

**Mind Shift, Mode Shift:  
A Lifestyle Approach  
To Reducing  
Car Ownership and Use,  
with  
Behavioural Economics**

**Stephen Young  
Carfree Cities York Conference  
29 June 2010**

# Agenda

- Biography: Background and Foreground
- Starting Points: A Carfree Journey
- Traditional Economics
- Behavioural Economics
- Behavioural Economics and Car Ownership and Use
- Some Key Concepts & Examples
- Questions, Follow Up, Contact

# **BIOGRAPHY**

# Background

## Current:

- Senior Lecturer in Economics, Brighton University Business School
  - teaching undergrad and postgrad courses in behavioural economics. Research area: behavioural economics.
- Senior Telecom Expert, International Telecommunication Union (ITU), a specialized UN agency
  - currently writing a study on climate change, ICTs and ICT regulation
- Founder/Director [www.ictandclimatechange.com](http://www.ictandclimatechange.com)

## Background:

- Senior roles in regulation, policy and strategy in the energy and ICT industries.
- International track record in advising, consulting, publishing and research.
- Long term interest in sustainability, esp. behaviour change needed for move to low carbon economy.

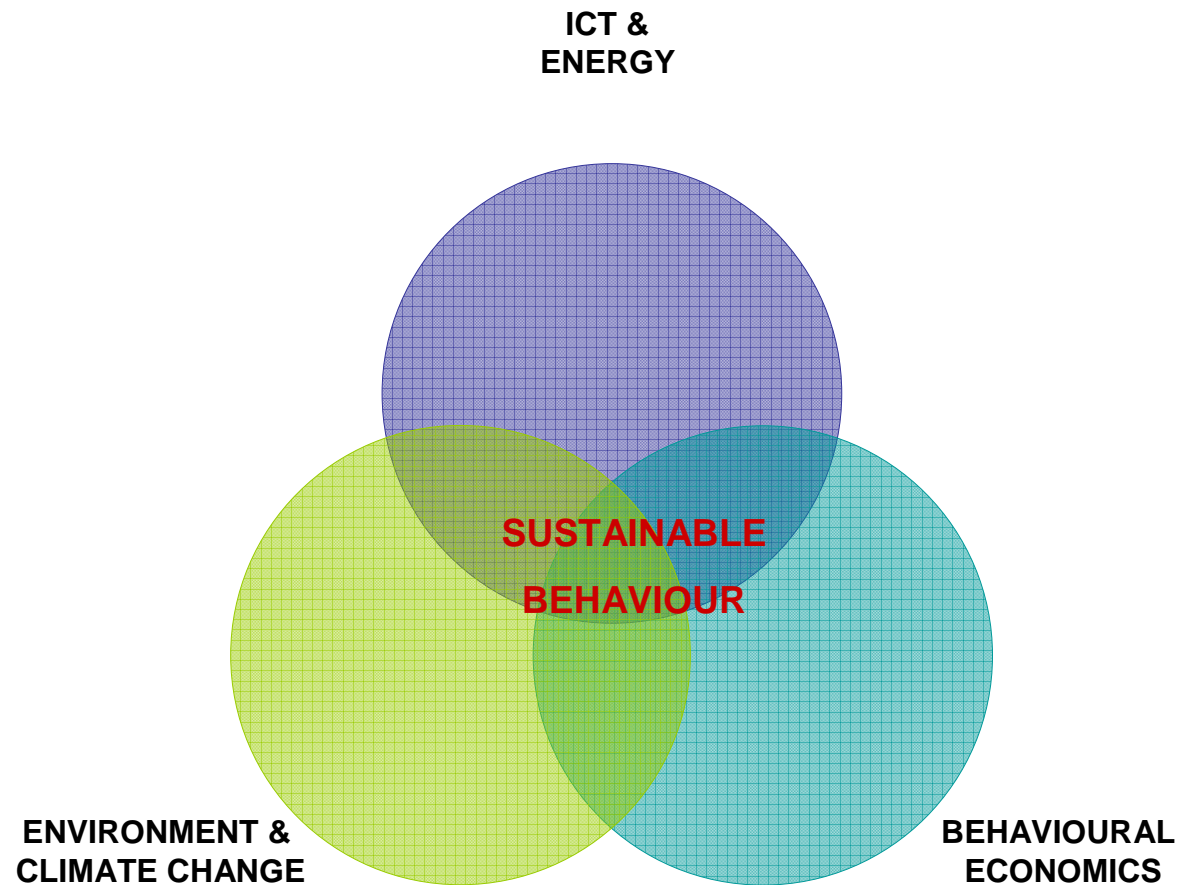
## Other:

- Member: Brighton & Hove City Council Sustainable Transport Partnership.
- Member: Transport Group, Transition Brighton and Hove.
- Local supporter: Living Streets Brighton & Hove.

## Contact/websites:

- email: [s.young@brighton.ac.uk](mailto:s.young@brighton.ac.uk)
- website: [www.giveupyourcar.com](http://www.giveupyourcar.com)
- blogsite: <http://livingthecarfreelife.blogspot.com/>
- booksite: [www.thefourwheeldetox.com](http://www.thefourwheeldetox.com)

# Foreground



**STARTING  
POINTS:  
A CARFREE  
JOURNEY**

# A Carfree Journey



I gave up my car - by choice - in 1995, and I haven't owned a car since

However, I have, when required, driven cars, vans and mobile homes.....

# My Car and the Planet

*"The great car economy."*  
Margaret Thatcher, 1990





# My Car and the Planet



# My Car and the Planet

## Some Car Facts:

- Worldwide, there are 600 million cars – forecast to grow to 2 billion by 2030
- Cars kill over 1.2 million people every year.
- By 2020, road traffic accidents could outstrip stroke and HIV as one of the main causes of preventable deaths
- Cars are a major, and growing, source of Green House Gases
- The infrastructure to support cars destroys urban and rural communities



## Summary:

- My car is bad for the Planet

# My Car and Me

- Owning a car means:
  - being £000's worse off (or working longer hours)
  - more likely to be overweight
  - running a relatively high risk of being killed or injured in a car crash
  - using a lot of time
  - hassle
- Summary:
  - My car is probably bad for me

# WARNING: TOO MUCH

INFORMATION CAN HARM

(AND CAN FAIL TO HELP CONSUMERS

TO MAKE CHOICES AND CAN IMPOSE

COSTS ON BUSINESS, DESPITE THE FACT

THAT IT IS OFTEN A POWERFUL TOOL AND MORE

EFFICIENT IN MANY CIRCUMSTANCES AND RESOURCES THAN

ANY OTHER AVAILABLE TOOL

FOR REGULATORS

An interim report by the  
Deftor Regulation Executive  
and National Consumer Council  
on maximising the positive  
impact of regulated information  
for consumers and markets

July 2007

If Only....

# The Four Wheel Detox

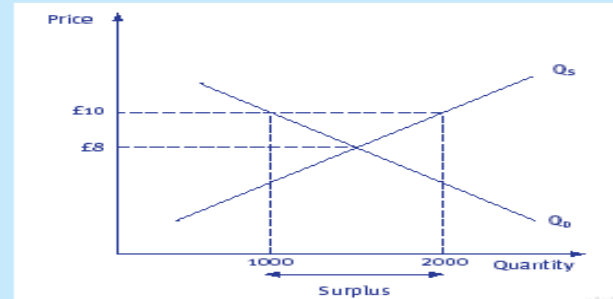
- Evidence-based evaluation of the costs of car ownership to the individual car owner: relatively unexplored impacts include factors such as:
  - financial costs
  - likely weight gain
  - health consequences
  - increased stress
  - impact on children
  - risks
- Conceptual frameworks, analytical methods, and behavioural insights from social marketing and behavioural economics
- Using a lifestyle approach, with stories, humour and celebrity exemplifiers
- See website: [www.thefourwheeldetox.com](http://www.thefourwheeldetox.com)

