

off the rails

Robin Hickman examines the development of cycling networks in Bogotá – illustrating how transport investments can be directly targeted at disadvantaged groups

using the difference principle



Robin Hickman

High-quality, segregated cycle routes in low-income neighbourhoods in Bogotá

Think of most of our transport investments – for example a new highway, public transport or cycling project – and usually it is the higher-income groups that benefit most. These are the groups that use the new infrastructure to reach desired activities, or are least affected by adverse impacts such as air pollution, noise and severance. Typically, we overlook these issues in transport planning, assuming that all will benefit from new infrastructure investment to the same degree, disregarding many important equity issues. Of course, distributional analysis is challenging – the population that is

affected might be difficult to estimate; for example, they might move into or out of the affected neighbourhood as a response to the intervention and hence are easily lost in any analysis.

However, this position is becoming increasingly untenable as social equity differences become greater. The research on social equity (see Piketty's *Capital in the Twenty-First Century*,¹ etc.) is generally showing that inequity is getting worse over generations and that this is unacceptable for the disadvantaged groups and also for society as a whole as resources are wasted.



Robin Hickman

Similar high-quality cycling in the city centre in Bogotá

Much of the contemporary research on social equity mentions the work of Rawls,² and often develops some of the concepts he put forward. An example is his mind game of the 'veil of ignorance', which assumed that, in the hypothetical 'original position', we do not know the interests we represent. Hence, if applied in public policy, we would favour disadvantaged groups when considering which investments to prioritise. We would be concerned that we might be within a disadvantaged group, hence would give investment to help these groups. His difference principle develops this idea – such that the position of the least advantaged should be maximised.

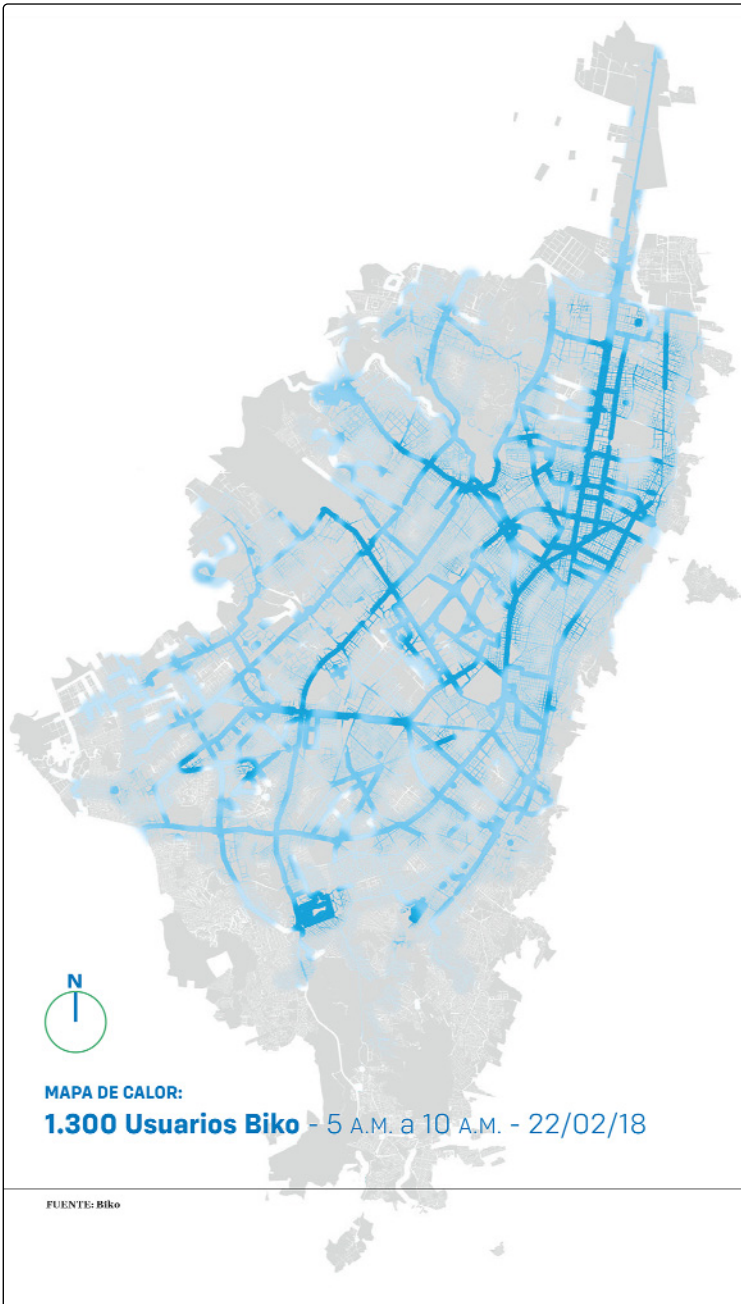
The question is: how we might apply this in transport? Perhaps we can understand the possibilities by examining practice internationally. An example is found in the cycling networks being developed in Bogotá, where low-income neighbourhoods are purposively given high-quality cycling routes.

Bogotá has the most extensive network of cycle routes of any city in South America. Known as the *ciclorrutas* (cycle paths), these have gradually been developed from the 1990s onwards into an extensive cycle network covering many of the different neighbourhoods in the city, including the

lower-income areas in the suburban outer areas. Progressive city mayors, particularly Enrique Peñalosa, were important in giving cycling support and priority for investment.

