Transport, Climate Change and Governance
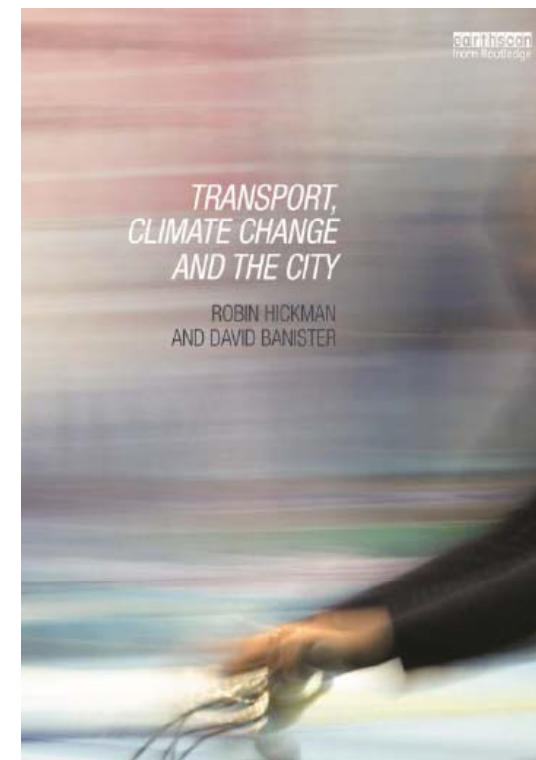
WCTR SIG
Karlsruhe, 2014

Dr Robin Hickman
Bartlett School of Planning, UCL
r.hickman@ucl.ac.uk

Key Questions and Issues

- What low carbon transport futures are possible for cities (and countries and other jurisdictions)?

- 2 billion cars by 2020 (Gordon & Sperling) – what does this mean for transport and society – the difficulty of enabling changed behaviours?

- How can scenario analysis and backcasting approaches help?

- CASE STUDIES: London, Oxfordshire, Delhi, Jinan, Auckland – what are the optimal policy trajectories?

- What policy interventions are available – how wide and deep do we need to go?

- Implementability and governance: how might we achieve deep reductions in transport CO2 emissions?

