



If walking and cycling are to contribute to greater health through increased physical activity, there needs to be a fundamental rethink about the way that transport schemes are modelled. This is a two-lane cycleway planned for Sydney, Australia.

# Improving health through walking and cycling

- The health of the nation could be improved by encouraging more people to walk and cycle. Roger Mackett FCILT, Professor of Transport Studies, UCL, discusses why it seems to be so difficult to increase walking and cycling. This is a shortened version of his keynote address at the most recent Transport Practitioners Meeting held at the University of York.

Walking and cycling are important modes of travel, particularly for short trips. They offer physical activity and can contribute significantly to health. However, despite their low cost and the ease with which they can be carried out, they have declined in recent years. This paper explores why it is so difficult to reverse this decline.

#### [Link between walking and cycling and health](#)

About one-quarter of the population of England is now obese, a significant increase from 15 years ago. This is part of a major health problem associated with diet and physical activity. The annual cost to the nation of physical inactivity is estimated to be £8.3 billion a year; made up

of between £1 billion and £1.8 billion annual costs to the NHS, about £5.5 billion due to sickness absence and £1 billion from premature death of people of working age according to: *Be Active, Be Healthy*, issued by the Department of Health.

The Department of Health recommends that adults engage in 30 minutes or more physical activity of at least moderate intensity on five or more days a week. The Health Survey for England shows that, in 2008, only 39% of men and 29% of women reached this level.

The evidence suggests that investment in walking and cycling schemes produces a good benefit-cost ratio. Walking and cycling schemes often have benefit:cost ratios of 25:1, or even higher; according to a recent report by Adrian Davis for Bristol City Council and NHS Bristol.

Walking and cycling have a contribution to make to the volume of physical activity. Transport planners could contribute to the health of the nation if they were able, through their policies and actions, to increase the volumes of walking and cycling, which have declined in recent years. The remainder of this paper discusses why this seems to be so difficult.

### Barriers to increasing walking and cycling

The reasons why more people do not walk and cycle short trips were identified in the project: *Potential for mode transfer of short trips*, carried out at UCL for the Department for Transport a few years ago. The reasons for the switching from walking and cycling to the car fell under three headings:

- Lack of motivation
- Difficulties in walking and cycling
- Lifestyle and shortage of time

Faced with the alternative of making a short trip using either the car, which will make the journey quickly and comfortably, or walking or cycling, which will take longer, require effort and involve exposure to the weather; many people choose the car.

There are a several possible difficulties in making a walking or cycling trip:

- Physical difficulties
- Fear of going out
- Local environment is unsuitable
- Desired opportunities are far away

Britain has an increasing proportion of the population who are elderly. Many of them have difficulties walking. Some people have a well-defined disability that prevents them from walking or cycling. At any time, younger people can have difficulty walking – for example, when carrying shopping or travelling with very young children. The car is usually the easiest way to travel in these circumstances.

Newspapers publish many stories about crime. This may cause people to refrain from walking, or parents to forbid their children from doing so. Instead they use their cars. Streets with poor quality pavements, dog mess, chewing gum and so on do not make pleasant areas in which to walk. At night, streets lacking good lighting will discourage people from walking. Urban areas have

spread over recent years. Suburbs have been developed, often providing housing with individual gardens where families can create their own environments, and usually one or more garages. Densities are fairly low, and so people tend not to live very near to the activities they need as part of their lives. Because they tend to have cars and the roads are usually not very busy, the car is the usual mode.

The shortage of time relates to modern family life, which has become very complex, partly because more mothers are employed, often part time, and partly because there is a perceived need to protect younger children by not letting them out without adult supervision. Nowadays, children tend to go to clubs, lessons and other organised activities, rather than just going out to play, and they are usually taken by car.



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TRANSPORT PLANNING

Possible methods of overcoming the perceived barriers to walking and cycling are relatively easy to identify. Improving the walking environment by investing in better and wider pavements, installing more street lighting, putting in more benches, and paying staff to clear up litter and dog mess are straightforward.



Many households have adopted a car-oriented lifestyle because they can afford enough cars to meet most of their travel needs, and the range and location of their activities require the use of the car. Equivalent trips by earlier generations would have been walked, cycled or been taken by bus. This gradual transition towards a car-oriented society has been part of a two-way interaction with the decentralisation process: as cars have become more widely available, suppliers, such as retailing chains, have chosen locations best served by cars, and households have felt an increasing need for a car – or two – to help them reach the opportunities offered.

There is a further dimension that makes it particularly difficult to reduce car use. Many of the households have chosen to live in places where car is the only way to reach the desired range of destinations, reducing the opportunity to walk and cycle.

This all means that it is difficult to encourage more people to use alternatives to the car: It is not simply a matter of reversing the shift from walking or cycling to the car. Many people have grown up in an environment where society is largely geared up to using the car. For them it is the easy choice, offering fast journeys and opening up opportunities unreachable by any other means. It allows people to continue the comfortable lifestyles that they have created. It also enables them to project an image of success to their friends and neighbours.

**Overcoming the barriers**

For those who make short trips by car, it is necessary to make the car less attractive by increasing the cost of its use or increasing travel times. In theory, this is straightforward: increasing fuel tax or charging for the use of road space can both be implemented if the Government has the will. But large increases have induced protests in the past, and the Government is aware that the majority of the population live in car-owning households and that votes may be lost if motorists feel they are being treated unfairly.

