



Move Free

Why and how making it easy to get about towns and cities in as many ways as possible boosts prosperity, high streets and freedom, happiness, health and house-building

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Contents

Executive Summary	6	3. Examples of getting it right	46
1. Introduction: Twin Inventions	8	Altrincham: curing a town by letting the people back in	47
2. Why movement matters	14	Pontevedra: boosting movement, health and prosperity	49
Prosperity: how more movement makes us richer	15	Lancaster, California: going on a road diet	51
Purchasing: how more movement makes high streets more successful	22	4. Conclusion: why and how to fight for better places	52
Place: how more movement makes us happier and healthier	28	Bibliography and interviews	54
People: how more movement makes us more free	33		
Property: how more movement can make more homes	41		

Executive Summary

- *Twin inventions.* In a quirk of history, the 'safety bicycle' and the internal combustion engine car were invented within the same few months in 1884-5. The bicycle's success was more immediate (there was an 1890s 'bike boom'). However, the success of the 'slower burn' invention, the car, has been far more radical and profound for our towns and cities. Now people increasingly think this has had disadvantages as well as advantages. Are they right?
- *Prosperity: how more movement makes us richer.* The more we can make it easier to move about from any one point to any other point and the more we can limit the polluting downsides of movement to others then the more prosperity the citizens of a town or city can generate. More movement, more pleasingly conducted between more places generates more value for more of us and makes for more prosperous places and economies. This can be measured through land values: **more walkable neighbourhoods are typically worth between 10 and 55 per cent more in controlled studies.** In towns, cars are just not very good at moving lots of people around. The same street lane can move 21 per cent as many people by car as it can move bike.



- *Purchasing: how more movement makes high streets more successful.* Town centres and high streets that flourish with the best commercial performance are the ones that are safe and easy to reach and not entirely dependent on cars or

dominated by fast and polluting vehicles once you are there. Retail sales increase by an average of 30 per cent following projects that improve pedestrian, cycling or public transport access to shops.



- *Place: how more movement makes us happier and healthier.* Physical activity, such as walking or cycling, is positively correlated with happiness, health and wellbeing and is most effective when it is deeply integrated into our daily lives for example in how we move about to get to work or school. This is particularly true as we age. 10,000 steps a day reduces the risk from dementia by 50 per cent. Dirty air from cars and their tyres is also very bad for us, causing around 40,000 early deaths in the UK each year.



- *People: how more movement makes us more free.* Cars empower and liberate their users to move around with comfort, ease and relative safety. However, they can also diminish liberty. They are ineffective and inefficient ways of moving around cities, towns. One of the greatest liberty losses of the past century has been the child's loss of liberty to move around his or her neighbourhood, a 97 per cent reduction in one study from several miles to almost nothing at all. This has been bad for children and their parents.



- *Property: how more movement can make more homes.* By creating more places in which it is easy to get about by bike, foot or public transport as well as by car and by retrofitting existing places to be like this, we can help create more homes on less land (the gift of 'gentle density') than by the infrastructure-heavy route we are currently taking. On the same amount of land that was used for greenfield development last year we might have built not 112,240 homes but 220,471 homes if we had developed at an historic 'gentle density' of, say, 55 homes per hectare instead of 28.



- *Conclusion: why and how to fight the fight for better places.* Cars are great. Cars are awful. Cars can boost liberty. Cars can destroy it. Cars can help the economy. Cars can undermine it. It is largely a question of where. They add most value in areas of lowest density. They add least and do most harm in areas of higher density. When it comes to freeing up our streets, our advice to decision-makers is:

- add choice and let people decide with their hearts and heads;
- think about place not just about movement; and
- find gradualist 'win-win' processes for improving places with the consent, even with the active leadership, of local neighbourhoods.



1. Introduction



Twin inventions

In 1884 the brilliant 30 year-old son of a gardener from Walthamstow in north east London changed history. Working in Coventry with his uncle and cousins, John Kemp Starley, invented the safety bicycle with its chain drive, 26-inch wheels and diamond-shaped frame. Put on sale the following year, it rapidly eclipsed and then surpassed previous bicycle designs that had been essayed over the previous 60 years. Penny Farthings had been as ridiculous and impractical as they looked, the prerogative of the bold and the 'boy racer.' However, the 1890s was the age of the international 'bike boom.'

The early bicycle was a harbinger of liberty, particularly for children and women. The American women's rights campaigner, Elizabeth Cady Stanton, wrote in 1896:

*'Let me tell you what I think of bicycling. I think it has done more to emancipate women than anything else in the world. It gives women a feeling of freedom and self-reliance. I stand and rejoice every time I see a woman ride by on a wheel — the picture of free, untrammelled womanhood.'*¹

The freedom and convenience of bicycles certainly opened up more opportunities for women to work, allowing more women to enter the labour market and giving greater bargaining power to those already employed. But one person's liberty is always another's frustration. The bicycle also engendered a type of moral panic. Not all were comfortable with the new freedom that bicycles gave women. From a pseudoscientific health risk such as 'bicycle face' to fears of immoral behaviour, the bicycle was a concern to many.² In America, the new disruptive transport technology was termed 'evil' and 'dangerous.'

An 1894 *New York Times* article, fetchingly entitled 'Lunacy in England,' warned that 'bicycle riding, if persisted in, leads to weakness of mind, general lunacy, and homicidal mania....The woman who rides the bicycle manifests her mental unsoundness by her dress'. In some cities (for example, Columbus, Ohio)

local legislators even limited bicycles' speed to eight miles per hour.³ Freedom was not for everyone.

Innovation often comes in bursts. In the very same year that John Kemp Starley was working on his revolutionary Rover Safety Bicycle, the English inventor, Thomas Parker, built the world's first electric car. The next year, in 1885, in the German city of Mannheim, the engineer, Carl Benz, built the first workable internal combustion motor car. And thus, not just in the same decade but within the same few months, were born the twin inventions with the potential to liberate the road-weary traveller from the physical constraints of his own legs or the monetary constraints of needing to pay for a horse.



The invention of the bike was liberatory for women and children in particular

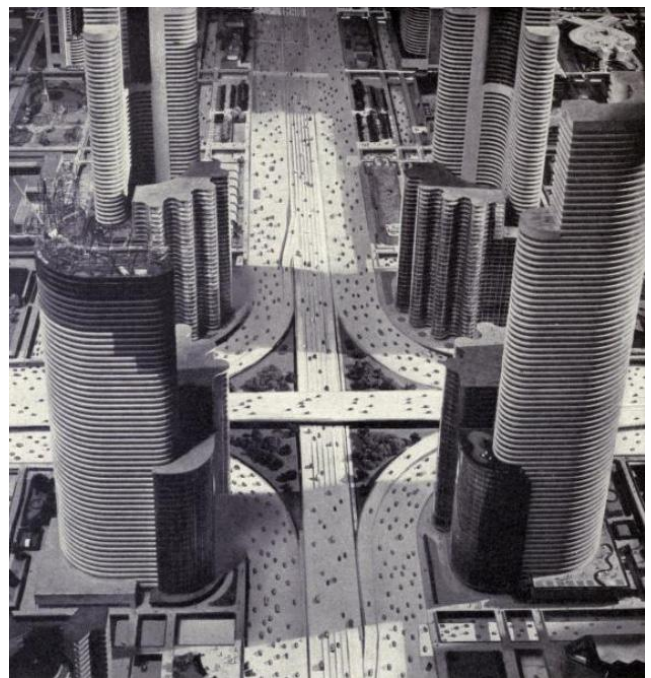
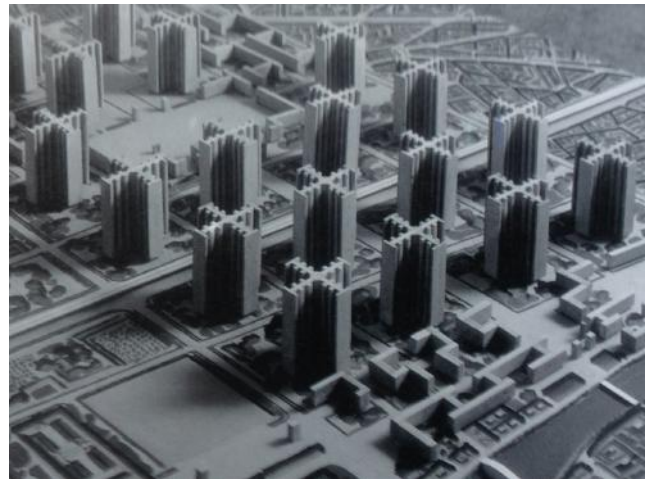
Of these two seismic inventions, the safety bicycle took off more quickly. There was no 'car craze' to match the 'bike boom' of the 1890s. In 1900, there were probably only 100 cars in Britain.⁴ This was because the bike was cheaper and less disruptive of existing streets. It was also born more fully formed. Within a few years, improvements to the frame and the addition of pneumatic tyres created a bicycle that, other than the lack of gears, was to

all intents and purposes technologically identical to the machine we ride today. The car had a lot more evolution to do and was a lot more expensive. If the emblematic bicycle rider of Edwardian literature was the middle-class commercial traveller or office clerk, the quintessential Edwardian driver was Mr Toad of *Wind in the Willows*, young, rich and abrasive, careless of others and thoughtless for their safety. In 1914 when the armies of World War I marched to war, they travelled by train or marched on foot. Only their generals had staff cars.

As any period street scene photograph will tell you, early twentieth century towns and cities in Europe and North America were what is now known in the jargon as 'multi-modal.' In plain English, it was possible to get around in many ways; on foot; by horse; by cart; by bicycle; or (if you were rich, bold and eccentric enough) by car.

Mid-century, and particularly immediately before and after World War II, this began to change. As post-depression or post-war job-creation schemes, nation states commissioned wide, fast and (initially) largely empty roads between towns and cities: *autobahns*, *autoroutes*, motorways and freeways. In parallel, and boosted by military innovation, cars got better, faster and, crucially, much cheaper. Bedazzled by the speed with which cars could get from City A to City B, town and city government began to redesign not just inter-city trunk roads, but intra-city streets to be primarily for cars, not carts, bikes or people. City roads were widened and straightened, curves were splayed and old buildings demolished so that they might be replaced with wider roads for cars and places to park them.

Modernist, one might better say 'traffic-modernist,' architects, provided intellectual justification. Hypnotised by the joy of driving on empty 1920s roads, and sometimes sponsored by car-manufacturers, they proposed that historic towns and neighbourhoods should be razed to the ground. Most famous was the Swiss architect, Le Corbusier, who, funded by the car producer, Gabriel Voisin, dreamed of sweeping away the blocks and boulevards of Paris and replacing them with 60 storey concrete towers, zoned by social class and linked by fast roads in open parkland. As he put it; 'the technocratic elite, the industrialists, financiers,



Two cities with one vision: the Plan Voisin for Paris, 1925 (above) and the Futurama model for New York, 1939 (below) ²⁶

engineers, and artists would be located in the city centre, while the workers would be removed to the fringes of the city.' Urban streets and squares essentially designed for walking or riding should be replaced with flyovers, and city centre motorways segregated from pedestrian walkways and underpasses. 'The street,' he wrote in 1929, 'wears us out; it is altogether disgusting. Why, then, does it still exist?'²⁵ Thanks to the car, the city was going to change profoundly and for ever.

Unsurprisingly, across the Atlantic the General Motors car manufacturer found this vision very attractive. In 1939 they paid the fashionable

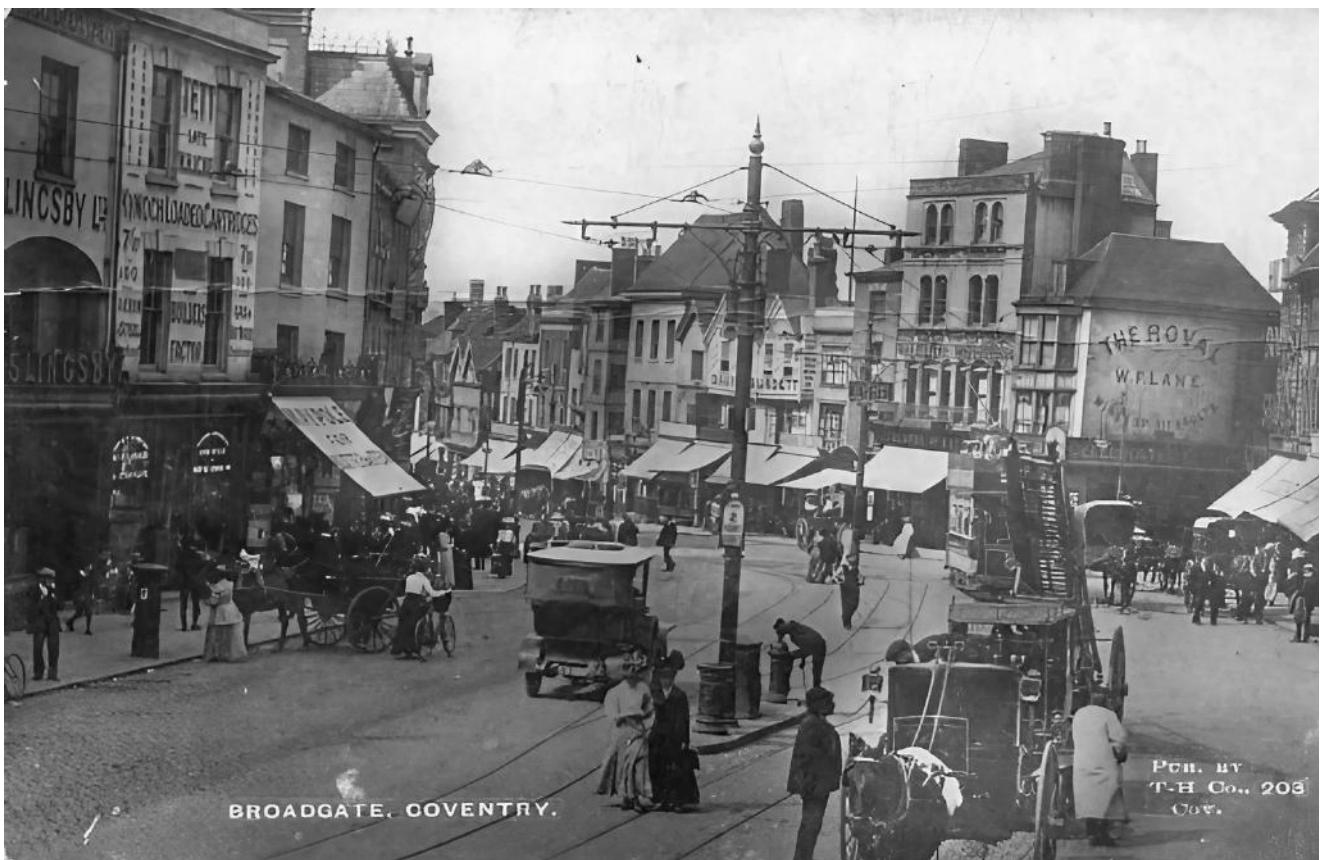
designer, Norman Bel Geddes, to apply the same vision to a one-acre model of an imagined future New York. It was called Futurama with high towers and motorways 18 lanes wide. If the more immediately successful transport invention of the 1880s, the safety bicycle, had been liberating with little immediate effect on historic towns and cities, by the 1920 and 30s the 'slower burn' invention, the car, promised to be far more radical and profound.

No British city tells the story of the change that was to come better than Coventry, early home to both the British bicycle and motor industries. Three years after crafting the world's first safety bicycle in Coventry, John Kemp Starley constructed there one of the world's earliest electric vehicles - a battery-powered tricycle.⁶ His firm, *Starley & Sutton Co*, rebadged itself as Rover and by 1902 was manufacturing the country's first motorbikes, the Rover Imperials. Other firms copied. The Daimler factory was established in 1896, and Britain's very first motorcars were manufactured near the city's well-preserved medieval town centre. Although it now seems incredible, Coventry was to become the

second-largest car manufacturing city in the world.⁷ It was the innovative Silicon Valley of the early British motor industry right next to a medieval cloth town which the English writer, J. B. Priestly, wrote in 1934 was so attractive that 'it might have been transported to Italy.' The irony struck him. He added:

'These picturesque remains of the old Coventry are besieged by an army of nuts, bolts, hammers, spanners, gauges, drills, and machine lathes, for in a thick ring around this ancient centre are the motorcar and cycle factories, the machine tool makers, the magneto manufacturers, and the electrical companies.'⁸

However, in the age of total war, the concentration of Coventry's factories made the city a tempting target for the blitzing Luftwaffe. A series of raids from August 1940 to April 1941 damaged two thirds of the city's buildings, including the cathedral, and destroyed 4,300 homes. Many historic buildings survived, however. In 1945 the city still had over 120 medieval timber houses. Not for long. Coventry's



People, bikes, buses and cars sharing the street. Broadgate, Coventry 1917

first city architect, Donald Gibson, appointed at the dangerously young age of 29, greeted the bombs with shameless delight. He wrote that the blitz was 'a blessing in disguise. The jerries cleared out the core of the city, a chaotic mess, and now we can start anew.... We used to watch from the roof to see which buildings were blazing and then dash downstairs to check how much easier it would be to put our plans into action.'⁹

Unsurprisingly, for the city that *made* cars, the vision was for a future Coventry *for* cars. Gibson was clear that 'it would be fitting for the centre of the motor car industry to give a lead.' As George Orwell nearly put in his 1945 novel, *Animal Farm*, 'four wheels good, two wheels bad.' The Coventry of the pedestrian and the cyclist was to be forgotten.

