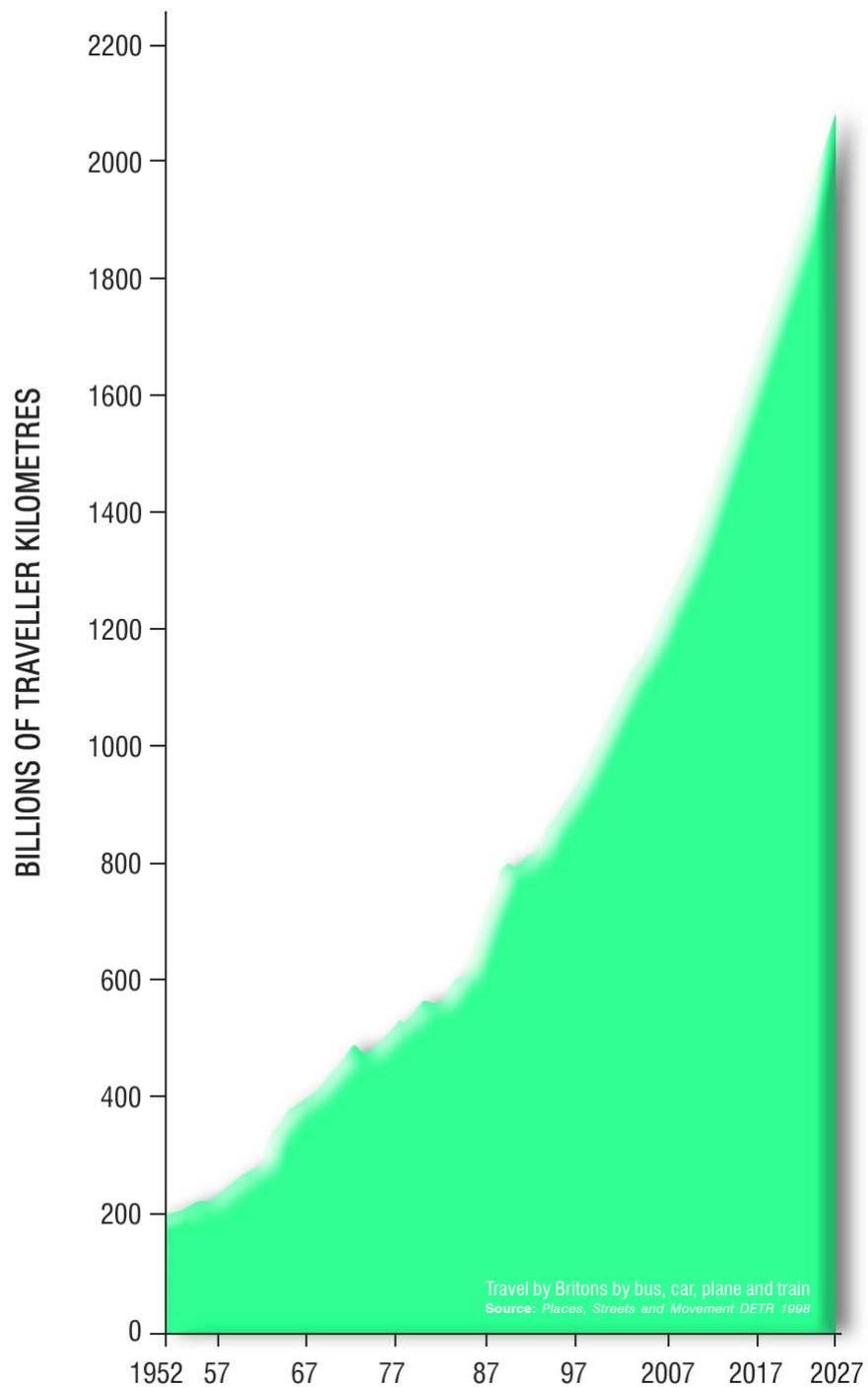


Suburban Future





INDEPENDENT TRANSPORT COMMISSION

SUBURBAN FUTURE

JULY 2004



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Foreword by the Chairman: Sir Patrick Brown

'Our part of London is so very superior to most others... We are so very airy!'
Jane Austen on Bloomsbury in **Emma**, 1816.

The pleasures that people find in suburbs are, as Jane Austen shows, a longstanding part of English life but one that persists. Zaiba Malik, who grew up in suburban Bradford, wrote on going back there as an adult: 'Other Pakistanis have joined the ranks of the suburban classes and moved away from the claustrophobic city centre'. (The Guardian, 1 June 2004.)

Four years ago the government published an urban White Paper called 'Our Towns and Cities: the Future'. Subtitled 'Delivering an Urban Renaissance', it was an account of how to mix land uses, raise densities and promote development *within* existing settlements. Suburbs were gently damned for being part of a low density tradition that 'squandered land'. Otherwise they were ignored. The same is true of transport policy. While some policies in the Transport White Paper of 1998 and in The 10 Year Plan of 2000 would have affected the suburbs, none is tailored for the suburbs. Even orbital roads like the M62 around Manchester and the many bypasses built by the Highways agency, though much used by suburban residents, were built for long distance traffic.

