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CAN CYCLING SAVE THE SUBURBS?

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What suburbs?

The suburbs can be characterised partly by their physical structure (low density, single family dwellings, private parking, zoned and separated non-residential land uses) and partly by reference to the particular qualities of life to which suburban dwellers aspire (privacy, car parking, quietness, good air quality, good neighbours, good schools, and plenty of indoor and outdoor space). Not all suburbs were developed around the car (many in outer London were served originally by cycle, bus, trolleybus and rail), but those developed since the 1960s have almost universally been so arranged.

Already most people in the developed world live in suburbs, and the great majority of new settlement building is carried out in suburban locations and styles. The only apparent exceptions to this occur where there is a severe shortage of land and/or planning restrictions on the outward spread of cities. Where land is relatively plentiful and cheap and without development restrictions, investors and customers interests combine with those of the road and motorcar lobby to produce a powerful force for car-based, low density, decentralised suburban expansion.

What needs to be saved?

The suburban way of life is under threat for two main reasons. First, the very qualities which people seek in the suburban way of life are being destroyed by the travel consequences of low densities and spatially separated land uses: increasing motor traffic due to reliance on the private car and increasing journey distances. People find when they travel that their journeys are taking longer, and parking is harder to find.

When they are at home they find their environment increasingly dominated by the traffic of others, with roads increasingly dangerous and intimidating, air quality deteriorating, and traffic noise unrelenting.

Second, as communities and the world at large wake up to the problems generated by private motorised transport, measures are increasingly promoted that tend to reduce the freedoms and ideals of suburban life, for example:

- promotion of a pro-urban counter-culture. For example, through higher density building, restrictions on suburban retail and employment locations, and the re-focusing of investment towards city centres and public transport nodes (all of these are now part of British planning policy);
- more travel by non-car methods, through both traffic restraint measures and improvement of non-car modes; and
- higher fuel and vehicle taxes, as the social and environmental costs of car use are internalised in the charges which motorists pay.

A third and potentially more powerful challenge to suburban lifestyles may emerge, namely social stigmatisation of those whose lifestyles impose heavy environmental costs on others _ "How many cars did you say you have?!".

In short, the quality of life for suburban dwellers is being eroded, while the environmental and community costs of their car-based lifestyles will put the suburban ideal under threat, either from redevelopment to achieve sustainability goals, or from fiscal and social penalties for those with car-dependent lifestyles.

Here are some examples of the mounting pressures:

- Suburban trips account for a high proportion of the total growth in motorised travel, energy consumption and air pollution (traffic in outer London suburbs is growing at almost ten times the rate of that in central London - see Pharoah, 1991).
- Land use trends towards larger and fewer facilities are fuelling car dependence and reducing the opportunities of the car-less (the car accounts for 90-95% of travel to typical British out-of-town retail or business facilities, compared to less than 50% of travel to mixed used centres, see ECOTEC/TPA, 1993).
- Population densities are reducing, not only because of aspirations to more space, but because of declining household size (Over 4 million new homes are expected to be needed in Britain over 20 years, without any increase in total population).
- Tele-working is likely to further increase demand for personal household space.
- Public transport provides for an increasingly marginal share of suburban travel, and generally is not financially self-supporting.
- Increasing "trip end" restraint in higher density areas through parking controls, tolls and city centre permits, reduces the opportunities for suburban dwellers to visit such areas, and thus further encourages growth of suburban destinations where such limitations can be avoided.

How can the bicycle help?

If some or all of the "threats" outlined above turn out to have a significant impact on the lives of suburban dwellers, how can they respond? One answer would be for them to abandon their lifestyle aspirations, and accept a more urban existence. Such a response will be necessary for the success of many of the initiatives towards the creation of "urban villages", "transit oriented developments", and "densification" policies. Another response is simply to fight to protect the suburban way of life, as happens already in most car-dependent cities.

A third response is to adapt suburban lifestyles to the new situation, by a mixture of behavioural change and physical planning. The scenario is to enhance the best aspects of suburbia by reducing the harmful effects of excessive car dependence, and by re-focusing on the bicycle instead of other means of transport.

Scenario for multi-mode suburbs

The essential ingredient of change is to reduce dependence on the car, which in turn has several favourable effects:

- Availability of a choice of means of travel will provide greater independence for those who because of age or other reasons cannot drive;
- Having a choice of alternative modes means that car traffic can be reduced without any overall loss of access opportunities;
- There will be less need for multiple car ownership, thus saving on household transport expenditure and helping to preserve residual demand for public transport.
- Reduced traffic levels will improve local safety and environmental quality.