Cycling on the congested highways is very uncomfortable in a busy city such as Bogotá, with high levels of traffic, including cars, taxis, buses and goods vehicles – and much conflict with cyclists. This type of cycling is only for the very brave; traffic and cycle collisions are common, and often fatal or life-threatening. Air pollution levels are very high – and add to the uncomfortable nature of cycling on busy roads without cycle routes.

Over time, cycling has been given much greater priority in Bogotá, and cycle facilities are being implemented with higher quality, including segregated routes – hence more people can be expected to cycle. Over 550 kilometres of *ciclorrutas* have been built, allowing easy access from most neighbourhoods, including the low-income areas, such as Kennedy. 80% of cyclists are from the three lowest income strata (the neighbourhoods in the city are divided into six income categories). Cycle usage is tracked with an App, and it is possible to see how cycling is distributed through many neighbourhoods in the city, including travel from



Tracking cycle usage in Bogotá
Bogotá Capital Mundial de la Bici. Una Visión de Ciudad³

the poorer suburbs to employment locations in the city centre. The cycle network allows people to participate in life in the city.

There are different types of cycle route provision. The principal cycle corridors have segregated routes and connect the city centre to the peripheral areas in the south, north and west. Segregated routes run

along the edge of road corridors or in the median strip; sometimes these are tree-lined and well removed from traffic. Temporary interventions are often used to test applicability, with cyclists divided from traffic by barriers – these help to assess the demand for routes and acceptability, and generate local community support for interventions. The cycle

network is therefore developed in an iterative process over time, testing facilities with users and gradually providing improved infrastructure.

Cycling is now the fastest growing mode in Bogotá – in 2015, the mode share for cycling was at 5% of trips, with TransMilenio bus rapid transit (BRT) at 15%, other bus at 29%, pedestrian at 30%, and private car at 11%. Later surveys indicate that cycling mode share has risen to 9%-10% of trips and that now more than 1 million trips are made by cycles in Bogotá every day.³

The provision of cycle networks was part of the response to the urban problems in Bogotá in the 1990s, including rapid population growth, migration from the countryside, the growth of informal settlements, and poor-quality, unregulated public transport. Cycle routes have purposively been developed in lower-income areas to provide access to the city for all, including for employment, education and leisure activities. An example is the Alameda El Porvenir cycle route, which links two low-income communities in the south west of the city. The cycle route was built before the development took place in the surrounding neighbourhoods, and hence became the 'spine' to the area, shaping how it grew.

The cycle routes also integrate with the BRT interchange stations, providing 'last mile' connectivity to the bus network. High-quality cycle parking is provided at many of the BRT portals, with internal, secure parking and cycle hire and repair available.

The development of the Bogotá cycle network is a clear example of targeting transport investment towards particular disadvantaged groups. Typically, this is not done in transport planning, which conventionally assumes that all will benefit from new infrastructure investment. Indeed, investment is usually given to projects and areas that are estimated to benefit most in economic terms – and hence is often regressive in practice.

The justification from Enrique Peñalosa was that, in giving cyclists their own space, he 'democratised' the city by giving a person with a \$50 bike the same space and right to move as a person with a \$50,000 car. Similarly, as all income levels start to cycle, both rich and poor meet equally on the bike lane, and gain a greater understanding of different types of neighbourhoods and people – thus helping to resolve many social problems which are rooted in insularity.

There is much inspiration for wider application of these ideas in transport planning, including targeting cycle routes, public transport and other projects in lower-income neighbourhoods and for the use of disadvantaged groups. Think of transport investment

in London, and the focus given to projects taking people into central areas. Why not also use the difference principle and give investment to the most deprived neighbourhoods – Tower Hamlets, Hackney, Newham, Haringey, Hackney, and increasingly the outer boroughs where poverty is concentrating, such as Brent and Barking and Dagenham? Why not have a proportion of the infrastructure budget allocated for the use of disadvantaged groups – even using a participatory budget mechanism, such as being applied in Paris and Madrid?

'This is a great task for transport planning – to start recognising and tackling the distributional issues'

All of these ideas would strengthen the democratic nature of infrastructure funding. They can be used beyond London, in all of the cities and towns in the UK where there are high levels of deprivation. This is a great task for transport planning – to start recognising and tackling the distributional issues. High-quality cycle networks, public realm and even tram and bus projects can be developed for all of the most socially-deprived neighbourhoods. Transport investments should not only be for privileged groups; they should be for all in society – allowing all of us to access the activities that we wish to participate in.

● **Robin Hickman** is Reader (Associate Professor) at the Bartlett School of Planning, University College London. He is Director of the MSc in Transport & City Planning. *e: r.hickman@ucl.ac.uk. The views expressed are personal. Thanks are due to Deutsche Gesellschaft für Technischer Zusammenarbeit (GIZ) (the German overseas funding agency) for funding an e-learning course on sustainable urban mobility from which the material in this article is drawn; and to David Uniman, Dario Hidalgo and Thomas van Laake for discussions on cycling in Bogotá.*

Notes

- 1 T Piketty: *Capital in the Twenty-First Century*. Belknap Press, 2014
- 2 J Rawls: *A Theory of Justice*. Harvard University Press, 1971
- 3 *Bogotá Capital Mundial de la Bici. Una Visión de Ciudad*. Bogotá Secretaría Distrital de Movilidad, Mayor of Bogotá, 2019. <https://planbici.com/alcaldia-penalosa-lanzo-el-libro/>