Considering that, in England alone (putting aside the 12 million people who live in 19th century suburbs) at least 20 million people live in 20th century suburbs and a further 7 million live in the loose knit 'exurban' hinterland that lies beyond them, such omissions are, to say the least, surprising. They suggest that policymakers are overlooking something important. Why? And what goes on in this *terra incognita*? Is it a sea of semis where everyone jumps on the 8.15 and heads to a city centre office? Or are the suburbs and exurbs a vibrant mix of houses, university campuses, business parks, restaurants, cinemas, shopping centres, international headquarters, high-tech factories, airports, hotels, research labs, ethnic minorities, middle classes and millionaires? The latter depiction is, of course, the nearer to reality. Not only do most of those who sleep in suburbia live, work, shop and play there too but, for many of them, the suburbs are their 'city'.

This has huge consequences. The combination of suburban population growth and rising incomes can only lead to increased travel – predominantly by car. Traffic congestion will worsen: getting about for those with and without cars will become more difficult. The Department for Transport needs to give the suburbs a much higher profile in its policy making.

'Suburban Future' could not have been undertaken without funds granted by the Esmee Fairbairn Foundation. My colleagues and I are all deeply grateful for this support. We are indebted too to Professor Marcial Echenique and Mr. Rob Homewood for their valuable, if sometime controversial, research. It opens up important new territory.

July 2004

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1 The Policy Context

For half a century green belts and other town planning policies have been used to stop the spread of British cities. Development has accordingly taken the form of urban renewal and gentrification within the cities while suburban expansion, the dominant form of growth, has gone on around towns and villages (and in new towns) beyond the green belts. Since 2000 the declaration by the government of an 'urban renaissance' aimed at reusing land and buildings has put even more emphasis on compact, high density living. In a period overshadowed by fears of climate change (and by research linking patterns of land use to means of travel) suburbs, and the intense use of cars and fuel associated with them, are increasingly seen as unacceptably risky.

Commercial interests have, however, continued to stress the preference of many households and firms for suburban locations, while academics have debated the extent to which compact cities are or are not efficient at reducing transport emissions. Add in social and economic factors and this is a highly complex field. The Independent Transport Commission (ITC) therefore decided initially to establish some of its boundaries.

2 The Echenique & Homewood Report

What is the extent of suburban living in England? What is its likely growth? What implications might this have for travel and what might be done to alleviate any resulting problems? It was questions of this kind that the ITC put to Professor Marcial Echenique and Mr. Rob Homewood of the Martin Centre for Architectural and Urban Studies, University of Cambridge. Their study 'The Future of Suburbs and Exurbs', and this ITC analysis of its policy implications, are the result. Both are being published at the same time. See: www.trg.soton.ac.uk/itc.

The method adopted by the researchers relates demographic and expenditure data from the Office of National Statistics to the National Travel Survey and to land use data at ward level used by the Department of Transport, Environment and the Regions in the 1991 census. The first step was to relate observed patterns of land use and travel between 1981 and 2001 with a view to confirming, or not, links between them. These results were then extrapolated to 2021 and the resulting patterns of travel reviewed in the light of i) constraining the supply of land, ii) investing in roads and railways and iii) introducing road user charges.

Such a method is not without technical problems. Not only do the official land use classes have limitations but the 'urban' class is dominated (and distorted) by Greater London. The necessarily widespread use of averages creates a different problem - the smoothing over of important variations in household expenditure and travel behaviour. Finally, due to the timing of the publication of 2001 census data, some data from 1991 had to be used. Professor Echenique is confident, however, that such problems in no way invalidate the findings of the study.

3 Defining Suburbs And Exurbs

Five land use classes

Echenique & Homewood based their work on the five English land use classes defined, at ward level, by the Department of Environment, Transport and the Regions (DETR) and used in the 1991 Census:

- | | |
|-------------------|---|
| a) Urban | city centres and, in London, much more |
| b) Suburban/Urban | 19 th century suburbs |
| c) Suburban | 20 th century suburbs |
| d) Suburban/Rural | scattered small estates interspersed with open land lying beyond the continuous suburbs |
| e) Rural | villages and open country |

The geography of suburbs

In the DETR map showing the five types of land use, 'suburban' provides an almost continuous background to the cities of North East England, and to the megalopolis composed of Liverpool, Manchester and Leeds (West Yorkshire) and its extension which runs on down to Sheffield (South Yorkshire).

Birmingham and the West Midlands show up as being less cocooned than the other conurbations. Then comes Greater London, a huge 'urban' blob surrounded by a fringe of 'suburban/urban' and then by a vast spread of 'suburban' running out into the Home Counties and spreading down the Thames Estuary to the North Sea. 'Suburban/Rural' areas lie beyond the suburbs proper and cover, in particular, very large parts of south-east England. (Figure 1)

The Commission's focus

The three suburban use classes together house 84% of the population of England. While such an extensive spread of suburbia demonstrates the long history of lower density town making in England, the Commission decided to concentrate, in this analysis, on the more car-dependent 'suburban' and 'suburban/rural' land uses. However, where relevant, conditions in them are compared with those in the higher density 'suburban/urban' or 'urban' and in very low density 'rural' land use classes.