# **“TRADITIONAL” ECONOMICS**

# “Traditional” Economics

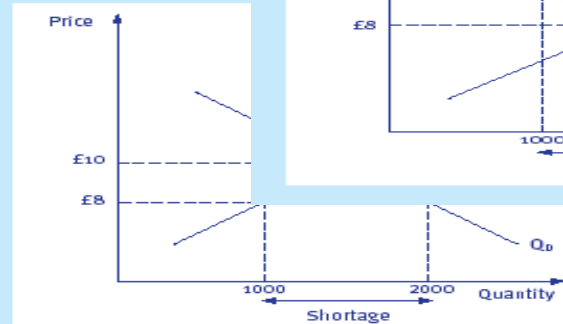
**Figure 4.9 A market surplus**

When the price is set above the equilibrium, firms are very willing to supply, but consumers are not willing to demand. As a consequence more is supplied than demanded. Firms are left with excess stock. In this case, at a market price of £10, firms supply 2000 units but consumers only demand 1000 units, leaving a surplus of 1000 units.



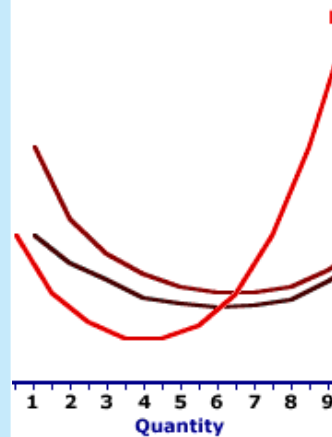
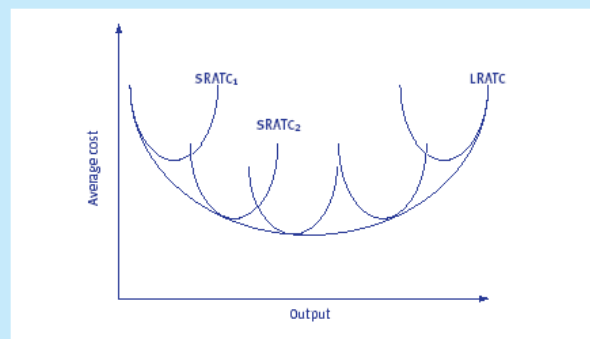
**Figure 4.10 A market shortage**

When the price is set below to supply, but consumers demand more, more is demanded than supplied. Firms are left with a shortage of 1000 units.

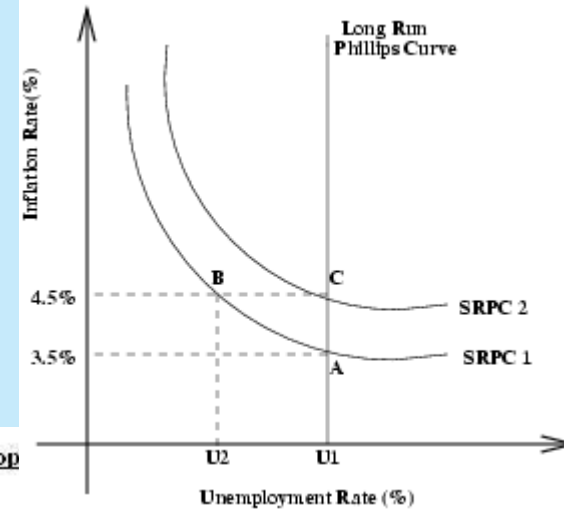


**Figure 3.9 Long-run average costs**

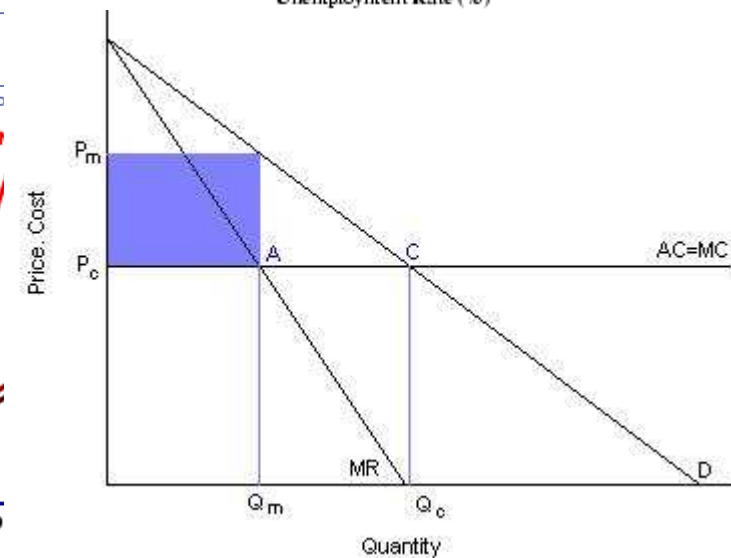
The long-run average cost curve is simply a collection of short-run average cost curves, illustrating how costs change as fixed inputs.



