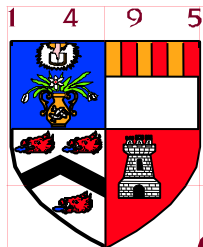

Influencing travel behaviour and attitudes

Dr Jillian Anable

Centre for Transport Research, University of Aberdeen

22nd Annual TRICS Transport and Development Conference

17th November 2010, London



UNIVERSITY
OF ABERDEEN

CENTRE FOR
Transport Research

Questions

1. What do we mean by '**behaviour change**'?
2. Can we change behaviour by changing **attitudes** alone?
3. How can **market segmentation** be used as a tool to target interventions?

Behaviour change is not just about mode switch

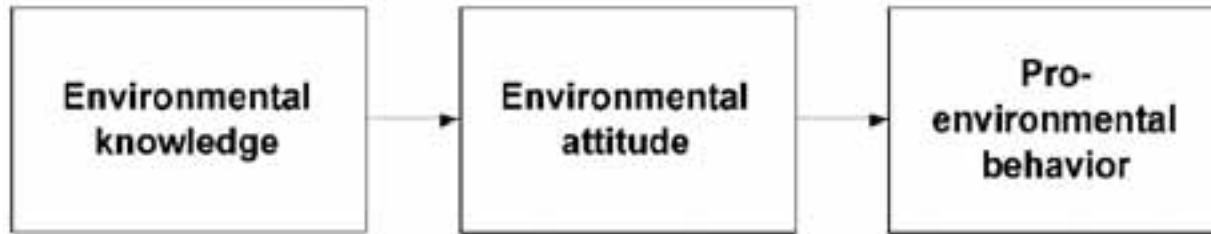
- **Purchasing** - *which* cars are bought
- **Driving** - *how* cars are driven
- **Use** - *how much* cars are driven
 - Mode choice
 - Car occupancy
 - Timing
 - Route choice
 - Frequency
 - Trip-chaining
 - Destinations / distance
 - Residential location choice
 - Work location choice



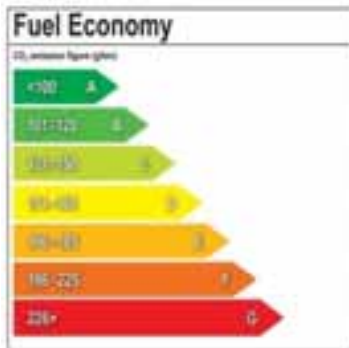
But ...

- **Information is necessary but insufficient on its own** – there are multiple *objective* and *subjective* barriers to behaviour change
- Different barriers are experienced by different people – **there is no one size fits all message or solution**

The deficit model still prevails ...



are you doing **your bit?**



CHOOSEANOTHERWAY

Barriers to behaviour change

- Values
- Efficacy
- Status and identity
- Social norms
- Perceived control
- Affective attitudes
- HABIT
- Choice

INDIVIDUAL SUBJECTIVE	INDIVIDUAL OBJECTIVE
<ul style="list-style-type: none"> • Values • Moral norms • Sense of responsibility • Perceived control • Self efficacy / agency • Denial • Instrumental attitudes • Affective attitudes • Identity and status • Heuristics 	<ul style="list-style-type: none"> • Knowledge • Habit • Personal capabilities • Actual resource constraints
COLLECTIVE SUBJECTIVE	COLLECTIVE OBJECTIVE
<ul style="list-style-type: none"> • Social dilemmas • Group cultures/ shared norms • Trust in others and in government 	<ul style="list-style-type: none"> • Contextual/ situational factors • Communication / the media

Anable, J. et al. (2006) [An Evidence Base Review of Attitudes to Climate Change and Transport](#). for the DfT