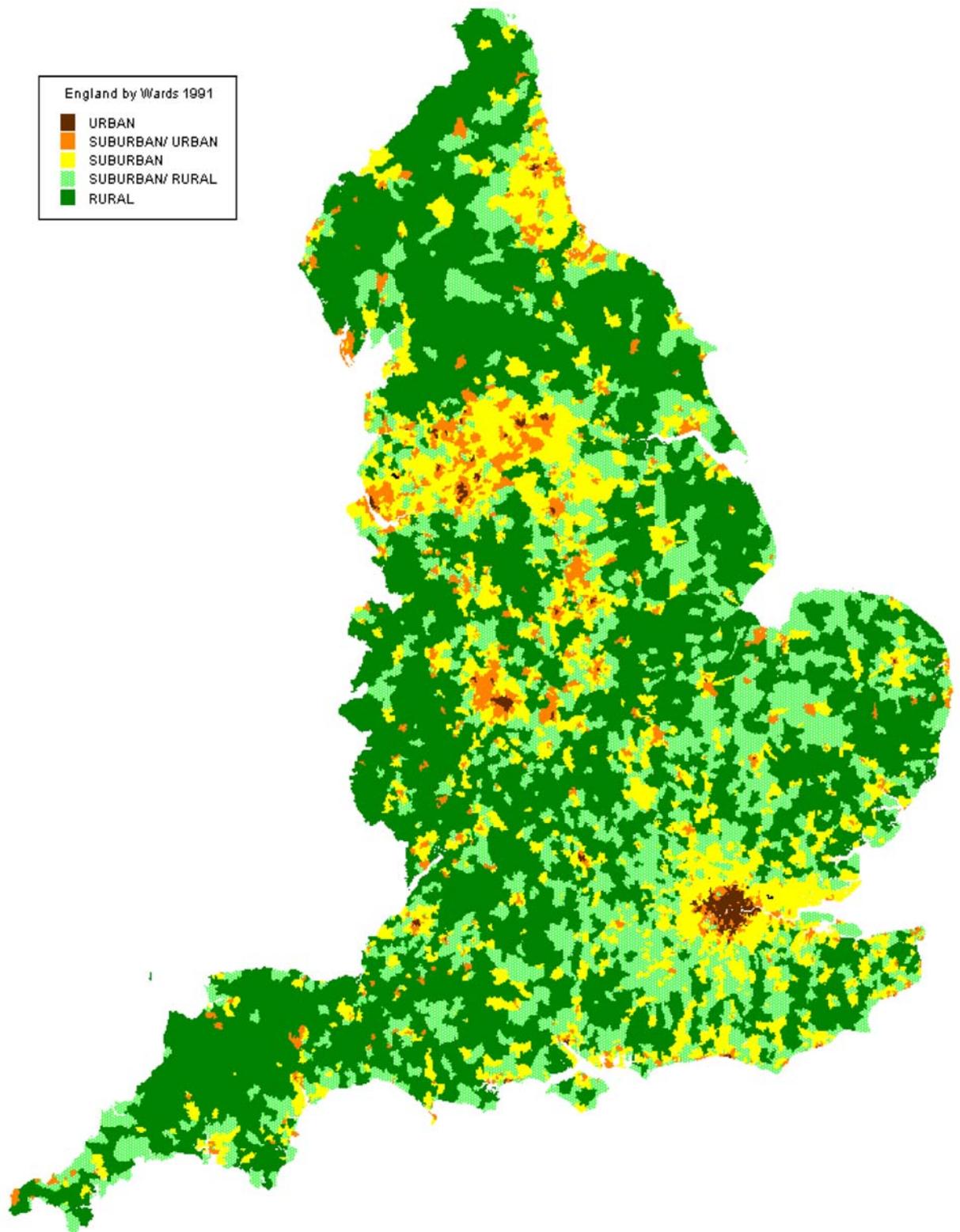


FIGURE 1: ENGLAND SHOWING THE DETR 1991 CLASSIFICATION OF WARDS BY THEIR LAND USES

Suburban

Professor Echenique calls the 'suburban' land use class 'the proper suburbs of the majority of towns'. Such places are home to 21.5 million people (44% of the population) and lie within wards that cover about 17% of the land of England. Houses in them are mostly semi-detached and are found in the outer parts of all towns and cities. (Figure 2.)

DETR criteria used in identifying such places include: 'edge of town, outer suburbs, small towns, leafier suburbs, mixed economies, better-off manufacturing, and classic commuters'.

Suburban/rural

About 7.9 million people (16% of the population) live in 'suburban/rural' and occupy a small part of wards that cover 23.5% of the land of England. Most of them live in detached houses located sometimes on their own but usually in large and small, low density estates adjacent to towns and villages. Such places are interspersed by large stretches of open land and, in this report, are called the 'exurbs'. (Figure 3.)

