographie

Printed version

Date of publication: 30 June 2005

Number of pages: 85-102

ISSN: 1377-2368

Electronic reference

Tony Champion, "The counterurbanisation cascade in England and Wales since 1991: the evidence of a new migration dataset", *Belgeo* [Online], 1-2 | 2005, Online since 27 October 2013, connection on 05 February 2021. URL: <http://journals.openedition.org/belgeo/12440> ; DOI: <https://doi.org/10.4000/belgeo.12440>

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Tony Champion

The Office for National Statistics provided the migration matrix of between-area migration flows in unrounded form for the three-year period 1998-2001. That data is crown copyright reserved. I am indebted to Stamatis Kalogirou for much of the data manipulation needed for this paper. I am also grateful to those who provided comments on an earlier version of this paper when it was presented at the 2003 Annual Conference of the Royal Geographical Society (with the Institute of British Geographers) and to two anonymous referees.

Introduction

- 1 Migration is an issue of great interest in both academic and policy arenas in the majority of More Developed Countries, and the UK is no exception. This is not just in terms of immigration and asylum seeking, though these are indeed more important than ever before in national population growth and have very uneven geographical distributions. Just as much interest is being shown in internal population movements and their impacts, most notably in terms of North-to-South net migration and the urban-to-rural shift. The latter, sometimes termed the “urban exodus” in policy circles and by the media, has been a particularly dominant issue in spatial planning in Britain since the recognition of the “inner city” problem in the mid 1970s (see, for instance, Champion, Atkins *et al.*, 1998; Champion, 2002) and continues to feature prominently in the UK government’s “urban renaissance” programmes (Urban Task Force, 1999; DETR, 2000). Similarly strong research interest in urbanisation and counterurbanisation trends is also evident for other parts of Europe (Rees, 1996; Kontuly, 1998) along with

North America and Australia (Johnson, 1998; Hugo, 1996, 2002; see also Champion, 2001a; Geyer, 2002; Kontuly and Geyer, 2003a).

- 2 In this context, it is clearly an important event when there comes available a new data source that allows the continuous monitoring of internal migration at the relatively fine-grained spatial scale of local government districts. Previously, in the absence of a national population register, migration monitoring in England and Wales has been restricted to using the National Health Service Central Register (NHSCR), which documents population movement between rather large areas based mainly on the broader framework of counties (Bulusu, 1991; Stillwell, 1994). Only at the time of the decennial population census has it been possible to obtain a much more detailed picture of migration flows between and within places, with this referring to changes of address in the 12 months immediately preceding census day. While these two sources have been used with great effect to improve our knowledge and understanding of internal migration in Britain (see, for instance, the collection of studies in Stillwell *et al.*, 1992, and the review of migration research in Champion, Fotheringham *et al.*, 1998), the limited degree of geographical detail between censuses has been the source of considerable frustration. It certainly restricted the choice of geographical framework for use in government-commissioned research designed to model past migration and test the likely implications of alternative policy scenarios (Champion *et al.*, 2002; Fotheringham *et al.*, 2002).
- 3 This paper therefore takes advantage of the new Patient Register (PR) migration dataset to test for the existence of a “counterurbanisation cascade” in England and Wales at the turn of the millennium. This updates the original test of the cascade model which was carried out by Champion and Atkins (1996; see also Champion, 2001b) using census data for the whole of Great Britain (including Scotland) relating to 1990-91, a period of very different conditions in the economy and housing market. Following a review of the background literature and a summary of the original test of the cascade model, the paper describes the new dataset. The test itself is undertaken in two parts; firstly, checking for a negative association between net migration rate and metropolitan/urban status and, secondly, examining whether all the migration flows between the status types involve shifts in population down the settlement hierarchy. The ensuing discussion of the results gives particular attention to the relatively few departures from the model. Finally, in terms of further research, the paper looks ahead to the release (during 2004) of the relevant data sets from the 2001 Census, which will allow more detailed analysis of the characteristics of the migrants involved, and to the opportunities that the new dataset opens up for following migration trends forward from the 2001 Census at this scale.

Counterurbanisation: The international context

- 4 Thirty years on from the first published observation of a population turnaround in rural America (Beale 1975), there is now a substantial literature on this topic. As reviewed by Lewis (1998), much of this research has aimed at establishing whether this urban-rural shift in population growth is a short-term phenomenon arising from an unlikely-to-be repeated combination of events in the 1970s or constitutes the major turning point in settlement trends that was anticipated when the term “counterurbanisation” was coined by Berry (1976). Given that more recent research has

identified signs of the revival of rural and non-metropolitan population growth since the slowdown or indeed reversal of net rural migration gains in the 1980s, there has also been an upsurge of interest in establishing more clearly what exactly has been happening to settlement systems around the world. For instance, stemming from a review of the many different definitions and approaches used to study this, Mitchell (2004) has proposed a new conceptual framework for “making sense of counterurbanisation”. Even more fundamentally, arising from the deliberations of a working party on urbanisation, Champion and Hugo (2004) have challenged the validity of conventional ways of conceptualising and measuring settlement systems and urged a major rethink that takes account of all the “new forms of urbanisation”.

