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**THE CHANGING NATURE OF URBAN AND RURAL AREAS IN THE UK
AND OTHER EUROPEAN COUNTRIES***

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*The views expressed in the paper do not imply the expression of any opinion on the part of the United Nations Secretariat.

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A. INTRODUCTION

As required by UN Contract No. 15365, this paper is on “The changing nature of urban and rural areas in the United Kingdom and in other European countries.” It is to “discuss the main changes in the urban and rural areas of Europe.” In a separate communication, it has been indicated that the topic should be read to include a discussion of new forms of urbanization.

This is a broad field, in theory covering the 47 countries that the UN classifies as Europe in its *World Urbanization Prospects* reports and not being restricted in time frame. Clearly, a degree of selectivity is needed, so as to avoid superficiality of treatment in the limited space available as well as to best fit the expertise of the consultant.

The main focus selected for this paper is on urban/rural patterns of population change and migration since the 1980s. Particular attention is given to the results of new research on the UK, but the main findings of selected studies of other parts of Europe are also reviewed and discussed. The paper begins by putting the European scene into global context using the UN’s data.

B. EUROPEAN URBANIZATION IN CONTEXT

This section overviews the European scene in a global context, using the estimates and projections from the 2005 edition of the UN’s *World Urbanization Prospects*. In 2000 the aggregate population of Europe’s 47 countries totalled 728 million, which was 73 million or 11 per cent higher than the figure for 1970. The projections for 2030 give a total population of 698 million, indicating a fall of 30 million or 4.2 per cent from the 2000 level. By contrast, global population rose by 65 per cent between 1970 and 2000 and is projected to grow by a further 35 per cent by 2030. As a result, Europe’s share of world population has shrunk markedly, reducing from 17.7 per cent in 1970 to 12.0 per cent in 2000 and projected to fall to 8.5 per cent in 2030.

In terms of urban/rural split on the basis of the definitions used by the UN, the overall situation in Europe is one of urban growth and rural decline. In 1970-2000 the continent’s urban population grew by 111 million (a 27 per cent increase), while its rural population contracted by 39 million (a 16 per cent fall). The projection for the 30 years to 2030 gives equivalent figures of a 24 million increase (up 4.7 per cent) for urban and a 55 million contraction (down 27 per cent) for rural. Thus, while rural population decrease is accelerating, the bigger change is the slowdown in urban population growth. In terms of global share, Europe’s share of urban population is projected to be 11.1 per cent in 2030, down from 18.4 per cent in 2000 and 31 per cent in 1970. Its share of the world’s rural population shrinks somewhat more slowly (10.4 per cent in 1970, 6.4 per cent in 2000 and a projected 4.6 per cent in 2030).

The combination of urban growth and rural decline produces a continuing rise in Europe’s overall level of urbanization. Though its strongest absolute and relative increases took place in the 1950s and 1960s (with an annual average urbanization rate in excess of 1 per cent taking its level from 50.5 per cent in 1950 to 62.6 per cent in 1970), the proportion of its population living in urban areas reached 69.3 per cent in 1985 and 71.7 per cent in 2000 and is projected to rise further to 73.9 per cent in 2015 and 78.3 per cent in 2030. Driven by the reclassification of territory from rural to urban status and (usually) by higher urban than rural population growth for the areas that have not changed status, this is the norm across the continent.

There remain substantial differences between the four regions of Europe recognised by the UN, but these are diminishing as urbanization levels rise above the three-quarters mark. Northern Europe (comprising the Nordic and Baltic states together with the British Isles) continues in the vanguard of urbanization, with an urban population share of 83.4 per cent in 2000, up from 73.1 per cent in 1970 and projected to reach 87.4 per cent in 2030. In second place, Western Europe had reached 76.2 per cent in 2000, up from 71.6 per cent urban in 1970 with 82.6 per cent projected for 2030. The equivalent 1970, 2000 and 2030 levels for Southern Europe (including Spain, Portugal, Italy, Greece and the countries of former Yugoslavia) are 57.6 per cent, 65.4 per cent and 74.4 per cent, while those for Eastern Europe (which includes the whole of the Russian Federation) are 56.2 per cent, 68.3 per cent and 73.7 per cent. In terms of individual countries, the highest levels in 2000 (ignoring countries with less than 100,000 inhabitants) were for Belgium (97.1 per cent), Malta (93.4 per cent), Iceland (92.3 per cent), UK (89.4 per cent) and Denmark (85.1 per cent). On the other hand, a part of the relatively small contrasts between countries arise from differences in urban/rural definition as opposed to “real” contrasts.

In this situation, it is perhaps not surprising that nowadays rather little interest is being shown across most of Europe in the precise levels of urbanization or in the now quite low rates of urbanization as measured in terms of the percentage change in the level. This is compounded by the erosion of differences between urban and rural territory in terms of economic structures, social composition and quality of physical infrastructure such as roads, power and other utilities. The relevance of the traditional rural/urban dichotomy has also been weakened by the blurring of distinctions at the edge of individual urban areas, as improvements in personal mobility have allowed people to move out of these agglomerations into the surrounding countryside without losing access to the jobs and services located in them. For further details of these changes and their implications for studying the geography of settlement, see Hugo and others (2004), Champion and Hugo (2004) and Champion (2007).

While there remains an interest in settlement size, it is not so much for separating out which parts of a national territory can be considered urban as opposed to rural but, instead, for examining the distribution of population across the full span of settlement sizes ranging from the largest conurbations through to the small town, village and hamlet. This is primarily because of the differences in the number and diversity of people, jobs, services and other amenities found at different levels of the settlement-size hierarchy, which are generally much greater than between urban and rural aggregates. On the other hand, even more important for the opportunities available to residents in a mobile society is the geographical context within which the individual settlements are situated, this being influenced by the overall “intensity” of settlement in the wider area and by distance to larger urban centres (see, for instance, Coombes, 2004). This accounts for the increasing use of functional criteria to define settlement systems and for the strong focus on urban/rural relations and networking in more recent European spatial planning (e.g. European Commission, 1999).

C. THE CASE OF THE UNITED KINGDOM

The UK provides a particularly good example of the way in which attitudes and approaches have developed, owing to the early date at which it urbanized. Following the “physical agglomeration” definition recommended by the UN from the outset of its data collection in this area, Law (1967) revealed that, even by the first census in 1801, fully one-third of the population of England and Wales were in urban areas. By 1851, the proportion had exceeded half and by 1901 it had grown to 78 per cent, considerably above the European aggregate figure now (see above). Over the following century, during which the level rose by just

11 per cent points, there has been ample time for developing more meaningful ways of measuring urbanization. In this section, we look first at the latest information on settlement size and then look at population trends since 1990 on the basis of an urban/rural classification of local authority districts.

1. Population by settlement size

We start by examining the full range of settlement sizes based on the “urban area” principle, where “rural” is the residual and its definition is flexible depending on what settlement size cut-off is used. Table 1 shows the distribution of the 2001, 1991 and 1981 Census populations of Great Britain (i.e. all UK except for Northern Ireland) by settlement size. The British urban system’s considerable stability on this criterion is clearly seen, especially for the lowest, most consistent cut-off of 2,000 residents, where the 88 per cent living in settlements larger than this is very stable across all three censuses. Similar stability is found if one takes a higher settlement size to separate urban from rural. The government department responsible for rural affairs in England (DEFRA) takes 10,000 residents as its primary cut-off, which continues to translate into just over one-fifth of the national population. This form of presentation thus allows users to select the size-based definitions of “urban” and “rural” that best fit their requirements, something that is especially useful if trying to make comparisons with other countries that also use settlement size as their criterion. On the other hand, one should not make intercensal comparisons for the totality of settlements (i.e. any size) because the ultimate cut-off point has varied between censuses.