DETR criteria for them include 'concentrations of affluence, town and country, green belt and retirement areas'.

Urban

As has been noted, the data set for the 'urban' land use class has a specific shortcoming. Because 80% of the people living in it are Londoners, findings related to it 'are not particularly representative' of the urban populations of cities such as Manchester, Birmingham, Nottingham and Bristol. However, as the Commission is particularly concerned with **suburban** and **suburban/rural** populations, this bias is not in itself a problem.

Suburban/urban & Rural

Suffice it to say that 'suburban/urban' is found mostly in northern industrial towns, in the manufacturing districts of the West Midlands, in declining seaside resorts and in the older parts of Greater London. Few would regard all such places as typical suburbs. 'Rural' is exactly what its name suggests – small country towns, villages and open country.



FIGURE 2: SUBURBAN ENGLAND



FIGURE 3: SUBURBAN/RURAL ENGLAND

4 Findings

Population

Most people in England live in suburbs. Twenty-one million live in ‘proper’, or mainly 20th century, suburbs and account for more than 4 out of 10 of the population. During the past 20 years such suburbs gained 1.3 m or 40 per cent of all population increase in England. Forecasts for the 20 years to 2021 suggest that growth will slow to 0.75m or only 18 per cent of the total. This substantial fall is because of a shift in growth outwards to the ‘exurbs’ and, as a result of urban regeneration and foreign migration, inwards to urban districts. Both exurban and urban districts are, as a result, expected to see population increases of over a million. (Figure 4)

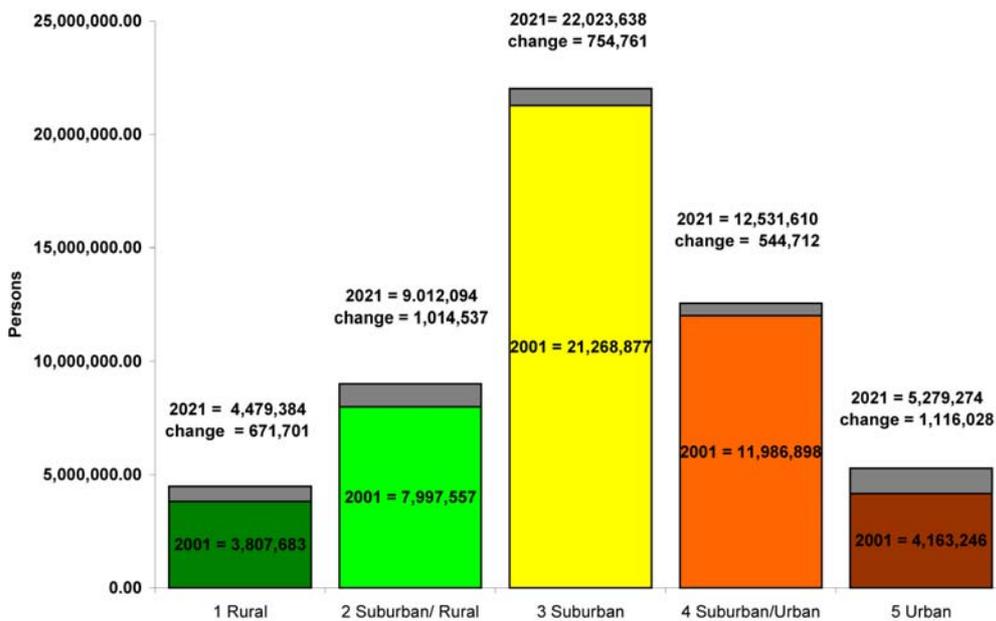


FIGURE 4: POPULATION CHANGE IN ABSOLUTE NUMBERS 2001 TO 2021

Land uses and commuting

Suburbs do not contain just houses but offices, factories, shops and all other activities as well. Many people both live and work in them. Only a minority commutes to city centres.

Different kinds of people

Residents of suburbs are of all kinds – rich and poor, old and young, foreign and native born, car and non car-owning. About one in six is over 65 with a slightly higher proportion of elderly people living in exurbs than in proper suburbs. Furthermore, compared with urban residents, they are more likely to work in manual or unskilled jobs but less likely to be unemployed.

Housing expenditure

When the researchers looked at weekly housing expenditure and at the price of 4/5 room houses they found little variation between levels in suburban and exurban districts but higher levels in 'urban' areas. Although the 'urban' data are dominated by costs and prices in Greater London, the big differential no doubt helps to explain why, every year since 1981, more **native born** Britons have moved out of the capital than have moved in. Further work is needed to establish whether the same relationship is present in house prices in other cities.

Houseroom

The study confirms the well-known phenomenon that the further from a city centre people live the more rooms they enjoy.

Density

Notwithstanding the prospects of population growth in all districts, very little change is forecast in suburban gross densities (total area divided by total residents). This underlines the spaciousness of the suburbs, with their gardens, heaths, commons, playing fields and protected green belts, and contrasts with conditions in 'urban' districts (in which Greater London is dominant) where already high densities are rising and forecast to rise to 100 persons per hectare by 2021.

