

Car Clubs, Smarter Choices and Climate Change



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Key messages

- In order to foster sustainable travel patterns, **the link between car ownership and use must be broken**
- CCs offer a different model of car ownership which **encourages the use of alternative options** whilst signalling that **car use can still be an appropriate and acceptable choice**
- CCs can ensure that voluntary shifts in behaviour can be maintained long term thus becoming **the 'glue' to bind other soft and hard policies together**

Outline

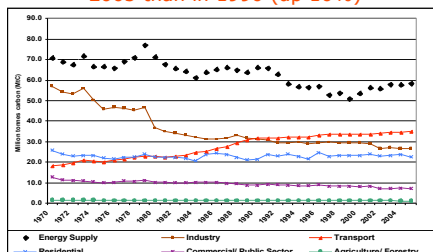
1. Transport and climate change
2. Car ownership - trends
3. Psychology of car ownership
4. Who doesn't own a car and why?
5. Who joins a car club and why?
6. Car clubs, smarter choices and climate change

(1) Transport, energy and climate change



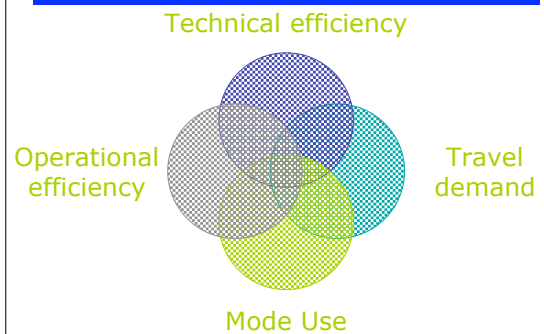
Transport's growing share of CO₂

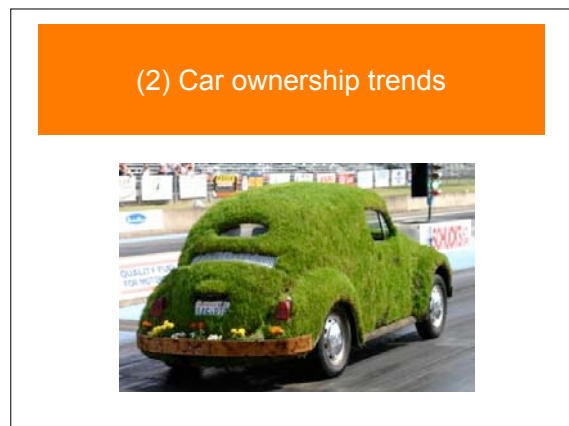
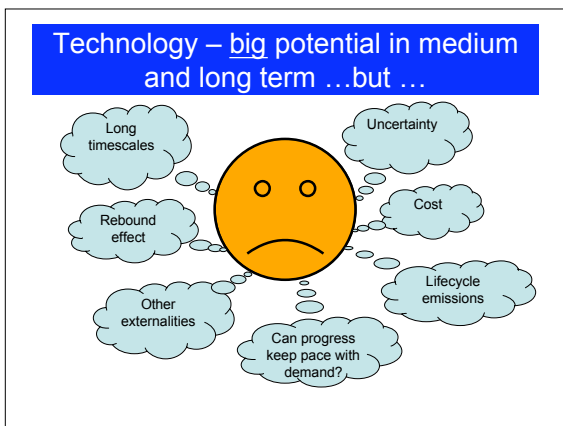
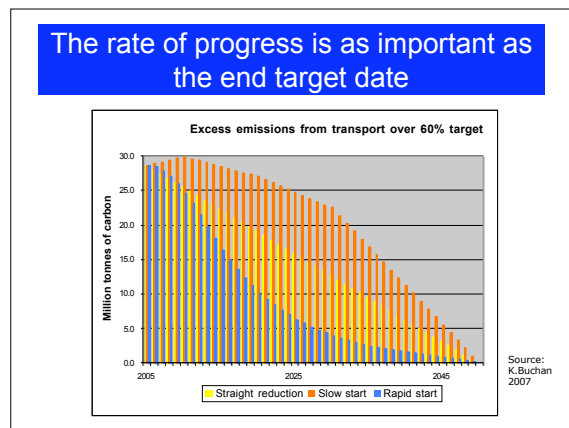
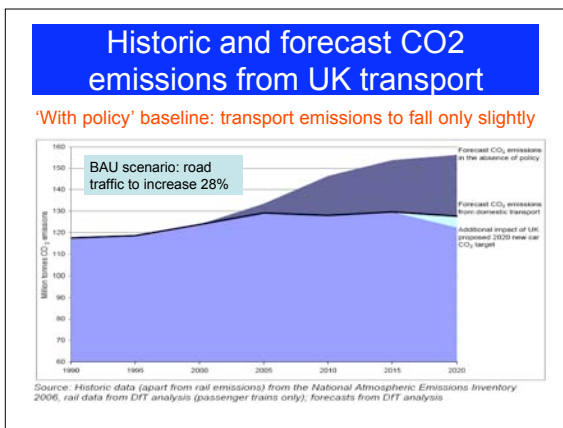
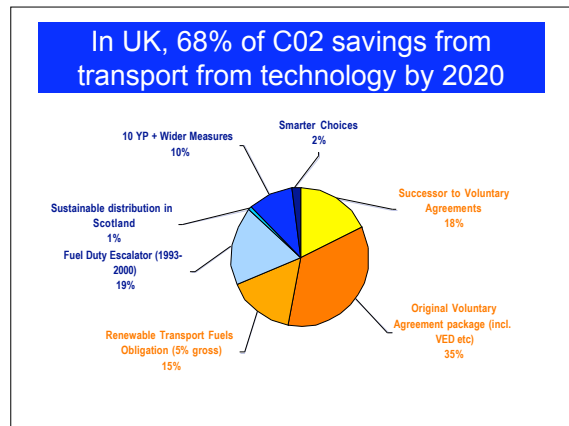
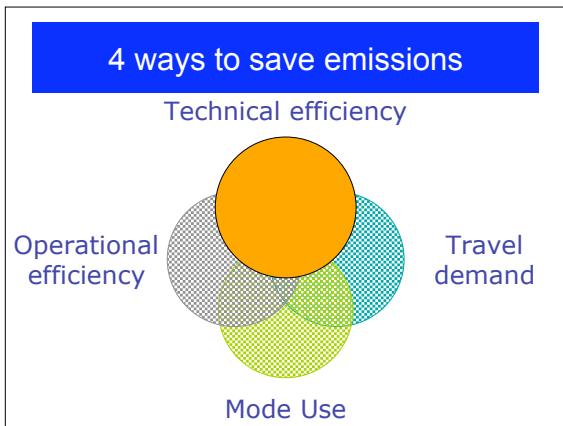
Only sector in which emissions were greater in 2005 than in 1990 (up 10%)



