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Away with all cars

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"Things all got too much for author Kudno Mojesic. He was arrested in the street outside his Belgrade home attacking cars with an axe, yelling 'Away with all cars, they are the devil's work!'"^[1] *Sunday Mirror, London, 11th January 1976*

The privatisation of public transport in the UK has had widespread negative impacts on human welfare and social justice. But these are dwarfed by what may prove to have been the most profoundly damaging privatisation

project of all time: the relentless subjugation of the public realm to the exigencies of the private motor car. Four out of five journeys in Britain are now made by car, van or taxi^[2], and there are 39.4 million licensed vehicles on the UK's roads – more than one car for every two human beings in the country.^[3] The number of cars in the UK has grown in every year since the end of the Second World War^[4] alongside a continual increase in the distance travelled by car.^[5]

Consequently, transport is now the UK's largest sectoral source of carbon emissions, accounting for a full third of our total carbon output.^[6] It is the only sector to have made no meaningful contribution to emission reductions to date.^[7] Almost two thirds of road transport emissions are from cars.^[8] Breathing motor traffic pollution leads to the premature deaths of around 8,400 people every year in the UK^[9], and causes one in five childhood asthma cases.^[10] Electric vehicles (EVs) are now being promoted by the motoring lobby and the Conservative government as the solution to both the air quality crisis and to decarbonising transport. 2% of all new vehicles sold in the UK in 2018 were EVs, most of which were petrol hybrids.^[11] Vehicle stock and flow analysis shows that from the point at which 100% of new vehicles sold are EVs, natural market turnover will take 20 years for EVs to make up 90% of the cars in service.^[12] Electrification of transport is a wonderful thing. The problem is the cars.^[13]

Manufacturing a battery powered electric passenger car emits 6-16 tonnes of CO2e.^[14] As one and a half metric tonnes of metal, plastic and glass^[15] carrying an average human payload of little more than 100kg^[16], privately owned cars are in use for just 4% of the time, spending the other 96% of their time parked.^[17] Each car parked on the street turns twelve square metres of the public realm private.

To get onto an emissions pathway consistent with our commitments under the Paris Agreement, it is estimated that the UK will need to see a reduction in overall traffic volumes of between 20% and 60% by 2030, depending on how fast we can switch to EVs.^[18] That is a lot of traffic to lose. Yet the DfT's Road to Zero strategy^[19] for decarbonising transport contains no measures to reduce traffic growth. Instead, the government projects that traffic will increase by up to 50% by 2050^[20], and plans to spend £30bn of public money between 2020-2025 on road building to facilitate this^[21] Car traffic is known to expand to fill whatever space is given to it^[22]; the DfT's own assessments show that these

schemes ultimately worsen traffic jams, rather than alleviating them.^[23]

Reductions in traffic volume of the magnitude demanded by the rapid decarbonisation horizon appear, on the face of it, to be a major headache for politicians. But a shift away from car travel is also the single low-carbon measure with the greatest socio-economic co-benefits.^[24] Done right, this will change people's lives for the better in a very material way. The imperative to abandon our cars is a golden opportunity to reclaim some of the most important parts of the public realm for people.

Almost half of low income households have no access to a car^[25], while those in the wealthiest households travel more than twice as far by car each year.^[26] Arranging our geography for the convenience of the motorist inscribes a structural bias against the poor into the landscape itself, and locks households into car dependency^[27] at the macro level whether they can afford it or not.^[28] Car dominance is so debilitating that lack of access to a car in Western society is a key measure of social deprivation.^[29] Cars isolate and atomise society, cutting us off from one another inside armoured shells that protect those inside by endangering everyone else. Falling child road fatality figures^[30] are mirrored by growing childhood obesity and depression, as children grow up in confinement because motor traffic has made the streets unsafe.^[31]

The best place to start the search for steep reductions in motor traffic is obvious: cities. The automobile has profoundly transfigured the face of the British landscape and built environment over the past 70 years. Suburban sprawl, out of town shopping centres and commuter satellite towns with no railway stations all conspire to a reliance on private cars for basic mobility. But many UK city road layouts predate the automobile by hundreds of years. They were never designed to accommodate motor traffic, yet we have funneled unimaginable numbers of private cars into these cramped urban spaces, to the detriment

of all concerned – including those behind the wheel.

In the metropolis, the promise of private car ownership is frustrated: speed and control, freedom and convenience – all as illusory as the open road in the advert. Take London. There are 6.8 million trips by private car in London every day. Some estimates suggest that on average eight minutes of each trip is spent looking for a parking place^[32], even though over 50 square kilometres of London's public realm – some of the most contested and expensive space in the entire world^[33] – is given over to car parking.^[34] Despite cars that are capable of over 120mph, London's drivers travel at an average speed of 7mph and waste 227 hours a year stuck in traffic.^[35] Air quality inside a car stuck in traffic is 140% worse than it is outside.^[36]

Meanwhile children at 400 schools in the capital are breathing illegally toxic air, preventing their lungs from developing normally^[37], and a child is hospitalised by traffic pollution-induced asthma every day.^[38] 83 people were violently killed by motor vehicles while walking or cycling on London's streets in 2017.^[39] The motor vehicle is like a cuckoo in the nest of the urban environment; it cannot share the space without murdering its companions.