TRANSPORT, CLIMATE CHANGE AND THE CITY

ROBIN HICKMAN AND DAVID BANISTER

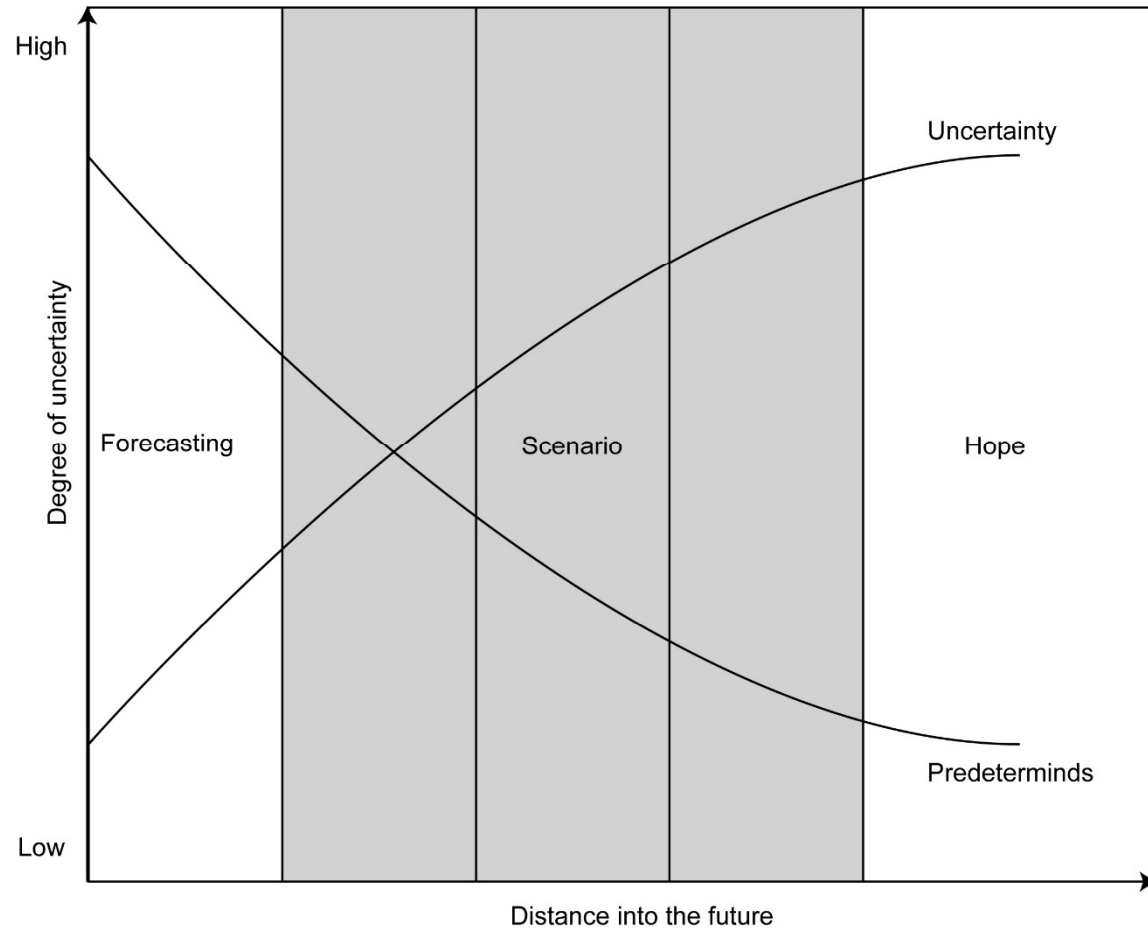Hickman and Banister, 2014, Routledge

Main Arguments

- A large gap between the policy makers and the car-owning public (or those aspiring to car use).

- Almost a *hyperreality in transport*: the advertising of the car as a sought after product and the aspiration to own and use a car v. the reality of the impacts in environmental, safety, urban fabric and even economic terms – a mass communication, consumption and materialisation: a heavily-mediated 'real' (Baudrillard, 1981).

- We draw on scenario analysis and futures thinking (from Thomas More's Utopia onwards, to Herman Kahn, Pierre Wack and Peter Schwartz ..) to consider alternative possibilities at the city scale.

- Scenarios are conceived as encompassing a wide range of factors such as changed environmental, economic and cultural factors, into composite images of different futures – different to the common parlance of 'scenarios '– which is really only 'option analysis', with only a limited tinkering considered.

