An ESRC Secondary Data Analysis Initiative Project

Life Transitions and Travel Behaviour

UWE BRISTOL University of the West of England

E·S·R·C ECONOMIC & SOCIAL RESEARCH COUNCIL

Department for Transport

University of Essex

Study team

- Centre for Transport & Society, University of the West of England
  - Kiron Chatterjee, Ben Clark, Steve Melia
- Institute for Social & Economic Research, University of Essex
  - Heather Laurie, Gundi Knies
- Department for Transport
  - Tom Gerlach, John Screeton

Overview

1. Research needs
2. Theoretical importance of life events
3. Existing knowledge from longitudinal studies
4. Understanding Society - a data opportunity
5. Research objectives
6. Seminar programme

Research needs (1)

- DfT's 'Door to Door Strategy' (2013)
  - UK Govt "wants more journeys to be made by sustainable transport: public transport, supported by cycling and walking"
  - Strategy sets out improvements to transport system to achieve this but notes **behaviour change also depends on "individuals' circumstances, characteristics, habits and attitudes"**
- DfT 'Climate Change and Transport Choices' study (2011)
  - Nine life-stage oriented segments across population which share particular travel behaviour characteristics – **useful to know how behaviour evolves as people move between life stages** and if it can change within life stages

Research needs (2)

- DfT's Behavioural Insights Toolkit (2011)
  - "People and organisations are likely to be most open to changing habitual behaviours at key **'transition points'** or **'moments of change'"**
- Interventions starting to target transitions point
  - e.g. West of England's Local Sustainable Transport Fund investment programme has a theme on "transitions
- Research needed to understand how and why behaviour changes at transition points

Life transitions – a definition

Life transitions - ‘major or minor life events that may cause changes in one’s life and relationships’ (Connidis, 2010)