Travel

Wherever they live, people **on average** make about 1,000 trips a year, a total that includes walks. However, high income individuals travel over three times the distance of the poorest, and the further from city centres people live the less they go by foot and public transport and the more by car. In effect they travel faster and further.

Travel by car

The average suburbanite uses a car for 64% of all journeys and goes by bus or train for only 8%. Exurbanites drive even more, for 69% of their journeys, but, even so, about one in four of all journeys in the suburbs and exurbs is done on foot. The average suburbanite travels 6,351 miles a year. Those in the more spread out exurbs do 7,957 miles. Urban residents, by contrast, average only 5,493 miles.

Households without cars

In 2001 one quarter of suburban households had no car. And about one in five in the exurbs was without one. This compares with 47 per cent without cars in urban areas.

Commuting time

Travelling to work in the suburbs (counting all forms of travel) takes, on average, 25 minutes and is done at a door-to-door speed of 15 mph: in the exurbs people travel slightly further, go at 19 mph and take one minute less. This compares with times of 34 minutes for residents within big provincial cities and 43 minutes in London where resident commuters average 10 mph.

The cost of travel

On average people in the suburbs and exurbs spend just over £25 per week on all forms of travel while those in urban areas (with their London bias) spend £26.62. The lowest costs of all occur in the car-dependent exurbs – presumably because of low insurance rates, free parking and uncongested, fuel-efficient driving. Professor Echenique notes that ‘there is no incentive to live at higher density to reduce the cost of travel’.

Motoring costs

Motoring costs per person are similar for all suburban areas. They are lowest overall in urban areas because fewer households own cars, while those that do, use them less and often carry passengers. However, a different picture emerges from expressing motoring costs per person per mile. Here drivers in the exurbs have the lowest costs while those in the proper suburbs pay about a third more. Urban costs per mile are higher still because of such expenses as insurance and parking charges and because fuel consumption at low speeds is high. This leads the researchers to conclude (controversially) that ‘there is no significant difference in terms of transport sustainability between urban and suburban areas’ (Figure 5).

Forecasts of traffic

Looking at the two decades up to 2021 the continuation of recent trends would lead households with no car to decline and to a proportional increase in those with two cars. Distance travelled per person per year could grow by nearly 1,000 miles – most of it car travel. Suburbs, which already see about 40 per cent of all the road travel in England, may see it to grow by over one fifth. Exurban districts, which are much more spread out, are forecast to see an even higher rate of traffic growth (35%) but from a lower base. Together the suburbs and exurbs are forecast, over the two decades to 2021, to see nearly 60 per cent of all road traffic growth in England (Figure 6).

Congestion

Work for the Commission by Professor Stephen Glaister and Dr Daniel Graham indicates that traffic congestion is already present on many suburban roads and that, in the absence of changed conditions, it can be expected to increase.* Professor Echenique confirms this view and estimates that, with more people owning more cars and trying to travel further, commuting in suburbs and exurbs is likely to take up to 40 percent longer. This means that a typical 25-minute suburban commute would, by 2021, increase to 35 minutes. Will this reduce the traffic growth forecasts set out in the previous paragraph? It seems likely.

* ‘Transport Pricing: Better for Travellers’ Independent Transport Commission, June 2003.
www.trg.soton.ac.uk/itc