Many of the surviving historic buildings were demolished and the quilt of medieval streets largely cut away. Most of their replacements have proved crude, faceless and unpopular. Local newspaper reports from 1945, when a 'Coventry of the Future' exhibition was staged, suggest that most agreed with the plea of one newspaper correspondent: 'give us back Coventry as we knew it.' Above all, there is just less going on in the much less intense city centre than of old. And the centre is surrounded by a choking ring road. Few can or dare to walk or cycle across the city as was possible in pre-war Coventry. Meanwhile, the 'boxland' warehouse stores beyond the ring road produce far less economic activity or business rates per hectare. (For example, in an American study, an out-of-town Walmart raises tax of \$6,500 per acre, while a town centre building raises a hundred times more tax per acre: \$634,000 per acre.¹⁰) Often 'boxland' is a net cost to towns and cities. Servicing them costs more in public subsidies or services than they raise in tax revenue.¹¹

Coventry, more than any other historic British city, was remade for the age of the motorcar. But if the city was kind to the car industry, the car industry did not return the favour. The car factories have all closed, and the city has not thrived as it did of old. Production bounced back after the war but then declined sharply, and by the 1980s unemployment was 20 per cent, well above the national average.¹² The city's population fell until the 1990s, losing 46,000 residents over 20 years.¹³ In the early 1960s,

wages were 24 per cent above the UK average.¹⁴ They are now 25 per cent below.¹⁵ Coventry was one of the country's wealthiest cities. It now has some of the most-weighty burdens of deprivation and poor health.¹⁶ Thirty per cent of the city's neighbourhoods are among England's 20 per cent most income deprived places.¹⁷

Modern Coventry is not without its merits. Most admire Basil Spence's new cathedral (as the architectural historian, Gavin Stamp, put it 'surely the last modern building that the general public queued to see').¹⁸ However, as *The Economist* journalist, Daniel Knowles, has observed, 'nobody would compare visiting Coventry to being transported to Italy now.'¹⁹

The future of the future is always changing. Modern Coventry's vision of its own trajectory has certainly come full circle. Instead of a city to drive round at speed, the city council is now committed to a city of walking and cycling. The city has a punchy plan to encourage walking and cycling, and the wider West Midlands Combined Authority is investing £283 million over 10 years.²⁰ The 'Starley network' (in honour of John Kemp Starley's invention of the safety bicycle back in 1884) is to be a 500-mile region-wide cycle network.²¹ Three major new cycle routes are planned for Coventry itself. The town centre is being regenerated, with ambitious proposals for the city centre that will replace or upgrade some post war brutalist architecture, much of it low rise with rooftop car parks. Crucially, the plans bring people back into the heart of the city, with a target of over 1,500 homes as well as shops and offices.²² This is a reversal of the strict post war zoning of the city which all but banished homes to beyond the central ring road.²³ The Twentieth Century Society, guardian of the mid-century traffic modernist vision, is not amused commenting that, 'the proposed 15-acre City Centre South redevelopment plan would obliterate much which is special about the heart of the city.'²⁴

An ambitious vision for encouraging cycling has been set out nationally. The Government's 2020 White Paper, *Gear Change*, set as an aim that half of all short urban journeys in England should be walked or cycled by 2030, up from 41 per cent in 2018.²⁵ And in 2022 the Government created 'Active Travel England'

with an aim to 'make walking, wheeling and cycling the preferred choice for everyone to get around.' £2 billion is to be spent on so-termed 'active travel' over the next five years.

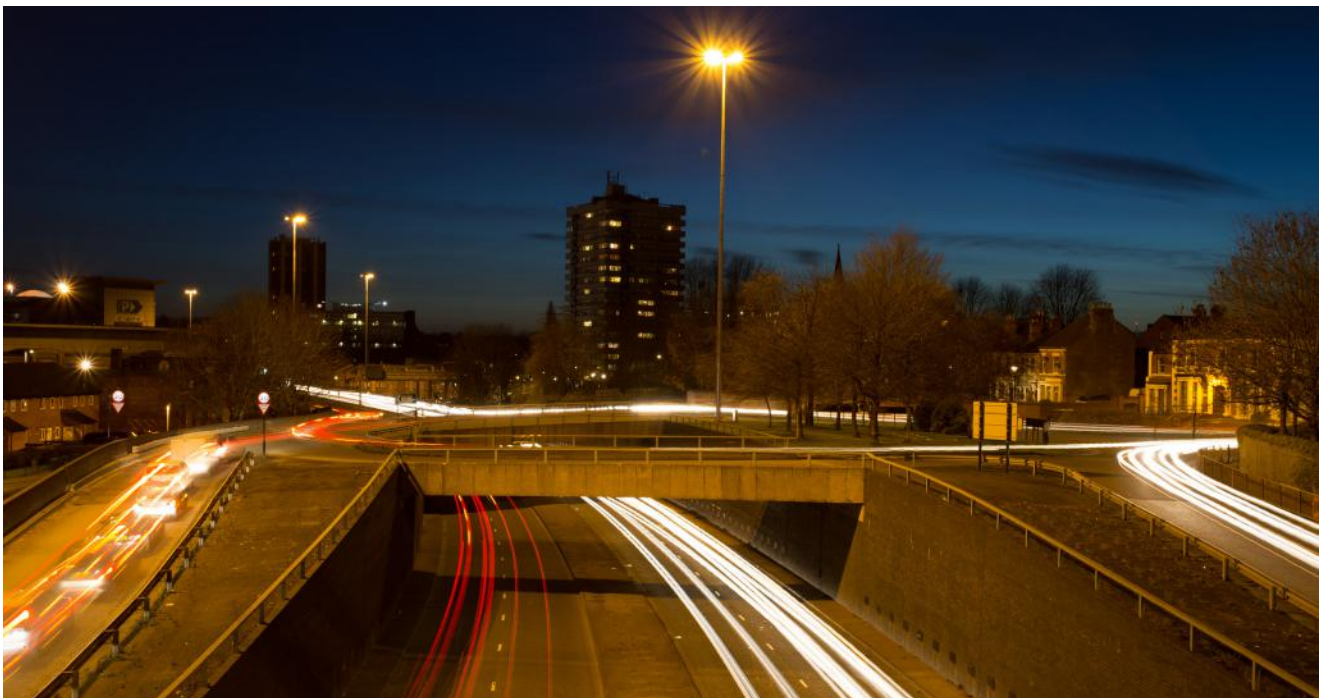
Why is this vision of the future changing? Is this just changing fashion, or does it reflect a deeper development in our understanding of human prosperity, freedom and happiness and the ease with which we can, or can fail, to provide desperately needed new homes? And indeed, is it really changing? In parallel, the British Government continues to invest £11 billion each year on existing roads.

How should we get about our towns? How should we get between them? What is best for our personal and collective prosperity? What best encourages the agglomeration effects that help cities thrive and drives economic growth? What makes us happier and healthier? And what boosts our personal freedom?

These are the questions that *Move Free* aims to answer. It does so through five main lenses:

- what types of movement patterns are associated with more prosperity;
- what types of movement patterns are associated with more successful high streets;
- what types of movement patterns are associated with more happiness;
- what types of movement patterns are associated with more freedom of choice; and
- what types of movement patterns are associated with building more homes?

Two ironies will emerge from our argument. The first is that those who argue against liberating streets for pedestrians and cyclists as well as motorists on grounds of liberty are arguing against themselves. The second is that those who foolishly campaign for cycling or for public transport (both causes this argument finds to be wise) by insulting not just cars but their drivers, are doing their cause enormous harm.



Coventry's ring-road today

2. Why movement matters



Prosperity: how more movement makes us richer

The ability to move, to 'get about' is crucial to the value that cities, towns and places bring to us, to the economy and, in consequence, to what households or companies are able to pay to own a home or place of business. But helping move about is not a straightforward matter of just getting from A to B as quickly as possible. The more we can make it easier to move about from any point to any other point and the more we can limit the downsides of movement (above all noise and pollution) then the more prosperity the citizens of a town or city can generate. More movement, more pleasingly conducted between more places, generates more value for more of us.

*How important is the economics of place?*²⁷ Access to jobs and income has been crucial to theories of land value for 250 years and is empirically unavoidable in any understanding of regional or city-level property values.²⁸ David Ricardo theorised about the impact of proximity not just to towns but to roads and irrigation systems.²⁹ The nineteenth century German economist, Johann Heinrich von Thünen, set out how different factors such as distance from a market might predictably determine the value of land in different locations.³⁰ In the 1920s, scholars such as Ernest Burgess and Robert Park of the Chicago School of Economics postulated that high order economic activity would be located in a dense town centre where land was at a premium and accessibility greatest.³¹

Thanks to improving data and tools, economists began developing more sophisticated models by the 1960s. In 1964, the urban planner William Alonso formulated the 'standard model' for understanding the distribution of land value in cities with the bid-rent theory.³² This set out drivers for differences in rent values across cities. It was based on the assumption that employment in metropolitan areas was concentrated in the central city with commuting costs increasing with distance.

Research over the last 40 years largely supports, though complicates, these theories on land value.

And so does common sense. In 2017, the price of a four-bedroom house in Westminster in central London was around £4.7m. In much of London's Zone 2 it was around £1.6m. In Barking, in outer London, it was £420,000. In Hull, Britain's 2017 City of Culture, a four-bedroom house was about £270,000 – 17 per cent of a similarly sized house in central London.³³ Clearly *where* a house is situated is as, or more important, than *what* it is. Place matters to value.

Access to jobs and town centres is a primary driver of property value. Literature reviews by Keith Bartholomew and Reid Ewing (in 2011) and by Robert Cervero (in 2004) studied the relationship between accessibility and property values.³⁴ With over 50 relevant studies, they found that public transport access to town centres was strongly desired, and was normally strongly associated with higher property prices. For example, studies completed between 1993 and 2004 showed price premiums for housing located within a ¼ to ½ mile radius of commuting stations of between 6.4 per cent and 45 per cent, compared to equivalent housing outside of that radius.

A similar pattern holds true for commercial property, with value premiums ranging from 8 per cent to 40 per cent. The effect was very dependent on the quality of the service. Reliability of access matters.

Nearly all studies agree that short and reliable commutes to places of work are primary drivers of property value and where people wish to live. Another 2015 literature review found a consistently important relationship between proximity to town centres and house prices.³⁵ For example, in a robust 2006 study, 44,429 house sales were used to investigate the relationship between accessibility and house prices.³⁶ The most significant measure was the number of accessible jobs and the number of resident workers within a 20-minute travel time. Property prices increased by 9.8 per cent for each additional 100,000 jobs available within 20 minutes of travel time from the property's city or town.

In short people clearly pay for ready and reliable access to jobs.

Higher incomes drive more place value. Unsurprisingly, ready access to higher income drives more value than ready access to lower incomes. People can, and will, pay more to live with ready access to high paying jobs. Towns and cities with more profitable businesses and higher paying jobs have more expensive offices and homes. A property in London is worth more than an otherwise comparable property in Manchester. Towns and cities with averagely successful businesses and adequate employment levels have more expensive offices and homes than struggling towns or cities. A property in Manchester is worth more than an otherwise comparable property in Hull.

This relationship has been studied. One 1979 American study indicated that for every dollar that income increased, house prices tend to increase by about 70c.³⁷ Other studies have indicated that price elasticity increases as income increases.³⁸ Richer people can pay more for their dream home. So-called income elasticity may be particularly high in the UK with its constrained supply.³⁹ In 2011, Edward Glaeser calculated using US census data that for every \$1.00 that a metropolitan area's income increased in the 20 years up to 2000, housing prices increased by \$1.20.⁴⁰

Purely relying on cars is not a very efficient way of getting workers to jobs. A range of studies have found that greater access to jobs by car is associated with more value.⁴¹ However, the problem is that relying *purely* on vehicular access to jobs does not get you very far. Compared to trains or, over shorter distances, even bicycle, cars are not actually very efficient at getting lots of people to work.

Consider a single lane of a city street, 3.5m wide. We might use this corridor for cars, as a dedicated bus lane or for a light rail (tram) line. Or we could build an underground line, or a suburban rail line along the same corridor. Cars are by far the least efficient method, moving only 19 per cent as many people as buses and only seven per cent as many as a tram can move.

Transport Type	Capacity: people moved per hour
Car	1,500 ⁴²
Bus	8,000 ⁴³
Tram/light rail	22,000 ⁴⁴
Underground rail	50,000 ⁴⁵

This is why, as we have got richer and technologically more able over the last 80 years, average car speeds have not increased. The limit to their efficacy is physical not technological. In fact, in many cities cars now go slower. Average cars speeds in central London have decreased from about 12 miles per hour between 1977 and 1982 to 9.5 miles per hour in 2021.⁴⁶

Cycling and walking infrastructure is also more efficient at moving more people over shorter distances. The same 3.5 metre wide lane can move over four times as many people by foot or bicycle as it can by car.

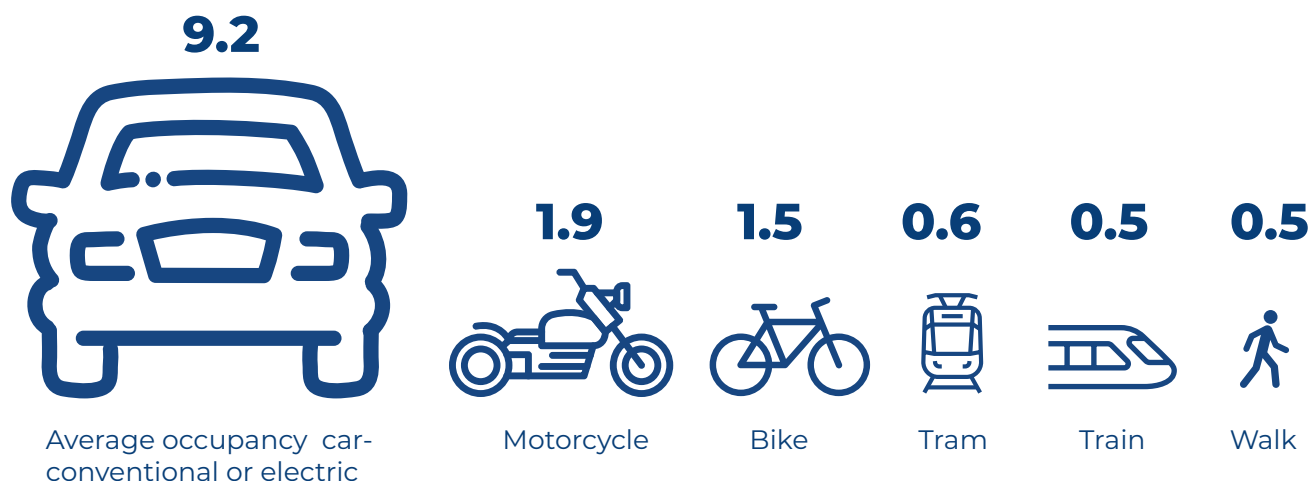
Transport type	Capacity: people moved per hour
Pedestrians	6,500 ⁴⁷
Cyclists	7,000 ⁴⁸

In terms of space, walking is by far the most efficient. If we made everyone queue up in their lane, a line of pedestrians that would be 28m long would be over a kilometre (1,030m) if everyone was in a car.⁴⁹

Walking and cycling, where possible, also tends to be more consistent, less affected by strikes or traffic jams. The time taken to drive or use public transport can vary hugely.⁵⁰ However studies find that capacity and journey time achieved by walking and cycling is very consistent.⁵¹ A journey that takes you 20 minutes by bike on the weekend will normally take 20 minutes by bike on Monday morning.

Transport infrastructure can bring problems as well as benefits. We prefer quieter streets. Where people will pay to be is not just about connectivity. It is also about the quality of a place itself. Being very proximate to heavy duty transport infrastructure is not pleasant.

Space per person (m²) for different types of transport



Why bicycles are more efficient at getting people to work over short distances.²¹⁹

For example, *immediate* proximity to railway lines with their associated noise and vibration often reduces value. A 2001 study demonstrated how trains can create what the researchers termed a 'disamenity zone' close to the station where noise and potential crime effects are greater than the transit accessibility benefits.⁵² They found that properties within the first ¼ mile of a train station are discounted by 19 per cent compared to properties over 3 miles away.⁵³

Far more value-destroying than creaking railway lines by night is the effect of traffic. And this is for very comprehensible reasons. As we shall see below, heavy traffic is bad for you, unpleasant and associated with lower levels of social connectivity and neighbourliness. Reduced perceived wellbeing and poorer health appear to flow rationally through to prices. One study of house prices in Borough, London using a dataset of 63,245 values, found that a property on a quiet road near to a well-connected station was worth a lot. A property on a busy road a long way from anywhere was worth very little. People value connectivity, but they also value freedom from noise and pollution.⁵⁴

The same has been found for levels of sound. One 2000 study estimated a 0.6 per cent discount in house price for each increase in decibel from traffic noise, leading to a 30 per cent price differential between a home on a noisy street and one on a quiet street. Another calculated the per decibel discount at 0.2 per cent. A third found the rate to be 1.3 per cent

for every one per centage point increase in volume. One expert has concluded that the noise discount does not rise linearly with the sound level, but that while sound levels below 55 decibels do not result in a price discount, levels above 65 decibels 'appear to be capitalised into prices, with a maximum discount of approximately 12 percent.'⁵⁵

Clearly supporting movement without needing to create unpleasant side effects will be best of all.