Yet London is also the only region of the UK with a long term trend of declining traffic. There are two underlying reasons for this. First, London receives far higher per capita spending on transport infrastructure than any other region.^[40] Second, London's public transport system remains under democratic ownership and control via its transport authority, Transport for London (TfL).

When bus services were deregulated in the rest of England in the 1980s, London was unique in retaining its ability to strategically plan and manage bus routes and fares, deciding when, where and how frequently to run the services.^[41] Since then, bus use in the capital has risen by 52% while it has declined in other English cities by 40%.^[42] TfL mandates

that a single bus fare in London today costs £1.50. In Manchester, there are 47 competing private bus companies, and a single fare in some of the most disadvantaged areas can cost £4.40^[43]; the Scottish Parliament has recently voted to allow local authorities to run their own bus services recent vote to allow councils to run public bus services.^[44]

Since TfL took control of the Overground from private operators in 2007, passenger numbers have increased by five times.^[45] Over the same period, tube, DLR and cycling journeys all rose sharply, while driving fell.^[46] Londoners now make 40% fewer trips by car than those living in other cities in England^[47] and car ownership levels are the lowest in Britain.^[48] London is consistently ranked in the top ten cities worldwide for high quality public transport.^[49] The most publicly owned and heavily planned transport economy in the UK is also by far the most successful.

Despite all this, London is still the most congested city in the UK^[50], and one of the most polluted.^[51] It is not possible to optimise this high pressure system while working around the coagulating presence of huge numbers of private cars. Most Londoners won't dare cycle because of a legitimate fear of being killed or maimed by a motor vehicle^[52], while bus journey times in London are increasing remorselessly because the buses are stuck in car traffic.^[53] Leaving the bulk of urban transport arrangements to the invisible hand of the market in a crowded world that is designed around the automobile is a recipe for carnage and gridlock. Half measures that nibble away at the edges of traffic's dominion are no good. The city must eliminate the private car from the public realm altogether.

It's hard to imagine, so let's try a thought experiment. It is 2030. Privately owned cars have disappeared from Greater London. As you leave work to go and meet a friend across town, you open the TfL app on your phone. The app shows every journey option available, including time and price.



1— Walk

You could take a stroll on the strategic walking network that now spans the whole of the city, connecting up London's town centres via its green spaces, with wide pavements lined with trees and benches and water fountains. Shops and cafes bustle with customers.^[54] Along these walking routes, pedestrians have right of way; wherever they are crossed by roads and tracks, the lights default to green for pedestrians, and other transport modes must wait for them to change.^[55]

2— Bus

These days nearly all Londoners live within 200m of a bus stop with a regular scheduled service. All buses are electric; the diesel buses have been cascaded out to the countryside to reopen rural routes. With the cars gone, congestion has been almost completely eradicated, halving bus journey times in the busiest parts of town.^[56] Bus routes are owned and operated by local municipal bus companies and TfL directly, and all buses in the city are free for those who live there.

3— Tram and Tube

Without cars, so much space has been freed up on London's strategic road network – also managed by TfL – that tram lanes now run down every major road, and are often the fastest way to cross town where there's no good tube route. Tram and tube tickets both cost a little but it's worth it for the speed. Like the tube, the tram system is owned and operated by TfL. From 7pm to 7am, the tram network is shared with bi-mode electric HGVs carrying pantographs that allow them to tap into the overhead power to make large scale deliveries.^[57]

4— Cycle

Dockless bikes are now ubiquitous, booked and unlocked with the TfL app. TfL planners ensure minimum comprehensive coverage across the city, and cycle hire is free to annual subscribers, pensioners and under 18s. Segregated cycle lanes are everywhere, even down to quiet residential streets, which are no longer crowded with parked cars.

5— E-bike

You could cruise to your destination at an even 15mph without breaking a sweat, on a London e-bike designed, built and maintained by a workers cooperative here in the capital. Members pay an annual subscription to ride free, while non members pay a small hire fee.

6— E-scooter

You're a member of London's independent e-scooter coop as you love how fun they are, and how frictionless it is to stop and start on one. Scooter journeys have a tiny environmental footprint^[58], plus they don't mess with your outfit.

7— Car-share

There are still a few cars on London's roads in 2030, though they're all electric. Most streets have a charging bay or two for the car share scheme, run by a coop that is regulated by TfL to manage overall numbers.