TRANSPORT, CLIMATE CHANGE AND THE CITY
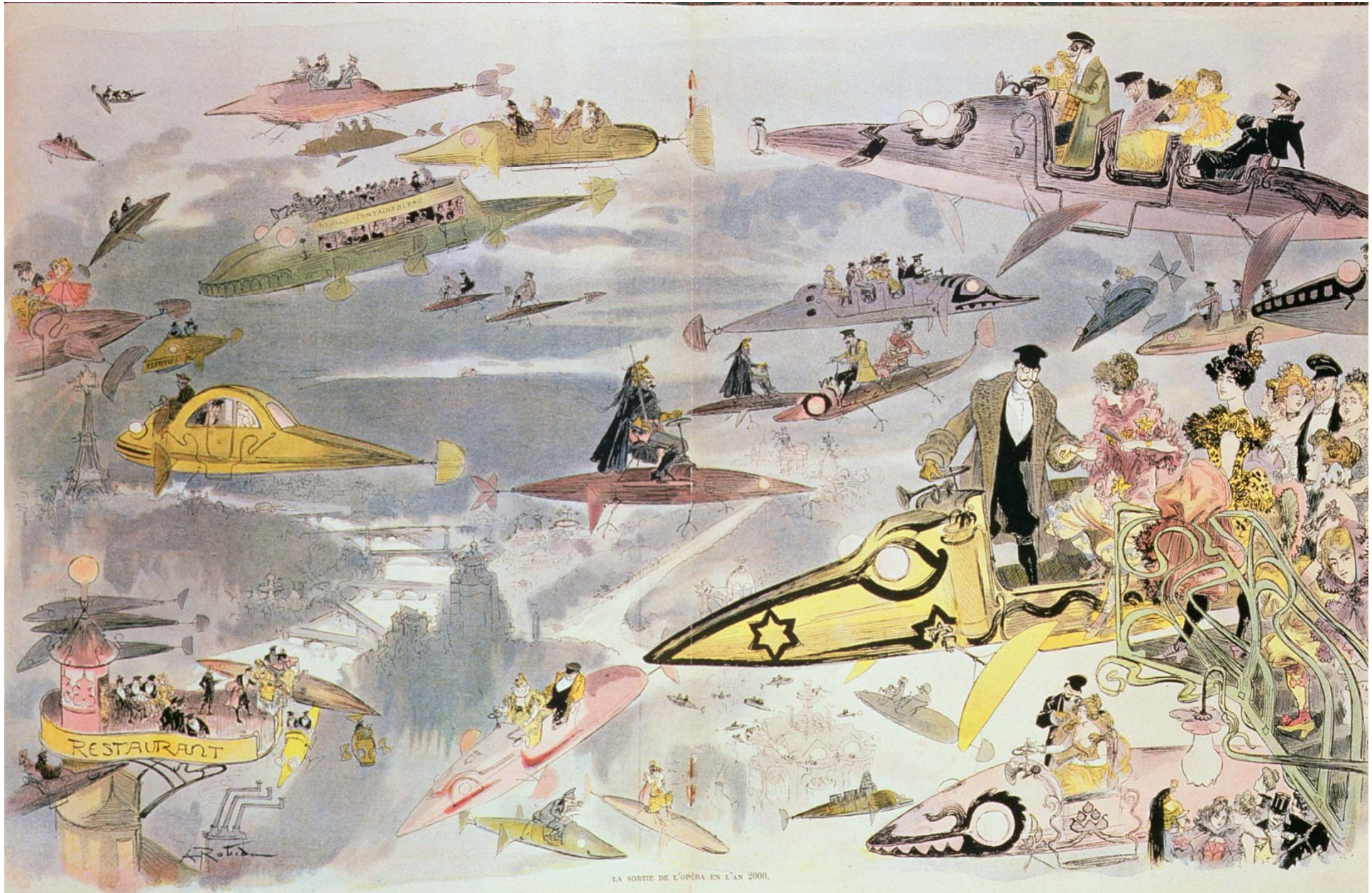ROBIN HICKMAN AND DAVID BANISTER

Hickman and Banister, 2014, Routledge

Scenario Analysis

Helping to: make effective strategic choices in view of uncertain trends, and understand the potential for achieving a break against dominant trends.

LA SORTIE DE L'OPÉRA EN L'AN 2000.

Leaving the Opera in the Year 2000, Albert Robida (1848-1926)
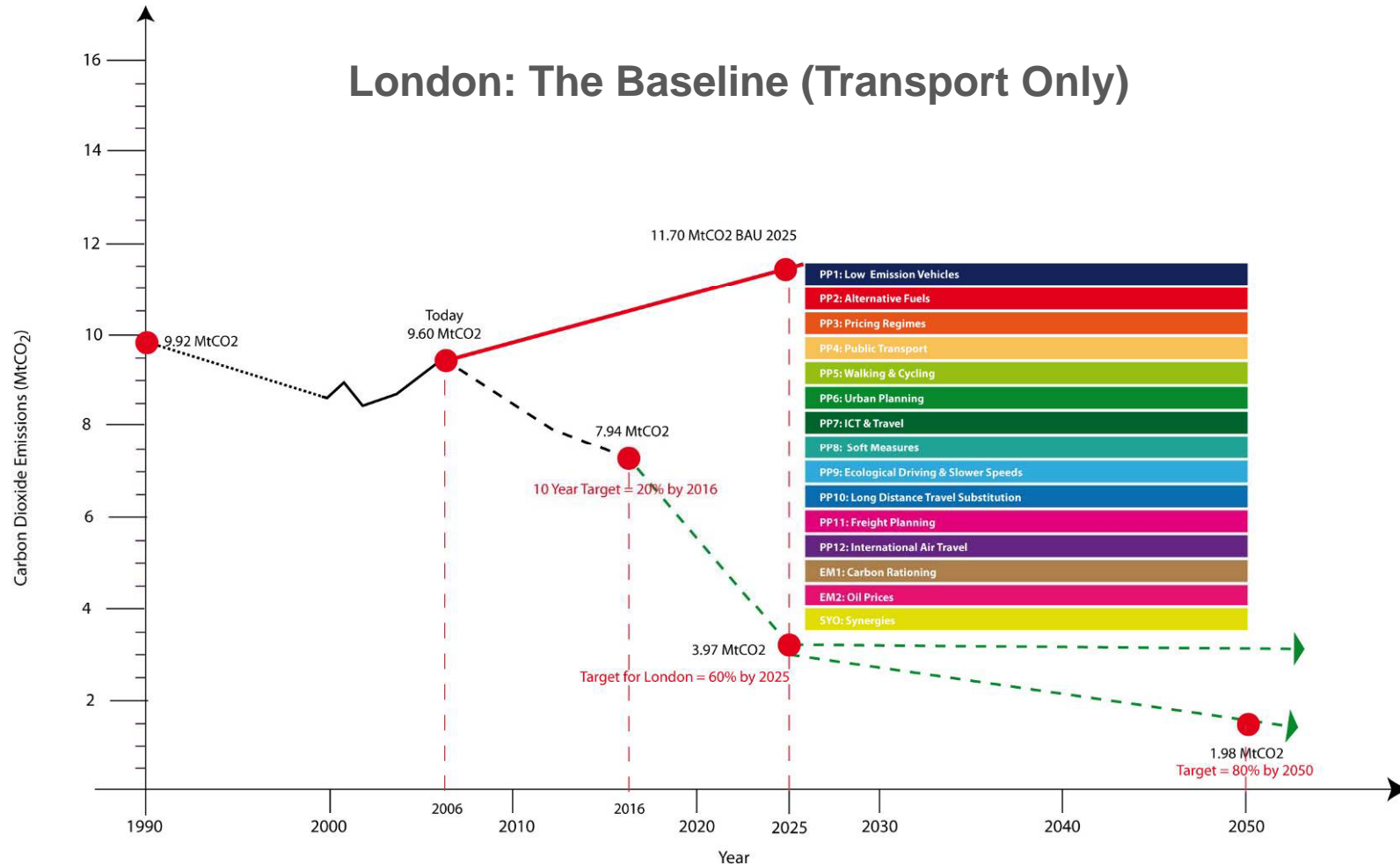
Case Studies