Do more ways of access and more routes bring more value? It should follow from the evidence above, that the more ways one can access the most jobs, the better. The more ways in which we can get about a neighbourhood, town or city, the more value access will bring to those buying or renting properties. The greater the choice, the more ways to get about ('modes' in the planning jargon) the greater the access, opportunities for employment and the exchange of ideas and recreation.

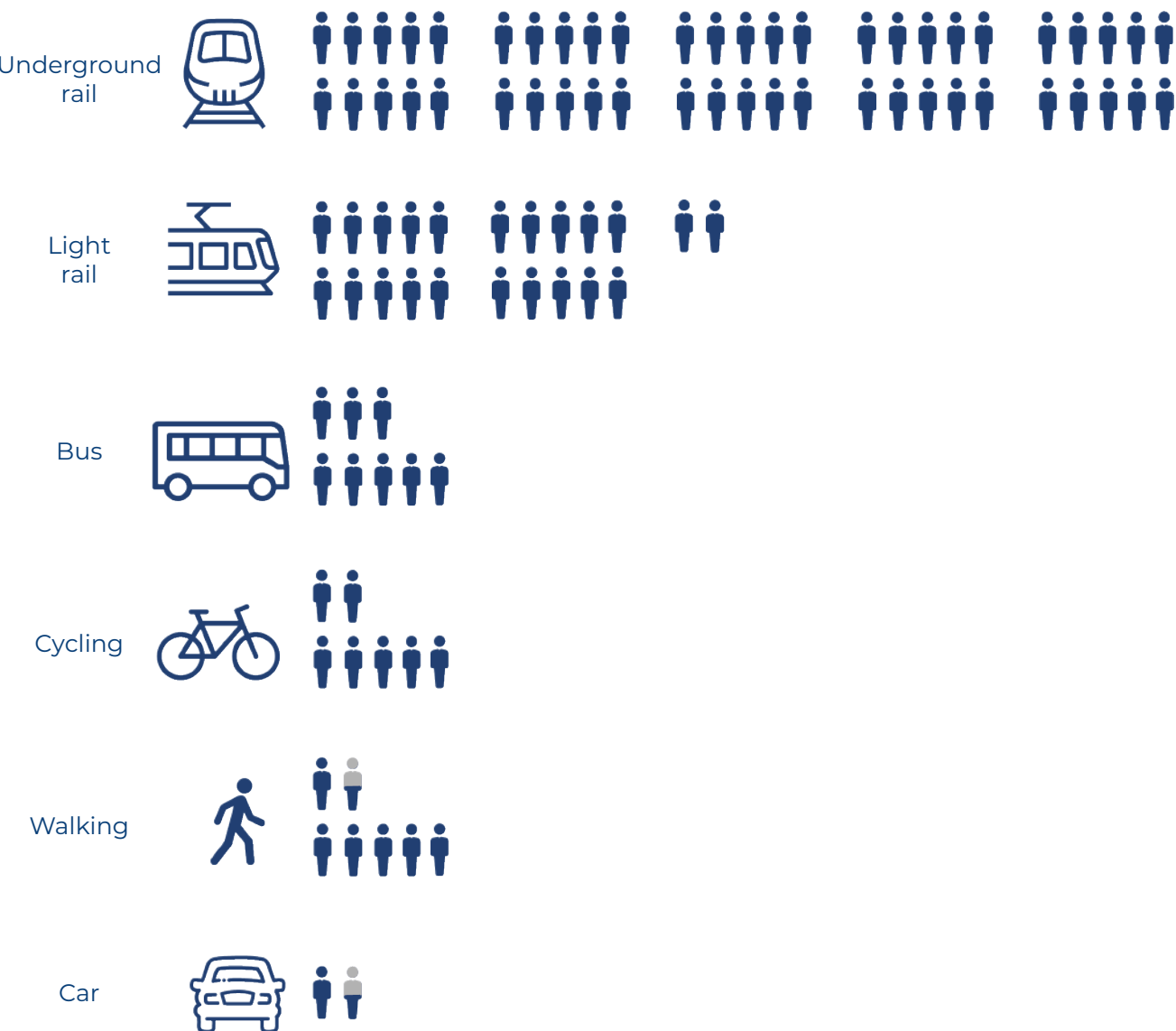
It should similarly follow in principle that being able to access multiple movement routes will be associated with more value than just being able to access one primary route. It gives you choice and makes it easier to move about for reasons other than the primary journey to work. Multiple routes also build resilience: there is less risk of being stuck at home due to a road closure, engineering works or a strike.

Passenger Capacity of different Transport Modes

Passengers per hour

on 3.5m wide corridor (street lane, rail line, cycle lane, pavement)

 = 1,000 average passengers/hour



Underground rail has significantly greater passenger carrying capacity compared to cars.²²⁰

But is this true? The evidence strongly suggests that it is.

We normally pay more to live in or work in more walkable and cyclable neighbourhoods. People will pay more for well-connected neighbourhoods that are easy to walk and cycle around as well as being purely reliant on the car.⁵⁶ Research has consistently concluded that such walkable neighbourhoods, with a mix of uses and ways of getting about, normally perform better economically. Researchers have shown that neighbourhoods with these characteristics generally economically outperform newer neighbourhoods without them and that the biggest difference is between pre 1930 and post 1950 neighbourhoods. The difference is so significant that poorer walkable neighbourhoods were found to outperform wealthier modern suburbs.⁵⁷

There are also useful metrics for assessing 'walkability' such as WalkScore. None are perfect as it is hard to separate walkability from other intrinsic design aspects. However, they still provide a consistent methodology. A 2012 study of 201 neighbourhoods in Washington DC found that:

- *Places with higher walkability perform better commercially.* A place with good walkability, on average commands \$8.88/sq. ft. more per year in office rents and \$6.92/sq. ft. per year higher retail rents, and generates 80 per cent more in retail sales as compared to a place with fair walkability holding household income levels constant.
- *Places with higher walkability have higher housing values.* A place with good walkability, on average commands \$301.76 per month more in residential rents and has for-sale residential property values of \$81.54/sq. ft. more relative to the place with fair walkability, holding household income levels constant.
- *Walkable places are popular and demand outstrips supply.* The report cited research that estimated smaller homes and terraced homes are undersupplied by 11 and 8 per cent respectively, while large, detached homes are oversupplied by 18 per cent. Another study found that only 35 per cent of those wishing to live in a walkable neighbourhood actually do so.
- *The increased housing cost is offset by lower transport costs and greater access to jobs.* Residents in neighbourhoods with good walkability spent 28 per cent less of their income on transport and 17 per cent more on housing than those in less walkable neighbourhoods. People in the more walkable neighbourhoods also have access to more jobs with 90 minutes.⁵⁸
- *A one point increase in Walk Score is associated with a \$3,000 increase in value.* The scoring is on a scale of 1 to 100. This is understandably more significant in places that are already dense and wealthy, such as San Francisco.
- *There is a minimum threshold for walkability.* Below a score of 40, small increases made very little difference to values. This is the difference between not being able to walk and being barely able to walk.
- *Raising walkability levels to 'very walkable' has an astonishing effect on value.* If a home went from a WalkScore of 60 (somewhat walkable) to a WalkScore of 80 (very walkable) this would, on average, add more than \$100,000 to its market value.⁵⁹

Another 2016 American study used the 'Walk Score' metric to find out how much people valued living in walkable neighbourhoods. The findings were clear:

A range of studies in the US and the UK have found that people are normally willing to pay a premium to live in a 'New Urbanist' development, typified as a traditional, walkable urban development in which it is as easy or easier to get about by foot and bike than by car. And the premium per unit can be substantial.⁶⁰ In one study, the confident conclusion was that 'the price premium for new urbanist housing exists across geographic areas,' though to differing degrees.

In Kentlands, the price premium was 15 per cent, in Laguna West it was 4 per cent and in Southern Village it was just over 10 per cent.⁶¹ The American developer, Charles Leinberger, has concluded that compact development can command a price premium of 40 to 100 per cent compared to nearby single use subdivisions.⁶²

A 2007 British study conducted a thorough comparison of three new British urbanist developments with modern suburban developments. The value premium per hectare of the new urban developments was 32 per cent higher than that of more typical suburban developments reliant more purely on car transport. A more recent 2020 study of Poundbury found that it was selling at a 55 per cent land value premium. This is composed of both the additional value people will pay per square foot of home due to place quality and the higher density that can be built on the same amount of land.⁶³

More movement creates a 'virtuous circle' of prosperity.

Ultimately, people can afford to pay more to live in more walkable and cyclable places because such places tend to prosper economically. They tend to attract good jobs and prosperous citizens. This is because successful places need to attract people, today more than ever. As Edward Glaeser helpfully put it; 'to thrive, cities must attract smart people and enable them to work collaboratively.'⁶⁴ This depends on many things including good education, security, safe property rights and the rule of law. However, the so-termed 'agglomeration effects' when people are able to come together to work productively, learn from each other either both by conscious co-operation and also by serendipitous interaction, are clearly boosted when it is easy and pleasant to get about. Larger towns and cities reliant purely on cars just cannot do this as their roads clog up quickly and pollute the atmosphere.

Ultimately, it comes down to space. At average occupancy, a car requires 9.2m² of land to move one

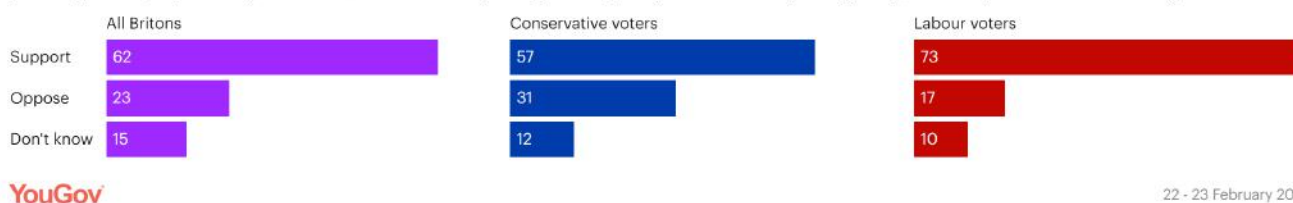
person around. As a sheer matter of physics, this is very inefficient compared to other transport options. A bike only requires 16 per cent of the space (1.5m²) and trams and buses only need around 7 per cent (0.6m²).⁶⁵ Walking is perhaps the most efficient, requiring only 5 per cent of the space taken by a car. A single street lane could, optimistically, transport 1,500 people an hour.⁶⁶ If the same lane is dedicated to a bus or tram, it could carry up to 8,000 or 22,000 people respectively.⁶⁷ Meanwhile, a two metre-wide bicycle lane could transport 4,700 people an hour.⁶⁸

Another reason for this space inefficiency is parking, we need parking spaces where we live, parking spaces where we work, and parking spaces wherever we might stop on the way. For most of the time, the land used for that parking space will be empty. Providing such a level of parking again requires a significant amount of valuable land which cannot therefore be put to better use as shops, offices or homes. This is one of the reasons why so many post-war cities 'hollowed out,' losing economic vitality and prosperity in the 1960s or 70s as happened to Coventry in Britain, or Detroit in the US where 31 per cent of the city centre is used for parking.⁶⁹

We can, up to a point, have our cake and eat it. Ways of moving are not binary. The small Dutch city of Utrecht (with a population of 340,000) is one of the pleasantest cities imaginable to get about by foot or bicycle. It is safe and clean, busy and bustling, loud with the hum of humans but almost unblemished by chugging diesel engines or revving motorbikes. However, it is still easy to get *to* this city by car, if less easy to get *about* by car than by bicycle. It provides

A majority of Britons would support their local authority adopting a target to make their area a 15-minute neighbourhood

For the question that follows, by a '15-minute neighbourhood' we mean the idea that every person within an area should be within a **15-minute walk** of basic amenities (e.g. pharmacy, schools, supermarket). To what extent if at all would you support or oppose your local authority setting a target to make your area a 15 minute neighbourhood? %



22 - 23 February 2023

Support for walkable neighbourhoods is strong across the political divide (YouGov, 2023)²²¹

access to over one million jobs by car, nearly five times the number accessible by bike.⁷⁰ The city has measurably excellent accessibility to jobs by public transport and by foot as well, particularly for its size, and is part of the wider Randstad conurbation. The excellent streets and public infrastructure make it easy for people to get to work without driving if they can, thereby freeing up space on the roads for those that do need to. Cars, public transport, bikes, and pedestrians are not mutually exclusive and may complement each other, in short widening choice may benefit everyone. It is not a zero-sum game.

What people say they want largely supports what they will actually pay for. If you do not like using money to judge good places, look at what people say they want. Although (not surprisingly) people *do* value the liberty that cars bring them to move about, they also prefer the type of place that is not dominated by cars. Most people appreciate this higher value inherent in a walkable neighbourhood with many ways of getting about. For example, recent UK polling found that most of us say we want to live in a neighbourhood where basic amenities should be within a 15-minute walk: 62 per cent of respondents agreed with strong support amongst urban and suburban and Conservative and Labour voters.

The complexity of course is that most people would like to 'have their cake and eat it.' They would like to live in a detached house with a garage in an otherwise walkable neighbourhood. The perfect home is a palace in the town centre! But that cannot work for many people. In a Europe-wide 2013 study, a detached house remained the preferred home type for a clear majority of Europeans (61 per cent) with the nationalities most aspiring to live in one being the Luxembourgers (75 per cent) and the French (73 per cent). The British were actually slightly less suburban in outlook with the detached home representing an ideal for only 66 per cent of surveyed Britons.⁷¹

The more we can make it easier to move about from any point to any other point, and the more we can limit the downsides of movement (above all noise and pollution), then the more prosperity the citizens of a town or city can generate. More movement, more pleasingly conducted between more places, generates more value for more of us. And the logic that works at the town or city level also works at the level of the neighbourhood centre or high street.



Purchasing: how more movement makes high streets more successful

Context: the long history of Britain's high street.

Britain's market squares and high streets were for centuries where a town's denizens and the inhabitants of their surrounding hinterlands congregated to buy, to sell, to meet, to do business and to be amused in the process. They were physically and metaphorically, at the heart of their neighbourhoods: places of commercial, cultural and civic life. They performed that role as much in the twelfth century as in the early twentieth with a rich and varying mix of places to live, to work, to shop, to meet, to eat and to be entertained. However, during the last century with the growth of cars, the suburbs and the deliberately planned demarcation of business districts and residential zones, high streets started to perform a more purely retail role. Places which rely on one use as opposed to many tend to be less resilient to the changing patterns which are an ineluctable part of urban history. This has, sadly, proved to be the case.⁷²

First, following the US model, came out-of-town shopping centres which were far easier for those living in car-based suburbs than the challenges of struggling onto crowded buses with bulging shopping bags. Drive-to shopping centres offered car-based movement and then the experience of a walkable and car-free 'indoors high street.' Britain's first out-of-town shopping centre, Brent Cross in North London, opened in 1976. Many more were to follow. From 2000 to 2009, town centre retail floorspace fell from 310 to 283 million sq. ft. (a decline of 9 per cent in nine years). In the same period, out of town retail space rose by 50 million sq. ft or one-third.⁷³



Mixed-use centres, such as Strøget have proved more resilient than out-of-town shopping districts

The 2000s brought a second challenge. The spread of the internet allowed shoppers to rediscover the joys of mail order shopping.⁷⁴ Shopping online is easy, quick and often cheap as vendors can be based far from the expensive rents of town centre locations. (Bricks-and-mortar retailers paid £7.2bn business rates in 2018-19 or 2.3 per cent of their retail sales. Online retailers only paid £457m, around 0.6 per cent of their sales.⁷⁵) The proportion of retail sales online grew from 2.8 per cent in 2006 to 7 per cent in 2010, 19 per cent in 2019, shot up in 2020 under the pressures of the first COVID lockdown to 33 per cent, and peaked during the second lockdown in early 2021 at 38 per cent. It is now at an average of 27 per cent.⁷⁶ British shoppers spend more online than any other European country.⁷⁷

The long-term consequences of the 2020-21 COVID crisis appear to be a shift to proportionally less city-centre commuting and more home working. This has increased the pressure on city centre shops. In 2023, footfall in major city centres was down 17.5 per cent compared to 2019. However, it is potentially good news for local centres and high streets. They have suffered a much smaller decline and have footfall levels broadly similar to before the pandemic.⁷⁸

Nevertheless, the consequence of all this is empty shops. The proportion of space within high streets taken up by shops continues to fall – from 29 per cent in 2012 to 25 per cent by 2017.⁷⁹ By January 2020, 10 per cent of shops nationally were empty, and this had risen to 12 per cent by January 2022.⁸⁰ According to the latest data from British Retail Consortium, it now stands at 14 per cent.⁸¹ 2021 Savills analysis estimated that the UK had 158 million sq.ft of vacant retail space, equivalent to 12 per cent of retail units. Some regional vacancy rates are as high as 17 per cent.⁸²

Savills has estimated that by the end of the decade there might be 345 million sq.ft of redundant retail space, increasing to 550 million sq.ft by 2040. It is not that there is no demand for places to shop. It is simply that centres have more retail space than there is demand.

