URBAN AGE
ELECTRIC CITY CONFERENCE
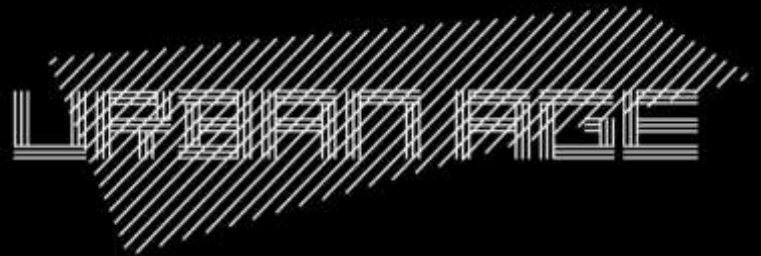
DECEMBER 2012

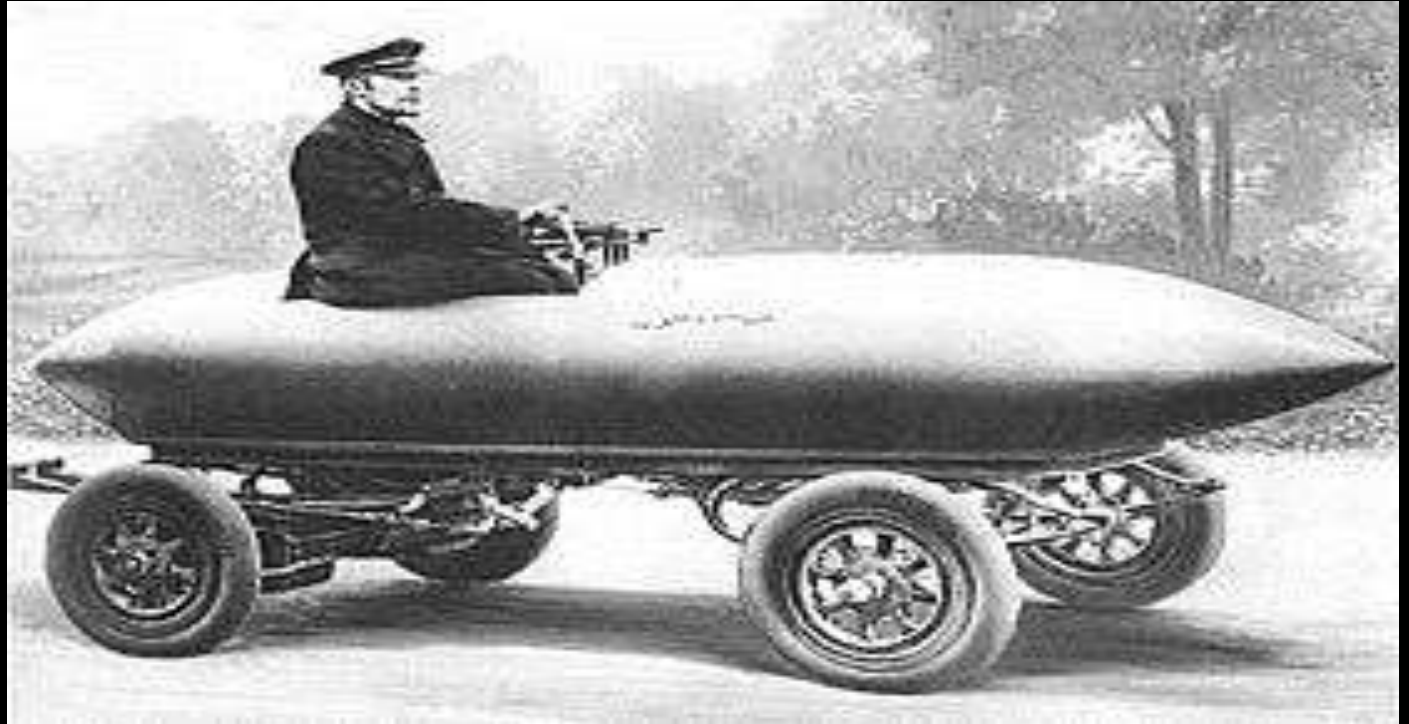**John Urry**

Lancaster University

*Socio-technical scenarios
for the future of the city*

LA JAMAIS CONTENTE – FIRST 'CAR' TO TRAVEL OVER 60 MPH WAS ELECTRIC - IN 1899 NEAR PARIS

1914 DETROIT ELECTRIC MODEL 46 ROADSTER

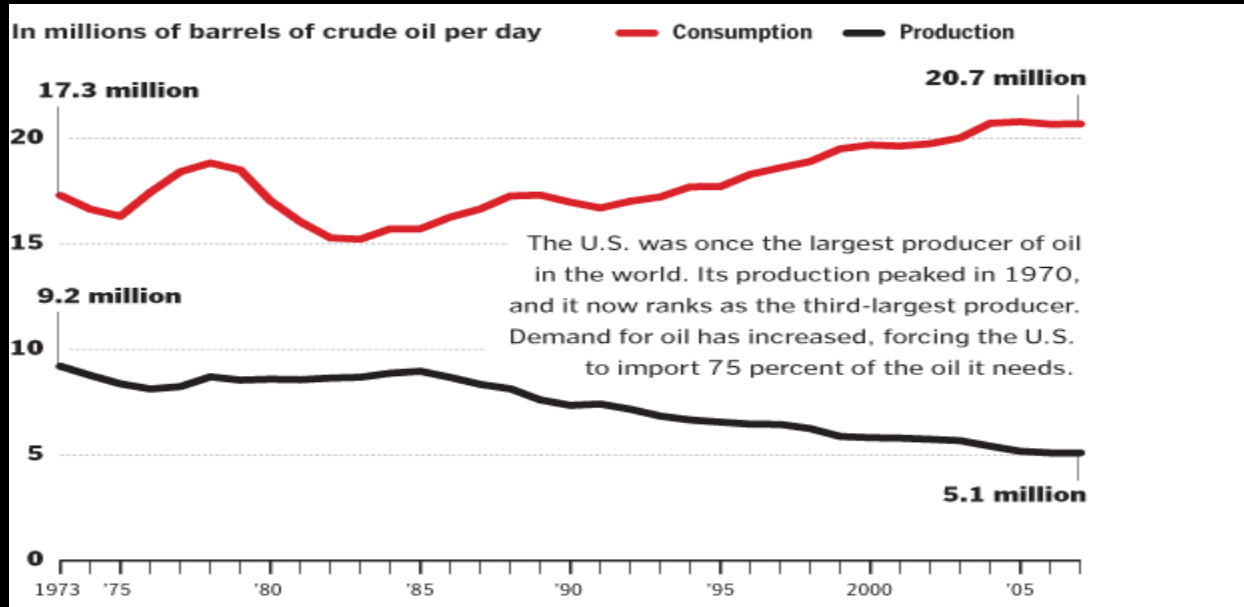**SPINDELTOP, TEXAS 1901**

FIRST OIL GUSHER

THE CAR SYSTEM

A 'steel-and-petroleum' car is never just a car:

- adapts as it spreads along the paths and roads of each city
- draws in many aspects of its environment which are then reconstituted as components of its system
- central to and locked in with all the leading economic sectors, iconic firms and social patterns especially suburbanisation
- promoting the notion of convenience
- seemingly provides the solution to the problems of congestion that it generates
- able to externalise dangers onto those outside the system as it enhances security for those 'within'
- central to the individualist, consumerist affective culture of contemporary capitalism

LOCKED INTO OIL

US OIL PRODUCTION AND CONSUMPTION, 1973-2007

In millions of barrels of crude oil per day — Consumption — Production

17.3 million
20.7 million

9.2 million

The U.S. was once the largest producer of oil in the world. Its production peaked in 1970, and it now ranks as the third-largest producer. Demand for oil has increased, forcing the U.S. to import 75 percent of the oil it needs.