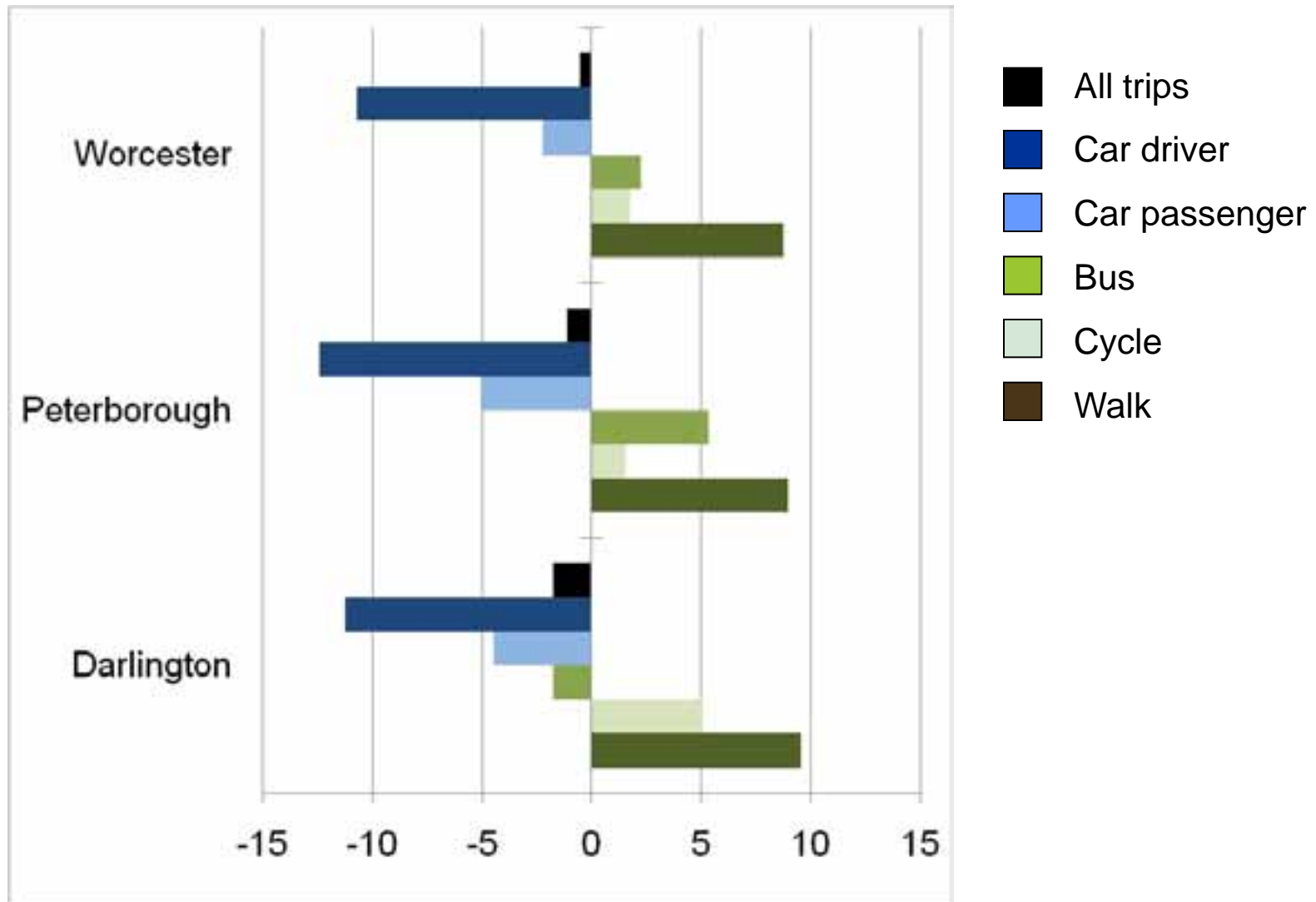
Need to change context + attitudes

Two ways of thinking about changing behaviour:

1. Influencing what people consciously think about (at all levels)
2. Altering the context in which people act (The 'choice environment')

= need a combination of hard + soft

Sustainable Travel Towns results



Change in trip numbers per 100 people per day 2004 to 2008; weighted dataset; trips<50km

Minding the 'gap'

- Value-action gap - complex - but need to try and understand the barriers to change
- ***What we think the public ought to know about is irrelevant: we must start from what they care about***
- Different for different population segments
- Different for each type of travel behaviour

Segmentation

Die Hard Drivers (20%)



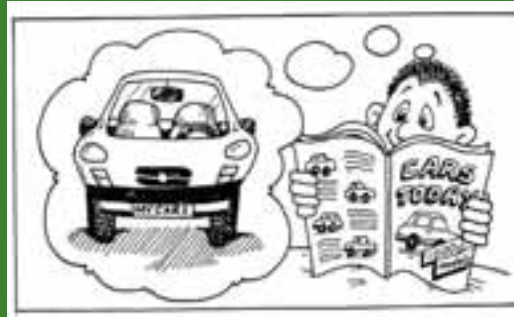
Car Complacents (20%)



Malcontented Motorists (18%)



Car Aspirers (9%)



Car Sceptics (9%)



Aspiring Environmentalists (16%)



Reluctant Riders (7%)



What is segmentation?