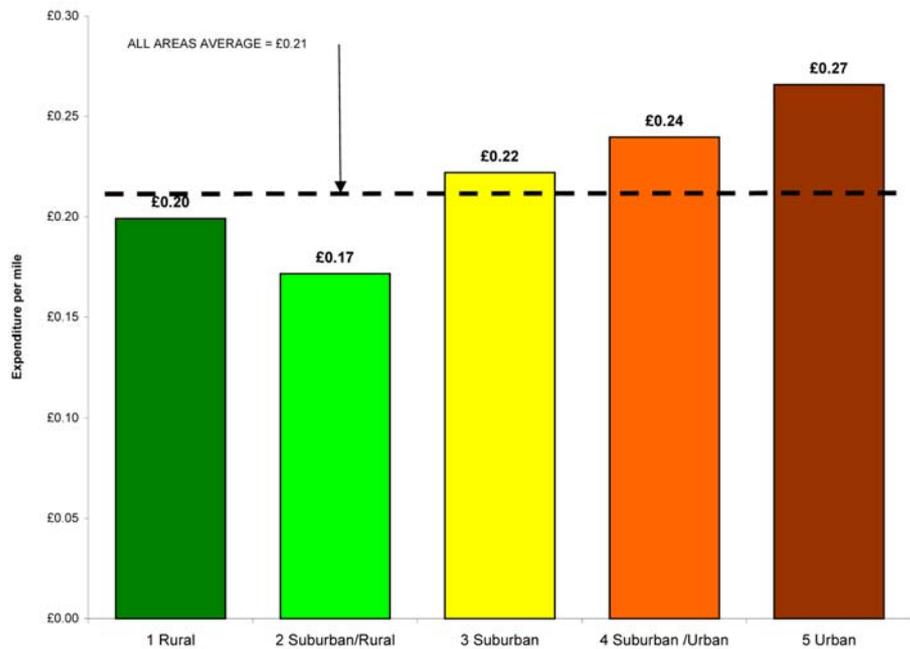


FIGURE 5: MOTORING EXPENDITURE PER PERSON PER MILE IN 2001

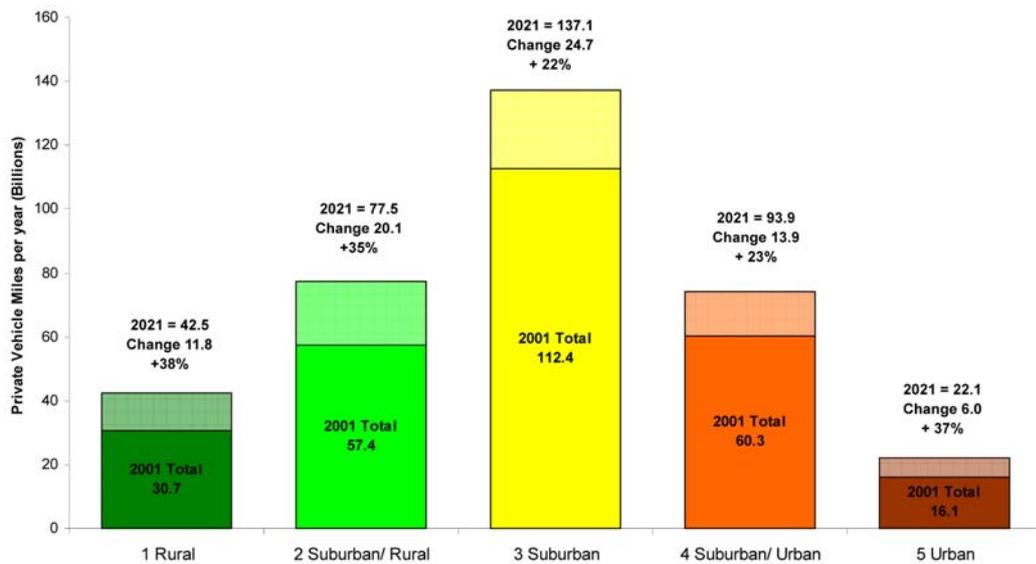


FIGURE 6: FORECAST OF GROWTH IN PRIVATE VEHICLES MILES 2001 TO 2021 (TRENDS)

5 Discussion

The suburbs in 2021

This study breaks new ground. Its most striking findings concern the huge scale of England's existing car-centred suburbs, the extent of their expected growth and the traffic and travel implications of catering for over 22 million mostly car-dependent suburbanites in 2021. Equally important is the prospect of an additional 1 million residents in the more rural, but highly car-dependent, 'exurbs' – taking their total population to over 9 m. ***Much of the population growth and most of the traffic growth in England up to 2021 will thus be in the suburbs and exurbs.***

This raises transport policy issues that have hitherto been largely neglected. Inter-city road and rail investment and the problems of town centre traffic have, up until now, tended to dominate transport policy. The transport problems of existing and future suburbs have received scant attention. It is clear that this must now change.

What accounts for the popularity of the suburbs?

Another striking finding, and one that is particularly applicable to the London region, is that residents in the suburbs get more house room, more space outdoors and **more travel for their money** than those living closer to city centres. Exurbanites, in particular, get more space indoors and out (bigger houses at lower densities), spend less per person on housing and travel, and **get to work more quickly** than their opposite numbers in cities. Add the benefit of driving on often less congested roads and it is clear that the satisfactions of living in the exurbs are considerable. These findings lead Professor Echenique and Mr. Homewood to conclude that the desire for exurban lifestyles is rational, underpinned by economics and likely to persist.

Such findings raise many issues.

- Can an 'urban renaissance' co-exist with the attractions of the suburbs?
- How do the full costs of urban and suburban living compare?
- How will congestion affect living in the suburbs?
- Can exurban living be made more sustainable?

Suburbs and an urban renaissance

Official forecasts suggest that, as urban regeneration gathers momentum, the population of the inner parts of cities will grow faster during the two decades up to 2021 than during the previous 20 years. The 'urban' land uses (city centres and their adjacent districts) which gained only 340,000 people in the two decades up to 2001 are forecast to gain 1.1m up to 2021. Such a shift in demographic trends will depend on some existing inner city residents deciding to stay put, some suburbanites being attracted to city living and, especially in London, migration from abroad.



Running parallel with this urban renaissance (which is backed by government policy) will be more extensive suburban and exurban growth. Will the two be in competition or will a kind of natural selection attract younger and recently retired people to live downtown while those with children and the elderly opt for the suburbs? Amongst the deciding factors could be relative housing costs, what types of job are available and the environmental quality of existing and regenerated inner cities. How people perceive the opportunities offered by the two kinds of location could also be influential. This is an important field for study.