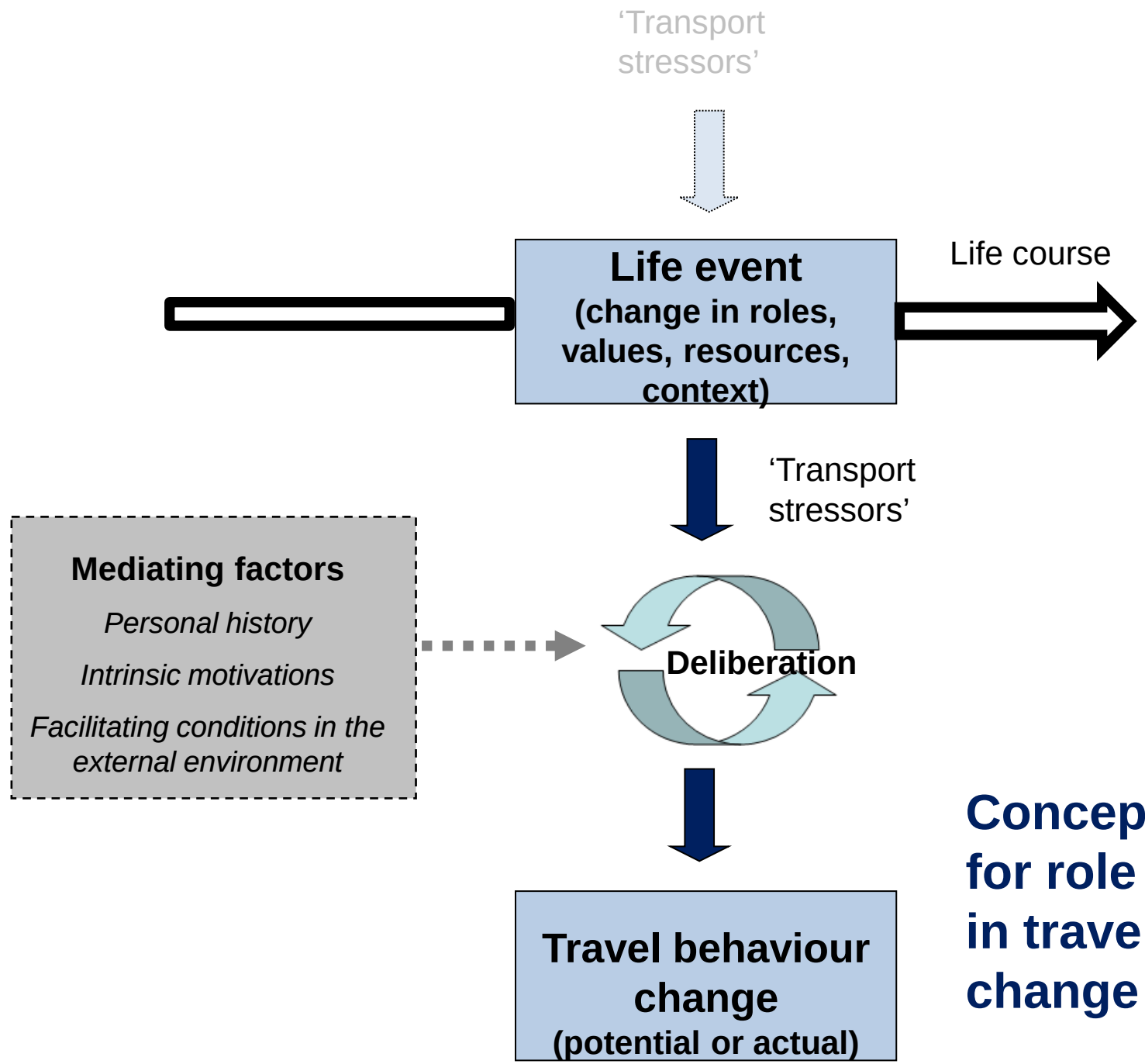
Theory - life events break habits

- Change to situational context breaks habits
- Decision makers become aware of situational cues and seek information internally/externally about options
- May thus become aware of changes to transport system
- Potentially changes made to longstanding behaviour

Theory - life events can more fundamentally alter…

- Roles people perform
- Values and preferences
- Resources available for travel
- Context for travel (activity space)

→ These can change the characteristics of travel considered salient and hence attitudes towards travel modes



Conceptual model for role of life events in travel behaviour change

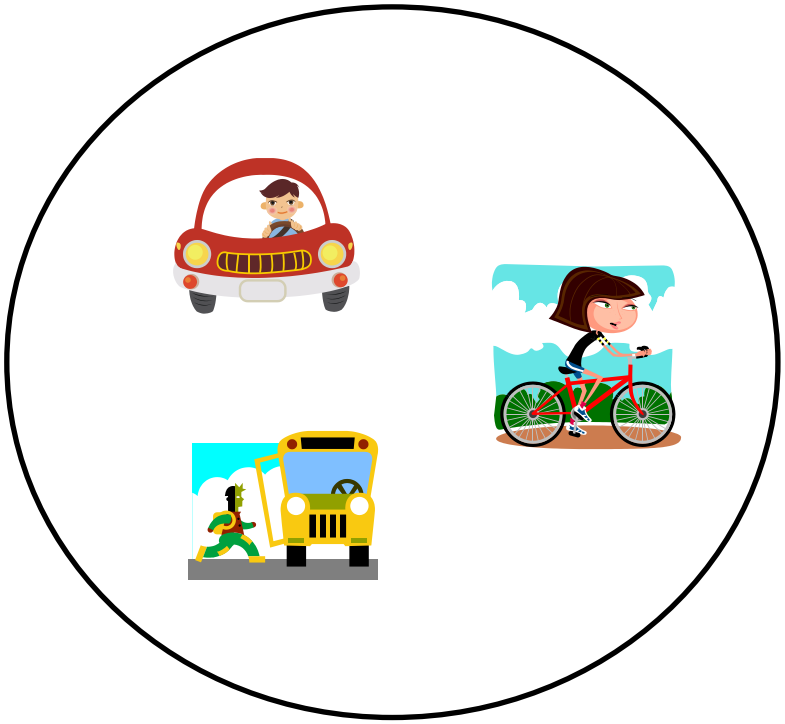
“we’ve become a two-car family because…”

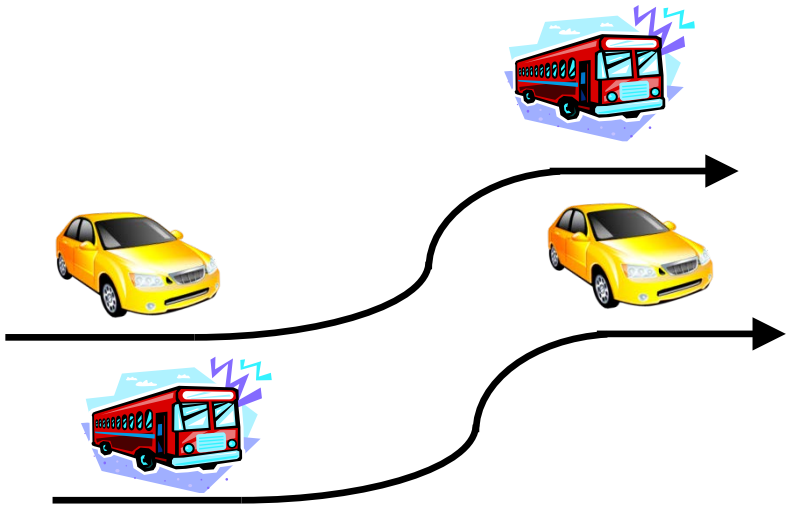
…my wife chooses to characterise the two-car scenario as a brief transitional period, on our way to becoming an elderly couple whose transport needs can be met by one tiny and completely unreliable vehicle. When our children leave home for ever, we can get rid of the big car. In the meantime, she says, the Mini will give us flexibility.