OXFORDSHIRE

DELHI

LONDON

JINAN

AUCKLAND

VIBAT-London
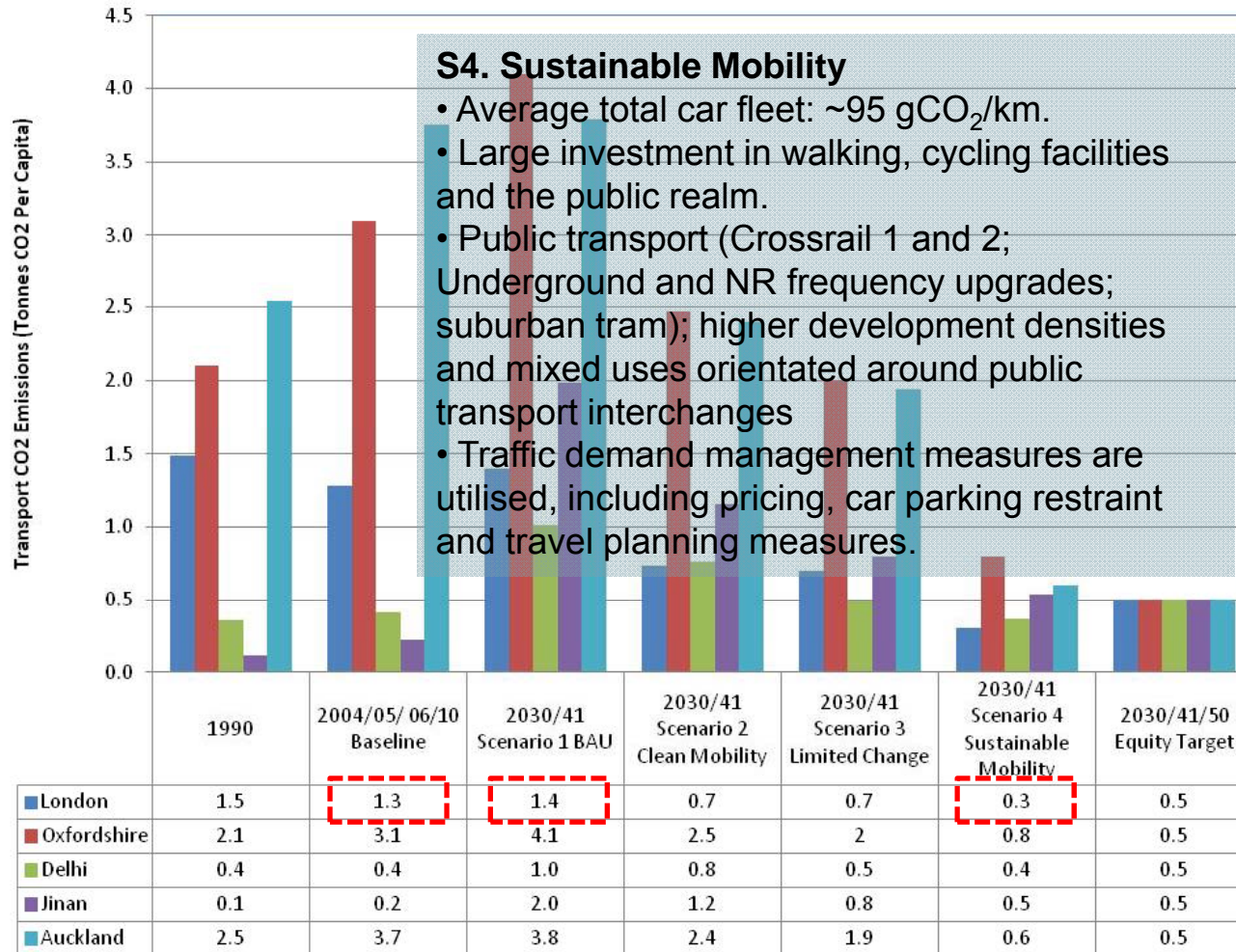**Visioning and Backcasting for Transport in London**