Table 1. Population of Great Britain, 2001, 1991 and 1981, by population size of settlement

Size group at relevant census	2001 population	% 2001 population	% 2001 cumulative	% 1991 cumulative	% 1981 cumulative
1,000,000 and above	15,475,010	27.1	27.1	24.9	25.6
500,000 - 999,999	3,554,356	6.2	33.3	32.5	33.1
200,000 - 499,999	7,332,922	12.8	46.2	45.2	45.4
100,000 - 199,999	5,402,465	9.5	55.6	53.4	52.5
50,000 - 99,999	4,361,740	7.6	63.3	61.7	62.2
20,000 - 49,999	5,451,565	9.5	72.8	71.3	71.8
10,000 - 19,999	3,365,573	5.9	78.7	78.1	78.6
5,000 - 9,999	2,746,740	4.8	83.5	83.3	83.5
2,000 - 4,999	2,728,752	4.8	88.3	88.3	88.6
1,500 - 2,000	721,342	1.3	89.6	nd	nd
1,000 - 1,499	845,587	1.5	91.0	nd	nd
Under 1,000	1,067,490	1.9	92.9	89.6	89.8
Other settlement	4,050,396	7.1	100.0	100.0	100.0
Great Britain	57,103,938	100.0	n/a	n/a	n/a

Note: nd = no data is readily available for separating out these size groups in the 1981 and 1991 Censuses.
Source: 2001 Census Key Statistics for Urban Areas. Crown copyright data.

Before proceeding, however, a word of caution is necessary. As the data in Table 1 is based on published Census data, it is important to recognise that there have been changes between censuses that make it unwise to compare the proportions above each size threshold. In particular, the effect of underenumeration in 1991 is believed to have been much greater in 1991 than in 1981 and also than in 2001 (when allowance was made of this), with this being primarily a feature of the larger cities. Secondly, the definition of usual residence changed between the 1991 and 2001 Censuses, such that students in 2001 were counted at their term-time rather than at their vacation address, having the effect of shifting this group up the urban hierarchy away from their family homes to the larger towns and cities that contain the majority of colleges and universities.

As a result of both these changes, the increase in the shares of population accounted for the largest size groups between 1991 and 2001 shown in Table 1 can be expected to be largely due to statistical artefact, as their 1991 share was deflated by under-enumeration and their 2001 share was inflated (by comparison with 1991) by the net shift in students.

The results of attempting to harmonise population statistics over time should give a more accurate impression of the way in which the settlement system is evolving. Estimates for the 1991 and 2001 populations of the urban areas of England and Wales, made by Norman (2007), have been aggregated to size groups in Table 2. Showing 1991-2001 population change for urban areas grouped on the basis of their estimated size in 1991, this reveals a general shift of population down the urban size hierarchy. On this basis, urban areas with between 0.5 and 5 million residents in 1991 experienced population decline in aggregate over the following decade, while the rate rises fairly systematically with falling settlement size until reaching its peak of 6.6 per cent for urban areas with under 1,000 residents in 1991. Even the territory that still lay outside the officially defined urban areas in 2001 is estimated to have averaged 5.1 per cent growth, not far short of the rates for the smaller urban places. The one glaring exception to this general “counterurbanization” pattern is provided by the London urban area, which is the only place in the largest size category, with its 6.9 per cent estimated growth for the decade exceeding that of all the others.

Table 2. Estimated population change, 1991-2001, England and Wales, for 2001 Census urban areas grouped by estimated population size in 1991

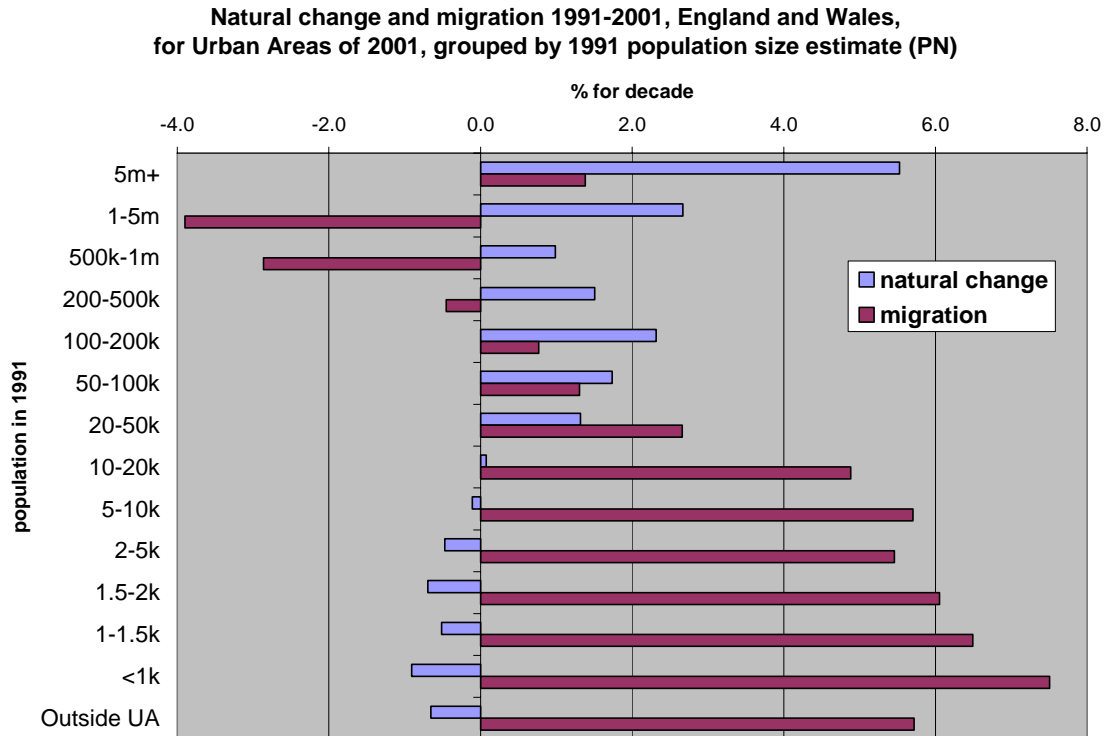
Size of 2001 urban area (UA) in 1991	Change (000s)			Change (%)		
	Overall	Natural	Migration	Overall	Natural	Migration
5,000,000 and over	544.0	435.3	108.7	6.91	5.53	1.38
1,000,000 - 4,999,999	-75.3	163.6	-238.9	-1.23	2.67	-3.90
500,000 - 999,999	-68.2	35.9	-104.1	-1.88	0.99	-2.86
200,000 - 499,999	72.1	103.1	-31.0	1.05	1.51	-0.45
100,000 - 199,999	141.7	106.4	35.2	3.08	2.31	0.77
50,000 - 99,999	123.6	70.6	53.1	3.04	1.74	1.31
20,000 - 49,999	167.6	55.5	112.1	3.97	1.32	2.66
10,000 - 19,999	149.4	2.3	147.1	4.96	0.08	4.88
5,000 - 9,999	118.4	-2.3	120.7	5.59	-0.11	5.70
2,000 - 4,999	113.0	-10.7	123.6	4.99	-0.47	5.46
1,500 - 2,000	30.9	-4.0	34.9	5.36	-0.69	6.05
1,000 - 1,499	38.9	-3.3	42.3	5.98	-0.51	6.49
Under 1,000	65.3	-9.0	74.3	6.60	-0.91	7.51
Outside UA	190.7	-24.7	215.4	5.06	-0.66	5.72
England & Wales	1,611.9	918.6	693.3	3.18	1.81	1.37

Source: calculated from data provided by Norman (2007).