5.1 million

1973 '75 '80 '85 '90 '95 2000 '05

GLOBAL CARBON EMISSIONS 1800-2010
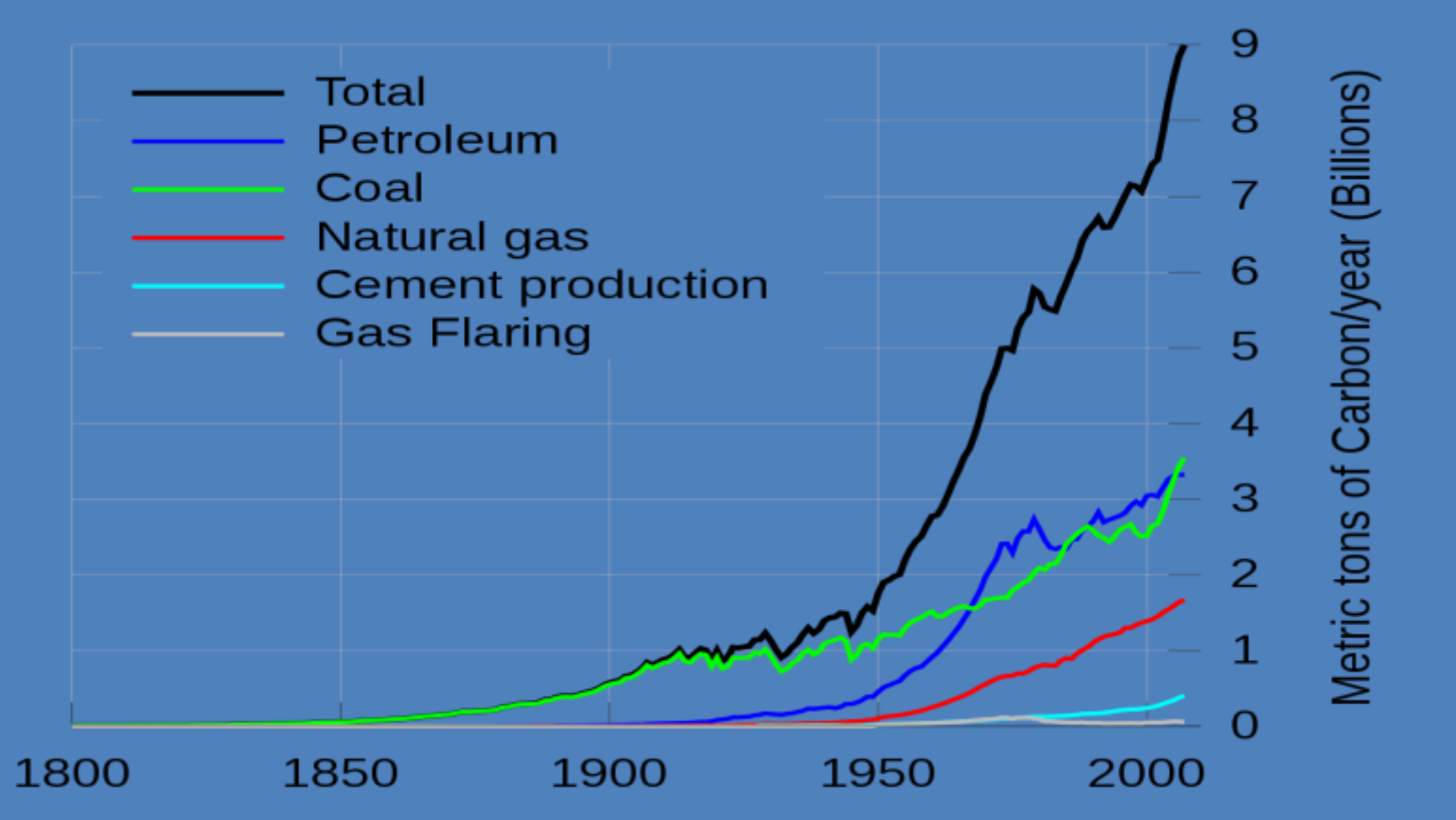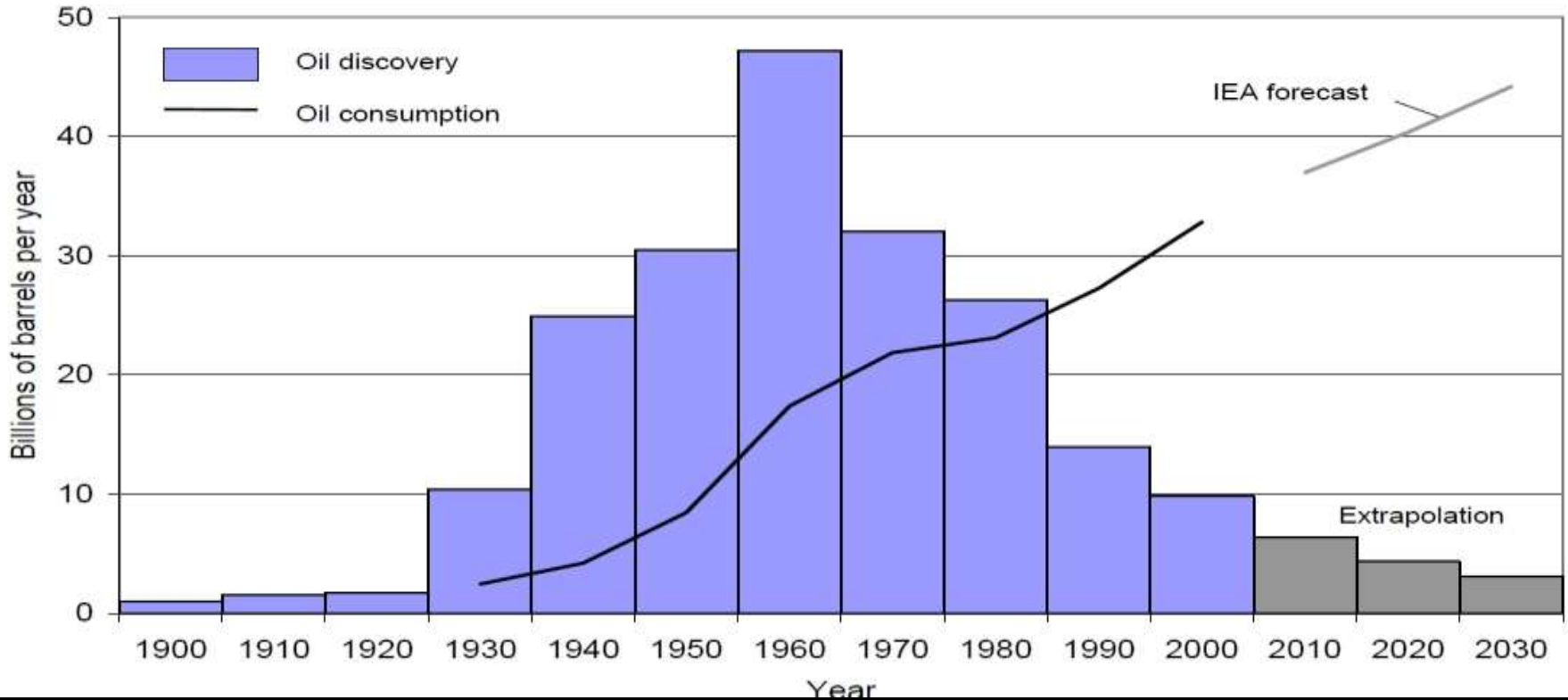
OIL DISCOVERY AND CONSUMPTION 1900-2030 – IEA PRONOUNCED PEAKING IN 2006