- Segmentation involves subdividing the public into **manageable groups** based on the attributes they possess, for example the attitudes they hold, or the behaviours they undertake.
- A good segmentation model allows its user to **identify clearly differentiated groups** within a broad audience, and to **understand the most effective means by which to engage those groups**.

Why segment the market?

- There is little point in targeting the **average**
- Different people are **motivated by different things**
- There is no 'one size fit all' approach
- It is necessary to **plug-in to belief systems**
 - not try to rewire them

But there is good segmentation and bad segmentation ...

- Segmentation of travellers has relied on demographics or behaviours, but ...
- Need to find *psychologically meaningful* segments
- Draw upon marketing and psychology disciplines
- Design **targeted messages**
- Investigate how segments change **over time**

Bases for segmentation

Observable/objective		Unobservable/subjective	
General	Specific	General	Specific
Demographic	Usage frequency	Personality	Benefits (perceptions and importances)
Socio-economic	User status	Values	Barriers to action
Geographic	Service loyalty	Lifestyles (activities, interests, opinions)	Attitudes
Household life-cycle	Stage of adoption		Preferences
	Use purpose		Intentions

Application of segmentation to smarter choices

Smarter Choices in Sustainable Urban Extensions

- **Jillian Anable**, Centre for Transport Research, University of Aberdeen
- **Steve Cassidy**, MRC McLean Hazel
- **Carey Newson**, Transport for Quality of Life
- **Helen Russell-Paddison**, Northamptonshire County Council
- **Lynn Sloman**, Transport for Quality of Life

Smarter Choices in Sustainable Urban Extensions (2008/9)

Northamptonshire Modal Shift Demonstration Project

- Commissioned by the Department for Transport and Northamptonshire County Council
- Evaluate and design efficacious choice packages for new residents to:
 - Support development of mobility/travel centres
 - Achieve modal shift targets
- Evaluate role of technological tools such as Smartcards and real time information



Life Building,
Northampton



Oakley Vale,
Corby



Upton,
Northampton

Phases of Research

Phase 1

- Group interviews with recent residents
- Large household quantitative survey (attitudinal and behaviour questions)
- Attitudinal Segmentation of respondents

Phase 2

- Focus groups with respondents representing each segment
- User design of smarter choice options

Segmentation

- Division of the population into distinct attitudinal groups to identify those most likely to respond to certain types of information and services and their motivations for doing so
- Car owning households only (N=355) subjected to statistical segmentation
- Groups were statistically derived from scores on:
 - attitudes towards car use and other modes
 - willingness to pay for environmental consequences
 - desire to reduce car use

Segmentation Results

- 4 distinct psychographic groups identified
 - each with varying degrees of attachment to the car, environmental consciousness and mode switching potential
 - each present in different proportions in each of the three housing locations
 - each respond differently to different types of information and service

Malcontented Motorists (32%)



Life	OV	Up
27%	<u>40%</u>	21%

- Highest actual car dependency
- BUT, find driving increasingly stressful
- Some willingness to sacrifice for the sake of the environment
- BUT, firm belief that the alternatives do not exist

The least positive about any of the service options (including car based solutions), but may respond to the idea of smart cards loaded with cash credits

Complacent Car Addicts (27%)



Life	OV	Up
22%	25%	<u>35%</u>

- High car dependency and ambivalent about reducing use
- Not willing pay more to drive. Not motivated by environment
- BUT, pragmatic approach to alternative modes
- High bicycle ownership, but lowest use

Most positive about cycle service including training and smart cards loaded with credits. BUT, drop-in travel centre unattractive – the information needs to come directly to them

Die Hard Drivers (20%)



Life	OV	Up
<u>30%</u>	18%	16%

- Strong emotional and physical attachment to the car
- Admit to strong habitual car use
- Not willing to use alternative modes or pay extra for car use
- Admit there may be alternatives but do not want to use them

Keen on 'technical' solutions such as smart cards (w/o carbon credits) & real time information. Some enthusiasm for car clubs. 'Early Adopters?' Negative about car sharing.