Table 2 also shows a breakdown into the two primary components of this population change, which are also plotted in Figure I. The clearest feature revealed by the latter is the fundamental importance of the migration component in producing the population growth differentials across the majority of the size hierarchy. In fact, the lower part of the hierarchy is dominated by migratory growth ranging from 4.9 per cent for urban areas with between 10 and 20 thousand residents in 1991 to 7.5 per cent for those with under 1,000 then. Above this, migratory growth falls off steeply with rising size, apart from the case of London. In terms of natural change, the general pattern is the opposite, with places of below 20,000 residents recording natural decrease or having births and deaths almost in balance and with natural increase for the urban areas larger than this. In this case, London confirms to the general pattern of natural change increasing with size of place, but its 5.5 per cent growth through this component is quite

exceptional compared to the other, larger places. Indeed, the London urban area (which is a more extensive area than that administered by the Greater London Authority) accounts for fully 47 per cent of England and Wales’s total natural increase of 919,000 (see Table 2).

Figure I. Estimated population change due to natural change and migration, 1991-2001, England and Wales, for 2001 Census urban areas grouped by estimated population size in 1991
Source: see Table 2.



Part of the explanation for London’s strong showing on natural change and its out-of-line performance for migration lies with its attractiveness for international migration, with the latter mainly focused on young adults and on groups with higher levels of fertility than the native British. The role of international migration cannot be explored fully for the settlement system as portrayed above, because the relevant data are not available at the small-area scale. For this purpose, we need to turn to an urban/rural classification based on local authority (LA) areas or “districts.” Such higher-level typologies also have the advantage of combining the individual urban areas with their surrounding areas that help to make up the local labour market areas and other spaces of daily activity and movement. Furthermore, being based on annual population estimates, one is not restricted to census years and can update beyond 2001.

2. Population by urban/rural district type

Out of the several available classifications of LAs, the most appropriate for exploring the urban/rural dimension is the DEFRA “district classification,” which has 6 main categories based on a combination of size of urban area and proportion of people living in rural settlements (where “rural” refers to urban areas of up to 10,000 residents plus towns of up to 30,000 that act as rural service centres). Various permutations are possible, like separating out the London urban area from the other Major Urban districts and pairing the 6 categories to give just three: Rural (LAs with at least 50 per cent of people living in rural settlements), Urban (LAs that best fit urban areas

with at least 250,000 residents) and Mixed (the rest). The classification is restricted to England, but the latter accounts for five-sixths of the UK population. On this basis, Rural LAs accounted for 11.5 million (or 23.3 per cent) of England's 49.5 million residents in 2001.

Table 3 shows population change on these bases for the five-year period 2001-2006, splitting down overall change into the natural change, international migration and within-UK migration. For England as a whole, international migration was the main generator of population growth over this period, with natural change contributing only two-fifths and with net out-migration to the other three countries of the UK. Looking across the three broad types of districts, very clear gradients are evident for all measures. Overall population change displays the same "counter-urbanization" relationship seen for 1991-2001 in Table 2, with growth rising between Urban, Mixed and Rural categories, and now this is seen to be driven entirely by the within-UK migration exchanges. By contrast, both natural change and immigration are positively related to urban status, with the Urban type growing particularly strongly because of the latter.

Table 3. Population change, 2001-2006, England, by urban/rural district type

Urban/rural classification of LA districts (see text)	Population	Overall change		Natural change	International migration	Within-UK migration
	2001	2001-2006	%/year	%/year	%/year	%/year
	000s	000s				
England	49,449.7	1,313.2	0.53	0.21	0.36	-0.04
Urban	24,715.3	478.5	0.39	0.35	0.57	-0.54
Mixed	13,219.0	391.9	0.59	0.19	0.24	0.16
Rural	11,515.5	442.9	0.77	-0.08	0.05	0.79
London	8,541.9	215.0	0.50	0.69	0.97	-1.17
Other Major Urban	8,865.3	127.8	0.29	0.22	0.37	-0.31
Large Urban	7,308.1	135.7	0.37	0.11	0.35	-0.09
Other Urban	6,774.9	178.3	0.53	0.27	0.33	-0.08
Significant Rural	6,444.0	213.5	0.66	0.11	0.15	0.41
Rural-50	5,771.5	192.8	0.67	-0.05	0.03	0.69
Rural-80	5,744.0	250.0	0.87	-0.10	0.06	0.90

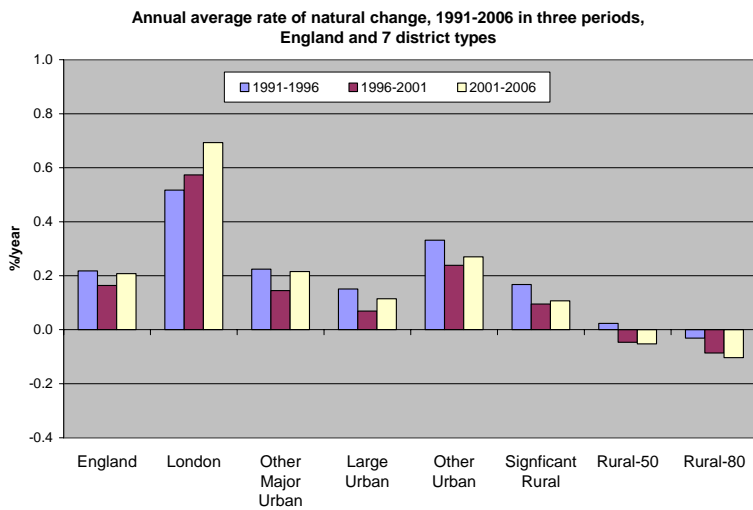
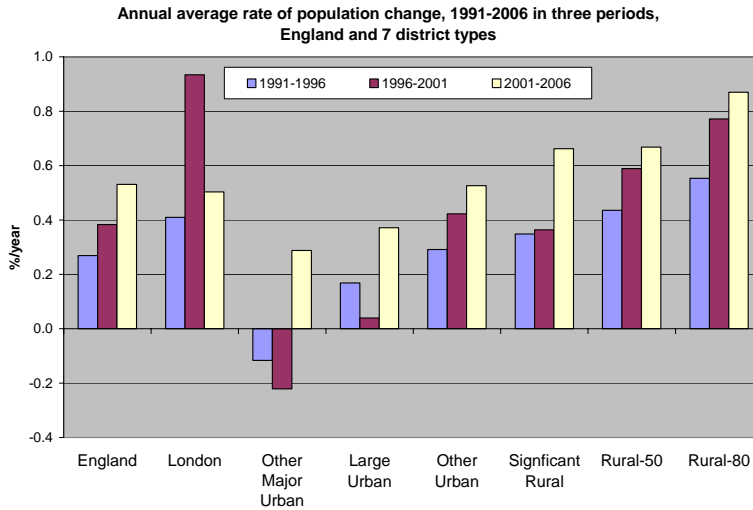
Source: calculated from annual population estimates and components of change data published by the Office for National Statistics, revised August 2007. Crown Copyright data.