For those not currently walking or cycling, the motivation to do so will need to be based on the intrinsic benefits, such as health. This requires increasing awareness of the health risks associated with lack of physical activity. Advertising campaigns may help here, but it seems unlikely that these alone will have very much impact on those who currently choose a sedentary lifestyle.

Many of the motivations for using the car arise from meeting the needs of children. These needs partly arise because of parental concern about the risks of allowing them to walk or cycle without an adult. Hence, one need is to increase parental confidence, which involves making streets safer and convincing parents that this is the case.

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in better and wider pavements, installing more street lighting, putting in more benches, and paying staff to clear up litter and dog mess are straightforward. Similar improvements can be made for cycling. Such improvements, together with effective policing, may help to reduce crime levels. Whether they actually encourage more people to walk or cycle is another matter.

The problems caused by greater dispersal of urban activities, which have led to increased distances from home to shops, schools and leisure facilities, can be addressed by planning policies. However, this is difficult because the trend has been towards larger, more centralised facilities, many of which are owned and operated by the private sector; and the financial interests of the company are likely to be given precedence over the public interest.

Another approach to reducing the distance people need to travel is to increase residential densities. Densities fell with the spread of suburbia, which led to longer trips that in turn led some people to use cars rather than walk or cycle. The increase in the forecast population has led to pressure to build on brownfield sites largely within existing urban areas. This may cause densities to increase, but will not reduce the distance of existing residents from shops, schools and so on, unless new shops and schools are built to meet the increasing demand, and they are within walking distance of existing residents.

Even if these planning policies of increasing densities and providing local shops and services are implemented further, they will do little to reduce the problems caused by people who have moved to areas where they can only maintain their lifestyles by using one or more cars for all their trips. It is unlikely that many of them are going to return to high-density urban living. It should also be borne in mind that the population is dynamic: new households are being formed all the time, while others dissolve. This means that whilst the existing households who have moved right out of the city may not move back, the equivalent households going through the stage in the life cycle when households in the recent past chose to move out, might come to a different conclusion and choose a more urbanised lifestyle. This suggests that it is important to target households before they move to rural areas. It also requires the provision of suitable housing to meet their needs.

The development of the road system in Britain is partly the result of the modelling and appraisal system used. These evolved in the 1960s and 1970s. Whilst there have been a number of methodological developments,

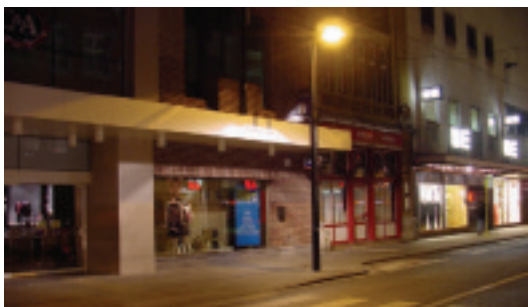
the basic methodology has remained the same. It can be argued that the emphasis put upon economic efficiency in the appraisal of road schemes tends to favour schemes that encourage high levels of transfer from the slow modes of walking and cycling to the faster mode of the car. This trend is exacerbated by the use of models based on assumptions of rationality that say that spending less time travelling is better than spending more time. This may be true for some forms of travel, but for walking and cycling, from the health perspective, the more time spent the better. This suggests that if walking and cycling are to contribute to greater health through increased physical activity, there needs to be a fundamental rethink about the way that transport schemes are modelled and appraised to make health issues more central, perhaps by replacing economic efficiency by quality of life, which would include good health, as the overriding criterion for determining the best scheme.

### Summing up

The main reason for the decline in walking and cycling is the growth in car use. The lives of many households revolve around use of the car. Many households have chosen to live in locations where they can only reach the activities they need to function by using the car. There are a number of other factors that make walking and cycling relatively difficult and unattractive for some people.

Walking and cycling can contribute to the improvement of the health of the nation, but there are many barriers to be overcome. Whilst the cost may be high, the cost of not doing so, through increased mortality, lost productivity and other costs associated with ill health, are likely to be much higher.

There is now an opportunity for transport practitioners to contribute more to the well-being of their nation than at any time in the past. They should seize the opportunity.



At night, streets lacking good lighting will discourage people from walking. Better street lighting encourages confidence for pedestrians.



### About the author

**Roger Mackett FCILT** is Professor of Transport Studies, University College London (UCL) and has extensive experience in transport policy analysis. He is interested in ways of overcoming the barriers to reducing car use. He has researched into the influence of car use on children's physical activity and their use of the local environment, using accelerometers and GPS monitors. He is currently involved in projects to examine the implications of children's independent mobility in countries around the world and to establish the health impacts of the Cambridgeshire Guided Busway. He led the development of the software tool AMELIA – A Methodology for Enhancing Life by Increasing Accessibility – to help make transport policies more socially inclusive.

Further information, web site: [www.cts.ucl.ac.uk/members/rlm.htm](http://www.cts.ucl.ac.uk/members/rlm.htm)

### Further information

For more information about the issues raised in this article, why not join our Travel Planning or Cycling Forums within the Active Travel & Travel Planning Sector? See our web site for details [www.cituk.org.uk](http://www.cituk.org.uk)

This article is a shortened version of a paper presented at last year's Transport Practitioners Meeting (TPM) conference. TPM is organised by PTRC, the leading organiser of training for the transport industry in the UK. Further information, web site: [www.ptrc-training.co.uk](http://www.ptrc-training.co.uk)