Aspiring Environmentalists (21%)



Life	OV	Up
22%	17%	<u>28%</u>

- Car use is lowest of all segments and desire to reduce further
- Strongest desire and tendency to use alternative modes
- Unlikely to give up the car altogether
- Motivated by environmental issues

The most positive about all the information and service options except 'start cycling'. Likely to be receptive to personalised information, car clubs and eco-driving

Segmentation conclusions

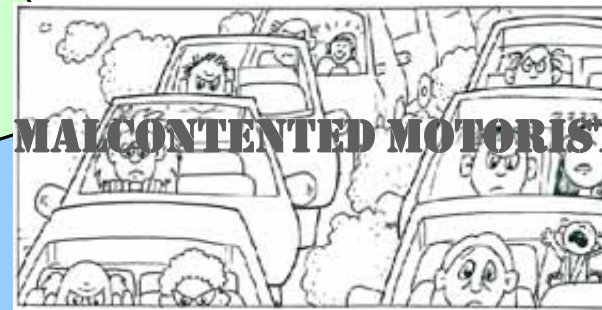
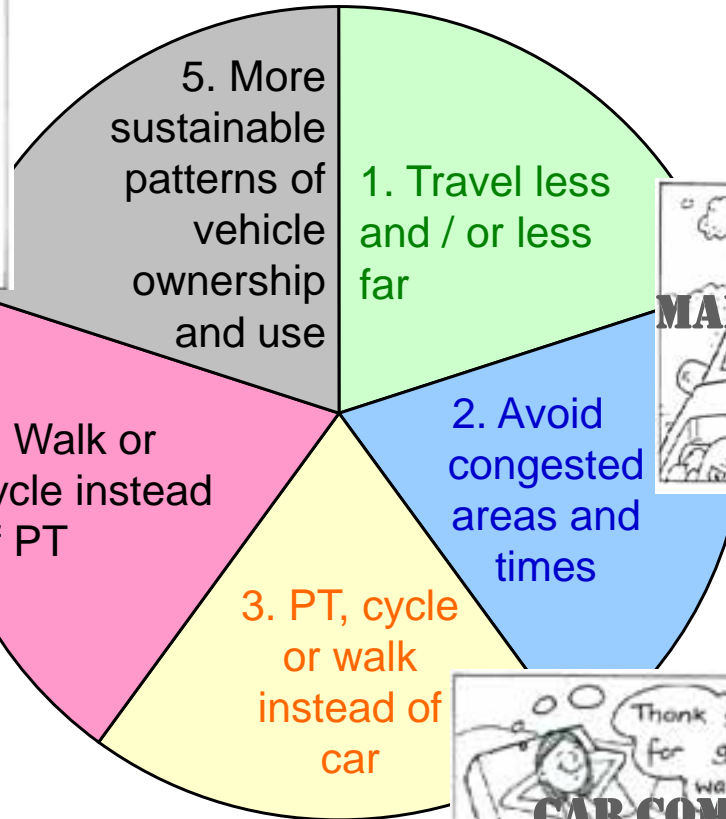
- Aspiring Environmentalists and Complacent Car Addicts make up ~50% and are willing and ready to adopt changes to behaviour
- Different groups need to be serviced in different ways in order to optimise behaviour change potential
- Distribution is different across locations – therefore, optimal mix of solutions in each location will be different
 - Upton: largest grouping of the segments with most willingness to change (AE's and CCAs)
 - Oakley Vale: clustering of the most difficult group to influence (MMs)
 - Lifebuidling: DHDs overly represented but even they are open to technological solutions

How can we change behaviour?

Identify:

- *Who* is most likely to change behaviour and why?
- *Which behaviours* can be changed and under what circumstances?
- *Which policies* target these people and behaviours?

Targeting demand management



Overall conclusions

- Behaviour change means more than just mode switch
- To change behaviour – need to change attitudes + context
- What works will be different for different people and for different types of behavior change
- Segmentation is a pragmatic tool for the development of achievable strategies