- 5 Clearly, in undertaking the present study, it is important, firstly, to demonstrate that counterurbanisation is indeed continuing and thus remains worthy of investigation and, secondly, to be very clear about how it is defined for this purpose. Several lines of evidence besides those for the UK can be drawn upon to confirm the persistence of this process. As with the original sightings, the re-emergence of rural population growth in the early 1990s was particularly clear in the USA (Fuguitt and Beale, 1996; Fulton *et al.*, 1997; Long and Nucci, 1997; Johnson, 1998). There, the county-level index of population concentration fell during the 1990s, as it had done two decades earlier, while net internal migration rates for non-metropolitan America again exceeded those of the larger metros. A new round of rural and non-metropolitan resurgence has also been evident in Atlantic Canada (Bruce *et al.*, 1999) and in some parts of Australia (Smailes, 1996; Ford, 1999; Hugo, 2002). As regards Europe, a set of national case studies testing the “differential urbanisation” model found that in the 1990s only one of the seven countries studied was characterised by an “urbanisation” pattern (Finland). Of the remainder, there were three cases of “counterurbanisation” (Britain, Western Germany and Estonia), while another three (Italy, Russia and Turkey) were at the intermediate stage of “polarisation reversal” whereby the medium-sized cities were outperforming both the large and the small ones (Kontuly and Geyer, 2003b).
- 6 As regards the issue of definitions, even this small sample of more recent studies provides plenty of support for Mitchell’s (2004, p. 15) statement that the usage of the term counterurbanisation “has been far from consistent”. For instance, the observations of a resurgence in the phenomenon in America since 1990 have been based largely on trends in rural population. At the other extreme, the testing of the “differential urbanisation” model specifically excluded examination of rural areas, being based entirely on the relative performance of three broad city-size groups (Kontuly and Geyer 2003a). The criteria have also varied between studies, with the majority of studies giving primary attention to net internal migration. In several cases, however, overall population change provides the main basis of the test for continuing counterurbanisation, though with some recognition that it is then important to unpack the direct determinants in terms of natural change, internal migration and international migration (see Mitchell, 2004, p. 21; Kontuly and Geyer, 2003b, p. 127).
- 7 Given this context, it is clearly very important to be explicit about the approach to be used for the present study. The key features of the approach used here in testing for the persistence of counterurbanisation in Britain since 1991 are as follows:
  - The measure to be used is net internal migration;

- The geographical framework is a classification of the settlement system that differentiates places primarily on the basis of urban status, with the hierarchy ranging from the largest metropolitan centre through to the remoter rural areas;
  - Counterurbanisation is deemed to exist if there is a strong negative relationship between net migration rate and degree of urban status.
- 8 The “cascade” element of the test refers mainly to the extent to which the net migration flows between the categories of settlement involve population shifts down the hierarchy as opposed to upwards, but it also concerns the nature of linkages between levels (see below).

The counterurbanisation cascade in Britain in 1990-91

- 9 In the original study of Great Britain’s migration patterns in 1990-91 (Champion and Atkins 1996, Champion 2001b), the counterurbanisation relationship was very striking. The highest rate of net migration gain was found for the least urban settlement category, referred to as “remoter rural districts”, while the highest rate of net migration loss occurred at the most urban end of the hierarchy, Inner London. In between these two extremes, a pretty regular gradient of migration rates was observed. The other large metropolitan centres averaged a net loss of about half that of London, followed by somewhat lower rates of loss for the non-metropolitan cities. At the other end of the spectrum, the rate of net gain fell away with decreasing remoteness and rurality. The only significant departure was provided by the resort and retirement districts which recorded somewhat higher net migration gains than expected from the general pattern on the basis of the average size of their urban centres.
- 10 As mentioned above, the “cascade” element of the test, as developed by Champion and Atkins (1996), concerns the way in which the different levels of the urban settlement system are linked by the net migration flows that, combined, produce the negative correlation between net migration rate and urban status. Does net migration flow exclusively, or at least primarily, from the highest level to the level immediately below it, and so on, cascading down like a mountain stream or down the levels of a city-square water feature? Or has the overall counterurbanisation relationship been produced by a more diffuse pattern such as would arise if water was thrown up by a fountain and, in descending, falls into several or all the levels below? A parallel analogy would be in terms of an active volcano: lava flowing down the hillside to successive levels as opposed to projectiles being scattered over all the slopes below.
- 11 Represented diagrammatically in Figure 1, the question can be summarised in terms of whether the process operates just through the vertical arrows in the centre, or through all of the arrows shown. In addition, part of the test is whether all the net flows are in fact downward. Even in the fountain or volcano analogies, some of the matter exiting a level may “defy gravity” and end higher up than it started, except for that exiting the highest level, by definition. In terms of population movement, in the absence of any obvious “gravitational” force pulling down the settlement hierarchy, the chances of net moves between layers being upward should be matched evenly with those of being downward – though the urban-rural gradient of net migration rates just described suggests that the latter will be the more prevalent.

Figure 1. The counterurbanisation cascade.

- ¹² This was certainly the pattern that emerged from the original test of the counterurbanisation cascade. As summarised in Champion (2001b), the vast majority of the net migration flows between pairings of district types in the pre-census year 1990-91 involved net shifts of people down the settlement hierarchy. In all, 66 of the 78 net flows between 13 district types adopted for that study were to a lower level than they originated from. Moreover, of the 12 exceptions, five comprised an upward shift between adjacent levels, where there was very little difference in urban status in this rather elaborate typology, and three others could be explained in terms of North-to-South shifts into Inner London. Thus, the two-fold verdict of that original research was that internal migration in Great Britain was very much dominated by down-hierarchy net movement, and that the detailed pattern comprised a very diffuse cascade rather than a simple transfer of population from one level to the next. The purpose of the present study is to see whether these two findings remain in place a decade later, using a dataset that covers only England and Wales but has a more comprehensive definition of migrant than the 1991 Census.