SOCIOTECHNICAL SYSTEMS

Social habits and practices derive from systems lying outside 'individuals'

Systems once established can get 'locked in' over decades – they have momentum

Systems significant in the contemporary world are economic, physical, technological, political and social – sociotechnical

SOCIOTECHNICAL SYSTEMS

One should resist a technology-first analysis since technologies do not just develop for endogenous reasons - they are embedded within forms of economic, social and political life.

They depend upon business *and* sociological models

There is an unpredictability of systems with 'non-linear' relations

Innovation is a matter of partially unplanned synchronisation across many different social, economic and political entities

Richard Buckminster Fuller: 'You never change anything by fighting the existing reality. To change something, build a new model that makes the existing model obsolete'.

Brian Arthur: 'A revolution does not arrive until we reorganize our activities...around its technologies, and until those technologies adapt themselves to us. For this to happen, the new domain must gather adherents and prestige. It must find purposes and uses...This time is likely to be decades, not years. And during this time the old technology lives on', driving out the new

A 'POST CAR' SOCIOTECHNICAL SYSTEM?

- shifts in transport *policy* in cities away from predict and provide
- new *fuel systems* for cars, vans and buses
- *new materials* for constructing 'car' bodies
- *smart* vehicles
- *deprivatise* cars through city-wide car-sharing, cooperative car clubs and smart car-hire schemes
- 'smart-card' *technology* to transfer information from car to home, to bus, to train, to workplace, to web site, to bank.
- new *social* practices
- *disruptive* innovation

POST CAR SYSTEM

- software systems 'intelligently' work out the best means of doing tasks, meeting up or getting to some place or event

- multiple, dense forms of movement mainly small, ultra-light, smart, deprivatised 'vehicles'

- flexibilised travelling accessing small, light mobile pods

- electronic regulators embedded in lampposts and in vehicles to regulate access, organise price and control vehicle speed.