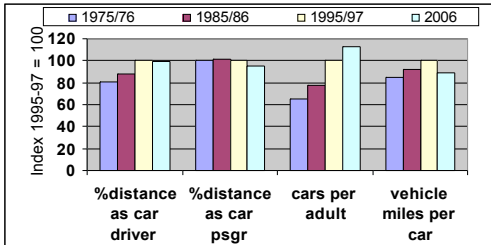
Improvements in fuel efficiency have been negated by increases in traffic growth and changes to the car market

4 ways to save emissions



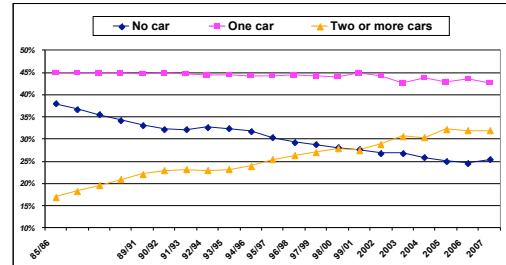


Changes in car use and ownership 1976-2006



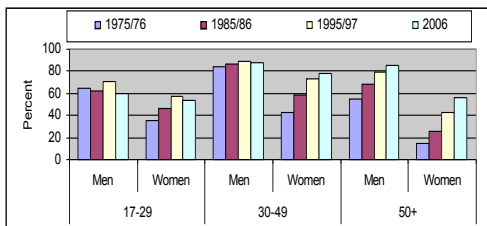
No. of cars per adult has doubled over the past 30 years, but car use has levelled off recently

Household car ownership



There are now more households with 2 or more cars than with no car

Licence holding by age and gender (1976 – 2006)



Ownership mainly up in women and those aged > 50 yrs
Reductions among people aged under 30 yrs

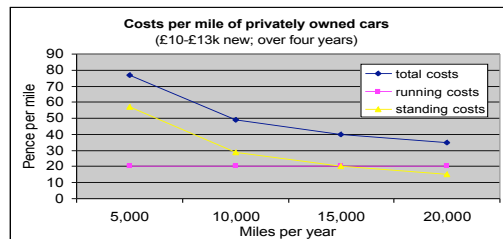
(3) Psychology of car ownership (and a bit of economics too)



The link between car ownership and use

- Car ownership is (unsurprisingly) the most important factor influencing car use
- When a car is acquired, trips by PT reduce by around 80% for the driver & 50% for non drivers
- Beyond physical opportunity, three key factors foster high car use:
 - The economics of car ownership
 - Car reliant locational choices
 - Car dependent attitudes and cultures

The economics of car ownership



Ave. mileage of a household car used for commuting = 11,730, but for others = 7,430. Need to persuade people not to drive to work & consider other forms of car access.