The Patient Register (PR) migration dataset

- ¹³ This dataset provides estimates of migration between the 376 local authority (LA) areas of England and Wales on an annual basis running mid-year to mid-year, starting with 1998-99. Previously, internal migration had been monitored only through the NHSCR, which has since 1975 provided quarterly data on movements between 98 “health areas” (HAs), which over most of this time were called Family Health Service Authority areas and comprised shire counties, metropolitan county districts and groupings of London boroughs. Reorganisation of the HAs in 1996 (including amalgamations into fewer, larger areas in the former metropolitan counties), together with the rising policy

interest in more localised patterns of migration and the computerisation of GP lists, provided the stimulus for the Office for National Statistics (ONS) to develop the PR-based migration estimates.

- 14 In terms of operational details, each HA holds a list of the patients registered with GPs within their area of responsibility, containing each patient's NHS number, gender, date of birth, date of acceptance at the HA and address postcode. An annual download of this information provides a total register for England and Wales, which when compared to that of the previous year allows the identification of people who have changed postcode. Those whose new postcode signifies a move between LA area are deemed to be migrants and are therefore included in this database. The data are adjusted by imputation of missing postcodes and by reference to the higher-level NHSCR migration estimates, which are believed to be of higher quality (not least because of tracking moves during the year as opposed to one-year changes of address). Further details of the mechanics can be found in Scott and Kilbey (1999) and Chappell *et al.* (2000).
- 15 The PR-based migration estimates are now published regularly by ONS, the latest report at the time of writing (August 2003) being for mid-2000 to mid-2001. The main features are published in an annual report in *Population Trends* (see ONS, 2002), with data by gender on moves into and out of each LA and HA. In addition, an age breakdown is available on the same basis on the ONS website (www.statistics.gov.uk). Also available from ONS is a migration matrix showing the number of persons moving between each LA and all 375 others. However, as these between-area flows are rounded to the nearest 10 to preserve confidentiality, the matrix yields only a rather lumpy picture, especially given the sparsity of flows in much of this 376-by-376 matrix of origin and destination areas.
- 16 The analyses undertaken for this paper are based on a dataset which ONS has provided specially for this study. It is the unrounded version of the matrix of migration between each of the 376 LAs of England and Wales for the first three years of the PR dataset combined, i.e. mid-1998 to mid-2001. The three-year period was adopted so as to even out the impact of any unusual events and to keep to a minimum the number of cells with zero movement between areas. Confidentiality is preserved by data being released for all persons only, with no breakdown by gender or age.
- 17 Before going into the results of analysing this new dataset, however, it should be stressed that this dataset differs in certain respects from the 1991 Census migration data used in the original test of the counterurbanisation cascade. Two are especially important. In the first place, the original test covered the whole of Great Britain including Scotland, whereas the PR dataset refers only to England and Wales. Secondly, the definition of "population" differs between the two sources, most notably with the PR data excluding moves by Armed Forces personnel but including moves of students to and from university and the 1991 Census being the opposite on both accounts. As such, the PR dataset is considered superior to the 1991 Census, notably because of the large proportion (by international standards) of students who move away from home for their higher education. A third difference is the reorganisation of local government in the mid 1990s, which reduced the number of districts from 403 to 376. The vast majority of districts remained unaltered in boundary, with the main changes restricted to Wales and two more rural counties in England and with these mainly involving amalgamations of whole 1991 Census areas. Nevertheless, a few districts switched category in the classification used for the 1990-91 analysis and, together with the other

two more significant changes just described, this means that the results of the present study cannot be compared directly with those of the original test.

Testing for an urban-rural gradient in internal migration

- 18 This section presents the results of the first of the two parts of the test of the counterurbanisation cascade. This checks for a negative association between net migration rate and metropolitan/urban status. It begins by describing the classification of districts used to represent the metropolitan/urban status dimension, which is the same as that used in the 1990-91 analyses apart from – as just mentioned – the exclusion of Scotland and some small changes arising from local government reorganisation in the mid 1990s.
- 19 As shown in Table 1 (left-hand column), 13 district types are recognised and are arranged in declining rank according to metropolitan and urban status. A broad distinction is drawn between metropolitan and non-metropolitan parts of the country, with the former comprising London (the area now administered by the Greater London Authority and its Mayor) and the six metropolitan counties (Greater Manchester, Merseyside, South Yorkshire, Tyne and Wear, West Midlands and West Yorkshire, centred on Manchester, Liverpool, Sheffield, Newcastle upon Tyne, Birmingham and Leeds respectively). For London, the more urban, inner boroughs (IL) are separated out from the more suburban, outer ones (OL), while each of the six provincial conurbations is split into its principal, or central, city (PMC) and the remaining suburbs and towns (OMD). The districts of non-metropolitan England and Wales range from large and small cities (LNC and SNC) through three types of town (ID, NT and RPR, these being distinguished mainly on functional and administrative criteria) to four categories with a greater rural character. Among the latter, the main distinction is between those that contain significant urban centres (Urban/Rural) and those without (Rural), with these two then being subdivided according to whether they lie within 65km of a metropolitan area (Accessible) or not (Remoter). Apart from this last refinement, which was introduced by Boyle (1995), this is a classification that was developed by the national statistical office some 25 years ago and has been widely used for statistical reporting and demographic analysis since then.