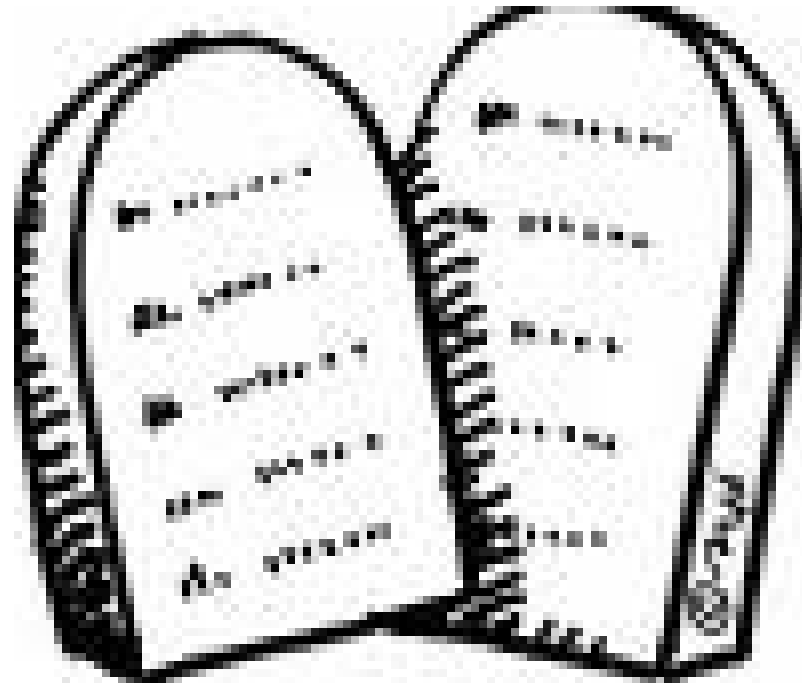
**Monop**



**Monop**



# “Traditional” Economics





# “Traditional” Economics

- In the Standard Economic Model, economic agents are:
  - Rational
  - Motivated by expected utility maximisation
  - Governed by selfishness, not taking into account the utility of others
  - Bayesian probability operators
  - Likely to have consistent time preferences according to their discounted utility
  - Likely to treat all income and assets as fungible
    - Source: Wilkinson, Nick, *“An Introduction to Behavioural Economics,”* Palgrave Macmillan

# Default Frame: Car versus Planet

Cars = problem of cars are externalities, market failures

- eg: Stern describes climate change as, “*the largest market failure of all time.*”

When it comes to cars, the focus on externality says: what’s the impact of my car on everyone else?

How to solve an externality?