POST CAR SYSTEM

- **some driverless vehicles**

- **vehicles would be electronically and physically integrated with other forms of longer range collective mobility**

- **smart 'cards' to control access to and pay for people's use of the various mobilities**

- **some rationing of carbon**

ELECTRIC VEHICLES
ROYAL ACADEMY OF ENGINEERING REPORT 2010

Personal vehicle decline

Or Competition

Or Complementarity of use through owning various vehicles
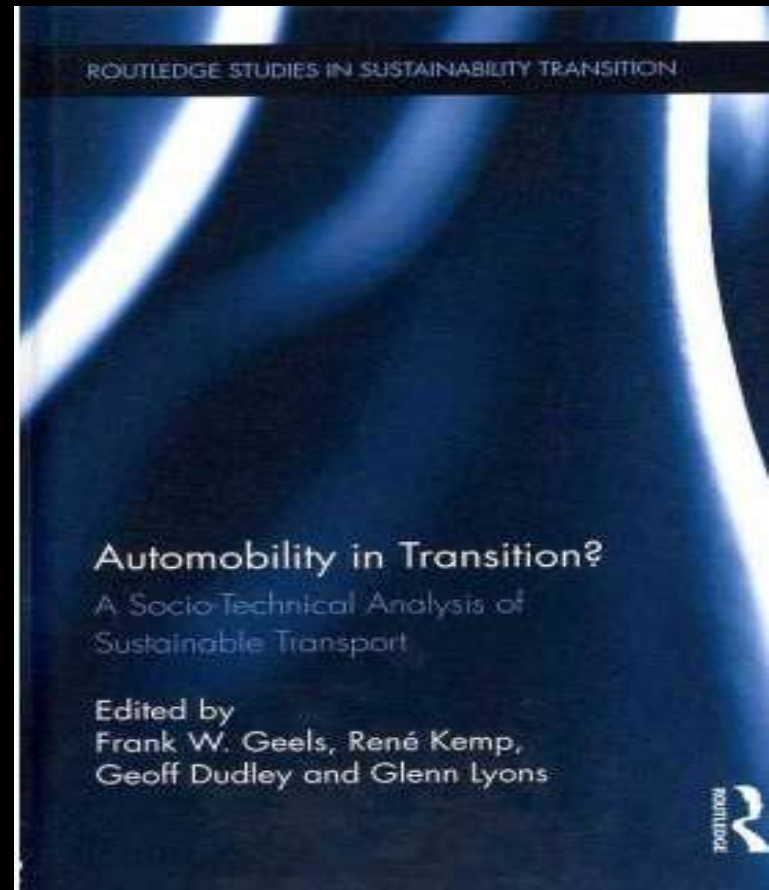
Or System substitution

CRACKS IN CAR SYSTEM

car restraining measures such as parking restrictions and tariffs, traffic calming schemes, pedestrianised centres, bus lanes, bicycles and road pricing
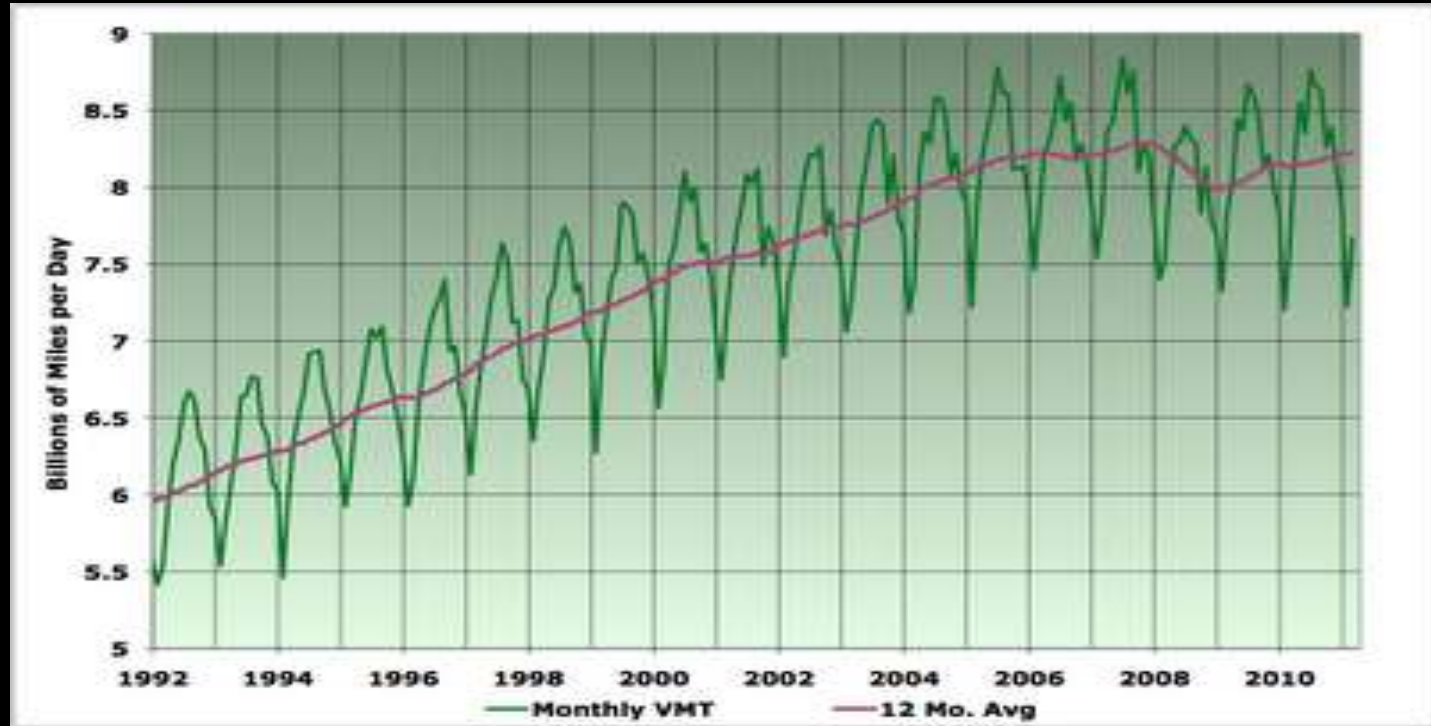
some weakening in the commitment of policy makers to the auto-mobility regime