Table 1. Migration between 13 types of local authority districts, England and Wales, 1998-2001.

District type	in migration	out migration	net migration	% net 3 years	% net per year
Metropolitan					
Inner London (IL)	347515	459614	-112099	-4.05	-1.35
Outer London (OL)	479084	561508	-82424	-1.87	-0.62
Principal Metro Cities (PMC)	355699	412089	-56390	-1.71	-0.57
Other Metro Districts (OMD)	455500	504759	-49259	-0.65	-0.22
Non-metropolitan					
Large Non-metro Cities (LNC)	368508	405745	-37237	-1.33	-0.44
Small Non-metro Cities (SNC)	358122	362836	-4714	-0.22	-0.07
Industrial Districts (ID)	582467	562766	19701	0.28	0.09
Districts with New Towns (NT)	274624	278612	-3988	-0.17	-0.06
Resort, Port & Retirement (RPR)	460524	361499	99025	2.69	0.90
Accessible Urban/Rural (AUR)	978723	919204	59519	0.71	0.24
Remoter Urban/Rural (RUR)	284504	253446	31058	1.39	0.46
Accessible Rural (AR)	208034	173583	34451	2.42	0.81
Remoter Rural (RR)	485861	383504	102357	2.55	0.85

SOURCE: CALCULATED FROM A SPECIAL TABULATION OF PATIENT REGISTER MIGRATION DATA SUPPLIED BY ONS. RATES ARE % OF 2001 CENSUS POPULATION. CROWN COPYRIGHT RESERVED.

- 20 Table 1 also shows the results of analysing the PR migration data for 1998-2001 on this basis. Focusing initially on the first four data rows, it is found that Metropolitan England as a whole sustained a total net migratory loss of 300,172 to the rest of England and Wales over this three-year period, i.e. almost exactly 100,000 a year. If the definition of “urban” is extended to include the two types of Non-metropolitan Cities (LNC and SNC), then the net “urban exodus” rises to 342,123 people for the three years, an annual average of around 114,000. Below this point in the table, only one type of LA registered net out-migration over this period, namely the districts with New Towns.
- 21 Looking in more detail first at the metropolitan areas, two types of distinction can be drawn. On the one hand, Greater London (IL and OL together) was responsible for nearly two-thirds of the net metropolitan migration loss, 194,523 people as opposed to the 105,649 loss of the six metropolitan counties combined (PMC plus OMD). This is despite London containing a considerably smaller population base than the latter, 7.2 million as opposed to the 10.8 million of the six metropolitan counties according to the 2001 Census. On the other hand, in the cases of both London and the other metropolitan areas, there is a clear contrast between their inner and outer LAs. While both core and other LAs lost population through migration exchanges with the rest of the country, the rate of loss was greater for the former, as represented by the Inner London Boroughs (1.35 per cent a year as opposed to 0.62 per cent for Outer London) and the Principal Metropolitan Cities (0.57 per cent a year as opposed to 0.22 per cent for the remainder of their counties). Internal migration has clearly been producing a degree of relative decentralisation of population in both London and the provincial conurbations.
- 22 Turning to the non-metropolitan district types, there is again evidence of decentralisation, albeit on a wider geographical scale than the essentially “suburbanisation” form of core-ring population shift observed in the metropolitan areas. As regards the two groups of Non-metropolitan Cities, the larger ones (LNC) would seem to be suffering from an “urban penalty” compared with their smaller counterparts (SNC), with a much lower rate of net migratory loss for the latter. Further

down the list, the “rural premium” appears to become progressively stronger, as one moves from the generally quite large towns of the “industrial” and “New Town” types (ID and NT) to the mixed urban/rural types (AUR and RUR) and the rural types (AR and RR). In addition, where remoteness is included in the typology, it is found to carry a premium in terms of net migratory growth rate, though this is fairly marginal in the case of the rural districts. The main exception to this overall urban-status progression is provided by the “resort, port and retirement” districts (RPR), which in fact have the highest average migratory gain rate of all, despite comprising larger urban centres on average than the urban/rural and rural categories.

- 23 In sum, the availability for the first time of LA-level data on migration between censuses has allowed us to demonstrate that the urban-rural gradient of migration rates across the full range of settlement types – which was observed previously from the 1991 Census data on Great Britain – is also evident around the end of that decade for England and Wales. Indeed, internal migration appears to be driving urban deconcentration at a number of scales. London and the other large cities are experiencing decentralisation from their inner to outer parts, while at the other end of the spectrum remoteness from metropolitan areas adds a premium to net migration gains over and above the degree of rurality. Across the whole settlement hierarchy, there is a relatively strong negative relationship between net internal migration rate and the metropolitan/urban status of places. Resort and retirement districts provide the major exception to this generalisation, with these destinations proving more attractive on average than even the remoter rural category. This departure is not new, as it had been noted from the 1991 Census analysis, but appears even more marked in these results. Whether this is really the case or is purely an artefact of the different bases of the two studies, however, cannot be established from the evidence presented here.