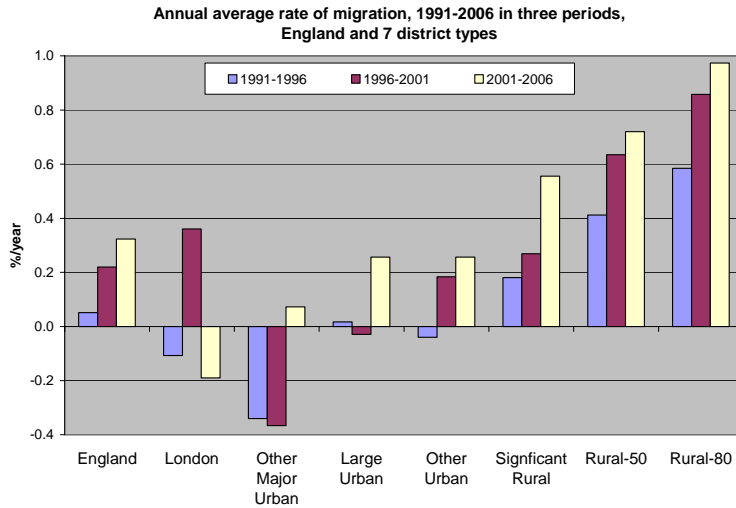
On the basis of the 7-way split of districts (see the lower panels in Table 3), the distinctiveness of the London urban area is immediately apparent. In terms of overall population change, London does not fit with the general "counterurbanization" relationship found across the other types, as annual average growth rises from 0.29 per cent for the other Major Urban areas to 0.87 per cent for the LAs where at least 80 per cent of people live in rural settlements. This is in spite of London's phenomenally high rate of migration loss to the rest of the UK, much out of line even with the general negative relationship with urban status for this. London is clearly far more attractive to international migrants than even the other urban types, while again its rate of natural increase is outstanding.

This raises the question as to what are the longer-term trends affecting the urban/rural dimension of population redistribution. The available data allows overall change and components of change to be traced back to 1991 on an annual basis, though for this longer period it is not possible to separate out the effect of international migration. A summary of overall change for three 5-year periods from 1991 is shown in Figure IIA. For the majority of the 7 categories, as for

England as a whole, overall growth was strongest in the latest period and the rate rose between each of the three periods shown. For London the rate peaked in 1996-2001, while for both the other Major Urban and the Large Urban categories it dropped back then before moving sharply upwards.

Figure II. Annual average change, 1991-1996, 1996-2001 and 2001-2006, England and 7 district types: A. Overall population change; B. Natural change; C. Migration (and other changes)
Source: see Table 3.



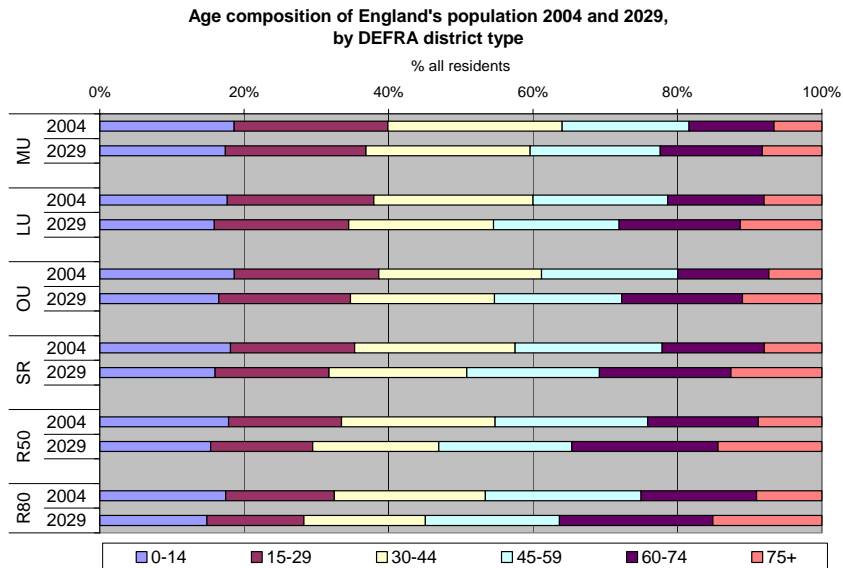


In terms of trends in the components of change, these new analyses show that the rates for 2001-2006 described above generally represent an uplift from those for the previous five-year period for both natural change and migration. Migration (Figure IIC) is clearly the main driver of trends in overall population (Figure IIA), with a progressive increase in rates from 1991-1996 for the four less urban district types, paralleling national experience. It is also migration that drives the peaking of London’s overall growth in 1996-2001, while for the other Major Urban type and also for the Large Urban type the 1996-2001 rate was marginally below that of the early 1990s. For natural change (Figure IIB), it is only London that displays a progressive increase across the three decades. For the next four types, there is a U-shaped pattern with the uplift between the two later periods being preceded by a drop from 1991-1996, while the rates for the two most rural types have fallen across the three periods.

The steepening negative gradient between degree of “urban-ness” and natural change rate is primarily related to the increasing disparity in age composition between urban and rural areas, which in its turn is reinforced by the age profile of migration. Based on data from the latest official projections, Figure III not only reveals the rather regular increase in the proportion of residents aged 60 and over down the urban/rural scale existing in 2004, but also shows the marked widening of the difference over the following 25 years, assuming current migration patterns and fertility and life expectancy trends continue. By 2029, it is projected that over one-third of people living in the Rural-80 districts will be of this age, compared to less than one-quarter of those in Major Urban areas.

Figure III. Age composition of England's population 2004 (estimated) and 2029 (projected), by urban/rural district type

Source: calculated from 2004-based Subnational Population Projections for England, Office for National Statistics. Crown copyright data.



The role of migration in producing these age differentials has been explored by Champion and Shepherd (2006). Interestingly, while there is some net migration of people aged 60 and over from more urban to more rural areas, its contribution is much smaller than that of three other factors. The most important is the urban exodus, or “counterurbanization,” of people aged 30-44 and, to a lesser extent, those aged 45-59, who then remain there and age in place. Secondly, more rural areas are major net losers of school leavers (with over 50 per cent net decline of birth cohorts between ages 16 and 24 recorded by more remote rural communities), who make for cities of 100,000 residents or more that offer further and higher education places and a greater range of job opportunities. Thirdly, as already mentioned, this rejuvenation of large-city populations is reinforced by these places acting as the main destinations of working-age migrants from outside the UK

These migration patterns – notably the concentration of net immigration on the larger cities and the urban exodus that is predominantly UK-born and white – are also serving to increase urban/rural differentials in racial and ethnic composition. The London urban area now accounts for almost half of all England’s non-white population, almost three times its share of all people. By contrast, the parts of England lying outside the 56 largest urban areas are home to barely one-eighth of all non-white people, three times less than their 42 per cent share of national population (Champion, 2006). Thus, while most of the differences between city and countryside in economic structure, occupational composition and quality of life have been diminishing over time, urban/rural gradients are steepening for some key demographic characteristics like age and ethnicity.