- taxes, regulation, laws

Hence, need for political will to implement change

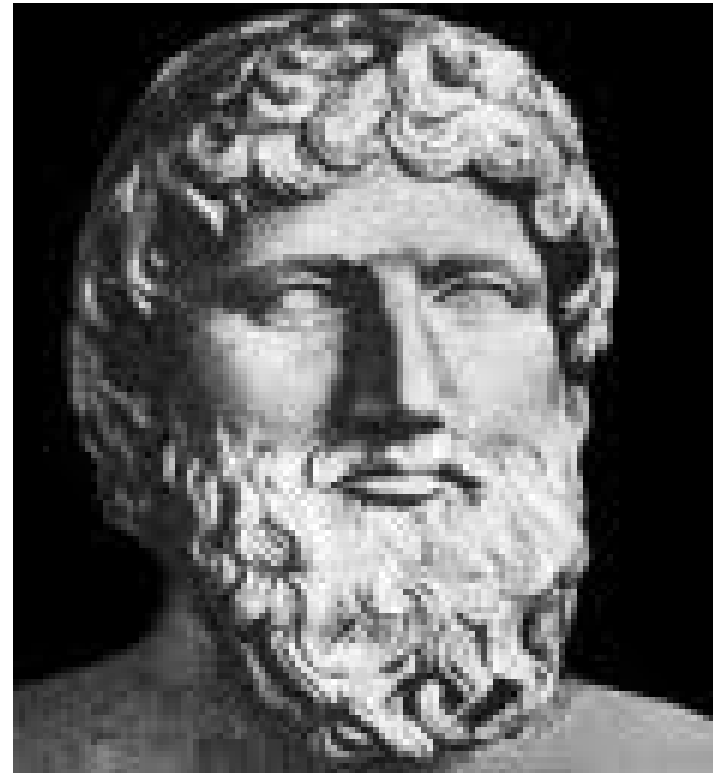
# **BEHAVIOURAL ECONOMICS**

# Behavioural Economics

- The study of how thinking and emotions affect individual economic decisions & the behaviour of markets.
- Combines psychology and economics.
- Concerns ways in which the actual decision-making process influences actual decisions.
- Relaxes the standard economic assumption that everyone in the economy is rational and selfish – because maybe some agents in the economy are sometimes human.
- Assumes we have limited time and capacity to weigh benefits and costs of decisions.
- Hence, decision making is less than fully rational:
  - people are prone to make predictable and avoidable mistakes.
  - at the same time, decision making is systematic and amenable to scientific study.

# Behavioural Economics: Two Systems in Every Person

- “Dual-system models of the human mind are ubiquitous in philosophical discussions of human behavior dating back to the ancient Greeks. In the Republic, for example, Plato contrasts the immediacy of desires....with the broader scope of reason” (Plato, Republic 441e).”
- thence via Adam Smith to Freud and the Neuroscientists, not to mention behavioural economists.
  - Cited in Loewenstein, George F. and O'Donoghue, Ted, *Animal Spirits: Affective and Deliberative Processes in Economic Behavior* (May 4, 2004).
  - Available at SSRN:  
<http://ssrn.com/abstract=539843>



# Behavioural Economics: Two Systems in Every Person

- Reflective

- Rational
- Controlled
- Effortful
- Deductive
- Slow
- Self-aware
- Rule following
- Conscious thought
- Your second language



- *“This turbulence is bad, but planes are inherently a safe way to travel”*

- Automatic

- Intuitive
- Uncontrolled
- Effortless
- Associative
- Fast
- Unconscious
- Skilled
- Gut reaction
- Your native language



- *“We’re all going to die”*

**BEHAVIOURAL  
ECONOMICS,  
CAR  
OWNERSHIP  
AND USE**

# Behavioural Economics and Cars



**Spock sees both the real (normally unperceived) costs and benefits of a car:**

- Can be convenient (so hire one!)
- Will likely make me fat
- May make me unfit
- Will spend my (total) time
- Absorbs my money
- May kill me
- Is not related to my image & status



**Simpson sees the real (and perceived) benefits, whilst discounting the costs of a car:**

- Convenient (own one)
- Nothing to do with weight
- Nothing to do with health
- Timesaver
- Cheaper than the alternatives
- Safe
- Status enhancing