Methodology: Scenario Development

London: The Baseline (Transport Only)

Each case study: modelled baseline, BAU and alternative future scenario, contribution of policy measures and packages of measures
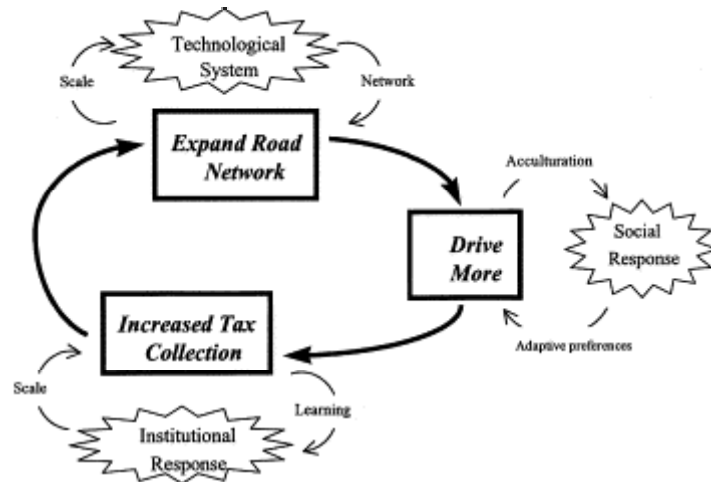
Scenario Results: Contraction and Convergence?

S4. Sustainable Mobility
• Average total car fleet: ~95 gCO_2/km.
• Large investment in walking, cycling facilities and the public realm.
• Public transport (Crossrail 1 and 2; Underground and NR frequency upgrades; suburban tram); higher development densities and mixed uses orientated around public transport interchanges
• Traffic demand management measures are utilised, including pricing, car parking restraint and travel planning measures.

PER CAPITA EMISSIONS

The end goal is perhaps a 2050 equity target in transport: around 0.5 tCO_2 per capita (Meyer, 2000; IPCC, 2007; Stern, 2009)

	1990	2004/05/06/10 Baseline	2030/41 Scenario 1 BAU	2030/41 Scenario 2 Clean Mobility	2030/41 Scenario 3 Limited Change	2030/41 Scenario 4 Sustainable Mobility	2030/41/50 Equity Target
London	1.5	1.3	1.4	0.7	0.7	0.3	0.5
Oxfordshire	2.1	3.1	4.1	2.5	2	0.8	0.5
Delhi	0.4	0.4	1.0	0.8	0.5	0.4	0.5
Jinan	0.1	0.2	2.0	1.2	0.8	0.5	0.5
Auckland	2.5	3.7	3.8	2.4	1.9	0.6	0.5