policy makers, transport planners, and the car industry are aware of environmental limits

the growth of car mobility seems to be coming to a halt in some countries

ROUTLEDGE STUDIES IN SUSTAINABILITY TRANSITION

Automobility in Transition?
A Socio-Technical Analysis of Sustainable Transport

Edited by
Frank W. Geels, René Kemp,
Geoff Dudley and Glenn Lyons

PEAKING OF CAR TRAVEL IN US 1992-2012?

PEAK TRAVEL

'travel activity has reached a plateau in all eight countries'

Western societies seem to have reached or even are passing 'peak travel'

this is being brought about by high oil prices, stagnating economic growth, an ageing population and a renaissance of walking and cycling

UK TRAVEL

	2000	2010	% change
Trips per person per year	**1071**	**960**	**-10%**
Distance travelled per person per year (miles)	**7164**	**6726**	**-6%**
Travel time per person per year (hours)	**376**	**367**	**-2%**
Full car licence holders aged 17-20 (%)	**41**	**35**	**-15%**
Full car licence holders aged 21-29 (%)	**75**	**63**	**-16%**

From 2000/02 to 2010, trips/person/year:

Car/van driver – down 6%   Bus (London) – up 53%

Car/van passenger – down 11%   Bus (elsewhere) – down 4%

Walking – down 17%   Surface rail – up 31%

DfT (2010) National Travel Survey 2010.

IF NOT POST CAR THEN LOCAL SUSTAINABILITY

- a reconfiguration of economy and society around 'local sustainability'

- a global shift towards lifestyles more local and smaller in scale

- friends would be chosen from neighbouring streets, families would not move away at times of new household composition, work would be found nearby

- education would be sought only in local schools and colleges

- the seasons would determine which and when foodstuffs were consumed

- most goods and services would be simpler and produced nearby

- status re-localised. Long distance travel uncommon and socially denigrated

OR REGIONAL WARLORDISM

- extreme weather events and extensive flooding

- oil (and gas and water) wars

- breakdown of many mobility, energy and communication connections

- relocalisation and increasing separation between different regions, or 'tribes'

- local warlords controlling recycled forms of mobility and weaponry

- no monopoly of physical coercion in the hands of a national state

- only the super-rich travel

- Hobbesian wars of each warlord dominated region

- everything 'peaks'

James Lovelock: 'So is our civilization doomed, and will this century mark its end with a massive decline in population, leaving a few survivors in a torrid society ruled by warlords on a hostile and disabled planet?' MAD MAX 2

Kingsley Dennis and John Urry

after the car

SOCIETIES
BEYOND
OIL OIL DREGS AND
SOCIAL FUTURES

JOHN URRY