MPG paradox and myopia

Mpg paradox:

- Consumers say they care about fuel economy, but don't
- Buyers think in terms of how much it costs to fill the tank but running costs are not systematically considered

Myopia:

- Inability of the consumer consider future running costs
- Car running costs are heavily discounted into the future

Quiz:

- Which saves more fuel?:
 - Upgrading from (i) 34mpg to 50mpg (ii) 18mpg to 28mpg?
 - **Answer = (ii)** (2.5 times more fuel saved than (i))

Time penalty of car ownership

The typical car owning Briton today devotes at least 1,200 hours a year to his or her car:

~500 hrs to earn the money to buy it and pay for petrol, insurance, repairs and parking

~100 hours to pay extra mortgage for a house with a garage

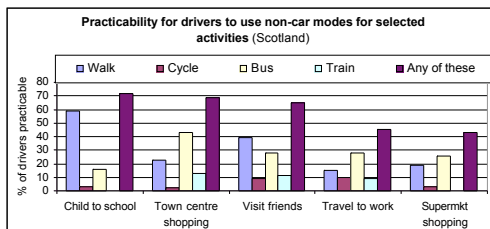
~400 hrs sitting in it while it goes and waits in traffic

~250 hrs devoted to a myriad small tasks:

- taking it to the garage for repair
- filling it with petrol
- washing it
- looking for the car keys
- walking to the car
- de-icing the windscreen
- finding a parking space at the end of each trip

(Sloman, 2006)

Car reliant locational choice



Source: Stradling et al., 2003

Car dependent attitudes and cultures

- Myopia
- Misperceptions
- 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

What kind of traveller are you?

Die Hard Drivers



Car Complacents



Malcontented Motorists



Aspiring Environmentalists



Car Sceptics



Car Aspirers



Reluctant Riders



Malcontented Motorists (16%)



- 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

MEDIUM POTENTIAL: Desire to reduce car use and some environmental imperative. However, needs to be convinced that the alternatives are for them.

Complacent Car Addicts (23%)



- 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

MEDIUM POTENTIAL: Open to alternatives to the car and motivated by cost savings. But not motivated by environmental issues and low desire to reduce car use. Options must be 'on their doorstep'.

Die Hard Drivers (23%)



- 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

LOW POTENTIAL: too attached to their own vehicle and currently display relatively little multi-modal behaviour. However, keen on 'technical' solutions such as smart cards new car technology. 'Early Adopters?'

Aspiring Environmentalists (21%)



- 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

HIGH POTENTIAL: Pragmatic attitude towards car use. Willing to try alternatives and hire cars for holidays. Environmentally motivated. Some may see car clubs as an opportunity to have access to a second vehicle.

(4) Who doesn't own a car, and why?



Who doesn't own a car?

- **Those with no car or van in England:**
 - 26.8% of **households**
 - 16.9% of **people aged 16–74**
 - 11% of **employees**
 - 7.8% of **home owners**
 - 5.7% of **home owning employees**
 - 58% of households in the **lowest income quintile**
 - 8% of households in the **highest income quintile**

Given that CC members have above average income (and are employed home owners?), it would seem that the typical CC member is not the same as the average non-car owner in England?

Reasons for not owning a car

No one in household can drive	38%
Cost of car / driving	32%
Not necessary – other transport available	31%
Health / physical difficulties	19%
Nervousness about driving	13%
Lack of parking space	7%
Environmental reasons	4%

Source: DfT (2006) Attitudes to car use

Car Sceptics (10%)



- Do not own a car
- High sense of green awareness and concern
- Positive view of public transport and cycling – enjoy using them

HIGH POTENTIAL: these individuals do not like car travel but hire cars for holidays so may see practical benefits of car club membership. However, they have already given up the use of their own vehicle

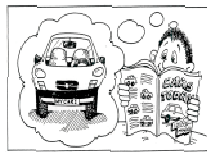
Reluctant Riders (6%)



- Do not own a car
- Would prefer to have greater access to a car and use one when they have a chance (as passengers)
- Not motivated by environmental issues

HIGH POTENTIAL: if income and health permits, a car club could be the answer to this groups desire to travel more by car.