Testing for the counterurbanisation cascade

- 24 This second test involves the investigation of whether net migration between each of the levels of the settlement hierarchy is always in a downward direction. As outlined earlier in the paper, in essence the question is how far the model shown in Figure 1, with each level receiving net migration from all the levels above it and losing net migration to all the levels below it, actually represents the situation for migration between districts in England and Wales in 1998-2001. The only difference from that diagram is that in this test we are dealing with a 13-fold classification of places rather than the five levels shown there.
- 25 Table 2 shows the net migration flow between each of the 78 possible pairings of the 13 district types. A positive figure denotes a move taking place into a district type that is lower down the settlement hierarchy as represented by the ordering previously seen in Table 1. For example, the figure at the intersection of IL and OL indicates that the two-way flow between Inner and Outer London resulted in a net flow of 91,146 people from the former to the latter over those three years. By contrast, the negative figure between IL and PMC indicates an up-hierarchy net flow of 7,971 people to Inner London from the aggregate of the six Principal Metropolitan Cities. In all, it is found that only 17 of the 78 net flows have negative signs. Clearly, the vast majority of the net flows in

this migration system – 61 out of 78, or 78.2% – involve down-hierarchy population shifts.

Table 2. Net migration between pairings of 13 district types, 1998-2001, England and Wales.

District type	IL	OL	PMC	OMD	LNC	SNC	ID	NT	RPR	AUR	RUR	AR
OL	91146											
PMC	-7971	-2639										
OMD	-2759	-173	29731									
LNC	-6124	-1886	-778	1143								
SNC	-7052	2593	681	4967	1795							
ID	6454	15541	2502	14892	11692	-2486						
NT	4324	14061	1258	4429	-833	122	-2236					
RPR	9337	27931	1903	10042	-800	4173	9563	5597				
AUR	16101	87064	8267	23265	7508	2252	4819	4781	-28793			
RUR	1579	5988	142	1583	14298	1309	828	2715	-2290	13339		
AR	1681	6240	1283	6525	-765	714	4774	3600	-641	13776	446	
RR	5383	18850	791	9212	-3303	1614	11146	8420	445	38630	7987	3182

NOTE: SEE TABLE 1 FOR KEY TO DISTRICT TYPES. POSITIVE FIGURES DENOTE NET FLOWS FROM COLUMN HEADINGS TO ROW HEADINGS (DOWN-HIERARCHY), NEGATIVE FIGURES DENOTE FLOWS FROM ROW HEADINGS TO COLUMN HEADINGS (UP-HIERARCHY). NET FLOWS BETWEEN DISTRICTS OF THE SAME TYPE (IN THE DIAGONALS) ARE ZERO AND THEREFORE ARE NOT SHOWN.

SOURCE: CALCULATED FROM A SPECIAL TABULATION OF PATIENT REGISTER MIGRATION DATA SUPPLIED BY ONS. CROWN COPYRIGHT RESERVED.

- 26 Table 3 focuses in on the 17 departures from the counterurbanisation cascade model, listing these up-hierarchy cases first by destination type (i.e. the higher level of the hierarchy) and then by origin type. As regards the former, it is London that features most prominently among the types of districts that received net inflows from lower down the settlement hierarchy in contradiction to the cascade model. Both Inner and Outer London gained from the central cities and outer parts of the provincial conurbations (PMC and OMD respectively). Both parts of London also gain from the Large Non-metro Cities, and Inner London from the Small Non-metros, too. The Large Non-metro Cities stand out as a second major departure from the cascade model, for these were drawing population up from four of the eight levels below it, including the two Rural types at the base of the hierarchy. Thirdly, the resort and retirement category attracted net migration from three of the four levels below it, the only exception being the small balance in favour of the Remoter Rural districts. The Principal Metro Cities, Small Non-metro Cities and Industrial Districts each gained from just one level below them, while there are no cases of up-hierarchy shifts to Other Metro Districts, New Towns and the four bottom levels – the latter perhaps not so surprisingly, given the small number of levels below these, which by definition is zero in the case of the Remoter Rural category.

Table 3. Departures from the “counterurbanisation cascade», 1998-2001, England and Wales.

Arranged by destination type	Arranged by origin type
Inner London from Principal Metro Cities	Principal Metro Cities to Inner London
Inner London from Other Metro Districts	Principal Metro Cities to Outer London
Inner London from Large Non-metro Cities	Other Metro Districts to Inner London
Inner London from Small Non-metro Cities	Other Metro Districts to Outer London
Outer London from Principal Metro Cities	Large Non-metro Cities to Inner London
Outer London from Other Metro Districts	Large Non-metro Cities to Outer London
Outer London from Large Non-metro Cities	Large Non-metro Cities to Principal Metro Cities
Principal Metro Cities from Large Non-metro Cities	Small Non-metro Cities to Inner London
Large Non-metro Cities from New Towns	Industrial Districts to Small Non-metro Cities
Large Non-metro Cities from Resort, Port and Retirement	New Towns to Large Non-metro Cities
Large Non-metro Cities from Accessible Rural	New Towns to Industrial Districts
Large Non-metro Cities from Remoter Rural	Resort, Port and Retirement to Large Non-metro Cities
Small Non-metro Cities from Industrial Districts	Accessible Urban/Rural to Resort, Port and Retirement
Industrial Districts from New Towns	Remoter Urban/Rural to Resort, Port and Retirement
Resort, Port and Retirement from Accessible Urban/Rural	Accessible Rural to Large Non-metro Cities
Resort, Port and Retirement from Remoter Urban/Rural	Accessible Rural to Resort, Port and Retirement
Resort, Port and Retirement from Accessible Rural	Remoter Rural to Large Non-metro Cities

SOURCE: READ OFF TABLE 2.