D. THE WIDER EUROPEAN SCENE

This section looks more widely across Europe. As the resources available for this report do not permit an examination of each country, the focus here is primarily on a selection of English-language studies that attempt to review the situation over large parts of Europe. These have been chosen to represent the main areas of interest that research has addressed since the start of the 21st century. The first reflects the concern as to the future of Europe's larger cities, asking whether there looks to have been any significant degree of "resurgence" in the fortunes of these cities since the emergence of "counterurbanization" in parts of Europe in the 1970s. Next, the results of some national studies of urban system change are examined in order to detect change over time in population concentration and deconcentration trends. The third set of studies looks at evidence on the existence and progress of urban sprawl in different parts of Europe, with primary emphasis on more localised patterns of development within cities and their regions.

1. Resurgent cities?

According to Storper and Manville (2006, p. 1269), "For almost as long as we have had cities, we have predictions of their decline and, for almost as long ... we have had prophecies of resurgence." Recent years have seen the latter in the ascendancy, with cities being identified as sites of renewed economic dynamism and engines of national prosperity (OECD, 2001; Parkinson and others, 2006). This view of cities has been endorsed at national and European policy levels to the point where it has been described as "a new conventional wisdom" (Buck and others, 2005). Yet there has tended to be more urban myth and policy hubris in the debate than there is hard evidence (Cheshire, 2006). Hence the value of an ambitious study by Turok and Mykhnenko (2007) to chart the population-change trajectories of 310 urban agglomerations with at least 200,000 residents in 36 European countries over 5-year periods since 1960, these accounting for over one-third of these countries' aggregate population.

The headline results of the Turok and Mykhnenko study are that the number of growing cities has been falling steadily since the 1960s. Nearly three times as many cities were growing in the late 1960s compared to the late 1990s, by when there were more cities in decline than growing. The picture looks little different if cities' population change rates are standardised to the change rates of their countries at each period, so as to allow for the long-term downward shift in national growth produced mainly by falling birth rate. The number of cities that were growing faster than their national rates fell from 241 in 1960-65 to 128 in 1995-2000, with those experiencing relative decline rising from 69 to 182. The only positive sign at this aggregate level was evidence of a slight recovery in 2000-2005, when 145 cities were growing faster than their national populations, but it is rather early to assess whether this modest rebound will continue.

In terms of the cities' individual trajectories measured in terms of the direction of population change, Turok and Mykhnenko (2007) were able to allocate 291 of the 310 (94 per cent) cities into one of nine types. Three of these represented different types of "resurgence" involving a change from decline to growth: 12 cities that had experienced resurgence just in the final period 2000-2005, a further 7 since the end of the 1980s, and 23 turning around between the 1970s and 1980s. In all, therefore, only 1 in 7 cities saw an absolute turnaround, with over half these events occurring as long ago as the 1980s. On the other hand, a total of 94 cities were found to have registered continuous growth over the study period, making this the largest single type of trajectory. Meanwhile, in terms of the four declining types, 5 cities were characterised by continuous population loss since the 1960s, 8 by loss since the 1980s, 75 by loss since the 1990s and 41 by loss just in the last 5-year period. The remaining 26 cities, mainly East European, had grown in the 1980s, declined in the 1990s and then returned to growth after 2000.

The study also found a major difference in general trend over time between Western and Eastern Europe. The latter was, in aggregate, characterised by very strong growth in the 1960s and early 1970s, somewhat slower growth the following decade, and then absolute decline since the mid-1990s. By contrast, the trajectory of Western Europe's cities is seen as much less dramatic, with a lower average growth rate in the 1960s, followed by an earlier slowdown than in Eastern Europe but then with a period of aggregate recovery in the late 1980s and another since 2000. Perhaps the starkest difference between East and West is the fact that in 2000-2005 no less than 78 per cent of the latter's cities were growing then while 82 per cent of the East European cities were in decline.

Taking the long-term view, therefore, the overall verdict is that city fortunes have waned over the last three decades. This is in relation to their past trajectories and also relative to smaller urban and rural areas. In the shorter term, several indicators suggest something of a recovery since the late 1990s, which was the weakest period for European cities overall, partly because of being dragged down by the Eastern ones then. While it is too soon to say whether this uplift will be any more enduring than the temporary one in the early 1990s, one potentially important development identified by Turok and Mykhnenko (2007) is that, on average, the larger cities are now performing somewhat more strongly than the smaller ones, reversing the negative relationship between size and growth that had pertained all through the study period till the mid-1990s.

2. National analyses of urban system change

Studies of individual countries are much more common than cross-national investigations and, though they can differ markedly in the way in which urbanization is defined and measured, they can help to build up a broad picture of the changes taking place. This is especially the case where such studies have had a degree of central coordination, as for a journal special issue or a book. This section focuses primarily on the findings of two such projects, namely a set of studies that aimed to test the "differential urbanization" model (Kontuly and Geyer, 2003a) and studies of urbanization and migration published in an *International Handbook of Urban Systems* (Geyer, 2002). In both these cases, the emphasis is on trends of urban concentration and deconcentration analysed for functional urban regions rather than physically-defined agglomerations.

The differential urbanization model posits a cycle of urban system development that progresses through a temporal sequence of three primary stages defined on the basis of the relative growth of three size groups of cities (with growth preferably measured in terms of net migration rate rather than overall population change). On this basis, "urbanization" is said to be occurring when the large cities are, in aggregate, growing faster than both the medium-sized and the small ones, while "polarisation reversal" occurs when the medium-sized cities outpace the others and "counterurbanization" is when the small cities are in the ascendancy. In their journal special issue, Kontuly and Geyer (2003b) summarise the results of 9 national case studies, 6 of which are for European countries (as defined by the UN to include Russia and exclude Turkey).

Taking these 6 countries in order of progress made through the stages of the model up to the 1990s, Finland emerges as the most advanced. Though urbanization began fairly late here compared to other European countries, progress was rapid, with the migration differentials signalling polarisation reversal by 1955-65 and counterurbanization by 1965-75. Then after a number of years in which net migration rates for all three urban size classes were roughly equal, a second cycle of urbanization emerged in 1990-98.

Focusing on the period since 1950, Britain was found on this basis to have been in the counterurbanization stage throughout, with no second cycle evident at least up to the end of the study period in 1991. Western Germany, like Finland, advanced rapidly through all three stages between 1950 and 1987, but then reverted to polarisation reversal. Estonia spent four decades in the urbanization stage before leaping forward to counterurbanization in the 1990s. Italy switched from urbanization to polarization reversal around 1971, while Russia reached this point around 1989.

Europe accounts for 8 of the national case studies in Geyer (2002): the UK, France, Germany, the Netherlands and Italy as representatives of “Western Europe,” and Finland, Poland and Romania as examples of “Nordic and Central Europe.” Taking these in reverse order and focusing on those not covered by Kontuly and Geyer, Romania has progressed through an entire cycle of urban evolution during the 20th century, beginning with a prime city phase centred around the capital city, followed by a shift in importance to the regional centres, then to the intermediate and small towns, and most recently to a revitalising countryside, marked by a decrease in urban population since 1996 (Ianoş, 2002). In the Polish case (Rykiel and Jazdzewska, 2002), there has been no period in the past half-century when prime cities dominated the urban system, but the predominant pattern of migration has been up the urban hierarchy, taking advantage of the much superior living conditions in the more urban areas. After 1980, however, economic crises and social unrest caused a switch in migration destinations from the large and medium-sized cities to smaller cities and towns and by the 1990s industrial restructuring and the expansion of the private housing market were being accompanied by an increase in urban-to-rural migration.