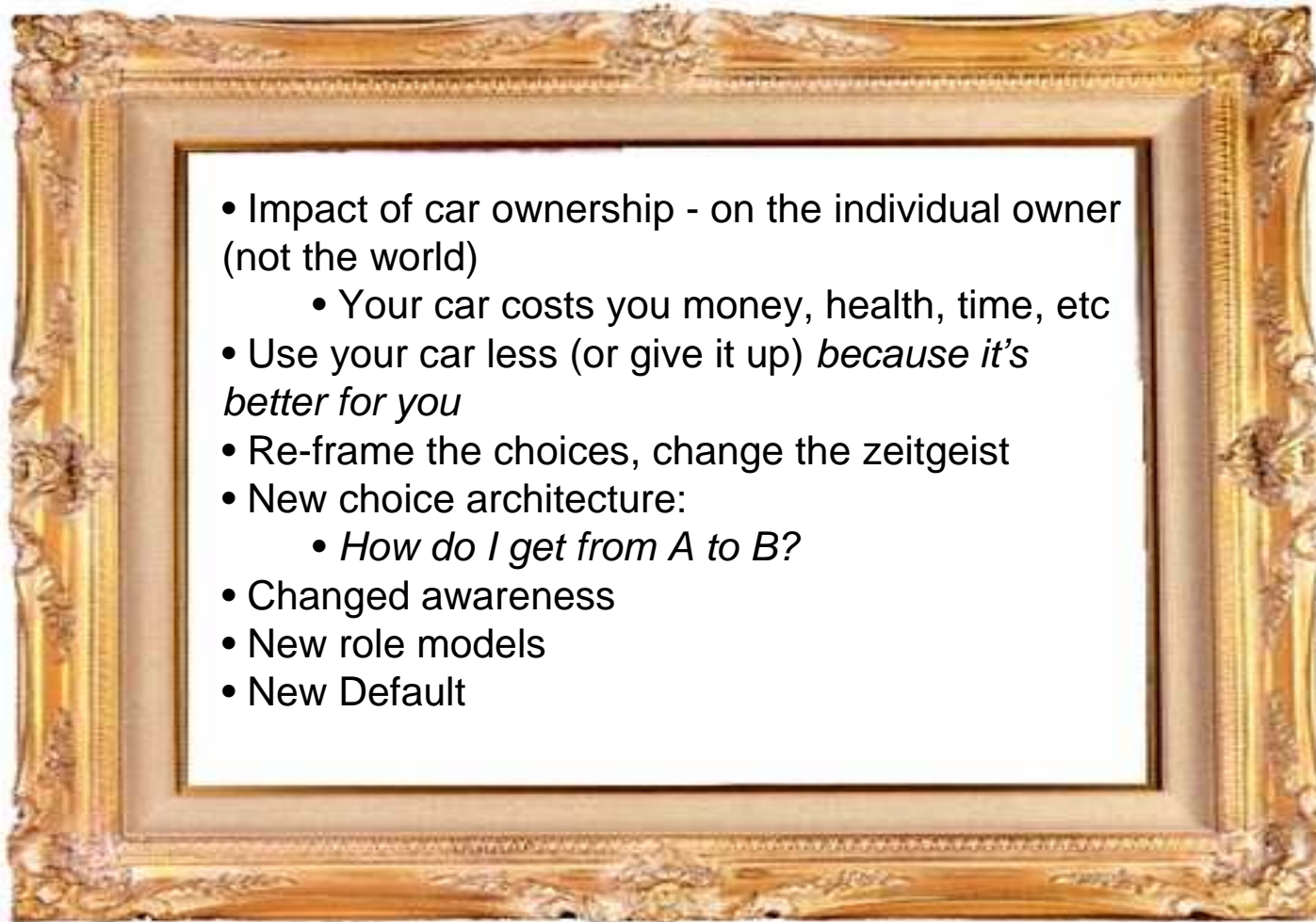


# Big Brained Piped

*“Human beings are big-brained bipeds who, while rarely in possession of perfect information, make fast, smart-enough choices based on heuristics which save computation time, avoid frozen stasis and enable action in and on the world.”*

- *Moving Around: Some Aspects Of The Psychology Of Transport.* (2006) Stephen G Stradling Transport Research Institute, Napier University, Foresight Intelligent Infrastructure Systems Project, 2006
  - [http://www.foresight.gov.uk/Intelligent%20Infrastructure%20Systems/Moving\\_around.pdf](http://www.foresight.gov.uk/Intelligent%20Infrastructure%20Systems/Moving_around.pdf)

# New Frame: Car v Car Owner



## New Frame: Car v Car Owner

- It's about you, the individual
  - not society
- It's about living better
  - not making a sacrifice
- It's about thinking differently
  - is car ownership the answer to my travel needs?
- It's about cool people who don't own cars
  - Dave Gorman vs Jeremy Clarkson
- It's about changing the default
  - Think 'go carfree', not automatically 'own a car'