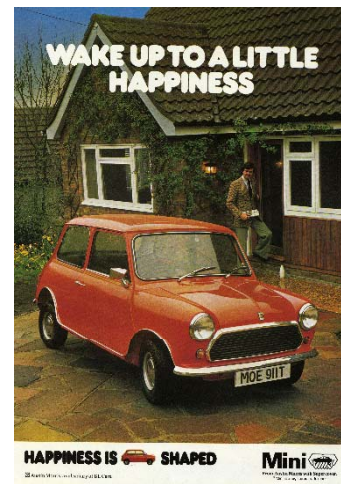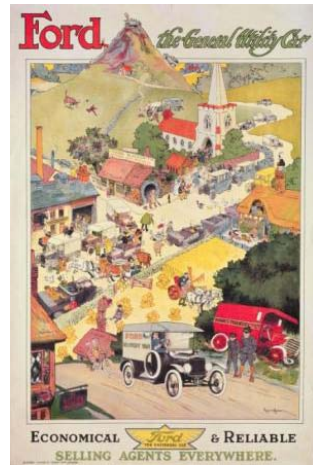Baseline and Scenarios

BUT: the Implementability Problem?
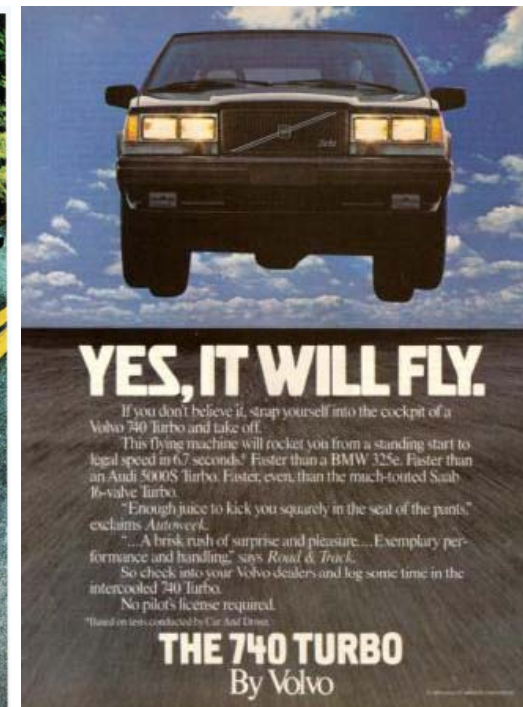## Dominant Policy Perspectives, Governance and Framing

Unruh, 2000

- The framing of the debate on transport in London (and elsewhere) is critical to the transport initiatives being considered – and those not considered.

- Much of the conventional analysis and thinking in transport has been path dependent, seeking to facilitate the growth in mobility, which has over time resulted in carbon intensive travel patterns.

- The car is marketed and sold as an iconic product - with functional, exchange and status values.

- Transport analysis needs to be understood within this framework, of (largely) promoting car-based transport, with the socio-technical systems reinforcing themselves through positive feedback loops and increasing returns (Unruh, 2000; Geels, 2002; Banister et al., 2011; Schwanen et al., 2011).

The Marketing Dream – as Developed Over Time

- The Utility Car for the masses
- The refinement of the product – creating a 'sought after' brand

The Marketing Dream – as Developed Over Time

- The 'auto-industrial complex' (Freund and Martin, 1993) – common interests for the motor manufacturers, the oil industry, the housebuilders (suburban), and much of the transport profession: to sell more units and fit greater traffic volume on the highway
- 'Greenwash' the product – so it seems to be providing the solution to the problems?

The Pursuit of Profit

- Land Rover (and other high end brands) 'opening up' new markets in China - these are the new markets for manufacturers
- Can the capitalist model respond to the climate change problem?
- Responsible capitalism or 'slash and burn'? (for the globe?)

Governance and Governmentality

Foucault's (1991) concept of governmentality is not often used in the transport domain – but can be used to help understand what policy measures are being discussed (and not discussed).

- **Governmentality:** (the art or 'how' of governance): the purposeful effort to guide, steer, control, or manage sectors or facets of society; the way governments try to produce the citizen best suited to fulfill the governments' policies, the organised practices (mentalities, rationalities, and techniques) through which subjects are governed.

- What are the wider options that might be available in terms of governmental intervention and indeed 'personal' conduct, i.e. the code of conduct?

- Cultural practices are important to lifestyles and travel, including psychological and sociological dimensions (Shove, 2012; Steg, 2005; Urry, 2007) – meaning that improving infrastructure (the focus of the transport planner/engineer), changing the built form (urban planner), and/or changing the prices within travel (transport economist) are unlikely to be sufficient by themselves?

- Particularly if they involve very limited levels of application?

- Emphasis alongside on changing cultural practices, norms and beliefs?

Policy Measures: Wider and Deeper Application?