In Western Europe, the case of the Netherlands is most notable for the development of a polycentric urban structure in the centre-west part (Randstad) of the country that has been concentrating population at the national level (Nijkamp and Goede, 2002). Finally, three main tendencies are clear from Pumain’s (2002) treatment of France. First is the high intensity of the urbanization process in the two decades to 1975, this by comparison with both previous trends and neighbouring countries. Second is the persistence of concentration trends at the scale of daily urban systems, on which basis the level of urbanization had risen to 77 per cent by 1999, up from 61 per cent in 1968 and 69 per cent in 1982 (and compared to 73 per cent in 1999 on an agglomeration-based definition). Third is the deconcentration of population at the local scale, which has meant that the population growth rate for the functionally-defined urban regions has for the last three decades been around twice the one measured on the agglomeration basis.

3. Urban sprawl

In contrast to the Anglo-American world, in Continental Europe sprawl is not traditionally associated with urbanization. A longer history of pre-industrial urbanization, generally less intense forms of industrialisation and rather different views about the status of rural land ownership among the elites all tended to maintain the preference for city life and secure greater investment in infrastructure and amenities for the city than for the countryside. While this may be a gross oversimplification of the European scene, there is no question that the attraction of the high-density apartment lifestyle has waned considerably in recent years, with the construction of single-family dwellings, the growing attachment to the private car and the switch of industry to horizontal factory layouts and road haulage all contributing to an explosion of physical development around urban nodes and further afield. It has also led to an explosion of academic and policy interest that includes books on urban sprawl in Europe (Couch and others, 2007) and in Western Europe and the USA (Richardson and Bae, 2004), national case studies like Guérois and Pumain (2002) on urban sprawl in France and Haag (2002) on sprawling cities in Germany,

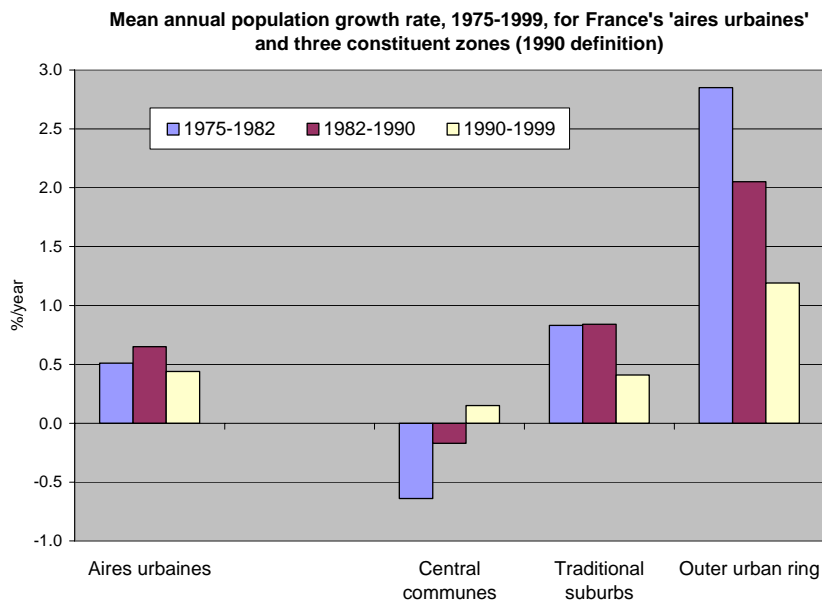
and a number of EU-funded investigations including SCATTER, SELMA and several projects under the ESPON programme. Here this literature is drawn on selectively to attempt a summary account of this development, leaving space for an assessment of its implications for defining and measuring urbanization in Europe in the 21st century (see next sub-section).

Given its “real predeliction for urban centres and urban values” (Guérois and Pumain, 2002, p. 14), France forms a particularly good example of the extent and nature of recent changes. Even more impressive than the rising population share of the functionally-defined daily urban systems, noted in the previous sub-section, is their rapidly rising spatial coverage. As defined at each population census, the land covered by what are rather confusingly called “aires urbaines” increased more than 5-fold in barely 30 years, rising from 32,733 km² to 100,218 in 1982 and reaching almost 176,000 in 1999. Generally, the number of urban centres used as cores for defining these areas has risen, but not hugely, up from 319 in 1968 to a peak of 361 in 1990. The main change has been the expansion of the daily urban system around each core, which has increasingly led to the merging of these systems, such that the total number of nodes actually dropped to 354 in 1999 (see Guérois and Pumain, 2002, p. 36, Figure 7).

While the expansion of these daily urban systems in France can be linked to increasing journey distances for work and services by long-term residents of these “peri-urban areas,” it has also been associated with the deconcentration of residential populations from their cores. Since 1975, the patterning of population growth within these systems has remained very consistent, such that the further from the centre, the higher the average growth rate. For example, in the intercensal period 1990-1999 and using the zones as defined at the start of this period, the annual rate for the outer rings averaged a gain of 1.19 per cent, compared with 0.41 per cent for the traditional suburbs (*banlieus*) and 0.15 per cent for the central communes. Figure IV confirms that this pattern also existed in the two previous intercensal periods. On the other hand, it is also clear from this chart that the scale of the differential across the three zones has contracted considerably over time and especially since 1990. As part of this, a particularly impressive feature is the recovery of the central communes from substantial decline to modest growth over the period studied, with their improvement since 1990 moving against the trend for the “aires urbaines” in aggregate. According to Guérois and Pumain (2002, p. 26), this slowing down of urban sprawl can be linked to central cities ceasing to lose population, which though beginning before 1990 became much more common afterwards.

Figure IV. Mean annual population growth rate, 1975-1999, for France's *aires urbaines* and three constituent zones (1990 definition)

Source: drawn from data presented by Guérois and Pumain (2002, p. 26, Table 3)



The expansion of daily urban systems and residential deconcentration within them are also associated with shifts in jobs and services and with the emergence of a more polycentric urban morphology in France. For instance, between 1990 and 1999 the traditional suburbs' share of their employment rose from 29.4 to 20.7 per cent and that of the outer urban rings was up from 8.7 to 9.1 per cent (Guérois and Pumain, 2002, p. 31, Table 4). The transformation of the functional spatial structure towards more complex patterns is coming about through the combination of absorption of previously existing secondary urban poles (including the effects of system mergers, see above) and the establishment of new nodes of economic activity, most notably located close to motorway junctions and airports. Nevertheless, as yet no secondary peripheral nodes have posed a real threat to the old city centre: "the concept of competing fringe cities has not been imitated from the US" (Guérois and Pumain, 2002, p. 38).

