Rethinking urban mobility

Professor David Banister and colleagues are rethinking urban transport solutions for the 21st century. To become more sustainable, it is essential to address our dependence on the car, and design transport solutions that can be integrated into our cities’ infrastructures.

In the last hundred years the increasing opportunity for ordinary people to travel has allowed us to expand our horizons both physically and mentally, and has changed our social structures and work-patterns beyond recognition. The car, the symbol of individual freedom in the developed world, has been integral to this revolution.

Despite its success, the petrol-driven car is taking an environmental toll on the world. Transport is responsible for 25% of global CO$_2$ emissions today. As large nations such as India and China continue to mature in their economic development, the demand for cars is expected to grow significantly, putting ever-increasing pressure on the environment. In the UK, the government has made a commitment to drastic cuts in greenhouse gas emissions by 2050, adding an even greater urgency to the debate on urban structure and travel. In addition to the environmental considerations, there are just too many cars on the road: traffic congestion is a serious problem in many cities.

The future of urban transport is one of the key issues addressed by Oxford’s Transport Studies Unit (TSU), an interdisciplinary research centre which specialises in the study of ‘transport futures’.

In coming up with a sustainable solution for urban transport in the 21st century, it is important to recognise that patterns of behaviour related to transport can be extremely resistant to change. Researchers at the TSU have drawn on ideas used in behavioural economics and transition theory to understand and model this inertia. The research shows that if you give travellers all the information they need to make a truly informed decision, it can enable them to move away from their currently car-centric modes of urban transport to the most efficient and environmentally sustainable combination of modes for a particular journey.

Another important area of TSU research concerns the subsidisation of new forms of transport that will help the transition from a car-dependent society. Subsidies can facilitate change; for example, the development of small speed-restricted electric vehicles offers the potential for a more efficient mode of urban transport if incentivised properly. However, the challenge for governments is how to ensure that any new technology moves from being subsidised to being independent of government financial support, and this requires detailed research.

Moving away from our dependence on the car is an important facet of rethinking urban mobility, but it is not the only consideration. TSU research is increasingly showing that urban structure and mobility are inextricably linked; there are significant associations between the built environment and travel. TSU policy papers highlight the need to design cities efficiently in order to maximise the capacity for low and zero-carbon journeys. Increasing urban densities and reducing urban sprawls can help facilitate transport patterns based on shorter journeys (less than 5km), which are suitable for cycling and walking.

Transport has a major impact on all aspects of our lives. Working towards an efficient and sustainable model of urban mobility will bring benefits for everyone who lives and works in a city.

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