What types of high street will succeed? In this rather melancholy context, what types of high streets will thrive? What places will bustle? Where will people choose to go to shop, to meet, to converse, to do business, to be amused, to watch their fellow men and

women? Is the future one of purely online shopping and drive-to theme parks? Several themes emerge from a review of the evidence and available case studies. Many of them pertain to how you arrive to a town centre, and how safe and pleasant it is to be there and to move about once you have arrived.

- **Safer and more walkable streets tend to be more commercially successful.** Evidence suggests that, unsurprisingly, people like to go where they can readily mingle with others and go about their daily business safely and pleasurably. The noise, pollution and potential danger of cars, is not conducive to this. Importantly, there is evidence that reduction of traffic in public spaces does lead to more pedestrians and increased social mingling.⁸³ A wide and growing range of studies in the UK and abroad suggests that this carries through to the commercial success of shops in less car-dominated streets.
 - ***Shops in more walkable, pedestrian-orientated locations tend to have higher revenues.*** For example, 1990s comparisons of pedestrianised and non-pedestrianised streets found that otherwise comparable stores in pedestrianised streets had a 10 to 25 per cent increase in retail turnover.⁸⁴ More recent studies estimated that retail sales increased by an average of 30 per cent following projects that prioritise pedestrians, cycling and public transport.⁸⁵ On the upper end of the scale, the creation of a pedestrian plaza in Brooklyn, New York resulted in a 172 per cent increase in retail sales for surrounding businesses.⁸⁶
 - ***Even simple improvements for pedestrians and cyclists can help: it is not just about 'full' pedestrianisation.*** For example, a New Zealand study found that relatively simple improvements such as crossings and wider footways increased foot traffic by up to 90 per cent.⁸⁷ There is a strong empirical link between footfall, visitors and sales, so increasing footfall should lead to higher sales volumes and takings.⁸⁸
 - ***The link between parking supply and retail vitality is not as strong as people think.*** A 2006 review of parking policy studies found that
- there was no discernible link between parking restrictions and commercial vitality.⁸⁹ One 2002 study found that many town centres with fewer 'convenient' parking spaces (fewer than five minutes' walk) were growing at a faster rate than those with plenty.⁹⁰ There was also a difference in results from 'attitudinal' studies, which surveyed people's stated attitudes, and statistical studies of observed parking behaviour:⁹¹ When asked, people stated they would probably not make the journey or would go elsewhere. In reality, people were more likely, up to a point, to trade off cost and convenience before seeking an alternative destination.⁹² In other words, perceptions about parking do not always match reality.
- ***Even when parking spaces are lost, retail sales do not fall accordingly.*** When interventions, such as bike lanes, lead to a reduction in on street parking, many studies have actually found a *positive* impact on sales, and at worst, no impact.⁹³ A study in Toronto, Canada into the removal of 136 parking spaces to make way for a bike lane, found that average customer spend increased 32 per cent, the number of customers increased 43 per cent and customers were 50 per cent more likely to spend more than \$100 after the removal of on street spaces and the installation of bike lanes.⁹⁴
- ***A similar pattern of high streets in which it is safe and pleasant to walk or cycle doing better commercially holds true in most American evidence...*** In New York's Harlem, bike lanes, traffic calming and pedestrianisation at intersections of busy roads between 2010-2011 contributed to a 48 per cent increase in retail sales.⁹⁵ In 2011 a local business district in north west Seattle witnessed a 400 per cent sales boost after installing bike lanes and removing car parking compared to a 'control street' where comparable improvements were not made.⁹⁶ One well-studied recent example is Times Square in New York, where the temporary closure to traffic of a three kilometre stretch of Broadway, from Union Square to the Flatiron building, was so successful that part pedestrianisation was made permanent. Since the changes, Times Square is widely seen as becoming safer and more enjoyable;⁹⁷

- Taxi traffic and car crashes were reduced by 63 per cent;
 - Collisions with pedestrians were reduced by 35 per cent;
 - There were 80 per cent fewer people walking in the carriageway and 11 per cent more people walking in Times Square;
 - Speed of motorised journeys decreased by 2 per cent for cars and 13 per cent for buses;
 - According to a Times Square Alliance's survey, around 74 per cent of New Yorkers agreed that the area had 'improved dramatically' in the last few years;
 - The Transport Commission observed that 'commercial activities were booming,' converting Times Square into one of 'the top 10 most desirable retail locations in the world.'
 - There was a 71 per cent increase in revenue by businesses; and
 - Rents of the shops around Times Square increased by 180 per cent.
- Activity in the city during the week had tripled.¹⁰⁰
 - *... and in European evidence including in smaller towns and cities.* Germany has long been implementing pedestrian improvements and traffic calming initiatives, many dating from the 1960s and 70s. Good evidence is therefore available. A wide-ranging 1993 review of studies, covering hundreds of schemes for small towns through to cities such as Berlin and Munich, found that:
 - Increases in footfall of 20-40 per cent are common;¹⁰¹
 - Typically, over 80 per cent of businesses reported increased turnover;¹⁰²
 - The increase in turnover is likely to be between 5-20%; but¹⁰³
 - There can, however, be a fall in turnover in the year or two during and after the implementation of a scheme as a result of disruption and evolving patterns of use.¹⁰⁴

In 2021 a large review of the evidence on the impact of bicycle and pedestrian infrastructure improvements across 16 cities in the US and Canada was carried out. This found no significant evidence of negative effects on business after the installation of cycling and pedestrian infrastructure, even where parking spaces have been removed.⁹⁸ A total of 15 relevant studies were reviewed covering 35 individual projects. These found positive or neutral effects for 86 per cent of the schemes studied.⁹⁹ There was evidence that even where there were positive effects, car-centric businesses such as petrol stations and repair shops, were negatively impacted. This is a useful reminder that there will normally be losers as well as winners to any change we make to our towns and streets.

- *... in Australian evidence...* Similarly, a review by Jan Gehl of the effects of widespread pedestrianisation in Melbourne, Australia, concluded that:
 - There was a 39 per cent increase in the number of pedestrians from 1993 and people spent three times more in the city;
 - Pedestrians' use of the city at night had doubled; and

The effects are so well understood that in 1976 a court ruled that retailers should contribute towards costs as they are certain to benefit from such schemes.¹⁰⁵ In other words, the case for pedestrianisation has been proven in a court of law.

In the late 1990s, authorities in Kajaani, a small Finnish town of fewer than 40,000 people, pedestrianised the main square and part of the main street. The results were clear and measurable with the same key link between place and movement emerging. After the pedestrianisation:

- 20 per cent more inhabitants said Kajaani was a good place to live;
- 13 per cent more inhabitants found the city centre beautiful;
- 55 per cent of them wanted a larger pedestrian area; and
- 52 per cent of shops and business said they had benefited.
- Perhaps the most famous, and earliest major pedestrianisation was of Strøget in Copenhagen. First pedestrianised in 1962, it is now one of the longest shopping streets in

Europe and one of the most studied.¹⁰⁶ Despite early protests, an insistence that 'it will not work here' and death threats against some of the scheme's progenitors, it was an instant success.¹⁰⁷ Improvements have continued and the street remains a success story:

- 35 per cent increase in footfall in the first year
- A 400 per cent increase in shopping and other activities between 1968 and 1996
- A 600 per cent increase in pedestrian space between 1962 and 2005.
- Up to 80,000 people a day now use the street to shop, dine or just take in the atmosphere and stroll.¹⁰⁸

The success has spilled out into the rest of Copenhagen. Three times as many people visit the city centre than before.¹⁰⁹ Copenhagen is now widely seen as a case study of urban revival with many places seeking to replicate its success.¹¹⁰



Strøget before and after²²²

More walkable and cyclable paces can support a much higher density of shops and parking spaces. Cycling and walking are incredibly space efficient, especially when compared to parking. The typical UK parking space covers 12m², with some councils now requiring a minimum of 18m² as an understandable response to increasing car sizes.^{111 112} A single parking spot takes up the same space as 12 cycle parking spaces, or as 20 people walking.¹¹³

A study in Melbourne showed that the same area of cycle parking delivered five times the retail spend compared to car parking.¹¹⁴ In other words, the same amount of cycle parking allows more visitors to a shop or high street, and therefore generates a higher turnover.

Places that are optimised for walking and cycling have a higher density of shops as less space is needed for parking. This means a higher tax take and higher revenue per acre or hectare of land.¹¹⁵

There is good evidence that people who walk and cycle to local shops take more trips and spend more per month than those travelling by car. This has been found to be true in Europe, North America and the UK.¹¹⁶ Surveys undertaken in London town centres have consistently shown that walkers have the highest average monthly spend.¹¹⁷ The most recent survey, undertaken in 2015 and mainly focusing on outer suburban town centres, found that people walking to the town centre spent an average of £87 a month



more than those driving. Per visit, walkers spent 47 per cent less but they visited twice as frequently.¹¹⁸ A 2011 survey of visitors to five shopping centres across the UK, places that are typically designed to be conveniently accessed by car, confirmed the same result; the best customers were those visiting on foot.¹¹⁹

The car is less important than many think it is. Retailers often over-estimate the importance of the car. Surveys in Graz (Austria), Bristol and Dublin found that retailers overestimated the number of customers arriving by car, by around 100 per cent in most cases, and underestimated the number arriving on foot.¹²⁰ The numbers speak for themselves and are consistent across different cities and different years.

More successful town centres and high streets intermingle homes and offices with shops. This provides resilience. It also provides a 'convenience' local market in which people can walk or cycle around the corner to nearby shops. This does not appear to have been extensively studied. However, there are convincing anecdotal and some empirical reasons to have confidence that homes boost the productivity, prosperity and resilience of nearby shops. Jane Jacobs, in her now famous 1961 book, *The Death and Life of Great American Cities*, argued that a rich diversity of uses is essential for city streets' vitality, in contrast to the twentieth century modernist orthodoxy of zoning commercial and residential areas.¹²¹ Recent research has borne this out. In 2016 Italian researchers were able to demonstrate statistically significant links between mixed use neighbourhoods and urban vitality, as measured through the levels of mobile phone activity.¹²²

A high diversity of uses, particularly the presence of venues as cafes, restaurants and bars, the presence of a dense grid of streets, and higher concentrations of people were found to correlate strongly with 'urban

vitality.' The vibrancy of London's numerous mixed use high streets, places of high activity and movement with a diverse range of uses, makes the same point. Around 40 per cent of Londoners (three million people) live on or within 200 metres of a high street, and more people are employed on London's high streets than within the central areas of the West End and the City of London.¹²³

As the quality of the data improves, increasingly, property investors and councils are responding to it, 'retrofitting' high streets to be safer places to walk and cycle – though not necessarily banning cars altogether and, if they are sensible, certainly ensuring that people can reach the town centre readily and reliably whether by car and parking (as is likely to be the case in market towns or suburbs) or via public transport (more likely in cities). Results over the last 30 years are fairly consistent.

In short, the evidence strongly suggests that the town centres and high streets that flourish are the ones that are safe and easy to reach, and not entirely dependent on cars or dominated by fast and polluting vehicles once you are there. You need to *get there* and that may be by car, particularly in suburbs or in rural towns. However, people will not pay a premium to feel unsafe. And this is because ultimately most people are rational. They know innately what is good for their health and happiness.

City	Year	Percentage assumed to be arriving by car	Percentage actually arriving by car	Percentage assumed to be arriving by foot	Percentage actually arriving by foot
Graz ²²³	1991	58	32	25	44
Bristol ²²⁴	2006	41	22	42	55
Dublin Grafton Street	2011	13	10	11	20
Dublin Henry Street ²²⁵	2011	19	9	6	19

How do customers travel? Difference between retailers' perceptions and reality.

Town and date	Improvements	Observed effect on local prosperity
Brighton (2007) ²²⁶	Transformation of the busy New Road in the city centre into a pedestrian priority shared space	- There is general agreement from businesses that redesign had significantly benefitted the hospitality trade, with restaurants and bars now providing outdoor seating. 162 per cent increase in footfall by 2011, 600 per cent increase in people staying and sitting, and enjoying the new space, rather than just passing through. - It is now the fourth most popular spots in the city to spend time.
Exeter (2000-2010) ²²⁷	- A combination of removal of traffic, creation of pedestrian only and shared spaces. - Includes the use of high quality stone paving, seating, tree planting and better lighting throughout. - The scheme covered a large part of the centre, including Queen Street, Castle Street, High Street, Cathedral Yard and Broadgate, Princeshay, Lower High Street, Cathedral Close, Paris Street, Sidwell Street, and Martins Lane.	30 per cent increase in footfall between 2002 and 2010. - A 3 per cent increase retail rental rates between 2006 and 2008, while rates in the region were falling.
Oxford (1999) ²²⁸	Pedestrianisation of Cornmarket in the city centre	17 per cent reduction in car trips without any adverse impact on overall visitor numbers

Place: how more movement makes us happier and healthier

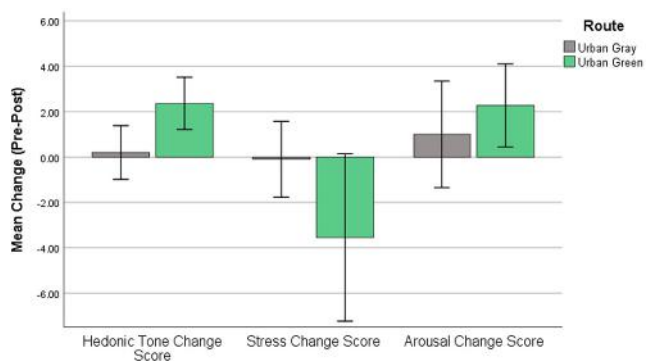
Is there truth in clichés? We have all felt the benefits of 'getting some air' or 'walking it off' when we have had a stressful day. Taking just a little time out to stroll, slow down, and let your mind wander is a time-honoured way to clear your mind, calm down, and bring a smile to your face. The 'father of medicine,' Hippocrates, supposedly wrote that 'walking is man's best medicine' and Charles Dickens certainly did write that 'the sum of the whole is this: walk and be happy; walk and be healthy. The best way to lengthen out our days is to walk steadily and with a purpose.'¹²⁴

Cycling did not have as long to garner praise, arguably only 50 years between the invention of the modern bicycle and its partial suppression in many countries by the victory of the all-conquering motorcar. Nevertheless, it garnered celebrity endorsements. H.G. Wells observed that 'whenever I see an adult on a bicycle, I do not despair for the future of the human race.' And Sherlock Holmes's creator, Sir Arthur Conan Doyle, was a fan. He wrote in 1895; '*When the spirits are low, when the day appears dark, when work becomes monotonous, when hope hardly seems worth having, just mount a bicycle and go out for a spin down the road, without thought on anything but the ride you are taking.*'¹²⁵

Walking and cycling (normally) makes us happy. These are not just sayings. There is now much research associating the simple act of taking a walk with lower levels of depression, anxiety and stress, and greater happiness and wellbeing. A 2018 study, the first of its kind, undertook a review of studies into the relationship between walking and eight mental health outcomes: depression, anxiety, self-esteem, psychological stress, psychological well-being, subjective wellbeing, resilience and loneliness. Researchers examined five systematic reviews and 50 individual papers. Consistently, they found a positive association between walking with better mental health and wellbeing.¹²⁶ Similarly, multiple studies (at least six) have found that cyclists are 'the most satisfied commuters.' Nor is it the case that the happy are more likely to cycle. Two studies have found that 'switching from a car or public transport to a bike for your commute appears to provide a noticeable boost to most people's psychological wellbeing.'¹²⁷ One

recent study of 14,170 people with depression found that exercise was twice as effective as antidepressants at treating their condition.¹²⁸

Walking in greener streets is normally best. One 2020 study examined the links between walking and mental health outcomes for retirement home residents in Richmond, Virginia. The study, involving 11 participants aged 57 to 77, compared the impact of walking in an 'urban green' and an 'urban grey' environment. In all cases, the results showed improved mood and energy, reduced levels of stress and improved reaction times. In short, walking made the participants happier, calmer and a bit sharper (though with much more positive reactions in the 'urban green' environment. Walks in the grey environment, essentially long a main road, actually increased reaction times slightly and may have increased stress levels.¹²⁹ This highlights the importance of characteristics such as beauty and nature on our wellbeing and the potential for traffic and noise to negate the positive impacts of walking, a theme that has been picked up in many studies.¹³⁰



The change in various psychological outcomes after walking in green and grey urban environments (Roe et al 2020)

Walkable streets and neighbourhoods make you happier particularly if you are older. This leads to the question; can we measure if people are happier in neighbourhoods that are more 'walkable'?¹³¹ That is those areas that have more access to amenities on foot, have fewer fast roads and less heavy traffic and a more pleasant walking environment. The answer is yes.