The costs of urban and suburban living

Professor Echenique's finding that living and travelling is less costly in the exurbs than in inner cities rests partly on 'urban' data that is biased by Greater London's high housing and public transport costs. Is the difference between urban and exurban costs equally pronounced in, say, Merseyside or Tyneside? It would be helpful to know.

Social costs are, of course, important and should, in policy analysis, be added to private costs. Yet since it is private and not social costs that determine behaviour and drive the housing market, the seemingly favourable cost of exurban living, though slight, is significant (Figure 7).

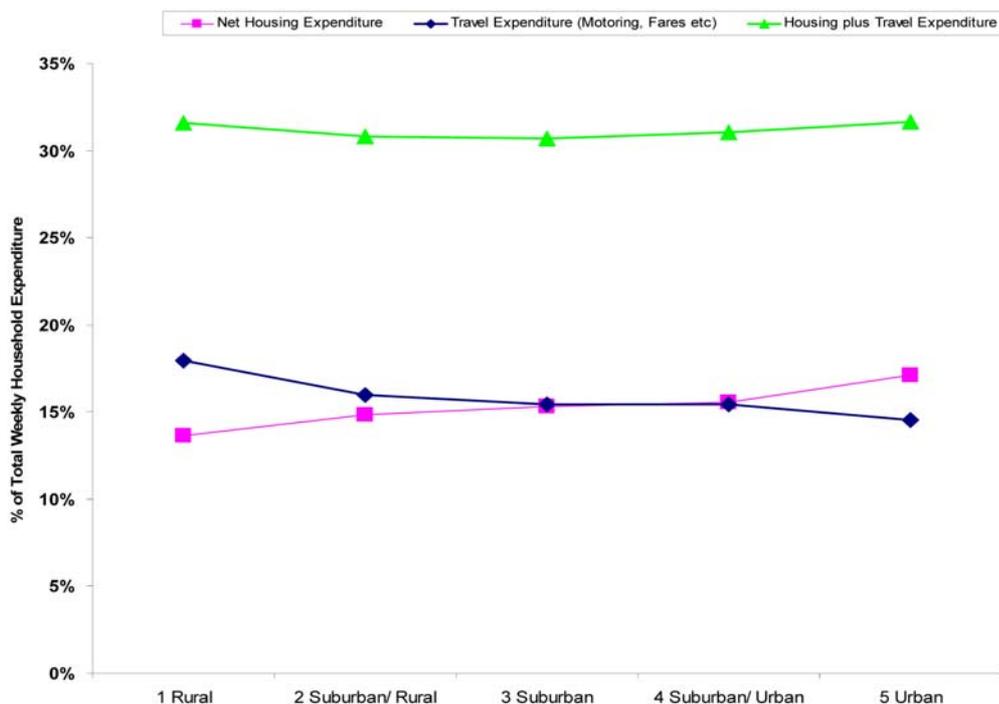


FIGURE 7: BREAKDOWN OF HOUSEHOLD EXPENDITURE ON HOUSING AND TRAVEL IN 2000

How travel costs are perceived could also be important. Professor Echenique shows that, if you live in the exurbs, your weekly travel costs (all modes) are lower than if you live in the inner city. Your cost per mile is lower too so you have a sense of getting better value for money. Furthermore most of your travel is by car, the preferred mode for the average English person. The attractiveness of this package should not be underestimated.

But perhaps this advantage will, in future, move in favour of city living. Might rising fuel costs change the balance of advantage? Much will turn on the success of the car makers, pushed by EU climate change policy and pulled by market pressures, in delivering thrifty vehicles. Not only is it likely that they will succeed but those in the suburbs can always buy more economical cars.

Urban travellers, by contrast, seem likely, as in the recent past, to face rising fares. (Department for Transport figures for the period 1974 to 2003 show the cost of motoring falling by 5 per cent while the cost of bus tickets rose by 84 per cent.) They could also face road user charges although they might find them less burdensome than the more car-dependent residents of the suburbs.

This complex economic and behavioural field requires further study. Suffice it to say that more crowded roads and, perhaps, their antidote - congestion charges – could, if introduced throughout metropolitan regions, add to the attractions of moving out to less crowded rural districts.

Congestion

Over the two decades up to 2021 incomes in the suburbs are forecast to rise and the population to increase by three quarters of a million. Given that 40 per cent of all private car mileage in England is already driven in the suburbs, and that this is forecast to grow by nearly a quarter, much heavier suburban traffic is in prospect. Out in the more spacious exurbs rising incomes plus a million additional residents could, likewise, result in a 35 per cent increase in car traffic.

Hitherto suburban and exurban traffic growth has been accommodated by a mix of local bypasses, orbital motorways like the M62 and the M25 and other local schemes. Yet work for the Commission by Professor Stephen Glaister and Dr Dan Graham makes clear that congestion is already a problem in such districts and will get worse. Professor Echenique supports this view. Should motorway capacity be substantially increased? Could a mix of school and company travel plans help to take the strain? Can the quality of bus services in counties like Cheshire and Surrey be raised to a level that would attract car drivers? Or, as congestion gets worse, will some car drivers, as in inner London, begin to change their behaviour and drive less? Finally, if variable road user charges can be made to work, how would they effect suburban economies and the criss-cross pattern of suburban road travel?