- 27 Turning to the obverse side of this picture shown in the right-hand column of Table 3, the suppliers of the up-hierarchy movement are a more diffuse set. Each of the levels features in this list at least once, apart from Outer London, which is a clear gainer from Inner London, and Inner London which, being at the top of the hierarchy, by definition cannot send people upwards. Much of this diffuse pattern arises from the apparent attractive power of two levels, these – as just observed – being the Resort, Port and Retirement category and the Large Non-metro Cities. Perhaps most noteworthy, however, is the fact that the latter level was also sending people to three of the four levels above, the exception being the Other Metro Districts. Indeed, the Large Non-metro Cities appear to form an important linchpin of the departures from the cascade model, with seven of its exchanges with the other 12 levels resulting in net movement of people up the hierarchy.
- 28 Before moving on to discuss explanations for these departures in the next section, we return briefly to the majority picture of conformity to the cascade and the question of the diffuseness of the cascade process. In particular, how far does the net migratory growth of the lowest levels of the hierarchy result from spillover from the next level up as opposed to gaining directly from all or most of the higher levels. As already signalled by Table 3, the bottom four levels of Rural and Urban/Rural districts gain from all the levels above them apart from the Resort, Port and Retirement districts in three cases and the Large Non-metro Cities in two cases. This suggests the prevalence of a diffuse form of the cascade, whereby the more rural parts of the settlement system are experiencing net in-migration not only from adjacent levels of the hierarchy but also directly from the higher, most urban levels. The latter would provide evidence of the

existence of a “clean break” type of population shift, whereas the former would be indicative of a more traditional cascading from one level to the next.

- 29 Table 4 provides an illustration of this aspect. It shows the sources of migrants to the most rural category, both for net migration (as from the bottom row of Table 2) and for the gross inflow. In terms of net migration, one category – Accessible Urban/Rural – accounts for over one-third (37.7 per cent) of the net gains made by Remoter Rural districts. This is more than double its share of the “at risk” population (shown in the final column of the table), suggesting that the cascade is not especially diffuse. On the other hand, exactly one-third of the net gain comes direct from Metropolitan England, most notably from Outer London but also from the equivalent districts of the six metropolitan counties (OMD) – all areas that, by definition, are at least 65km away from the nearest Remoter Rural districts. Moreover, this proportion is not far short of Metropolitan England’s 37.5 per cent population share. Industrial Districts, Districts with New Towns and Remoter Urban/Rural Districts are also significantly involved and, as mentioned above, only one category – the Large Non-metropolitan Cities – is not a net loser to the Remoter Rural category. In terms of gross in-migration to Remoter Rural districts, the proportion of all arrivals coming from Metropolitan England is lower than for net migration, at 20.0 per cent, but the remaining four-fifths are quite broadly distributed across all eight of the other non-metropolitan categories.

Table 4. Sources of gross and net in-migration to the Remoter Rural districts of England and Wales, 1998-2001.

Origin district type	Gross in-migration to RR		Net in-migration to RR		% total population*
	Number	% total	Number	% total	
Inner London	18627	3.8	5383	5.3	5.8
Outer London	32794	6.7	18850	18.4	9.2
Principal Metro Cities	16187	3.3	791	0.8	6.9
Other Metro Districts	29800	6.1	9212	9.0	15.7
Metropolitan England	97408	20.0	34236	33.4	37.5
Large Non-metro Cities	33346	6.9	-3303	-3.2	5.8
Small Non-metro Cities	43507	9.0	1614	1.6	4.4
Industrial Districts	59358	12.2	11146	10.9	14.6
Districts with New Towns	24459	5.0	8420	8.2	5.0
Resort, Port and Retirement	62645	12.9	445	0.4	7.7
Accessible Urban/Rural	100201	20.6	38630	37.7	17.4
Remoter Urban/Rural	43746	9.0	7987	7.8	4.7
Accessible Rural	21191	4.4	3182	3.1	3.0
Total to Remoter Rural	485861	100.0	102357	100.0	100.0

NOTE: PERCENTAGES MAY NOT SUM EXACTLY DUE TO ROUNDING.

*PERCENTAGE OF 2001 CENSUS POPULATION, EXCLUDING REMOTER RURAL.

SOURCE: CALCULATED FROM A SPECIAL TABULATION OF PATIENT REGISTER MIGRATION DATA SUPPLIED BY ONS. CROWN COPYRIGHT RESERVED.

- 30 In sum, the results presented in this section have shown that the urban-rural gradient found in the previous section is the result of a rather diffuse cascade. Nearly four-fifths of the 78 net flows between all pairings of the 13 district types involve down-hierarchy population shifts. In general, therefore, each of the levels of the settlement hierarchy gains from the levels above it and loses to those below it. This is illustrated clearly by the experience of the bottom level of Remoter Rural districts, the strong migratory gains of which result from this level being a net gainer from all but one of the other levels, including a proportion direct from Metropolitan England that is close to the

latter's share of the population. On the other hand, the exceptions to this cascade pattern are by no means a random selection, but instead appear to be mainly focused around three types of places – London, the Large Non-metro Cities and the Resort, Port and Retirement districts. The next section examines these departures within the context of a wider discussion on how the prevailing patterns compare with the results of previous research for the UK and elsewhere.