The picture of urban sprawl more widely across Europe is documented in the book edited by Couch and others (2007). In particular, a sample of 45 cities drawn from 18 countries are classified using the European Union's Urban Audit estimates of the rate of 1991-2001 population growth of their conurbations (defined on the basis of "larger urban zones," LUZ) and the change in the share of total LUZ population accounted for by the LUZ's core city over the same period (see Reckien and Karecha, 2007, p. 46, Table 2.4). "Sprawl," defined in terms of a fall in the core's proportion of the LUZ population, was found to be extremely common, accounting for 37 cases, leaving only 8 cases of "containment," where the core was growing faster than the LUZ. The largest single group comprised the 25 cases that were sprawling and growing at the same time, this group being particularly well-represented in Belgium, Netherlands, Austria and Germany. In second place, 12 cities had experienced a combination of sprawl and decline, these mainly located in Eastern Europe though the list also includes 2 English cities and 2 Italian ones. Six of the 45 cities registered growth with containment and are to be found in Denmark, Sweden, Greece and Cyprus, while just two were classified as "decline with containment": Campobasso in Italy and Kalamata in Greece.

Drawing on in-depth case studies of 7 of the 45 cities as well as a review of the wider literature, Leontidou and Couch (2007) conclude that there exists a triplet of broad regional contrasts in the nature of sprawl in Europe. In their own words (p. 256, emphases as in the original):

1. Cultures of urbanism in **Southern** Europe have created compact cities in combination with *infrastructure-related* urban sprawl after long periods of popular suburbanization as a means of survival.
2. Anti-urbanism in **Northern** Europe created *lifestyle-related* urban sprawl, by the elites and middle classes wishing to escape urban squalor by moving to the countryside.
3. *State-induced* sprawl in **Eastern** Europe has *deconstructed* the compact city/pastoral landscape antithesis through the development of post-suburban landscapes which are usually not residential after the transition in the 1990s.

They acknowledge, however, that most European cities fall between these archetypes. Moreover, the fundamental North/South cultural dichotomy has been altering since the post-socialist transition and also through the move towards urban competition and the entrepreneurial city that has led to the coincidence of re-urbanization and urban sprawl. The “Mediterraneanization” of the North is seen as one of the most important changes in European urban culture of recent decades, raising the possibility of urban convergence (Leontidou and Couch, 2007, p. 263).

With the general prevalence of sprawl across European cities indicated by the full sample of 45 cities, it is not surprising that the EU has been giving much attention to this issue in recent years. As with Couch and others (2007), a small number of city case studies provided the core of its SCATTER project on “Sprawling Cities and Transport: From Evaluation to Recommendations.” A substantial part of this project (see Gayda and others, 2005) was devoted to the measurement of urban sprawl, first devising measures (including shift-share analysis, an H-indicator of spatial deconcentration and local spatial autocorrelation statistics as well as more traditional indicators like density maps) and then applying them to six cities (Bristol, Brussels, Helsinki, Milan, Rennes and Stuttgart).

Examining data on up to 20 years of change in the internal distribution of population and employment for all these cities plus income, housing and commuting for some of them, the SCATTER project concluded that the cities could be clustered into three groups with distinctive deconcentration patterns (Gayda and others, 2005, pp. 9-10). Milan and Bristol were found to be characterised by continuing and rather strong spatial deconcentration, with the former seeing centrifugal movement over increasing distances and with redistribution in the Bristol urban region having a more polycentric pattern. For Brussels and Stuttgart, the deconcentration had been more moderate and appeared to have disappeared, apart from the latter still having a low level of outward shift of population by the end of the study period but no longer one of jobs. For Helsinki and Rennes, by contrast, the dominant pattern was one of spatial concentration of activities, though there was also evidence of some scatteration, this being produced partly by these cities’ in-migrants settling not only in their urban centres but also in their outer urban rings.

The EU project on “Spatial Deconcentration of Economic Land Use and Quality of Life in European Metropolitan Areas” (SELMA) also used the case study approach, selecting a pair of larger and smaller cities from each of 7 countries (6 in Europe plus Israel). The emphasis here

was primarily on the changing distribution of jobs within the 14 city regions. Employment change in the two Dutch cases was found to be led by producer services exiting historic cores to form suburban concentrations along major motorways. The data from Britain also reveals faster outer growth, but more for population than for jobs. In Denmark employment deconcentration has been taking a more dispersed pattern rather than focusing on the suburban nodes served by rail, though a back-to-the-city can also be observed in the case of Copenhagen. In Spain and Italy metropolitan areas have so far retained a strong monocentric pattern for employment, but central city population has stagnated or begun to decline in the Italian cases. Finally, in the Czech Republic, profound changes have occurred since 1990, with early investments being directed at the commercialization of city centres but being followed soon afterwards by suburbanization pressures. Here, unusually, the employment shifts have preceded the residential ones, with the movement of middle-class families into low-density neighbourhoods starting only recently.

The ESPON programme includes a review of urban sprawl in the context of a wider examination of urban-rural relations (Bengs and Schmidt-Thomé, 2006). This study observed that the often rather fine balance between centripetal and centrifugal forces leads to different types of sprawl and identified four profiles (p. 231). Firstly, when observed at the regional scale, urban sprawl is characterised by the emergence of secondary urban centres. A second type involves infill, as scattered and low-density housing development locate between urban centres or transport corridors. Third is sprawl that is generated by the part of the population that has no other choice but to relocate because of the increasing costs of life in urban centres. Finally, sprawl can manifest itself in the erection of service and business centres outside the compact city boundaries, which will then tend to attract housing development, setting the ground for further dispersal. Bengs and Schmidt-Thomé (2006) go on to look at policy responses under the heading “urban containment,” focusing on interventions in the development and property markets of France, Germany, Italy and the UK.

E. IMPLICATIONS FOR STUDYING URBAN AND RURAL AREAS

It is primarily the lateral extension of urban nodes, commonly referred to as “sprawl” as noted above, that raises issues for the definition and measurement of urbanization in Europe, though the challenge is magnified by the way in which adjacent settlements tend to merge into each other in more heavily populated areas and also by the general increase in individual personal mobility that facilitates these tendencies. The latter also means that, even where individual urban areas remain physically discrete from one another (as, for instance, has largely been achieved in the UK since 1947 through strict controls on new building), they can still be rather intimately linked to each other by regular – even daily – flows of people, goods and services. Trends in urban development patterns have therefore not just made the task of urban/rural definition more difficult, but at the same time they have challenged the underlying rationale for doing this.

In their ESPON 1.1.2 project report, Bengs and Schmidt-Thomé (2006) raise these issues in no uncertain terms:

Currently, it is not so easy to argue in favour of the traditional split between the two spheres of urban and rural Europe ... A clear-cut visual divide has simply gone, being replaced by *rurbanization*, a process where the physical environment loses qualities that were traditionally associated with urban or rural settings. In most countries, urban centres have long since lost their particular privileges and there is no longer a clear difference in administrative status between town and

countryside, or it is blurred ... What is left? Is the urban-rural divide totally anachronistic? (p. 12, emphasis as in original)

This leads them to the central question that their study was designed to address, namely: “Is it possible and sensible to make a distinction between urban and rural areas in Europe?” (Bengs and Schmidt-Thomé, 2006, p. 12). It is also the question that was tackled at global scale by the IUSSP Working Group on Urbanization (Champion and Hugo, 2004) and indeed has been the subject of much discussion over the 60 years since the UN made its initial recommendations on measuring urbanization and even before that (see Champion, 2004, and Zlotnik, 2004, for further details).