Policy Measures (Packages)	'Ease' of Implementation - *Public and political acceptability (☺ ☺ ☹)* - *Cost acceptability and scale (public purse) (£ ££ £££)* - *Consistency with auto-industrial complex (M)*				
	Very High	High	Neutral	Low	Very Low

AVOID: Reduce the need to travel
• urban planning
• traffic demand management
    − fuel taxation
    − road pricing
    − parking cost increase and space reduction
    − roadspace reallocation
    − ICT and telematics					

SHIFT: change the transport modes that people choose
• public transit
    − high speed rail
    − rail
    − new interchanges
    − mass and light rapid transport
    − bus rapid transit
    − ultra light and demand-responsive transport
    − motorised two and three wheelers
• non-motorised transport
    − walking and public realm
    − cycling					

IMPROVE: increase the energy efficiency of vehicles and fuels • low emission vehicles • alternative fuels					
CULTURAL: influence social practices, values and norms • marketing campaigns • (all of the above)					

Policy Measures: Wider and Deeper Application?

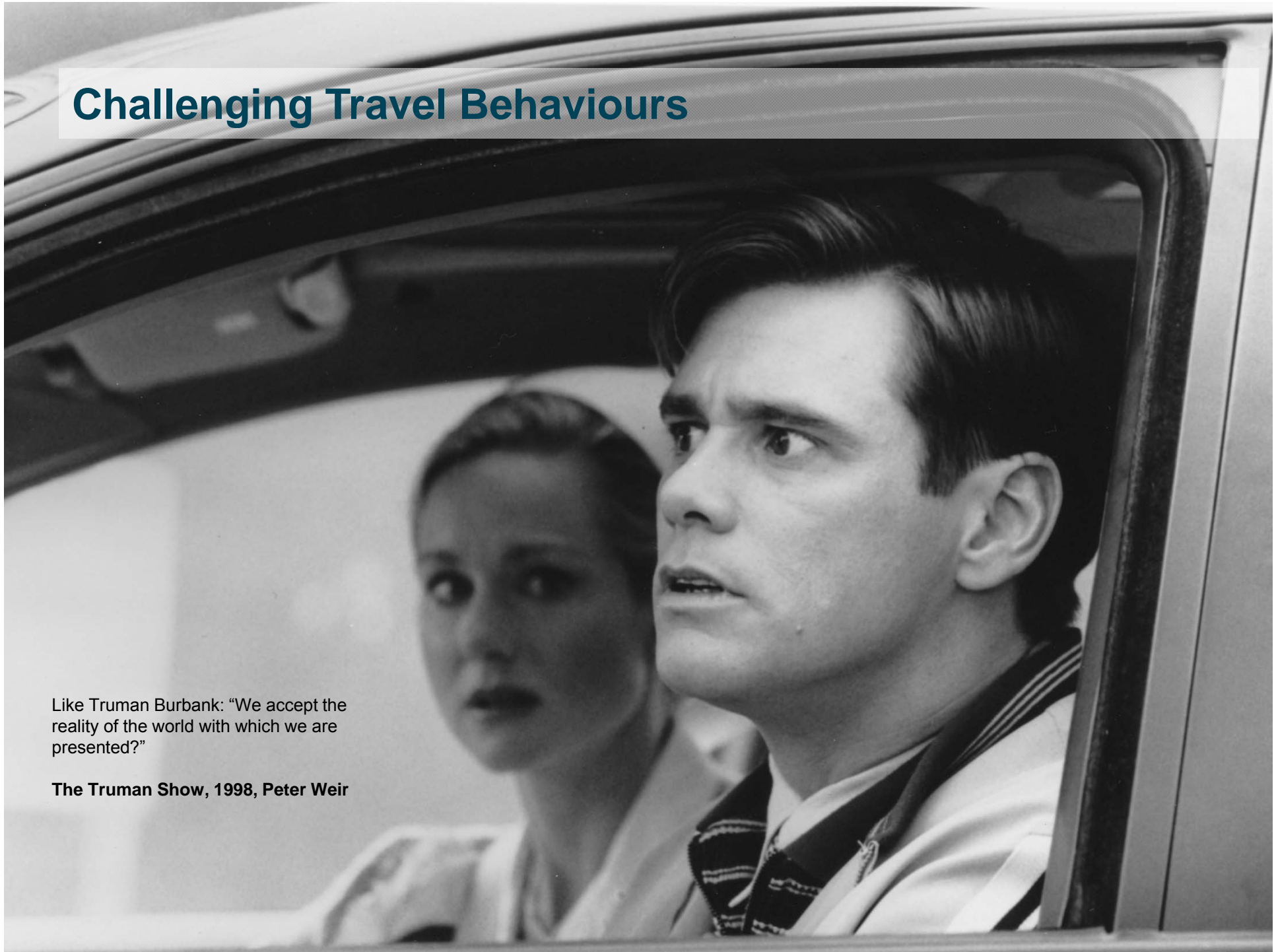| Policy Measures (Packages)	'Ease' of Implementation - *Public and political acceptability (☺ ☹ ☺)* - *Cost acceptability and scale (public purse) (£££ ££ £)* - *Consistency with auto-industrial complex (M)*				
	Very High	High	Neutral	Low	Very Low
AVOID: Reduce the need to travel					
• urban planning	M (sprawl)	☺ £			*M (compact)*
• traffic demand management					
− fuel taxation	££				☹ M
− road pricing		£			☹ M
− parking cost increase and space reduction		£			☹ M
− roadspace reallocation		£			M
− ICT and telematics	M	☺ £			
SHIFT: change the transport modes that people choose					
• public transit					
− high speed rail		☺		☹	£££ M
− rail		☺		££	M
− new interchanges		☺		££	M
− mass and light rapid transport		☺		££	M
− bus rapid transit		☺ £			M
− ultra light and demand-responsive transport		☺ £			M
− motorised two and three wheelers		☺ £			M
• non-motorised transport					
− walking and public realm		£ ☺			M
− cycling		£ ☺		☹	M
IMPROVE: increase the energy efficiency of vehicles and fuels					
• low emission vehicles	£ M	☺			
• alternative fuels	£ M	☺			
CULTURAL: influence social practices, values and norms					
• marketing campaigns		££		☹	M
• (all of the above)					