These changes work together in a "virtuous circle" of improvement, but will require community planning and intervention to set the ball rolling. People acting individually cannot bring about any significant improvement either for themselves or for the community. The need for collective planning and action to limit car travel and to simultaneously provide the benefits of so-doing provides a major challenge for local authorities.

In deciding what alternative modes to provide, the bicycle can be seen to have major advantages compared to the other possibilities, namely walking and public transport. These advantages include:

1. Suburban distances are too great for a high proportion of trips to be made on foot. On the other hand, many trips are not so long that they require the use of motorised vehicles. The bicycle neatly supplies the majority of intra-suburban travel. In Britain, 29% of trips are less than one mile, but 70% are under 5 miles (Department of Transport, 1993).
2. The bicycle upholds one the great suburban virtues, namely independence. The bicycle, like the car, provides door to door travel without the need for timetables or information about public transport fares and services. In a study of families in Bremen (Germany) who gave up their cars for one month, it was this freedom which led the participants to choose the bicycle most often as their alternative

means of travel (see Pharoah, 1992, p.59). Provided that traffic dangers can be designed out, children can ride to school and other places; thus providing both them and their parents with greater independence.

3. Unlike public transport, the bicycle can provide access to suburban or isolated facilities without the need to restructure or "densify" the land use pattern. The suburban shopping malls, business parks and leisure centres, for example, can thus continue to function with the bicycle instead of the car. In most cases, it is impossible for such activities to be reached conveniently by public transport, even with much improved levels of service.
4. The diffusion of origins and destinations in suburban areas means that private transport will be favoured over public transport. The bicycle provides the nearest equivalent to the car in terms of flexibility of destination, distance and time. Trip chaining is also easier, allowing multi-purposes to be served by single "trip chain", even where different activities are physically separated.
5. Cycle facilities in the form of special lanes or separate paths can be provided more easily than in high density or "pre-car" areas, because there is more space available on suburban roads. Exclusive rights of way for bicycles are much easier to provide than the equivalent for bus or rail routes, because of smaller dimensions necessary, and few restrictions in terms of required geometry.
6. Cycle-and-Ride is preferable to Park-and-Ride because of smaller space requirements. Not only is it easier to find the necessary sites next to public transport stops, but the smaller sites create less of a barrier between the stop and the surrounding neighbourhood. A problem with car P+R sites is that even the nearest housing is pushed too far away to encourage walking; and walking through a car park is not pleasant (see Pharoah and Apel, 1995).

The bicycle cannot provide for all the trips of suburban dwellers, but the potential is likely to be at least half of all intra-suburban trips. It is important that cycling is not promoted at the expense of public transport use. Unless more cycling means less driving, there will be no environmental gain, and there will be disadvantages for those who remain dependent on public transport (see Pharoah, 1993 and Pharoah and Apel, 1995). Bicycle provision should therefore be planned to work in combination with public transport to provide access to the more specialised facilities and services available (at a greater distance) in city centres.

Cycle provision should also be on space taken from the car, not from footways or other space for people on foot. Again, if more cycling simply means less walking, while car driving stays at the same level, there are no gains.

The higher the proportion of trips that transfer from car to bicycle (or to walking), the greater will be the potential for higher density development without loss of environmental quality. The bicycle in this way may be seen not as an exclusive alternative to restructuring the suburbs, but an important element in making such restructuring possible and effective.

Conclusion

In conclusion, the bicycle can provide the means of survival for the suburban ideal, by providing important health, independence and lifestyle benefits for suburban dwellers, whilst simultaneously reducing the environmental burden which current suburban lifestyles place on the community at large.

Implementation of this adaptation will require relatively inexpensive changes to transport infrastructure, promotion of the benefits to be gained through awareness and information campaigns, and some down-sizing of the road and parking infrastructure to discourage car use. Compared to trying to provide for full motorisation of the suburbs, it will be a relatively straightforward technical job. Compared to retro-fitting the suburbs with higher densities and mixed uses, results can be achieved much faster and perhaps with less opposition from existing property and other interests. Such re-structuring of the suburbs may also be important, but it is already becoming clear that it involves going against the grain of established development laws, policies, procedures and practices.

Creating multi-modal suburbs, with the bicycle as the main alternative to the car offers a potentially straightforward path to making the suburbs sustainable. The real challenge will be for local authorities to take the necessary steps to achieve the "trend breach", and to not be deterred by the inevitable resistance from those political instinct is to oppose collective action for the common good.

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