



To: Neighbourhoods and City Development

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Subject: Essential Evidence on a page: No.79 The paradox of the effective speed concept

Top line: The impacts of speed on health are far more subtle and pervasive than simply effects on road safety. Slower modes should be encouraged because they enable a range of healthy and sustainable behaviours.

Speed is most commonly seen as a health issue in relation to road crashes. A recent review notes that there are many other ways in which the speed of motorised traffic is linked to factors that have clear negative health impacts.¹ Increasing the speed of motorised traffic increases levels of pollution. High car speeds can affect levels of physical activity through reductions in active transport, including children's independent mobility. Local social interactions are disrupted by high-speed traffic, leading to a loss of social connectedness. High speed transport encourages urban sprawl and hence, the creation of longer distances for urban travel and the loss of agricultural land and market gardens, which then add to pollution through increased food miles. As well as the speed of motorised traffic, a general increase in the pace of urban life has also been linked with negative health impacts including reductions in healthy eating.

In contrast, lower speeds in urban areas contribute to a higher quality of life in terms of the livability of public spaces, including lower crime rates and higher levels of social interactions between people. "Streets with low traffic speeds and volumes have been found to have more indicators of a better quality of life—more street activity, more signs of street care (e.g. flower boxes) and more open windows".² The effective speed concept suggests that lower speeds ultimately save time as retention of high density enables people to access services and facilities by sustainable modes not possible even by car with low density land use planning. This is a paradox of the effective speed concept.

Households with children in many cities are less likely to feel able to live without a car. Often the case in cities in Australia, the US and the UK, there is a growing expectation on parents to drive their children to school, to sport and to extra-curricular activities. Parents can become caught in a 'social trap', where it is seen as socially unacceptable not to drive your child to school and to other places. Such social traps are not as evident in some developed countries (e.g. Japan and Germany) where children have high levels of independent mobility. For those who can make the choice to switch modes, particularly if they can sell the second car, there is potential to save time and decrease their work hours. Even if their work hours each week are not easily reduced, then the money saved by slower modes of transport can facilitate greater spends on leisure-time.

The greatest potential for applying the effective speed concept lies, however, at government policy level. Governments can save money by switching to 'slower' modes of transport. The possible extent of savings is indicated in data showing the differences in the % of gross regional product spent on transport in European compared with, say, Australian cities. European cities spent on average 8.1% of their city's income on transport, compared with 13.2% for Australian cities. The amount spent on roads is an important part of this difference between cities.

¹ Tranter, P. 2010 Speed kills: The complex links between transport, lack of time and urban health, *Journal of Urban Health*, 87(2), 155-166.

² Essential Evidence No 77 www.bristol.gov.uk/tpevidencebase