Discussion

- 31 This analysis of 1998-2001 data on migration between local authority districts of England and Wales would appear to confirm the continued existence of the two main features revealed by previous research on Britain. Firstly, there remains a strong and relatively clear urban-rural gradient in rates of internal migration. Secondly, the “counterurbanisation cascade” model, originally demonstrated by Champion and Atkins (1996) from the 1991 Census migration data, continues to represent the prevailing pattern of net migration exchanges between the 13 levels used here to portray the national settlement hierarchy. As such, the cascade retains its diffuse nature, with a combination of “spillover” from one level of the hierarchy to the next and of bigger jumps down the system. While the former type of movement corresponds to the nature of a “cascade” in the normal meaning of the word, the latter can perhaps be interpreted – in the language of the early counterurbanisation literature – as more of a “clean break” from more urban, and indeed more metropolitan, living environments. To the extent that these “majority” results are also in line with previous findings for some other countries, notably the USA, then in explaining them we can be fairly confident about alluding to the factors cited previously. These comprise a mixture of “pull” and “push” factors, with the former generally being given the greater prominence in the British context (see, for instance, the reviews in Champion, Atkins *et al.*, 1998; Murdoch, 1998; Champion, 2001b).
- 32 At the same time, there are some exceptions to the overall down-hierarchy shift of population; indeed, a few more than in the 1990-91 analysis for Great Britain and more focused in their occurrence. In particular, three elements of the settlement system have been identified as the main causes of the departures from the model in 1998-2001, with London as the most important. Inner London gained net migrants from all four of the next highest levels apart from its outer boroughs, while Outer London gained from the next three levels below it. Secondly, the Large Non-metro Cities appear to be playing a considerable role as a “pivot” in the “deviant” up-hierarchy movement, receiving net migrants from half of the levels below it and losing to three of the four levels above. Thirdly, the Resort, Port and Retirement category is a net gainer from the majority of the levels below it as well as from all those above it, helping to give it a much higher rate of net migration growth in the urban-rural gradient than would be expected from its average size of urban centre.
- 33 These three departures from the cascade model are all more marked than those found for 1990-91 by Champion and Atkins (1996). The question thus arises as to whether the cascade has become less prevalent since then. This is not an easy question to answer because of the differences between the two data sources described above. Now, therefore, we take each of the differences in turn to see if they could explain these

changes, before briefly reviewing the changes that have occurred between the two periods in the actual determinants of migration.

- 34 In the first place, it seems unlikely that the two differences in the geographical basis of the studies could have produced these changes. As mentioned above, local government reorganisation in the mid 1990s involved relatively little change in the pattern of districts and, where there was change, it generally involved the amalgamation of districts that fell in types other than the three under investigation. The omission of Scotland from the present study is a potentially larger source of variation, but again it is found that the three district types in question are located almost entirely in England and Wales. Scotland contains no representatives of London by definition nor any of the Resort, Port and Retirement category. It does, however, contain three of the Large Non-metro Cities included in the 1990-91 analyses – Aberdeen, Dundee and Edinburgh – but this compares with 11 in England and Wales, so their omission is unlikely to provide much of the explanation for the LNCs becoming more involved in up-hierarchy movement during the decade.
- 35 Potentially much more significant, however, is the inclusion of movement by students to and from places of higher education in the PR dataset, unlike in the 1991 Census. Certainly, among the district types Inner London and the Large Non-metro Cities have among the largest relative concentrations of students in their populations. These students will be drawn from a wide range of localities including those further down the urban hierarchy that do not contain large universities and colleges. Moreover, while most students leave their university cities and towns at the end of their courses, a proportion of them do not. Also, the degree of retention can be expected to be higher for a large dynamic labour market like London than for the majority of LNCs, from where graduates – if they do not return to their parental homes – are more likely to move up the hierarchy to the larger conurbations and especially to London, as observed previously by Fielding (1992). The fact that London also gains net migrants from the Principal Metro Cities and Other Metro Districts is also partly explicable in terms of these types of places drawing in students from a wide variety of origins and subsequently channelling graduates to the much larger job market to be found in the national capital. It could well be, therefore, that the 1991 Census analysis, by ignoring moves to and from university, overemphasised the prevalence of the cascade pattern then. Unfortunately, this cannot be checked directly from the special dataset used for this study, because it does not provide even a disaggregation by age, let alone permit the identification of students/graduates.
- 36 A further factor affecting comparability between the two datasets is that both have well-recognised problems of accuracy, especially concerning their coverage of people changing address. The PR dataset, like the NHSCR, will be adversely affected by failure to re-register with a doctor before the next move takes place – considered to be most common among young adults, especially males. The Census, with its migration data based on address one year ago, misses all multiple changes of address during the year. Also, the analysis based on the 1991 Census data omits about one in six of the people who are thought to have changed address. Two-thirds of these comprise people who were migrants but did not declare this on their census form, while the remainder comprise migrants classified as “origin not known” because they gave inadequate details of their previous address. There is also the issue of Census underenumeration: the so-called “missing million” of the 1991 Census, who, being disproportionately males

aged 16-29 in larger cities, would have dampened down the counterurban shift indicated by the census migration data though not reversed it (Simpson and Middleton 1999).