8— Taxis and Private Hire Vehicles

There's still plenty of appetite for private, door to door ride-hailing services amongst wealthier Londoners, so no taxi or minicab drivers lost their jobs in the transition. Instead, the number of licensed hire drivers more than doubled when private cars were expunged from the city. Without traffic congestion, all car trips are much faster than they used to be, so drivers are able to turn jobs around quicker and earn more too.

The experience for service users works just like Uber, but drivers and riders are members of a regulated platform cooperative that pays sick pay, pensions and annual leave. The ride-hailing platform is far more efficiently run by TfL as a monopoly service with blanket coverage of the entire capital, while the cab cooperative, with the help of City Hall, provides access to low cost finance for driver members to choose and operate their own electric vehicles. Dynamic road user pricing^[59] makes private car travel an expensive way to get around during rush hour, helping to keep streets moving freely 24/7.

9— Ride-sharing

You could summon an on-demand minibus - one of the purpose built red 8-seater, wheelchair accessible ride-shares that operate like a bespoke shuttle service, and have become the most popular option for door to door travel amongst Londoners. They're not quite as fast or direct as a completely private journey, but they're a lot more affordable – and they're free to the 3% of Londoners with a blue badge.

10— Auto-rickshaw

More expensive than the tube or tram, but far cheaper than a private car ride, journeys by electric three wheelers are also four times more energy efficient.^[60] The locally built black, London taxi-styled e-rickshaws have picked up a sizeable share of the journeys formerly made by car. Unlike a ride in a petrol tuk-tuk, an e-rickshaw journey is almost silent.

11— School bus

In the outer London boroughs, free, dedicated school buses are returning from their daily drop offs in the suburbs^[61], where urban sprawl has made it a little harder to meet mobility needs without private cars.^[62] Digital route planning means it is simple for these local authority run services to deliver bespoke, responsive routes based on need.^[63]

12— Vans

Most of the other vehicles on London's roads are electric light goods vehicles (LGVs). Although nearly three quarters of the deliveries that used to be made by van were small and light enough to now made by e-cargo bike^[64], vans are still needed for tens of thousands of tradespeople, services and utilities going about their business every day.^[65]

The disappearance of congestion^[66] has made life less stressful for London's professional drivers, and radically improved productivity for businesses and public utilities that rely on LGVs – helping to contribute to moves to a shorter working week. Overall, London's economy is billions of pounds better off each year now it is free from private car traffic^[67], and the biggest direct beneficiaries are

the taxi drivers and van based businesses who had historically been amongst the biggest barriers to measures to control traffic. Much safer streets means there are far fewer road casualties, and ambulance response times have shrunk by precious, life saving minutes too.^[68] Parks and allotments grow where car parks once stood, and local shops and new homes have taken over the sites of former petrol stations.

Rapid build out of the walking and cycling networks and free, ubiquitous bus transport were the early measures that unlocked the city's successful transition away from car domination. An e-bike swappage scheme helped many households give up their cars too.^[69] Reclaiming parking spaces for more beneficial uses was hard at first but began to gain popularity as people saw the results. Most of the cars that had been choking the streets of places like Hackney and Tower Hamlets belonged to people from outside the area.

Bringing all private hire vehicles city-wide under the same unified platform allowed TfL to begin to consolidate all transport modes into a single, incredibly powerful app, dramatically streamlining all journey planning. This in turn gave TfL near-total visibility over movements in the capital, allowing strategic planning to deliver seamless journeys integrating all transport modes. Planning efficient journeys for millions of people every day is not easy, but incomplete information is the least of our worries in the age of big data and machine learning.^[70] In the 21st century, the more carefully planned an urban transport system is, the better it works for everyone using it^[71]

As the TfL model is rolled out to every metropolitan region, alongside extra powers over local taxation and revenue raising, direct control over commuter rail into cities, and boosted borrowing and negotiating authority^[72], private car ownership is fast becoming obsolete in the UK's cities. Democratic control via Mayors means these bodies can also integrate transport planning with other public interest goals around housing, health,

education, crime and economic development. Led by municipalities, the modal shift to new forms of urban transit is being driven through procurement and commissioning rules that privilege local businesses, democratic ownership models and social enterprise. In 2030 over nine out of ten of us are living in cities.^[73] So removing private cars from cities means actually owning a car has become, quite suddenly, a niche pursuit – profoundly changing the shape of mobility nationwide.

This rapid and fundamental re-engineering simply mirrors the process by which British society was systematically motorised in the 50s and 60s, when the government forced the closure of thousands of miles of railway lines while constructing a thousand miles of new motorways. Deliberate choices by governments gave us the transport system we have, and they can give us the transport system we need to prosper in the 21st century too. But first we need the courage to imagine better – and then to demand it.

“The most publicly owned and heavily planned transport economy in the UK is also by far the most successful.”

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