# Social Marketing and Behavioural Economics

- Young, S., and Caisey, V. (2010)
- *Mind Shift, Mode Shift. A Lifestyle Approach To Reducing Car Dependency, using Behavioural Economics and Social Marketing*
- Perspectives in Public Health. London: Royal Society for Public Health. May 2010.
- First published on February 11, 2010 as doi:10.1177/1757913909354151
  - <http://rsh.sagepub.com/cgi/rapidpdf/1757913909354151v1>

Perspectives in Public Health OnlineFirst, published on February 11, 2010 as doi:10.1177/1757913909354151

PAPER

Mind shift, mode shift

## Mind shift, mode shift: A lifestyle approach to reducing car ownership and use based on behavioural economics and social marketing

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**Key words**  
mode shift; behavioural economics; social marketing

### Abstract

The paper sets out a new approach to the Wicked Problems of obesity and climate change, and the linked and causative Wicked Problem of increasing car ownership and use. Policies to bring about modal shift from car dependence to forms of transport that cause lower emissions, and are less obesogenic, are conventionally based on framing car use as an externality to be addressed by policies such as taxation or regulation. These policies have been hampered by the reluctance of politicians and policymakers to countenance electoral risk by impinging on the individual's perceived right to personal mobility. This paper's approach combines insights and methods from behavioural economics and social marketing: it shifts the focus by considering car ownership and use not as an externality to be addressed in the aggregate, but as the product of individual behaviours and lifestyle choices. Behavioural economics can help to uncover the motivations, heuristics and cognitive biases behind such behaviours. Social marketing builds on the premise that people will only change their behaviour if they are sufficiently motivated to do so. It can be used to design interventions which help sectors of the population make transport choices that are more optimal – both for the individuals concerned and for all of us who are affected by these Wicked Problems.

### INTRODUCTION

Imagine. It is 1876 and TV has already been invented. You are watching Dragons' Den, where investors decide whether to fund new ideas paraded in front of them by eager inventors. Into the Den strides one Nikolaus Otto, who says:

'I have invented an engine that can be dropped into today's horse-drawn vehicles to enable them, with an onboard source of fuel, to be self-propelled. The owner of such a machine will be able to go wherever he wants, whenever he wants. If we get the funding we need, I forecast that in about a century there will be 600 million of these vehicles in active use. This could grow to 1.5 billion by 2023,<sup>1</sup> or 2 billion by 2030.<sup>2</sup>

The Dragons are reaching for their cheque books when one asks: 'Is there a downside?' Otto replies:

'By 2010 motor vehicles will kill around one and a half million people a year. Much of the countryside, and many towns and cities will be devoted to roads. These cars will damage the social fabric of communities and cause social isolation and urban sprawl. People will increasingly rely on their cars, contributing to a sedentary society and alarming increases in obesity, even amongst children. There will be noise and pollution, and the need to fuel these vehicles will dominate the foreign policy decisions of the major powers, leading to decisions that will cause the deaths of hundreds of thousands of people, and cost trillions of dollars. And emissions from such vehicles will be among the fastest growing sources of CO<sub>2</sub>, a major contributor to the growing problem of global warming which will threaten all life on earth.'

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**SOME  
KEY CONCEPTS  
&  
EXAMPLES**

