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Is Urban Transport Sustainable?

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Introduction

Once the privilege of the elite, personal mobility is a freedom bestowed by modernity on the general public through technology. The physical negotiation of space by people in pursuit of social values (access to work, friends, child care, education, recreation and supplying the home) is part of urban social life. Road freight vehicles provide a flexibility of supply that keeps profits up and costs down for businesses in the ‘consuming’ city. But the benefits of freedom and flexibility are illusory if the opportunity costs of providing for unending mobility are never considered, distances to be covered increase, travel becomes a compulsory, stressful, dangerous and expensive routine and the costs of mobility are merely shifted from the individual to society and the environment. This book explores how the real benefits of mobility can be protected and the costs properly allocated and contained. The chapters examine the sustainability of the world’s urban transport systems, bringing a variety of perspectives from different nations and from different fields: engineering, sociology, critical geography, environmental economics, eco-politics, urban planning and transport planning.

What does ‘sustainability’ mean? The question will be approached from a familiar perspective, that of the triad – economic, social and environmental sustainability. In the ‘triple bottom line’ variant, this perspective requires that corporations and governments seek the simultaneous achievement of three fundamental goals: economic profitability, social responsibility and environmental conservation (Elkington, 1998). Our analysis shows, however, that such an outcome is contingent on power and commitment. There is no necessary correspondence between economic, social and environmental sustainability. Useful though the triple bottom line framework is as an accounting tool, sustainability will require a massive and concerted effort of political will and technical ingenuity, and a true ‘paradigm shift’ in the belief systems and education of engineers, urban planners and economists – the professional shapers of the city.
That shift is already under way. Many of the new generation of engineers, planners and economists are developing a new way of thinking about the infrastructure of the city, and the connection between transport, land use, society and environment. The new paradigm is developing ‘critical mass’ (to use Whitelegg’s expression), enough momentum to make a real difference to transport planning policy and practice. In this book we hope to help the shift along a little further.

The paradox of sustainability

As every engineer knows there is nothing more stable than a triangle in which the forces conducted through each member cancel each other out (Figure 1.1).

Unfortunately applied to ‘sustainability’ this figure is paradoxical because for the environment to be sustained, both society and economy have to change. They cannot therefore be sustained in their present form. Debates about sustainability are fuelled by the perception that ‘we can’t go on as we are’ (Blowers, 1995), that ‘business as usual’ can’t continue (Athanasiou, 1998; Sachs, 1999), that society must find ways of curbing consumption even while spreading the capacity to consume more widely throughout the world (Daly, 1996). Peters (2000: 113) in a discussion of Europe’s contribution to the 2002 Johannesburg Earth Summit writes: ‘Accessibility and mobility gains are often reaped at the expense of severe damage to human health and global biodiversity, with problems accelerating for future generations. This clearly violates the sustainability principle’. White (2002: 57) citing research by Boardman et al. (1997) notes that by 2010, in the UK, carbon dioxide emissions from road transport are expected to rise to 27 per cent of total emissions, rivalling that of all industry. Urban transport is a key element in the structure of the city, and the city – and city network – is typically the geographical and social formation in which most people in the world are coming to relate to and consume the natural environment (Low et al., 2000).

![Figure 1.1 Sustainability as a triangle of forces. (Figure drawn by Chandra Jayasuriya.)](image-url)