- 37 Set against these various considerations, however, there are good grounds for believing that at least part of the observed differences between 1990-91 and 1998-2001 are real. In particular is the major change in economic conditions that took place between the two periods, for whereas at the beginning of the decade the UK was gripped by a severe economic recession, by 1998-2001 the country's economy was booming. London was at the forefront of this turnaround, having led the country into recession at the end of the 1980s with all the attendant problems of lack of demand for its housing – the so-called “negative equity” crisis – and then leading the recovery during the 1990s. With an associated widening of the North-South divide, it is not surprising that in the later period London had a more positive balance in its migration exchanges with the provincial conurbations and also with the Large Non-metro Cities, the majority of which are located outside southern England.
- 38 Finally, as regards the Resort, Port and Retirement category of districts, these have traditionally exercised a pull over within-Britain migration that is additional to receiving net migration from larger urban centres. Being located mainly in coastal locations, especially along the English Channel, these constitute the core of the nation's “sunbelt”, sometimes referred to as the “costa geriatrica”. Even in 1990-91, according to Champion and Atkins (1996), they were attracting up-hierarchy migration from the more accessible districts of both Urban/Rural and Rural categories. The fact that by 1998-2001 they were also gaining from the Remoter Urban/Rural level is perhaps a relatively minor change, possibly arising from the general freeing-up of residential mobility consequent upon the economic recovery of the mid 1990s. Also, given that some of these areas lie barely 100km from central London, further investigation is merited to see whether their local economies – suffering since the 1970s from the increasing relocation of much holiday-making to the Mediterranean and elsewhere overseas – have been able to share significantly in the strong job growth that has taken place across south-eastern England.

Concluding comments

- 39 The Patient Register dataset for England and Wales, starting in 1998, now makes it possible to continuously monitor migration between individual local government areas – a significant improvement from previously when, except for the one year in every ten for which census data were available, such monitoring could be done only at the much broader level of the Health Areas. In this paper, advantage has been taken of this extra geographical detail to examine what is the most important dimension of internal migration in the UK – the net shift of residents from more urban to more rural places. Applying broadly the same approach as used in the original 1991-census-based test of the “counterurbanisation cascade” hypothesis, the PR-based analysis for 1998-2001 has largely confirmed the continuation of the patterns found for 1990-91. In particular, across the 13 levels of the settlement hierarchy, there remains a strong counterurbanisation relationship whereby rate of net internal migration is negatively correlated with degree of metropolitan/urban status. Secondly, in the test of the cascade model, it has been shown that down-hierarchy net flows account for the vast

majority of the 78 net exchanges between pairings of the district types, as had also been the case in 1990-91.

- 40 Clearly, however, further work is needed. In the first place, as with any new dataset, even one like this that has been extensively trialled by the national statistical agency, there is bound to be some uncertainty about its reliability. All it is possible to say at present is that, where differences have been found between the results for 1998-2001 and those from the previous study of 1990-91, some may have arisen because of variations between the two studies in definitions and geographical coverage, but others would seem to be readily explicable in terms of real changes in the factors influencing migration. The first opportunity for checking the new dataset against an independent source will come when the 2001 Census Special Migration Statistics are released during 2004. The latter will not only permit comparisons in terms of total migrant flows between districts – and on almost the same definitional basis as, for the first time in 2001, the census migration data includes moves to and from university – but will also provide a great deal of information about the characteristics of migrants and about the sub-district-level geography of moves, thus enabling a more intensive examination of the nature and context of this important dimension of population redistribution.

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ABSTRACTS

A new migration dataset that continuously monitors people moving house between local government areas of England and Wales is used to update a test of the "counterurbanisation cascade" model that was originally developed and carried out using data from the 1991 Census. Following a review of the relevant international literature including a summary of the original test, the paper describes the Patient Register (PR) migration dataset. The test is undertaken in two parts; firstly, checking for a negative association between net migration rate and metropolitan/urban status and, secondly, examining whether all the migration flows between the 13 status types involve shifts in population down the settlement hierarchy. Both are largely confirmed, but there are a number of exceptions, the significance of which is discussed in the final section.

De nouvelles données, enregistrant en permanence les mouvements de population entre les différentes zones de gouvernement local d'Angleterre et du Pays de Galles, sont utilisées pour la mise à jour d'un test mis au point et appliqué au modèle de contre-urbanisation en cascade à partir des données du Recensement de 1991.

Cet article passe d'abord en revue la littérature internationale pertinente et présente en résumé le test originel. Il décrit ensuite les données tirées du "Registre des Patients". L'objectif du test est double: 1° rechercher l'existence d'une corrélation négative entre un taux migratoire net et le

statut de métropole/ville; 2° vérifier si les mouvements migratoires entre les 13 types de districts se traduisent par des glissements de population le long de la hiérarchie des lieux. Ces deux hypothèses se trouvent largement confirmées en dépit d'un certain nombre d'exceptions, analysées dans la dernière partie de l'article.

INDEX

Mots-clés: migrations, contre-urbanisation, glissement urbain-rural, Angleterre, Pays de Galles, données migratoires

Keywords: migration, counterurbanisation cascade, urban-rural shift, England and Wales, Patient Register migration data

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