<b>Concept from Behavioural Economics</b>	<b>Explanation of Concept</b>	<b>Example</b>	<b>Applied to Re-position Car Owning and Use</b>	<b>Applied to Re-position Car Owning and Use</b>
<b>Framing</b>	People are sensitive to the <i>framing</i> , or formulation, of the decision problem. The presentation of the data is as important as the data itself.	Consumers are greatly influenced in their decisions by how choices and options are presented to them – a fact that industry has been taking advantage of for years.	<i>“Although I know that my car is probably bad for the planet, I didn’t know that it probably isn’t good for me.”</i>	Car owning and use is not just about the impact on society and environment; it’s about living a better life, not by making a sacrifice but because the personal costs of car owning may outweigh the benefits – is owning a car good for the owner?
<b>Defaults</b>	If the default is set right, the individual does not need to choose the right decision.	Public transport seems more difficult and inconvenient than jumping in the car.	<i>“I don’t even think about it – I own a car, rather than think about the optimal choices for each journey I make.”</i>	Change the default: don’t automatically own a car; could carfree + hire or car club be a better option?
<b>Salience: Novelty, Pain and Sunk Costs</b>	Paying cash now is painful. If the cost is already incurred, you might as well forget about it.	Train and bus tickets are expensive compared with the cost of the petrol for each car journey. All the other costs of a car are near-invisible.	<i>“Public transport is expensive. My car cost a lot to buy, but now I’ve got it, I’ll use it.”</i>	Start thinking about how much it costs to own and run a car. A car owner is generally £000’s worse off than a non car-owner.

# Saliency

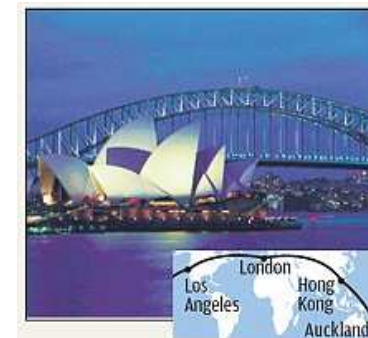
- The state or quality of an item that makes it stand out relative to neighbouring items
- Hence, our attention is drawn to what is novel, accessible, painful, simple and relevant...



# Salient: The Cost of Public Transport



Mail Online, 4.11.09



**ROUND THE WORLD  
PLANE TICKET:**

**£755**

London, Dubai, Bangkok, Sydney,  
Melbourne, Auckland, Dubai, London



**TRANS-SIBERIAN  
RAIL TICKET:**

**£995**

Moscow, Ulaanbaatar, Mongolia,  
Beijing



# Not Salient: The Cost of Car Ownership



*“Direct debits have  
the strange power of  
semi-invisibility.”*

- Guardian, Second Leader (on BSkyB), 16.6.10

**QUESTIONS,  
FOLLOW UP,  
CONTACT**

# What Next?

- Behavioural Economics:
  - recognise the biases
  - construct a new framework
  - design a different choice architecture:
    - what's the best way to get from A to B?
    - do I really need to own a car for this?
    - think 'would I be better off (richer, thinner, fitter etc) being carfree?'
- Social Marketing:
  - use the social marketing benchmark criteria to focus on the individual, generate the segments that will act on this information and devise appropriate interventions
    - older people
    - students, etc

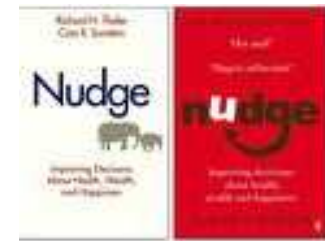
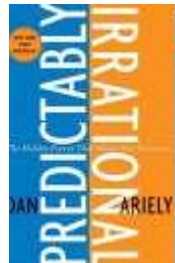
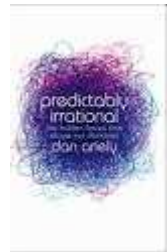
## Where Next?

- Use social marketing and behavioural economics
- Extend the insights from SM and BE into new fields
- Develop these ideas and insights
- Additional support/funding
- Collaboration invited...

# More Reading

Ariely, Dan, *Predictably Irrational*. London: Harper Collins.

Thaler, Richard & Sunstein, Cass, *Nudge: Improving Decisions About Health, Wealth, And Happiness*, London: Penguin



(Both available as hardback & paperback)

# Contact and Follow Up

## Stephen Young, BA, MA

- Low carbon, web-based activities
  - [www.ictandclimatechange.com](http://www.ictandclimatechange.com)
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  - [www.thefourwheeldetox.com](http://www.thefourwheeldetox.com)
  - <http://livingthecarfreelife.blogspot.com/>
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  - <http://www.brighton.ac.uk/bbs/contact/details.php?uid=sy14>
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