One recent Irish study reviewed 1,064 Dublin-resident adults in 16 neighbourhoods, selected to include a

mix of high and low 'walkability' and a balance of more and less prosperous areas. The researchers then asked the simple survey question; 'All things considered, how happy are you right now?' along with other questions to control for things such as health, employment, marital status and crime. Walkable places were found to be happier places for residents, either through direct or indirect effects. The group with the strongest correlation between walkability and happiness was the 36-45 years old group. This was due to direct effects such as the convenience and accessibility of amenities and closeness to friends. For this group, living in the most walkable neighbourhoods equated to a 26 per cent increase in overall happiness.

Older groups were also happier in walkable neighbourhoods, but this was more due to indirect effects such as health, trust in others and neighbourhood appearance, both of which were linked to higher walkability. Results for the youngest group, 18 to 35, had the weakest link between walkability and happiness. There was a small but statistically insignificant positive correlation, but they definitely were not unhappy about living in a walkable neighbourhood.¹³² Non-fully controlled research has also found a relationship between the happiest areas of the UK and levels of cycling.¹³³

Why and how does walking and cycling make us happy? What is it about the act of walking that can bring happiness? Is it purely biological or is it the indirect benefits such as exposure to nature or opportunities for social contact? Or is it the freedom it brings? Evidence suggests that it is probably a bit of everything. Key reasons include:

- *Biological effects.* For most people, aerobic exercise, such as walking, modulates various neurotransmitters like dopamine, serotonin, and endorphins. These are known to increase feelings of happiness.¹³⁴ Exercise can literally make us feel happier, which is why so many of us pay money to join gyms or the like. 'Hard wiring' exercise into our daily routines is the most effective way to optimise this for most of us. Regular walking can also have measurable positive effects on the structure of your brain. This is particular important as we get older. Staying active for longer can equate to maintaining higher levels of cognition. The brain can still grow, change and adapt later in life (known as 'neuroplasticity'). Exercise stimulates this.¹³⁵
- *Social effects.* Walking, particularly in well-designed urban areas, can lead to far more opportunities to interact with people we know



(and people we do not) in ways that do not threaten us. One determinant in residential neighbourhoods of the level of social interaction with movement has been found to be the presence (or absence) of modest front gardens. One study compared levels of activity over entire days on 17 residential streets, some with and some without front gardens. The most activity (69 per cent) very clearly took place in front of the houses with front yards or gardens. It was by these types of houses that neighbours stopped to chat or children played. However, front gardens which were too small to sit in had much less of an effect.¹³⁶

- *Exposure and opportunities.* Walking also allows us to experience things that make us happy. There is a much evidence for the positive associations with exposure to nature, greenery, and happiness.¹³⁷ As demonstrated in the study above, walking in greener, quieter places has measurable benefits, far more than driving through it. Several studies have shown that the presence of greenery tends to induce more physical activity and creates a virtuous circle.¹³⁸
- *Freedom.* The ability to get to places when we want and *under our own steam* is incredibly liberating for many of us. Psychological theories, notably Self-Determination Theory (SDT), emphasises that autonomy is a fundamental psychological need, and satisfying this need is essential for our wellbeing.¹³⁹ For example, the 'high degree of commuting control and arrival-time reliability' is one of the key reasons that cyclists are amongst the happiest commuters.¹⁴⁰

And cleaner air is better for us! Cars, even electric ones, are bad for the air we breathe and our personal health, especially in bigger towns and cities. Dirty air affects every organ in the human body and does disproportionate harm to vulnerable groups such as children, pregnant women and the elderly. The Royal College of Physicians estimates that it is responsible for around 40,000 early deaths in the UK, costing the country £20 billion a year. Many part of the UK currently exceed the safe limits of air pollution set out by the World Health Organisation (WHO). Some areas, such as Greater London and Greater Manchester, exceed it by as much as five times.^{141 142}

Vehicle emissions from tailpipe exhausts and road abrasion are major contributors to this pollution. Sadly, electric vehicles cannot entirely solve this problem. Although, they are cleaner with regards to exhaust emissions, because they are significantly heavier than their petrol and diesel counterparts, they end up releasing more particulate matter from braking and tyre wear: in some studies, up to 20 per cent more.¹⁴³

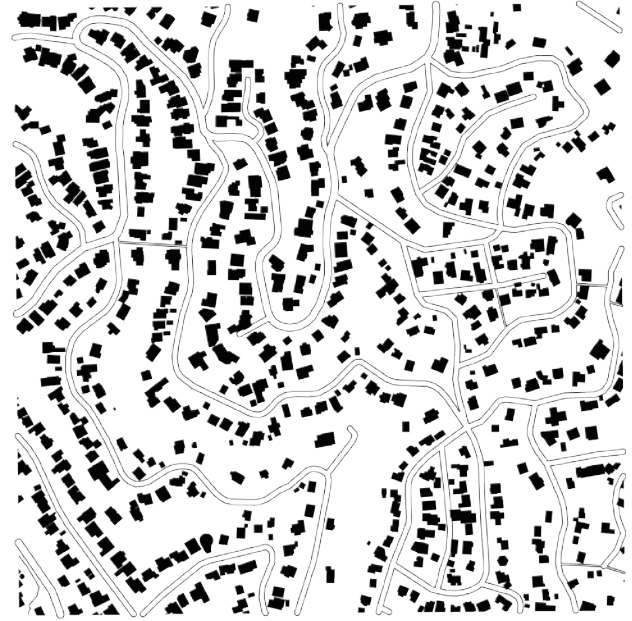
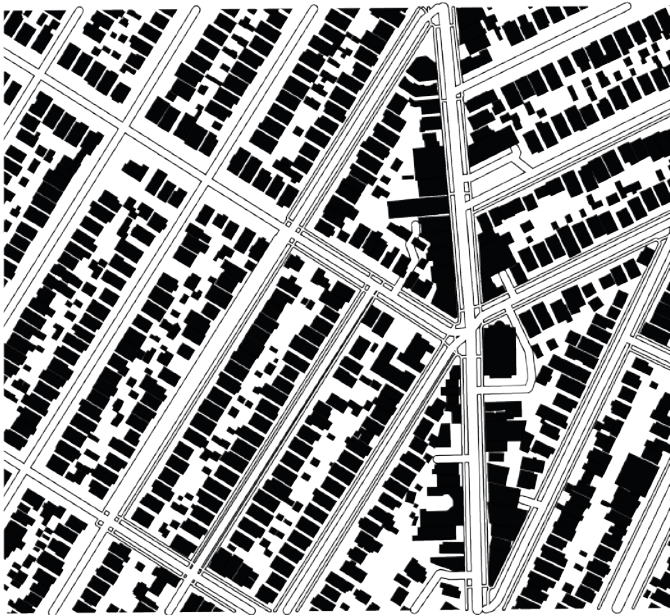
Self-evidently, places where a high proportion of people can and choose to move about by foot, bike tram or train, are normally likely to have cleaner air. It has been estimated that people walking, wheeling or cycling instead of driving annually avoids 1,120,000 kg of nitric oxides and 158,000 kg of particulates.¹⁴⁴

Why and how walking and cycling makes us physically healthy. The human body is naturally designed for movement. However, too often our cities seem to have overlooked this fact. As a nation we are 20 per cent less active than in the 1960s.¹⁴⁵ In our home, work and public spaces, sedentary living has become the norm.

Walking is good exercise, particularly for those who are older. The most striking effects of exercise for older adults came in 2022, when a large study demonstrated that walking about 10,000 steps a day was associated with a 50 per cent reduction in the risk of dementia. The effect was dose-dependent, with even 4,000 steps, or about two miles, linked to a 25 per cent reduction.¹⁴⁶

Cycling is even better exercise. Exercise can be measured in 'metabolic equivalents' known as 'METs'. One MET is the energy it takes to sit quietly. Walking leisurely takes 0.6-3.0 METs. Cycling at an easy pace of 10-12mph takes 3.0-6.0 METs, similar to a brisk walk. Cycling fast, that is 14-16mph, is in the same MET range as hiking or jogging. With that knowledge we can reasonably say that the benefits of walking (for physical health, mental well-being and overall happiness) are likely to be similar or greater for cycling.¹⁴⁷

Why does this matter? Well, physical activity is a key contributor to overall physical health, and walking is a coordinated, dynamic, weight-bearing physical activity that nearly everyone can do, engaging half



One of these built forms encourages more walking than the other. Two urban grains in Rockridge, Oakland (left) and Lafayette, California (right).

the body's muscle mass. It is an everyday, low risk and low-cost form of exercise that unlocks many of the well-established health benefits of physical activity and reduces the risk of developing over 20 chronic diseases. These include heart disease, stroke, Type 2 diabetes, cancer, depression, and dementia.¹⁴⁸ This can add between 0.4 and 6.9 healthy years to people's lives and cut the chance of premature death by 30-35 per cent.¹⁴⁹

The impact reverberates across demographics. Adults managing multiple chronic diseases may experience challenges in the workplace, such as increased absenteeism, unemployment, and recurrent periods of leave.¹⁵⁰ Meanwhile children who are more physically active tend to be happier, less lonely, perform better in school, and face fewer health issues throughout their lives.¹⁵¹ As Dr Vicci Owen-Smith, Clinical Director for Public Health for NHS Stockport CCG (Clinical Commissioning Group), has put it:

*'If everyone did 30 minutes of exercise five times a week, almost every single chronic disease would be reduced by 40 per cent. If this was a pill we'd call it a wonder drug.'*¹⁵²

How to manage poor health and physical inactivity?

Much of the national budget is spent on tackling the results of physical inactivity. Sedentary lifestyles are connected to one in six deaths in the country and

cost around £8.2 billion each year, with £1 billion on the NHS alone.¹⁵³ Obesity is the second biggest preventable cause of cancer and amounts annually to a £6.5 billion financial burden, with projections rising to £9.7 billion by 2050.^{154 155} Heart disease costs the NHS a further £7.4 billion a year and £15.8 billion to the wider economy, whilst ten per cent of total health spending is on diabetes.^{156 157}

It has therefore been estimated that increasing walking and cycling in England and Wales urban areas would save the NHS £17 billion (£26 billion in 2023 prices) over 20 years.¹⁵⁸ Even a modest 10 per cent increase in adult physical activity could save the NHS £500 million a year (£883 million in 2023 prices).¹⁵⁹

Urban design is part of the answer. But how to encourage more people to take exercise more often? Perhaps the answer is staring us in the face. Over the last 15 years a range of studies have shown that conventional walkable neighbourhoods are meaningfully correlated with lower rates of obesity, diabetes, heart disease and high blood pressure. Two recent studies have been particularly emphatic.¹⁶⁰ One recent literature review also found that 50 out of 64 relevant studies found associations between compact walkable neighbourhoods and positive health outcomes. The remainder had no clear results. None showed a reverse correlation.¹⁶¹

The evidence that people walk more in traditional street grids seems hard to argue with. One of the first comparisons (in 1995) of walking levels in a neo-traditional and a typical suburban neighbourhood in San Francisco found that the residents of the traditional neighbourhood made 10 per cent more non-work trips even taking account of income levels and available public transport.¹⁶² Another 1995 study corroborated this though the phenomenon was found to be less strongly true where there was simply less to walk for.¹⁶³ Since then a range of studies have built up a remarkably consistent picture. A study which rated high walkability by greater land use mix, higher street connectivity and high population density found that residents took the equivalent of an additional one to two 15-13 minute walks per week.¹⁶⁴ Another study found that 37 per cent of residents in the most walkable neighbourhoods met the recommended minimum of at least 30 minutes of physical activity compared to only 18 per cent of those who lived in the least walkable neighbourhoods. Residents of the most walkable neighbourhoods were nearly two and a half times more likely to get sufficient physical activity than residents of the least walkable.¹⁶⁵

Specific studies on population and employment density, land use mix and street connectivity have found that all tend to correlate with more walking and, where data exists cycling. Street connectivity may be measured by the number of intersections per square mile, block length or area or the ratio of the straight line distance between two points and the distance along the network between these points. One study that specifically measured accessibility and controlled for socioeconomic characteristics found that urban form did make a measurable difference on people's propensity to walk.¹⁶⁶ The London-based firm, Space Syntax (a spin out firm from UCL), have similarly calculated that 60-80 per cent of actual usage of streets would appear to be due to spatial accessibility.¹⁶⁷ In short, more pleasantly and safely accessible places get more people moving through and to them.

More movement makes us healthier and happier. Physical activity and specifically walking and cycling are positively correlated with happiness, health and wellbeing, and is most effective when it is deeply integrated into our daily lives, for example, in how we move about to meet our quotidian needs. We are also starting to understand the complicated biological, social, and psychological reasons why this is so. Some of this is about physical health and movement, but it is also about physical control, or mastery, over our environment.



People: how more movement makes us more free

When and how cars liberate us. Cars are great. They give the population at large immense liberty to move around the country, the countryside and the suburbs with comfort, ease and relative safety. They empower and liberate their users. They meet what has been termed a 'latent demand for journeys' for pleasure and for business¹⁶⁸. Cars can particularly help those with goods to deliver or physical challenges to overcome. Those who foolishly campaign for cycling or for public transport by insulting not just cars but their drivers, should hardly be surprised that both main political parties adopt rhetorical positions on the side of the majority. It is called democracy. Most households (77 per cent) own a car.¹⁶⁹ Both major British political parties have therefore been very clear that they support car owners.¹⁷⁰

People are going to keep wanting cars and keep using them because they value that liberty and ease. And as we switch them over from being petrol burners to electricity users, their environmental cost will substantially diminish, though with important remaining challenges such as particulates from tyres and the sourcing of the chemicals for batteries.¹⁷¹

When and how cars constrain us. However, cars diminish liberty as well as enhancing it. As we have seen, they are very ineffective and inefficient ways of moving around cities, towns, even historic villages and high streets. They pollute. They are dangerous to everyone else. They take up lots of space (about 20 times the space of a person) when moving, stopping and when parked which they are for most of the time. (British cars spend about 96 per cent of their time parked, a nearly unchanged figure since 1995).¹⁷²

This does not matter much on roads between towns where land is abundant, but it matters *a lot* where land is scarce in towns and cities. As the economist and Create Streets fellow, Ben Southwood, has pointed out in this context, land is worth about £10,000 per acre in agricultural use and about £38m per acre in the City of Westminster.¹⁷³ Nor, as we have seen, are cars very good at moving us about in towns.

Cars diminish the joy of moving around our urban neighbourhoods and they undermine the productive

agglomeration effects (i.e. the interplay of people and ideas that makes us richer and more productive) in towns and cities. Not for nothing are most European cities more productive than many British ones. Not for nothing are high streets with wide carriageways, fast cars and thin pavements normally failing not flourishing. Not for nothing are most of our least prosperous neighbourhoods scarred by dual carriageways running through them or separating them from their nearby centre.



Childrens' freedom to roam has dramatically shrunk

The shrinking liberty of the child. Cars particularly destroy the liberty of the child and the teenager to move around safely. Children are much less free now than they were 50 or 100 years ago, a fact which changes the nature and vitality of our towns. Sir Roger Scruton's lament for the lost High Wycombe of his childhood could be repeated across much of the country.