The conclusion reached by the ESPON 1.1.2 report on urban-rural relations in Europe is that something along these lines is still worthwhile; otherwise, it would have been a rather short report, which it is not! But the basis selected for the empirical work in that study is not in terms of physically defined units, but rather in terms of classifying larger regional zones (NUTS3 units in this study). On the other hand, it is suggested (Bengs and Schmidt-Thomé, 2006, p. 19) that the same approach is flexible enough to be applied at a variety of scales that could include ones as fine-grained as NUTS5 (which equates to the electoral ward in the UK and can be thought of as residential quarters in large cities, though combining several settlements in a sparsely populated area).

The ESPON 1.1.2 urban/rural classification is based on two main dimensions that are then operationalised using a number of indicators. One dimension is the “degree of urban influence,” for which two factors were taken into account: population density (whether the NUTS3 region had a population density above or below the European average of 107 persons per square km) and status of the leading urban centre of the region (whether or not this centre had been labelled a “Metropolitan European Growth Area” or MEGA, as defined by the ESPON 1.1.1 project). If a region satisfied either or both of these criteria, then it was classified as being of high urban influence, otherwise as of low urban influence. The other dimension, “degree of human intervention,” was determined by the relative shares of three types of land cover (artificial surfaces, agricultural areas and residual land) as given by the CORINE data set. Using a set of rules based on whether the shares of these were above or below the European average, regions were classified three ways into high, medium and low human intervention types, which when cross-tabulated against the two-fold urban-influence dimension produced a 6-way classification of NUTS3 units across the 29 European countries covered by the study (the then current EU25, the two more recent accession states of Bulgaria and Romania, and Norway and Switzerland).

By way of example, Table 4 presents some headline results from this work, based on data for 28 of the 29 countries (comparable data was not fully available for Norway).

Table 4. Selected indicators for a 6-way urban/rural typology of Europe

Type code	Regional classification		Number of NUTS3 regions	Population density 1999 (persons per square km)	Population change 1995-1999		
	Degree of urban influence	Degree of human intervention			EU25+3	EU15+1	EU10+2
1	High	High	691	330	0.84	1.10	-0.78
2	High	Medium	52	127	1.06	1.54	0.30
3	High	Low	34	139	1.01	1.02	0.39
4	Low	High	131	81	-0.18	2.21	-1.15
5	Low	Medium	184	55	0.64	0.78	0.24
6	Low	Low	201	29	0.08	0.28	-0.88
All 6 types			1,293	114	0.68	1.04	-0.64

Source: Bengs and Schmidt-Thomé, 2006, Table 3.6. See text for countries covered.

Bengs and Schmidt-Thomé (2006, p. 173) then discuss what this population change data reveals for trends towards concentration and deconcentration for the whole of Europe and for the former socialist countries (EU10+2) compared with the rest. In general, the regions of high urban influence are characterised by the stronger growth than those of low influence, whether or not standardising for degree of human intervention. Within each of the two urban influence classes, however, there is somewhat more variation as to which of the three human intervention classes is the strongest growing. The “high” class has the highest growth rate for the low urban influence regions (i.e. type 4) of the EU15+1, whereas it is the “low class” that is in this position for the high urban influence regions of the EU10+2. Otherwise, however, it is the medium human influence regions that score highest, as is also the case for the Europe-wide patterns for both high and low urban influence regions. The report therefore concludes that in the EU15+1 there seems to have been a slight decentralisation in the three regional types with high urban influence, but centralisation for the three regional types of low urban influence. The results for the EU10+2 are interpreted as evidence of “a kind of suburbanization” (Bengs and Schmidt-Thomé, 2006, p. 173).

This ESPON 1.1.2 classification was seen as replacing a typology of rural-urban spatial patterns produced by Moriconi-Ébrard and Eurostat (Pumain, 2004, p. 244, Figure 12.2). This identified 6 main regional types of settlement, as follows: regions dominated by a large metropolis, polycentric regions with high urban and rural densities, polycentric regions with high urban densities, rural areas under metropolitan influence, rural areas with small and medium-sized towns, and remote rural areas. As such, it represents a now rather common approach to classifying territory at scales higher than individual parcels of land. In section C above, we have seen the example of England’s DEFRA urban/rural district typology that first identifies the areas covered by the larger cities and then allocates the remaining districts to categories by reference to the proportion of people living in rural places. A parallel approach to settlement classification in England, adopted by DEFRA’s urban equivalent (now called Department of Communities and Local Government, DCLG) for its State of the Cities 2005 Report (Parkinson and others, 2006), gives greater emphasis to city size, grouping 56 cities into four categories (London, Mets, Large Cities, Small Cities) as well as recognising two further categories (Large Towns, Small Towns & Rural).

Clearly, settlement size is still regarded as an important basis for differentiating territory, but this is primarily for the upper end of the urban hierarchy, with a wider range of criteria being used for smaller settlements and more rural regions. The justification for the latter approach is well-articulated by Coombes (2004), whose examination of recent trends in a number of countries

suggested three main dimensions of settlement systems: the size of settlements, the intensity or concentration of settlements, and accessibility to services and other facilities. These three, it is claimed, are not substitutable for one another and, indeed, it is likely that their degree of non-conformity will be greater in regions that do not contain larger cities. Some settlements will score higher (can this still be termed “more urban?”) on one of these criterion than another. Hence the value of a classification like that of ESPON 1.1.2 that involves more than one dimension.

Finally, however, there is also the issue of what territorial units are used as the building blocks for these territorial classifications. Many of the latter are hampered by needing to use rather large statistical recording units that are primarily determined by administrative structures. The ESPON 1.1.2 urban/rural typology described above is based on (NUTS3) regions which do not provide a very good fit to the geography of the urban system. Meanwhile, both the DEFRA and DCLG classifications for England are primarily based on cities defined as physical “agglomerations” and ignore the fact that these constitute only part of the whole city because green-belt and other planning interventions have imposed a zone that further development of that city has had to leapfrog. In some other countries, it would seem to be physical urban sprawl that provides the main challenge for identifying what constitutes the entirety of a city. Hence the increasing popularity of the “metropolitan region” concept, where this is defined not in the UN’s sense of physical agglomeration or the related concept of “conurbation” but instead is defined in terms of the city’s functional region and measured through daily or quite regular spatial interaction like commuting.

In conclusion, in the task of classifying territory for the purposes of studying urbanization and population redistribution across settlement systems, perhaps the most appropriate way forward is a two-level approach that captures both the type of settlement that people live in and also the broader regional context. This is by no means a new suggestion. Indeed, it was advocated by the UN’s John Grauman almost 40 years ago (United Nations, 1969, p. 3): “A fourfold classification, separating ‘urban’ and ‘rural’ areas both within and outside the larger regions of urban dominance, might provide a more relevant framework of analysis” than what was currently being used. This idea was then endorsed by the United Nations (1973, p. 12), as follows: “Looking in to the future... one can incline to the view that a fourfold classification may eventually serve most practical purposes the best. It may become necessary to distinguish urbanized and non-urbanized areas ... both within the metropolitan regions and outside such regions, resulting in four categories such as metropolitan urbanized, metropolitan rural, non-metropolitan urbanized, and non-metropolitan rural populations.” That anticipated future would seem to have arrived, judging by the wealth of evidence now assembled on new forms of urbanization (including Champion and Hugo, 2004, and National Research Council, 2003). Moreover, four decades on, there is the possibility of much greater sophistication in developing indicators for applying at both the local and regional levels of such a classification.

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