"I suppose we can use it as a front shed," I say. "As long as we can get a parking permit for it.“

Tim Dowling, The Guardian, Saturday 1 March 2014

Need for longitudinal data





Cross-sectional data:
Explaining differences in behaviour by differences in prevailing circumstances between individuals

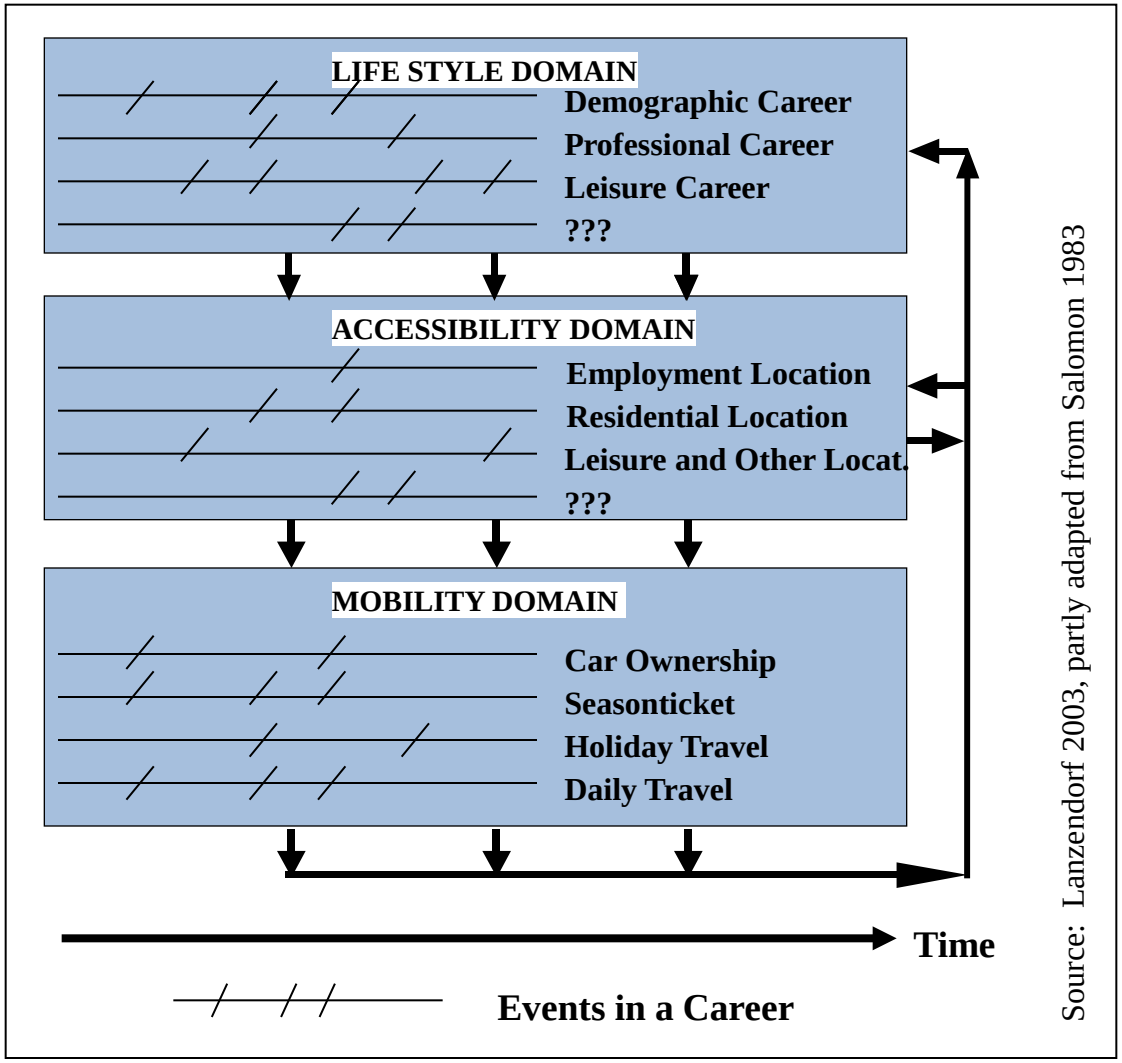
Longitudinal data:
Explaining evolution of behaviour of individuals by differences over time in circumstances