The Commission is not in a position to answer such questions. What is clear is that transport policies tailored to these emerging suburban conditions are urgently needed.

Reducing transport emissions - sustainability

It is under the heading of sustainability that Professor Echenique makes his most controversial points. The conventional view is that those who live at high densities, because they can accomplish many of their journeys on foot or by bus and train, use less fuel, and so emit smaller volumes of greenhouse gases, than those who live and drive in the suburbs. The study, which shows that residents in 'urban' land use classes (mostly London) spend less on fuel, and therefore emit fewer greenhouse gases, than those elsewhere, supports this view. However, on the basis that fuel consumption per person per mile is lower for the exurbs than elsewhere, Professor Echenique goes on to suggest that "there is no difference in....transport sustainability between 'urban' and 'suburban' areas".

This is a controversial proposition. Given, as the data shows, that those who live in the suburbs and exurbs burn substantially more fuel than those living further in, they seem bound to be emitting more pollutants. But could it be that they also have more job opportunities? Is it significant that, when it comes to work, they can either travel by train to a nearby city centre or drive in all directions to jobs in the suburbs?

This seems to have two important implications. First, ways need to be found, as Mayor Livingstone has in central London, to thin out urban road traffic so that it operates more efficiently. Second, it is necessary to recognise the dominance of suburban living and its explosive growth and to ensure that those who live it (both now and in the future) use highly efficient cars and make the minimum practical use of them.

6 Conclusions

The Independent Transport Commission, having reviewed the findings of the Echenique and Homewood research, and other sources, has come to a number of conclusions.

- People have been moving from cities to suburbs for as long as there are records. In 1816 Jane Austen noted the desirable airiness of Bloomsbury – then on the fringes of London.
- Twenty one million people in England live in suburbs and another eight million live in more loose-knit 'exurbs'. The English are a suburban people. Six out of ten live in suburbs or exurbs.
- Suburbs and exurbs are not predominantly dormitories for city centre office and shop workers. Most of their residents live, work and play in the suburbs and visit city centres only from time to time.
- Suburbs, being vibrant mixes of homes, universities, research labs, shopping malls, business parks, airports and hotels are essential parts of the country's economy. They provide today most of the services found in cities in the past.
- Having been designed around lorries and cars, suburbs could not exist without them. The average suburbanite uses a car for 64% of all journeys and goes by bus or train for only 8%. The remaining journeys are made on foot. The eight million exurbanites make 69% of all trips by car and only 4% by public transport.
- Commuting is quicker in the suburbs than in cities. It takes residents within the suburbs and exurbs 24/25 minutes, 34 minutes for residents within cities like Bristol and Birmingham and 43 minutes for those living and working in Greater London.

- Those in the exurbs spend on average slightly less on travel than those living anywhere else. They also enjoy more indoor and outdoor space than those living closer to city centres. This points to a rational explanation for the movement of people out of cities.
- Population in the suburbs and exurbs is forecast to be 31 million by 2021, an increase of 1.75 million over twenty years and 43% of the total growth for England. Traffic, propelled by more people, more cars, higher incomes and longer journeys, is expected to grow faster and to account for 60% of all traffic growth for England.
- With more people owning more cars and trying to drive further, congestion in the suburbs and exurbs will increase and commuting is forecast to take 40% longer. By 2021 a commuter now taking 25 minutes could take 35 minutes.
- The number of old and very old people living in the suburbs and exurbs – many of them drivers – is expected to grow. How will they get about?
- Cars are the dominant form of travel in the suburbs and exurbs and will continue to be so. Given this prospect and the risk of climate change, fiscal and land use policies are needed to persuade suburban residents to buy ultra economical cars and minimise the use of them.
- Better bus services are the key to improved inter-suburban public transport but, with car use being so dominant, it is more important to modify driver behaviour and slow traffic growth. Policy options include company and school travel plans and suburban road user charging.
- The suburbs and exurbs have hitherto been neglected in transport policy. Governments have concentrated on improving access to city centres and on long distance inter-city road and rail routes. Land use and transport policies tailored to the suburbs and exurbs are needed urgently.

Work in progress

As those who follow the Commission's work will know, this is the second investigation of land use and transport interactions. (The first was 'The Land Use Effects of the 10 Year Plan' in which Professor Sir Peter Hall and Dr Stephen Marshall revealed the tension between an 'urban renaissance' and heavy investment in radial motorways and railways.) Current work includes 'Why Do We Travel?', an examination of cultural and social factors underlying the contemporary travel explosion, and, with Professor Stephen Glaister and Dr Dan Graham of Imperial College, London, follow up studies of the effects of variable road user charges. This work will take forward earlier research into the effects of road user charging by Professor Glaister which was published in June 2003. 'Transport Pricing: Better for Travellers', the Commission's policy analysis, the study by Professor Glaister that underlies it, and the Commission's other studies can be found at www.trg.soton.ac.uk/itc.



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