'The town itself was torn apart: timbered houses gave way to steel-fronted shops; old alleyways where children played hopscotch were cleared for parking lots; streams were diverted or covered with concrete; faceless blocks rose up with placards declaring "Office space: to let."'¹⁷⁴

John Betjeman recalled his inter-war prep school: 'at my private school, Lynam's at Oxford, I was lucky enough to be allowed to go off with friends bicycling in the limestone villages of Oxfordshire.'¹⁷⁵ It is impossible to imagine boarding schools allowing children below 13 to cycle around the countryside

unaccompanied today. London's East End children enjoyed comparable freedoms, now largely lost. In pre-war Whitechapel children roamed freely for miles unsupervised in a manner unthinkable today. One recalled:

'Many miles were also travelled hanging on to the back of horse-drawn vans. Many a time we were forced to abandon our 'transport' on hearing the shout from some unfriendly individual, 'Whip behind, guv'nor,' at which the driver would flip his whip to get rid of us, his unwanted cargo.'¹⁷⁶

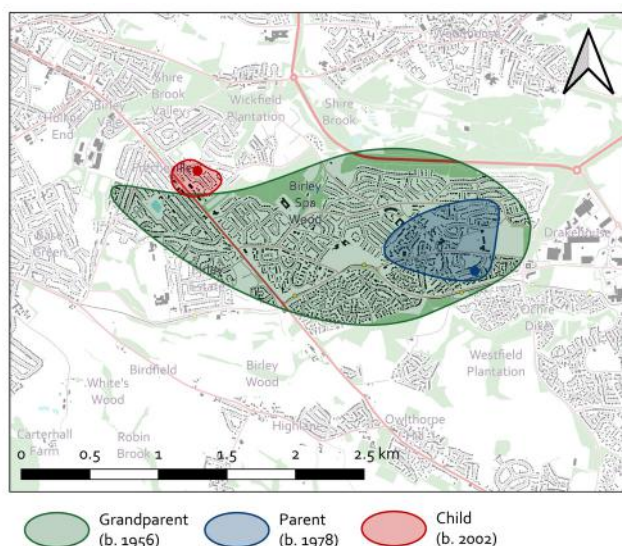
This was the perennial urban experience until the 1960s when all of the town or city could be a playground, a place to roam around readily on foot. Housing was more cramped than today and there were fewer opportunities for formal play. This was less of a problem than it would be now. The street became the playground. In his 1916 book *London Street Games*, the author Norman Douglas listed a total of 950 games, verses and songs, a testament to children's inventiveness.¹⁷⁷ Such a book would be hard to write in modern Britain. Surveys show that only 27 per cent of children regularly play out in their street. And this appears still to be declining.¹⁷⁸

The 'range' of children's unaccompanied right to roam has collapsed over three generations from several miles to the domestic home and garden. From Australia to Portugal, significant restrictions are being placed on children's freedom. A 2015 comparative study of 16 countries identified a decline, and a corresponding rise in car use, in all but two countries; Israel and Japan.¹⁷⁹

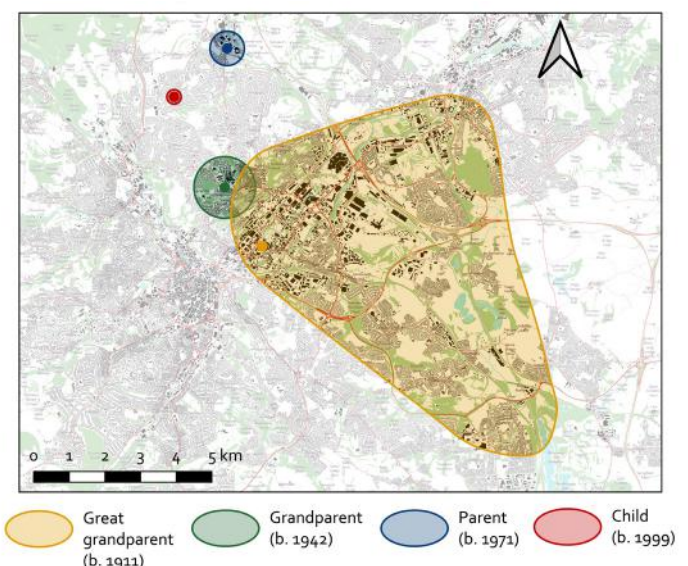
The change is well illustrated by a map that appeared in the *Daily Mail* in 2007.¹⁸⁰ The accompanying article told the story of four generations of a Sheffield family and the stark reduction in children's 'home range' (i.e. the distance from home they were allowed to wander) over 90 years. In 1919, the eight-year-old great-grandfather was allowed to walk up to six miles (9.7km). In 2007 his eight-year-old great grandson could only walk to the end of his street unaccompanied, a distance of 300 yards (375 metres). This is a 97 per cent reduction.

Similar results were obtained in a 2012 academic study looking at two families over three generations in the same part of Sheffield. In both cases, the range that children could freely roam fell by an order of magnitude from several miles down to tens of metres, or none at all. The children of one of the families, aged six and ten, were not allowed to leave home

Home range for three generations in south east Sheffield



Home range for three generations in north Sheffield



Collapsing childhood freedom. The loss of 'range' to roam over three to four generations in Sheffield. Adapted from findings in the 2012 academic study (Woolley, H. E., & Griffin, E.) (left) and from the 2007 Daily Mail article (right).

alone at all.¹⁸¹ This appears the norm for many modern children, infinitely less free than their grandparents and great-grandparents if only they knew it.

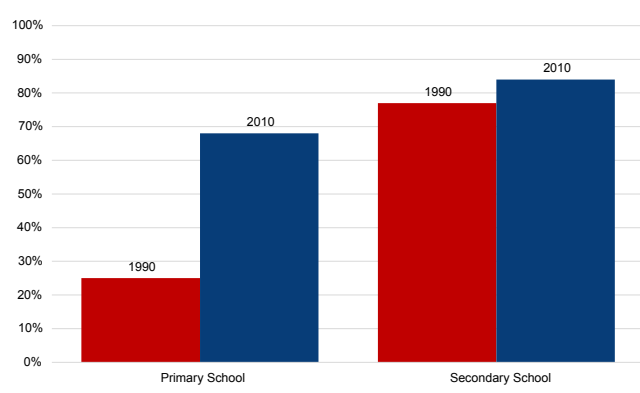
In all cases, there was a moderate reduction in this distance between the current generation of children and their parents, but a far more dramatic shift between the parents' and their own parents and grandparents. This pattern was also identified in a 2005 Dutch study into three different streets in Amsterdam.¹⁸² Outdoor play had decreased at the same time that adult supervision has increased. Where previous generations could be defined mainly as 'outdoor children' (largely playing outside), more recent children were mainly 'indoor children' (largely playing inside) or 'backseat children' (mainly driven or escorted to adult-organised formal children's activities.) This shift largely took place in the 1970s as traffic increased sharply.

Larger scale studies from 1971, 1990 and 2021 all paint a similarly hued picture. Children's self-reliance and their freedom to explore has collapsed nearly everywhere.¹⁸³ One study compared 629 junior school children (aged 7 to 11) in 1971 with 541 primary school children and 470 secondary school children (aged 11 to 15) in 1990.¹⁸⁴ It compared what they termed

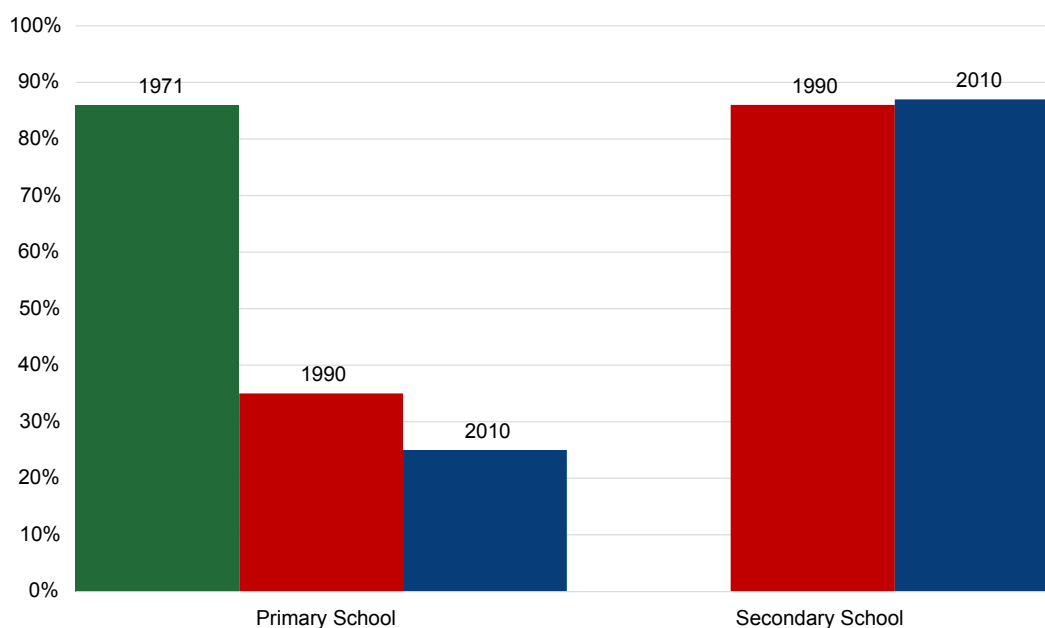
children's 'licence' (i.e. permission from their parents) for six activities, such as crossing the road or making their way to school. The key findings are striking:

- In 1971, 80 per cent of seven and eight-year-old English children were making their own way to school. By 1990 this had fallen to 9 per cent;
- The proportion of children permitted to travel to the cinema, playground or the like unaccompanied has fallen by nearly half across all age groups;

Percentage of children that owned bicycles stating that they were allowed to cycle on



Percentage of parents reporting that their children are allowed to travel home from school



The decline in children travelling home alone from school (below). It's not all bad news however: surprisingly more children are allow to cycle on main roads (above). From Shaw *et al* (2013)

- Up to the age of 10, there has also been a significant (21 per cent) fall in the number of children allowed to cross the road on their own; and
- There was a steep (on average 40 per cent) decline in the number of weekend activities in which children participated, particularly unaccompanied (47 per cent).

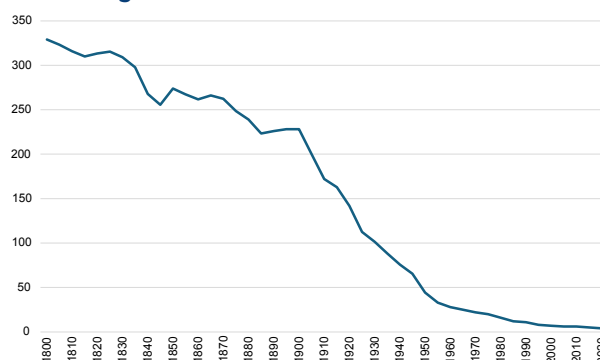
The study also compared English and West Germany schoolchildren. German children had much more independence in 1990, normally matching or exceeding English children's independence in 1971. For example, 86 per cent of English children were allowed to travel home from school alone in 1971. By 1990 this had dropped to 35 per cent whilst remaining at 91 per cent in West Germany

The authors suggested that cultural attitudes were one reason, speculating that tighter laws and stricter German parents provided a framework for children that meant that 'children are freer to venture independently into a less free world.' However, they also judged that a significant factor might be the urban form and spatial planning policies of German towns and cities. Towns are denser, with more intensity of activity and with better public transport. This keeps distances shorter and encourages more passive supervision through more 'eyes on the street.' Children also tend to live closer to school than in England, again making walking to school safer and more convenient. A 2010 update study (on 987 children) showed an ongoing reduction in independent mobility and increasing adult accompaniment on journeys to school or elsewhere. However, there was some potential signs of a change in direction: since 1990 parents had become less concerned about children being injured in a traffic collision and more children were allowed to cycle on main roads.

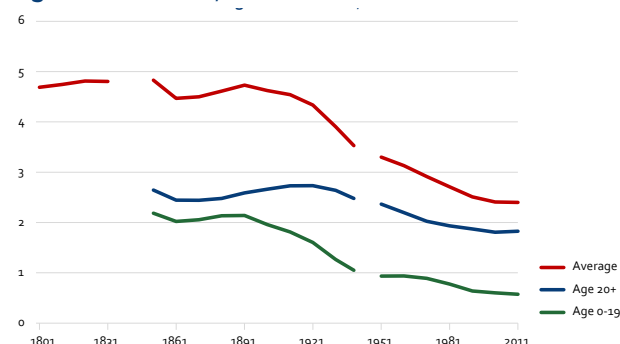
Why are children less free? Something has clearly changed fundamentally over the last 70 years or so to have such a significant effect on children's independent mobility. Changing cultural attitudes to risk may be part of this. Murders are rarer, but awareness of them is heightened. Social fear ('stranger danger'), larger homes, cultural changes and new forms of communications and play are relevant. Nor is correlation always causation.

Nevertheless, it seems hard to escape the obvious huge increase in road traffic over the last 70 years. Certainly, most of us do not when we pause to think about it. One 2022 survey found that less traffic was a key reason for the lack of public use of streets.¹⁸⁵ However, this is not *just* a question of the risk of collisions. The effects of cars, and car parking, on spatial planning has been 'to pull us all apart,' increasing distances between homes, schools and amenities. Children a century ago lived round the corner from the aunts and uncles, cousins, friends and any surviving grandparents. This is much less likely

Child mortality rate (under five years old) in the United Kingdom from 1800 to 2020



Average household size and adults per household England and Wales, 1801-2011



Child mortality has decreased dramatically.²³¹ Households are smaller meaning more space and parental time for fewer children per adult.²³²

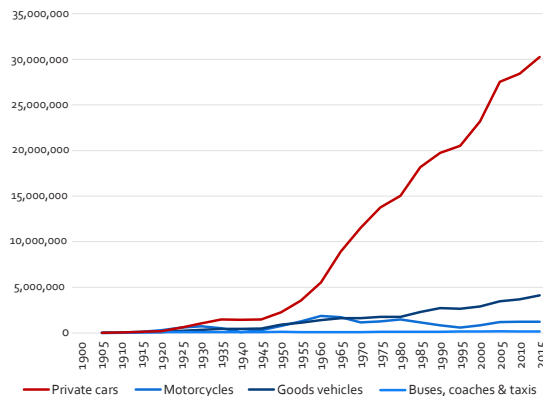
for modern children. Children's freedom to move has declined in parallel with growing traffic. The good news is that road safety has improved dramatically, deaths have declined from a peak of 7,985 in 1966 to 1,711 in 2022.

Does this matter? Is this such a bad thing? We are richer and have a higher standard of living: children might have more supervision and less independence,

UK Road Casualties 1926 to 2022



Motor vehicle registered in Great Britain by type, 1905-2015



Over the last generation roads have started getting safer again (left).²³³ However, the number of vehicles on the road continues to grow.²³⁴

but they certainly live longer. As the academic Lia Karsten has pointed out, the streets and the public realm were children's spaces out of necessity, especially in poorer areas where overcrowding was a problem.¹⁸⁶ We now tend to have a more home-centred family life, families are smaller and perhaps parents can devote more time to supervision. Homes are also bigger. More people have gardens, and more activities are available to children and young people. Maybe children have plenty of opportunities for play and physical activity: it now just comes with more supervision.

Why liberating children is good for them. Unfortunately, while there have clearly been improvements to children's lives, this curtailment of freedom and independence does matter. Children's health and happiness is being affected in many ways. The evidence is growing continuously. A lack of liberty matters.

Liberating children is good for their physical health. Children are more inactive than ever. In England, less than half of children are considered to be physically active, 23.4 per cent of 10-11 year olds in England are obese, with a further 14.3 per cent classified as overweight.¹⁸⁷ As set out above, this has serious implications for the individual later in life, as well as wider social and economic effects. Self-evidently, this is not just due to urban design and transport strategy but it is inescapably one of the reasons.

Liberating children is good for their development by helping children become better adults. There is clear evidence that children need to freely experience the

adult world in order to become adults themselves. Being active and independent at an early age helps set these habits.¹⁸⁸ For some time, studies have highlighted the importance of curiosity and exploring for children's development and their ability to form relationships, and the need for children to have unsupervised 'subsidiary environments' away from home and school life.¹⁸⁹ The decline in children's independent activity correlates with a decline in mental health over several decades. Researchers, publishing in the American Journal of Pediatrics in 2023, found this decline to have important and long lasting implications for wellbeing and development.¹⁹⁰

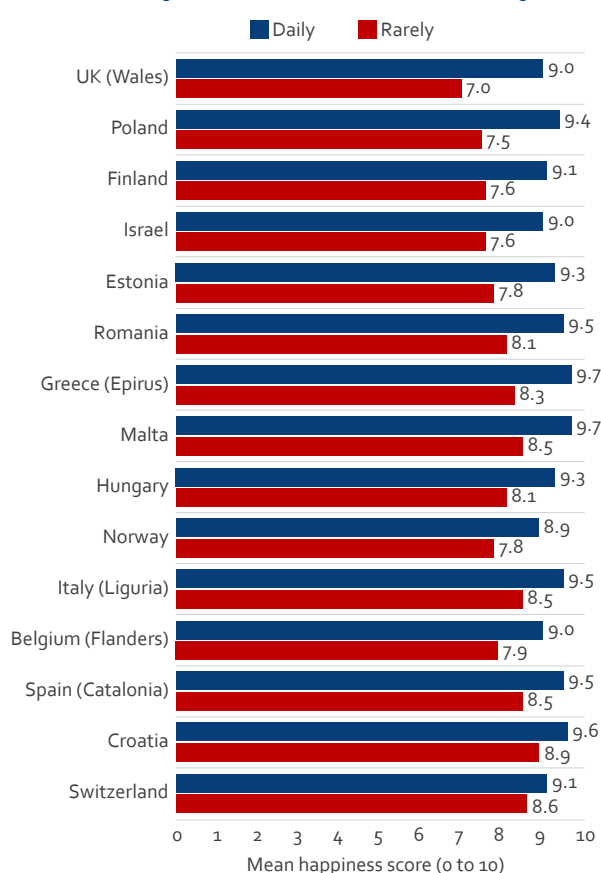
Why is this? The reasons are a little less clear. Researchers have suggested that, from a psychological perspective, less supervision leads to a more 'internal locus of control' (known as 'LOC') meaning that children grow up believing they have more agency over their life and more capacity to deal with life's inevitable problems. Less independence to an external LOC is linked to anxiety and depression in later life.¹⁹¹

Freedom is good for our mental wellbeing. Most of us are happier and fulfilled when we are free to choose our own paths. This is the premise of a well-researched and established field of psychology known as Self Determination Theory (SDT). Researchers have established that the three basic pre-requisites for feeling in control of our lives are: Having the *autonomy* to do so, having *competence* in what we're doing, and a sense of *relatedness* or being supported. There is strong empirical evidence that fulfilment of these needs leads to better outcomes and wellbeing.