Car Aspirers (5%)



- Desire car ownership
- High bus use
- Not motivated by environmental issues

HIGH POTENTIAL: car club membership may be the answer to latent demand for car travel without the need to own a car

Windows of opportunity

- Life stage versus **life events** when mode choice interventions will be much more effective:
 - Residential relocation
 - Birth of a child
 - Acquiring a drivers licence
 - Change of workplace
 - Retirement

Asymmetric churn

- Behaviour change is a **two way process**:
 - Each year, a large number stop driving and start use public transport, while a larger number stop taking public transport and start to drive
- Need to achieve asymmetric churn - or a 'swing' in a sustainable direction:
 - Increase the number of people who are going in the 'right' direction and slow down the number going in the opposite direction
- Those are two quite separate decision processes, and they have to be targeted separately.

We live in interesting times ...

"... our attitudes have only really started to change in the last few years. Two years ago, the number of motorists saying they'd find it difficult to adjust their lifestyle to not having a car stood at 87%; in 2007 it fell to 81% and this year it's down to 73%. Which means one in six motorists who, just two years ago, said they'd find it very difficult to adjust no longer say that."

"Compared with 20 years ago, the proportion of us who drive more than 12,000 miles a year has fallen from 26% to 15%...All this points towards a slow, subtle but still fundamental shift in our car-dependency."

RAC (2008)

(5) Who joins a car club, and why?



Who are CC members?

- ~50% do not own a car on joining
- But, not the same profile as the average non-car owner in England
- CC members tend to be:
 - Male
 - Middle aged
 - Above average income and education
 - 'working professionals'
 - Already travel 1/3 fewer car miles compared to the national average before joining + use other modes more
- Is the market moving beyond the early adopters?

Travel behaviour of CC members

- CC members reduce car mileage by 53.6% *in response to joining*
- They make between **13.2% - 15.2% more trips on foot and bike**
- Smaller effect on PT usage as members were already high PT users
- Tariffs encourage **'trip chaining'** – this is more efficient

Displaced cars:

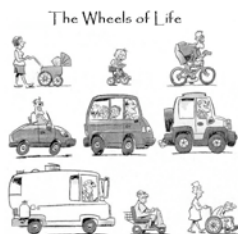
- **24.1% got rid of a car** as a result of joining
- A further **50% claimed to have deferred purchase**
- Dec 2007: 26.25 members/car – this means a car club is directly responsible for taking **5.48 cars off the road**
- If 50% of those people who say they deferred ownership had purchased – this translates into **11.74 cars off the road/ cc car**

Members survey 2008 (Carpus)

Long-term lifestyle effects

- Need to ask 'what would you have done if the car club was not available' rather than a straight *before and after* comparison
- Short term versus long term effects
- Even if cc members have 'non standard' travel behaviours before joining – as long as CC helps sustain this – it is a positive result

(6) Car Clubs, Smarter Choices and Climate Change – final thoughts



Why are car clubs 'the glue'

- Encourage **longevity** of behaviour change
- Enable **other smarter choices** to be adopted
- Attractive to a number of traveller **segments**: i.e. target the car dependent *and* the travel poor
- Become niche markets for **alternative technology**
- Become a lead market for **ICT** (Smartcards and telematics)
- Bridge **travel demand, mode choice, operational efficiency and technology**
- Straddle **business and private travel**

But for CCs to stick ..

- Interoperability
- Integration with other modes (incl. bike rental)
- Growth outside London
- National travel card
- Different packages for different users
- Focus on tariffs and transparency of costs
- Awareness raising
- Foster sense of ownership and community
- Incorporation with travel plans
- Become a test-bed for alternative technology

Carbon savings from CCs

More sustainable travel patterns
+ more efficient vehicles
+ displaced car ownership/ embodied energy

= 0.7t/CO₂ per member in 2008

- If scaled up to 6% population = 4.5MtCO₂
 - = 6% emissions from passenger cars in the UK
- + health benefits, reduced pressure on car parking, increased social inclusion, increased public transport revenues

CONCLUSIONS

- In order to foster sustainable travel patterns, **the link between car ownership and use must be broken**
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- CCs can ensure that voluntary shifts in behaviour can be maintained long term thus becoming **the 'glue' to bind other soft and hard policies together**