Policy Measures: Wider and Deeper Application?

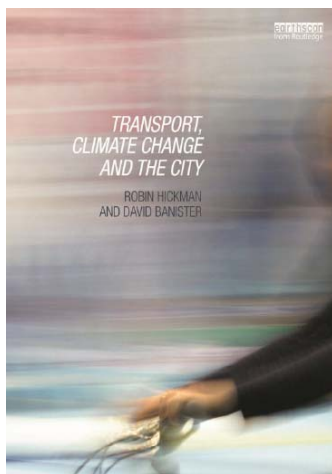| Policy Measures (Packages)	'Ease' of Implementation - Public and political acceptability (☺ ☹ ☻) - Cost acceptability and scale (public purse) (£££ ££ £) - Consistency with auto-industrial complex (M)				
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− roadspace reallocation		£			M
− ICT and telematics	M	☺£		☹	
SHIFT: change the transport modes that people choose					
• public transit					
− high speed rail		☺		☹	£££ M
− rail		☺		££	M
− new interchanges		☺		££	M
− mass and light rapid transport		☺		££	M
− bus rapid transit		☺£			M
− ultra light and demand-responsive transport		☺£			M
− motorised two and three wheelers		☺£			M
• non-motorised transport					
− walking and public realm		£ ☺			M
− cycling		£ ☺		☹	M
IMPROVE: increase the energy efficiency of vehicles and fuels					
• low emission vehicles	£ M	☺			
• alternative fuels	£ M	☺			
CULTURAL: influence social practices, values and norms					
• marketing campaigns		££		☹	M
• (all of the above)					

Challenging Travel Behaviours

Like Truman Burbank: "We accept the reality of the world with which we are presented?"

The Truman Show, 1998, Peter Weir

Conclusions

TRANSPORT,
CLIMATE CHANGE
AND THE CITY

ROBIN HICKMAN
AND DAVID BANISTER

- Ambitious strategic policy ambitions (CO2) not likely to be delivered (on current progress) – lots of conjecture, little change of spending profiles.

- The growing body of scenario analysis and modelling of impacts by policy tool or package of tools is useful, but in the end of limited value, if political deliverability is not possible.

- The default option: vested and powerful interests continue to dominate as the auto-industrial complex – and the public remain unaware and disinterested (participatory elements critical ..)

- The debate needs to be broadened and deepened – to consider the best practice benchmarks in sustainable transport planning – and to implement them much more widely.

- Cost remains a key difficulty – but this is only really a prioritisation problem – or, at the most, a scheduling problem.

- We should start with agreeing a normative vision – and then find the ways to implement this.

r.hickman@ucl.ac.uk