This matters for children, and research has linked independent play and mobility to more developed senses of autonomy, competence, and relatedness.¹⁹²

Where we are versus where we evolved to be. There is also the evolutionary psychology perspective: there is essentially a mismatch between the environment that shaped children's, and all our, development and our modern developed environments. Much of the evidence for this comes from studies of children in indigenous communities who are living in conditions far closer to those of our ancestors. In such societies, it is more common for children to learn far more

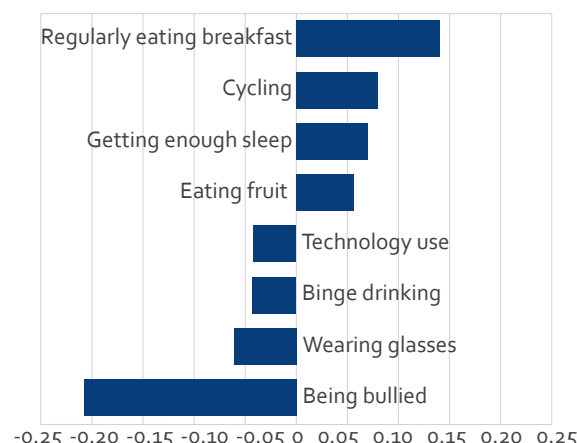
Mean happiness scores of children who played outside rarely and those who did so daily



Figures from the UNICEF report 'Worlds of Influence'. Above: Mean happiness scores of children who play outside regularly vs those who do not. Above right: Effect of different activities on young people's well-being.²³⁵

through direct experience and to contribute to domestic life from a much younger age, sometimes as young as five. In other words, we are hard wired to take part in the world and acquire skills from an early age. Suppressing this drive may be detrimental to children's wellbeing.¹⁹³

Links between eight different activities and adolescent mental well-being



There is a problem, particularly in the UK. The decline in children and young adult's mental health and wellbeing is sadly well established empirically, particularly in the UK:

Only 64 per cent of children report high life satisfaction in the UK, compared to 90 per cent in the Netherlands, 86 per cent in Mexico and 84 per cent in Switzerland.¹⁹⁴

In the UNICEF league table of children's wellbeing, the UK is in the bottom third in terms of mental wellbeing.¹⁹⁵ A quarter of children in the UK leave primary school clinically obese, with studies finding a positive association between traffic within 150 metres of a child's home and obesity.¹⁹⁶

One in six children aged 5 to 16 are likely to have a mental health problem in England.¹⁹⁷ Over half of young people aged 16 to 25 have seen their GP about mental health problems.¹⁹⁸ Antidepressants use in 12 to 17 year olds has doubled since 2005 in England.¹⁹⁹

In the US, 36.7 per cent of high school students (aged 14-18) reported symptoms of depression and anxiety. Since 1950 the number of young people with these issues has increased five to eight fold. This can have tragic consequences. There has been a 350 per cent increase in suicides of children under 15 over a similar period.²⁰⁰

Children who are more free seem to be more happy. 90 per cent of Dutch children have self-reported 'good'

life satisfaction. Dutch children are also able to walk and cycle far more as part of everyday life; 66 per cent of them cycle to school, Dutch teens make nearly 60 per cent of their journeys by bike, more than any other demographic, and 80 per cent of them use their bikes to get around more than three days per week. In total they rack up, on average, an incredible 2,000 km a year.²⁰¹

What do children want? Most children say they would like to cycle to school if they could. In England 40 per cent of children surveyed said they would like to cycle to school, compared to two per cent who actually do.²⁰² Sport England research found that the main reason for children participating in sport and activity is that they just really enjoy it, with the majority (around 63 per cent) of children aged 5 to 7 saying that they love being active.²⁰³ Making walking and cycling not just safe but enjoyable would appear to be important.

Improving children's mobility would probably benefit poorer children the most. Children have not stopped playing. It is just that the *how* and *where* have transformed from more outside and less supervision, to less outside and more supervision. These more controlled and formal activities are all very dependent on the time and resources available to a family. Children from poorer families, or with parents that are time poor, are less likely to benefit from these opportunities. Some children still have the luxury of being free to play outdoors with little supervision, but this is rare. A study in Amsterdam suggests that these differences are becoming more entrenched, and the opportunities for children to play with children from different backgrounds is diminishing.²⁰⁴

In short, the ability to roam and play freely can actively reduce inequality and improve the physical and mental health of the poorest children most of all.

Why liberating children is good for their parents and would cut traffic. Children are not the only ones affected by their lack of freedom. If children cannot go to school or out to meet friends by themselves then it follows that an adult has to take them. This in turn limits the time that adult has for work and other activities. This limit has a cost. A recent survey found that parents in the UK spend, on average, £2,400 a year on driving their children around.²⁰⁵ Another survey found that parents spend up to 52 hours a

month being their children's chauffeur.²⁰⁶ Nor do most enjoy it, for example a recent survey found that parents consider the school run one of the most stressful activities of the day.²⁰⁷ 73 per cent of parents would like their children to walk, cycle or scooter to school.²⁰⁸ But only 50 per cent actually do, of which only three per cent do so by bike.²⁰⁹

Play streets and school streets: signs of an unserved 'latent' demand?

Play streets are temporary traffic-free streets, often held at the weekend. School streets are closed to traffic at school drop-off and pick up time. The 1938 Street Playgrounds Act permitted local authorities to close 'certain streets at certain times' to traffic and hand them back to children. Even in the early days of motor cars, some, including Government, were concerned about their constraining effect upon children.²³⁶

There now appears to be a renaissance in interest in play and school streets. Over 1,600 neighbourhoods have organised 'play street days' as part of the 'Playing Out' project involving 49,140 children and 24,570 adults. Over 100 English councils and the Scottish and Welsh governments have specific street play policies in place to make their delivery easier. For example, the London borough of Lambeth's new kerbside strategy together with the Playing Out Community interest company offer practical guidelines for their implementation.^{237 238}

School streets are being trialled or created in Bristol, Leeds, Halifax, Hampshire (Gosport, Totton and Petersfield), Devon (Exeter and Cranbrook) and as part of the 'Live and Move Programme' with ambitions for national roll out.²³⁹ The trials in Hampshire found that beyond initial set up costs of £12,000 to 15,000 the programme costs were minimal.²⁴⁰ A 2021 survey by Sustrans (a charity which supports active travel) found 51 per cent of residents agree that school street closures would improve their local area compared to 20 per cent who disagree.²⁴¹

The 'backseat' generation is normally chaperoned by car, further adding to traffic woes and creating a vicious spiral of cultural dependency. The school run is familiar to millions and its effect on traffic is felt by millions more. One recent report discovered that in London, up to 43 per cent of car trip journeys in the capital were due to the 'school run.'²¹⁰ That is a lot of extra cars. A common observation is that the traffic is always better in the school holidays. Data from the technology company, TomTom, during school strikes showed a traffic reduction ranging from 14 per cent in London to 26 per cent in Liverpool, with resulting improvements in journey times.²¹¹

Making it easier for children to walk or cycle to school would not just be good for them but good for their parents, and would also reduce congestion and traffic pollution.

Cars empower and liberate their users to move around with comfort, ease and relative safety. They can make life better and ease movement. However, they can also diminish liberty. They are ineffective and inefficient ways of moving around cities and towns. One of the greatest liberty losses of the past century has been of the child to move around his or her neighbourhood. This has been bad for children and their parents. Creating places which rely purely on cars does not just sequester households and neighbourhoods. It also leads to far fewer homes being built in the first place which is an ongoing challenge except where land is abundant compared to the population.



Property: how more movement can make more homes

Not needing to park so many cars allows us to create more homes on the same land. Creating tight, walkable streets or managing existing streets to be fun and safe places in which to walk and cycle, as well as drive, can also help to solve our housing crisis and create more new homes, more efficiently and on less land. Why is this?

Put simply, when the only way to get about safely or pleasantly is by car, then not unreasonably, people require and demand not just one car per household but two, three or more so that any adults can readily and easily go about their daily business. This is then 'hardwired' by local planning departments into so-called 'parking minimums' which set, often quite high, minimum parking requirements per household for new development. This has been most prevalent, and much discussed, in the United States which typically has very bad public transport.²¹² However, it is also common in the UK. For example, in Worcestershire the number of required cars per home varies from between one to four or more.

Number of bedrooms	Minimum number of parked cars
1	1
2-3	2
4-5	3 or 4
6+	4 or agreed case by case

Minimum parking requirements, Worcestershire.²⁴²

Charnwood in Leicestershire requires two parking places even for a one-bedroom flat. Minimum parking requirements are, completely reasonably, typically popular with existing residents who do not want excess cars from 'under-provisioned' new streets spilling out to park in front of their own homes.

However, high parking minimums are not without important consequences. Put simply, they make it very hard to create places at densities much above about 30 homes per hectare. And, indeed, according to 2018 government data, new British greenfield development averages a density of just 28 dwellings per hectare.²¹³ Historic Victorian or early twentieth

century streets which might now be able to support just one car per home were typically developed at densities closer to 50 to 75 homes per hectare. Such neighbourhoods are typically highly sought after and valuable. They are also better able to support local high streets and centres as there are far more households and people within a walkable catchment distance. If we can re-learn how to create 'gentle density' style developments at about twice the average current density, the opportunity to create places more efficiently is profound.

An opportunity to solve much of our annual housing shortfall. This is a huge opportunity in lost new homes on the same land. Put simply, on the same amount of land that was used for greenfield development last year, we might have built not 112,240 homes but 220,471 homes if we had developed at an historic density of, say, 55 homes per hectare instead of 28. The increase in theoretically possible new homes would have been sufficient for the country to meet the government's annual target of 300,000 net additional homes per year. Nor need such an approach be unpopular. As we have seen, people will provably pay a premium to live in places they consider beautiful and well-designed.²¹⁴

Alternatively, we might have built the same number of new homes on much less greenfield, on just over 2,000 hectares instead of just over 4,000 hectares.

High parking requirements are reducing the provision of new homes right now. Lest this seem too theoretical, at the time of writing Create Streets is aware of an actual live case where increased minimum parking requirements have led to a 12 per cent reduction in the number of new homes being planned in a new greenfield development in South East England.²¹⁵ In a happier example, the Duchy of Cornwall has been able over the last 25 years to argue down the minimum number of cars per home in the successive phases of Poundbury's creation, as it has become clear that residents living in an attractive, mixed-use, walkable town such as Poundbury just do not need as many cars to go about their daily business as they might in a more typical 'drive-to' cul-de-sac model of development.

The required cars per home was initially set to be 2.7. This was argued down to 2.2 and then 1.9 due to

What	How many	Unit
Average density of new green-field homes ²⁴³	28	homes/hectare
Number of new greenfield homes, 2022-23 ²⁴⁴	112,240	homes
Implied number of hectares	4,009	hectares
Assumed increased density	55	homes/hectare
Possible new homes	220,471	homes
Increased supply on same land	108,231	homes
Increased supply on same land	96%	%
Reduced land required for same output	2,041	hectares

Potential housing uplift from development with more potential for safe and popular 'active travel' and reduced or removed parking minimums.

the mixed use and walkability of the neighbourhood. In fact, however, the take up of cars is *even less*, at an average of 1.1 to 1.3.²¹⁶ This also of course saves residents money.

Right now car parking is taking up more and more land not less! Sadly, more widely the amount of space required for parked cars per car is actually increasing not decreasing. Their breaking effect on the creation of new homes is thus worsening not improving. The width of the average European car has increased by 0.5 cm per year from 2001 to 2020. Obviously, this represents greater space and comfort for the passenger (a good thing) but, again, it is not without important externalities. Self-evidently bigger cars require more space: not just when moving but when parked. A standard UK parking space used to be 2.4m by 4.8m. Increasingly, however councils are now demanding more. Worcestershire requires 2.5m by 5m; Essex requires 2.9m by 5.5m; the New Forest requires 2.5m by 5.0m; and Buckinghamshire requires 2.8m by 3.0m.²¹⁷

Roadbelt: can we create homes by turning roads back into streets? Moving from places which are entirely dependent on cars to places which depend on a richer and more resilient array of movement also has the

potential to create more homes by putting roads on a diet and *literally re-purposing wasted road space*.

As we have seen, motorways and dual carriageways within towns and neighbourhoods sever communities, ruin air quality, take away alternative transport choices, and ultimately deter residents and 'fine grained' local investment alike. They tend instead to attract big box commercial buildings and surface car parks into the heart of towns, which reduce local prosperity and tax take. It is striking that this is most true of the least prosperous places. Among the bottom dozen urban neighbourhoods in the Legatum Institute's UK Prosperity Index;²¹⁸

- Five have fast wide roads or dual carriage ways though their town centres (Middlesbrough, Oldham, Grimsby, Doncaster and Wakefield);
- Three have fast wide roads or dual carriage ways encircling their town centres (Manchester, Dundee and Glasgow); and
- Two have busy roads, though not dual carriageways, near the town centre (Blackpool and Great Yarmouth). In Grimsby, for instance, an arterial road, much of it dualled or elevated,

separates the town from the coast and left behind neighbourhoods from the town centre. In Morecombe, a dual carriageway and around 15 surface carparks dominate the town centre between the station, the sea front and the new Eden Project site.

These wide and fast roads sometime serve a wider strategic transport need. The M5 and the M6 both run through Birmingham. But many other more modest dual carriageways do not, sometimes merely serving as a fast dual carriageway linking two much slower bits of road. They actually perform no strategic function and do not improve longer journey times at all. Some of these wide roads could turn back into the streets they were initially were and re-cede their surplus land back to housing or other development.

There are seeds of projects like this beginning to germinate. In Rochdale, a project taking a single turning lane from a five-lane urban motorway has allowed designers to add a new row of homes, adding up to 400 more homes than if the road was left untouched. The four lanes of traffic are left untouched.

In a project in Aylesbury a vast roundabout in the middle of the town could be replaced by a more humane junction allowing 105 homes and 850m² commercial space to be built.

In Southend-on-Sea a project to tame a vast elevated roundabout with seven lanes of traffic in places to a simpler four lane street and calmer roundabout has created space to create 1,760 homes and removes a huge barrier for people living either side of the road.

By doing this across Britain's towns and cities, in one act we could create thousands of beautiful, sustainably-located homes, protect our countryside from suburban sprawl and boost skills, jobs and economic growth. We might call all of this building on 'Britain's Roadbelt' and it appears to be catching on. To the best of our knowledge no one has yet estimated the potential from this source of new homes.

Existing places in which it is easier to get about more readily in more ways are associated with more monetary value, with better performing local centres and high streets, with greater health and happiness and with more personal freedom, particularly for children. Additionally, by creating *more* such places or by retrofitting existing places to be more like them (the gift of 'gentle density') we can also help create more homes than by the infrastructure-heavy route we are currently taking.



Better Queensway, Southend-on-Sea. Current layout and proposed masterplan. ²⁴⁵



St Mary's Gate, Rochdale, before (above) and a speculative vision for transformation (below) ²⁴⁶

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3. Examples of getting it right



How to spin the virtuous circle of place

Altrincham: curing a town by letting the people back in

Context. Altrincham, in Greater Manchester, is a market town of around 80,000 people. First granted a charter in 1290, it sits on the edge of the Cheshire countryside with excellent road and rail access to Manchester and Manchester Airport. It is home to some of the region's best schools, many lovely homes, independent businesses and many lovely historical buildings. It has a clear character and a true sense of itself. It is flourishing.²⁴⁷

Punching below its weight. Walking through the streets of Altrincham 15 years ago was not the same. One nearby resident recalls:

*'It was unattractive and apparently unloved, colourless and lacking character with neglected buildings, ugly frontages, delayed developments, boarded up shops, an empty town centre and the country's worst retail vacancy rate.'*²⁴⁸

It was labelled a 'ghost town' by the press.²⁴⁹ Despite many appealing assets on paper, Altrincham was not working in practice. People just did not want to go there and the vicious circle of decline was spinning ever faster.

What was going wrong and how to fix it? Some of Altrincham's challenges were very familiar: the rise of out-of-town 'boxland' shopping and the emergence of online retail. The nearby Trafford Centre, which had opened in 1998, was a major competitor.

However, one thing that was *not* the problem, as some said, was the lack of access or parking by car. Available parking was very generous: 4,700 town centre parking spaces in a multi-storey car park besides the high street and a large and free (for three hours) supermarket car park several minutes' away.²⁵⁰ Similarly, Altrincham has good road connections. The A56 and A560 joined nearby motorways.

Something else was needed beyond good car access and good parking. In 2011, 'Altrincham Forward' was formed, bringing together public, private and third party sectors to engage residents and evolve a vision and plan. Trafford Council, then Conservative-led, took the lead. The resulting 2014 Town Centre Masterplan recognised Altrincham's lack of movement, joy, safety and place quality. It was not welcoming to walkers or cyclists. It had poor public spaces, too many cars and too few pedestrians at key junctions. 'Existing footways were along busy roads' (never ideal) and 'streetscape' lacked imagination. Put simply being in town centre Altrincham was unpleasant at worst, boring and forgettable at best. Who would go there? All the incentives were to either drive elsewhere or, at best, drive, conduct your business rapidly and leave. The centripetal forces of the town had broken.

The goal was set to make it easier to move about and more attractive to visit places 'that had become sterile and lifeless' by linking up pedestrian routes across the town centre. Altrincham was to be more cycle-friendly with cycle lanes and hubs. To create 'safe, efficient and attractive routes', it said, the priority should be encouraging more street movement and activity, rather than boosting the speed of vehicular movement. The vision understood that our streets need to be shared and that humans need to be the primary species. It sought to encourage drivers to slow down on certain 'pedestrian priority streets' and 'be more aware of other street users.'²⁵¹

Promoting movement and place. Since then, £6 million has been spent putting the plan into action and it can fairly be said to have worked. Three key things have changed.

Creating streets that put people first. Many streets have been rebalanced in favour of walkers. Wider pavements and narrower vehicle carriageways with more frequent crossings have helped to rebalance the town towards people. Several roads have been pedestrianised, removing all vehicular access and providing walkable thoroughfares for people to shop,



The transformation of Goose Green, Altrincham town centre (above) and Greenwood Street (Below) before (left) and after (right)^{271 272}

stop and enjoy their surroundings. Food and drink outlets have spilled out offering outdoor seating in these areas, creating a buzzing atmosphere in the evenings.²⁵²

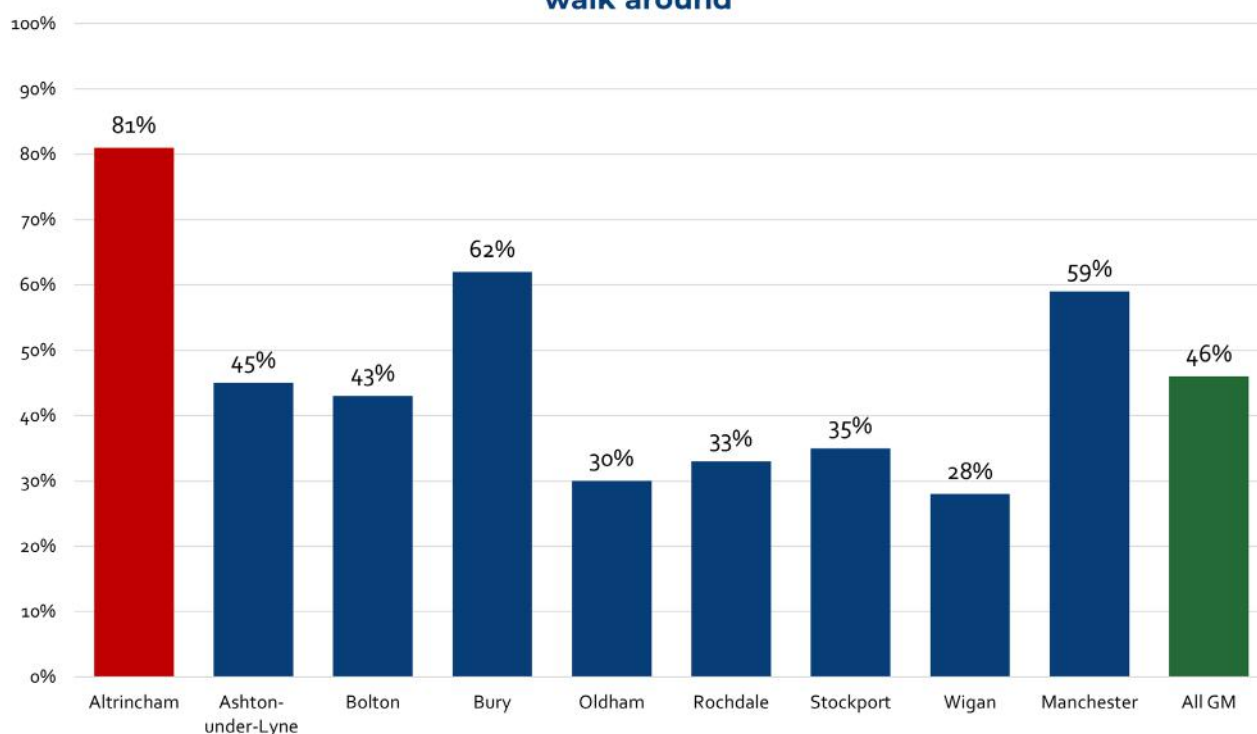
Making cycling easy for everyone. Two central roads now feature so-called 'contraflow' cycle lanes, which give cyclists priority to ride two-way along otherwise one-way streets for vehicles. One of these is a fully segregated cycle lane, offering even more protection, and is lined with 'rain gardens' - pockets of shallow vegetations and flowers, designed as an attractive way to increase rain runoff reabsorption by the soil, thereby helping to prevent flooding. The opening of a cycle hub at Altrincham Interchange provides 56 cycle parking spaces that are safe, secure and protected from the elements.²⁵³

Creating beautiful spaces and places. Street trees, high-quality paving, street furniture and better building frontages have created a more active 'streetscape'. A feeling of enclosure from the busy roads has helped residents and visitors feel welcome.

Enhancing the existing public spaces has provided flexible platforms for music, arts and cultural events. The new and improved Goose Green Quarter has an annual Summer Music Festival that is hugely popular and free to the public.²⁵⁴

Success: creating prosperity through aligning movement and place. Altrincham was always an easy place to get to and park in. This was never the problem. The changes made people *want* to come: attracting people to the centre and letting them enjoy it as shown by a five year sustained year-on-year footfall growth, totalling 13 per cent, with 3 per cent in 2019 alone. This was particularly impressive against a backdrop of *falling* footfall figures of -4 per cent for that year in similar market towns across the country.^{255 256} Since 'Altrincham Forward' formed in 2011, the number of pedestrians entering key locations in Altrincham town centre in early evening increased by 42 per cent in 2019, an all-time high, and recovered strongly in 2022 after the pandemic-related dips. A 2022 survey by Transport for Greater Manchester found that that 81 per cent of respondents found Altrincham town centre

Percentage of respondents who rated their town centre as having either very good or good, pleasant places to sit outside, relax and walk around



Altrincham's revitalised town centre has proven very popular with residents²⁷³

as having either very good or good 'pleasant places to sit outside, relax and walk around.' This was top of their chart and well above the 46 per cent Greater Manchester average.²⁵⁷

Businesses have flourished, with 23 new establishments from 2015-2019 and a further 20 emerging since the end of the second lockdown in late 2020.²⁵⁸ Altrincham is now home to more than 500 businesses, including 266 shops, restaurants and cafes, 159 of which are independent. Retail vacancy rates are down by 73 per cent since 2010, to 7.9 per cent in 2019, a third below the national average and a remarkable improvement.²⁵⁹

Within the decade, Altrincham went from having over 30 per cent of its shops boarded up to winning 'The 2018 Great British High Street' award and being named one of the *Sunday Times* 'Best Places to Live' for five years running, topping the list in 2020.²⁶⁰ Altrincham showcases a successful model of regeneration, escaping from the model of the town centre as purely a place to drive to and through and instead creating a safer and more attractive place to visit any way you want.

Pontevedra: boosting movement, health and prosperity

Context. Over the last quarter century, the Galician city of Pontevedra, with a population similar to Carlisle, Chester or Guildford, has quietly undergone a movement revolution, showing how making it easier for more people to move about can boost not just safety and air quality but urban prosperity and economic performance. This did not occur overnight. It was thanks to a cocktail of strategy and courage, a comprehensive plan to redistribute public space and wider decisions about how the city might grow.

Boosting movement. In 1999 Pontevedra was struggling, polluted, noisy and congested. People were leaving not coming. The city centre was not a place to seek or wish to be. So boldly, perhaps rashly, the city's beautiful historic core was pedestrianised and on-street parking spaces were moved to the periphery. Over the following 25 years, subsequent decisions have focused on the vitality and ease of movement around the historic core, rejecting large shopping malls out of town and using flourishing public revenues to boost public transport. The city's tight urban form has also helped. It has a higher

percentage of city centre residents than comparable British cities. 100,000 residents are concentrated within the three-square kilometres surrounding the city centre.²⁶¹

Boosting prosperity. Pontevedra has achieved this while maintaining, indeed renewing, a thriving city core which is attractive to shoppers and business alike. The city's economy has continued to grow. It



Pontevedra remade. The streets are cleaner, safer and busier than 25 years ago²⁷⁴

Boosting health. The city's streets are now a place where children play freely, markets bustle and neighbourhoods can come together. It has not had to develop a comprehensive network of dedicated cycle paths as residents can cycle safely on the existing streets. The city is now a much easier place to walk and cycle. Seventy per cent of city trips are on foot or by bike, 81 per cent of children walk to school and 91 per cent of vehicle trips do not enter the city centre.

A 2016 survey of residents' shopping habits found that 92 per cent of the population do their food shop close to their homes and that 53 per cent never use the car to purchase goods. As a result, the air is cleaner: CO₂ emissions have fallen by 88 per cent. The physical dangers associated with motorised traffic have been banished. There have been no car-related deaths or serious injuries recorded in the city since the programme began.²⁶²

has ridden out economic turbulence with a 7.2 per cent growth in the private services sector between 1997 and 2015. During the same period the Spanish economy flatlined, growing by only 0.1 per cent.²⁶³ Between 2005 and 2015 there was a 43 per cent increase in the number of local companies from 10,641 to 15,215 suggesting more people wish to work and spend time in the city.²⁶⁴ In short, the city is vibrant, prosperous and populated: a model of beautiful, walkable streets and economic resilience.

Lancaster, California: going on a road diet

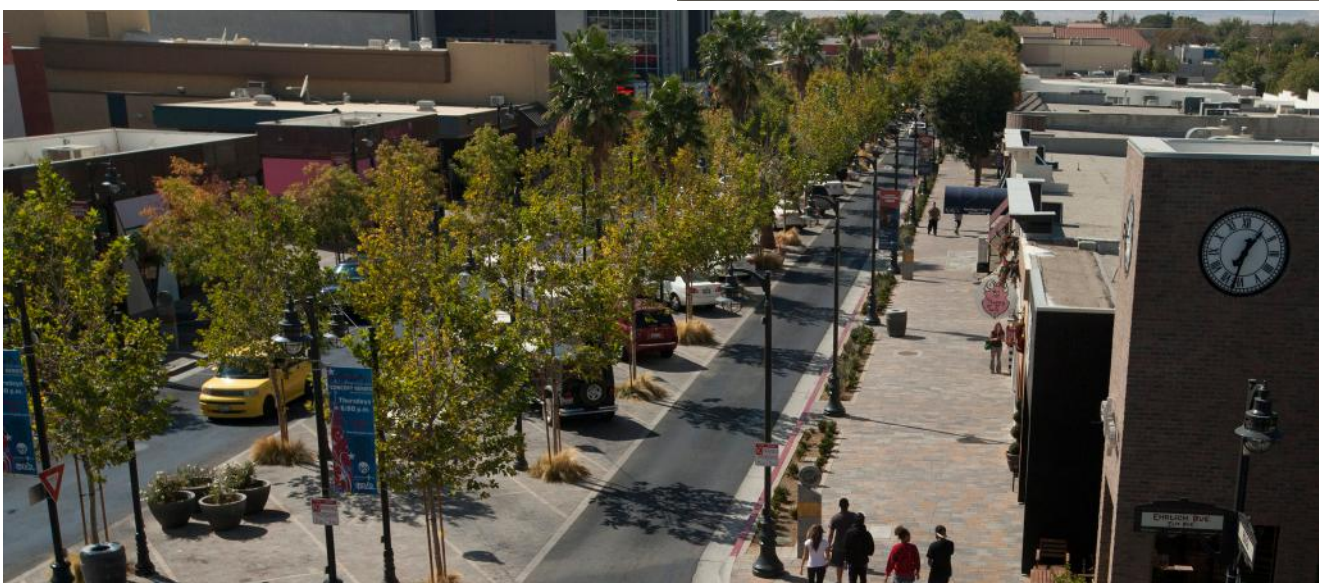
In 2008 the Californian city of Lancaster transformed its engorged main street (West Lancaster Boulevard) from a road of fast cars, difficult walking and failing retail into a street of slower cars, easier walking and flourishing retail. Their fast road went on a diet and came out a traditional main street: healthier, happier and more prosperous. The physical improvements were delivered in eight months for \$11.2 million.²⁶⁵

The most immediately visible change was the creation of a 30-foot-wide tree-shaded central walkway creating a city park within a five-lane thoroughfare. This space now accommodates public events such as fairs and markets attracting 20,000 to 30,000 visitors, and provides parking the rest of the time.²⁶⁶ The improvements included reducing five traffic lanes down to three, pavement widening, creating more pedestrian crossings, more lighting and, above all, planting scores of street trees to provide precious greenery and shade. The aim was not just to beautify the city centre but also to entice residents and visitors to come and visit.²⁶⁷

By every yardstick the improvements have worked. The rediscovery of Lancaster's 'main street' from within five lanes has made the town safer. There has been a 50 per cent reduction in crashes and 85 per cent reduction in injury-causing crashes. The street's footfall had doubled. This in turn has had a positive ripple effect on the local economy.²⁶⁸ The city centre

has blossomed back into life with 40 new businesses, 800 new homes and 2,000 new jobs.²⁶⁹ Property values have increased by nearly ten per cent reflecting increased demand. The initial public investment of \$11.2 million in street improvements has induced an estimated \$100 million of private investment and led to an estimated local economic boost of around \$280 million.²⁷⁰

West Lancaster Boulevard's renaissance shows how engorged 'roads' in which people are second class citizens and in which businesses fail can be put on a diet and rediscovered as walkable streets in which people are first class citizens and businesses flourish. Lancaster has rediscovered the virtuous circle of place though the simple expedient of making it safer, easier and more pleasant for more people to move around its main street and by ceasing to impose a near-freeway into its precious town centre. It is a staggeringly simple intervention, even an obvious one, but one that many towns in many countries have yet to make. Sometimes the answer is hiding in plain sight.



The transformation of West Lancaster Boulevard. Following changes to the original street design (above), the street is now safer, greener and more beautiful boosting footfall and business (below)

4. Conclusion



Why and how to fight the fight for better places

Just as modern Coventry was both made rich by the manufacture of the motorcar and then immolated on the cult of traffic-modernist town planning, so life is complicated. Cars are great. Cars are awful. Cars can boost liberty. Cars can destroy it. Cars can help the economy. Cars can undermine it. It is largely a question of where. They add most value in areas of lowest density. They add least and do most harm in areas of higher density. Those unhappy about the apparent politicisation of this issue are being naive. How we move about, what it costs and who can tell us where to go or not go are very legitimately matters of public interest and political debate. You need to win the argument, not complain that it is being waged.

The trick is to move the debate from cars to choice. And place. Undoubtedly the most successful (and sustainable) urban places make it easy, safe, joyful and affordable to move around by train or tram, bus or bicycle, on foot as well as on wheels. By liberating other ways to get about, they actually make it easier to drive for those who still wish to or need to. Everyone wins. The case is overwhelming. This is why we remain very confident that the logic, and the joy, of villages, towns and cities with more choice about how we get about, will win in the end.

Our advice for our friends who run councils or work for them, or who work in government or for developers and investors, would boil down to this: create opportunities before you curtail them. Add choice and let people decide with their hearts and heads. And think about *place* not just about *movement*. Removing or constraining an existing right to drive down a given street will certainly inconvenience some and may (though less frequently) be a problem for specific shops particularly reliant on car driven trade (even if the wider evidence suggests this will be quite rare). You can hardly blame inconvenienced drivers and worried shopkeepers for kicking up a fuss. And, as Edmund Burke once observed, in the field of politics, angry grasshoppers make far more sound than the contented cattle, chewing the cud.

You should therefore find gradualist “win-win” processes for improving places with the consent, even with the active leadership, of local neighbourhoods. This can be done. Plant street trees. Create continuous (so-called Copenhagen) crossings. Experiment with pedestrianising or part-pedestrianising streets on a given Sunday or bank holiday. Very often, local shop takings will rise. Clearly, this does mean recognising that what is possible in areas of high public transport is very different from what you can do immediately where there is not.

Look at the facts and the data already in your local town. In many historic English market towns the most prosperous street with the fewest if any empty shops are the ones with the most street trees and with the tightest most speed-constraining carriage way. Cars can be present but they are guests. Humans are the dominant species not cars. Create Streets have worked on a wide range of master plans and street design codes which seem to have been widely accepted when they are respectful of reality whilst also being ambitiously hopeful for the future. Work to create urban streets and squares in which people can naturally move in other ways than the car if they wish to, because it is more convenient, enjoyable and cheaper.

Don't hate cars. Don't wage a war against motorists. But don't wage a war *for* them either. Instead fight the battle for place and for happy and healthy, prosperous and productive neighbourhoods. All the evidence suggests that voters will thank you.

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Interviews

Name	Organisation and role	Date
Mark Frost	Transport planning society	21.11.2023
Roxanne De Beaux	Cambridge Cycling Campaign	21.11.2023
Tim Gill	Researcher - Child friendly cities	21.12.2023
Caitie Gillett	Conservative Environment Network	05.01.2024
Dan Watkins	Kent and Canterbury Councillor	12.01.2024
Maya Hobbs	IPPR	12.01.2024
Tim Burns & Dan Simpson	SUSTRANS	12.01.2024
Dr Suzanne Bartington	Birmingham University - Institute of Applied Health Research	15.01.2024
Scott Cain	CP Catapult & Bicycle association	17.01.2024
Dillon Smith	Centre for Policy Studies	18.01.2024
Lisa Hopkinson	Transport for Quality of Life	19.01.2024

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51	Lancaster, California After	US EPA (public domain)
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Endnotes

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