Timeline …of longitudinal research studies in travel behaviour

1960	Life course approach to studying individual lives emerges
1977	Synthesized theory of travel behaviour proposed
1977	Travel behaviour conceived in terms of a discrete choice hierarchy
1980s	Research into dynamics of travel behaviour begins to emerge
1983	Long term lifestyle choices recognised as influencing travel behaviour
1983	The evolution of travel behaviour over the family lifecycle is studied
1999-	Large scale panel studies reveal how travel behaviours change over time
2003	The idea of mobility biographies is put forward
2003-	Empirical studies using the mobility biography framework emerge
2005	Micro-simulation models of travel behaviour change are developed
2013	Conceptual model of life events and travel behaviour turning points is put forward

To the present day **-** A number of research groups remain active in the area of longitudinal travel behaviour research.

Mobility biographies



Mobility biography is the total of the longitudinal trajectories in the mobility domain

Lanzendorf (2003)

Exploratory studies

			Current Mode			
Key Events	**Former Mode**	**n**	**Car driver**	**Car passenger**	**Slow mode**	**Public transport**
House	Car driver	9	4		4	1
Move	Car passenger	2	1		1	
	Slow mode	15	10		3	2
	Public transport	5		2	2	1
	Total	31	15	2	10	4
Starting	Car driver	2	2			
To work	Car passenger					
	Slow mode	16	9	1	5	1
	Public transport	8	4	1	3	
	Total	26	15	2	8	1

Van der Wearden, Timmermans and Borgers, (2003).

Evidence limitations

- Quantitative and qualitative research based on relatively small sample sizes
  - Not representative of general population
- No data on number of people experiencing life events from year to year
- No data on number of people experiencing travel behaviour changes from year to year

Unknown how many people change travel behaviour at the time of different life events and circumstances that affect this

About Understanding Society

Survey design

Who is it for?

Research and impact

About – Everything you need to know about the study

Understanding Society is a unique and valuable academic study that captures important information every year about the social and economic circumstances and attitudes of people living in 40,000 UK households.

It also collects additional health information from around 20,000 of

Key facts

- 40,000 househ
  England, Scotl
  addresses fro
- £48.9 million fu
- Approximately
  information

Research objectives

1. To identify the **extent to which life transitions** are associated with major turning points in travel behaviour related to car ownership and commuting;
2. To understand in **what circumstances** life transitions are likely to lead to turning points in car ownership and commuting behaviour;
3. To use the understanding gained above to identify how **policy interventions** can achieve desirable outcomes for transport; and
4. To **build capacity** in the transport field to use large-scale, longitudinal data sets to inform policy analysis

Seminar programme

1. Overview (Kiron Chatterjee) ✓
2. Understanding Society and data preparation (Steve Melia)
3. Household car ownership (Ben Clark)
4. Commuting mode (Kiron Chatterjee)
5. Discussion

We have also produced two briefing sheets

Life Transitions and Travel Behaviour

Understanding Society and Data Preparation

Steve Melia

(University of the West of England)

E·S·R·C ECONOMIC & SOCIAL RESEARCH COUNCIL

Department for Transport

University of Essex

Overview

1. The Understanding Society dataset
2. Linked variables – area characteristics
3. Creation of life transition variables

Understanding Society

- Maintained by University of Essex (project partners)
- Household panel (annual) survey
  - Aimed to interview all adult (16+) members of households
  - Children or young persons who are 10-15 yr old
- Aim is to interview the same set of individuals every year
- Most of the data is collected using face-to-face interviews, some by proxy
- Intended to be representative of UK population in 2009

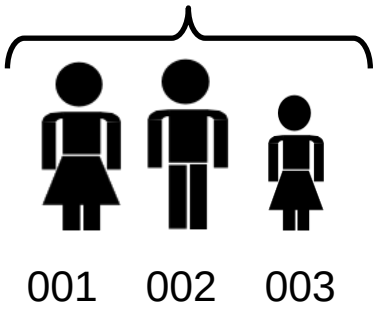
Understanding Society
THE UK HOUSEHOLD LONGITUDINAL STUDY

www.understandingsociety.ac.uk

Focus on the individual
Example of following rules:

Wave 1

Household ID a1



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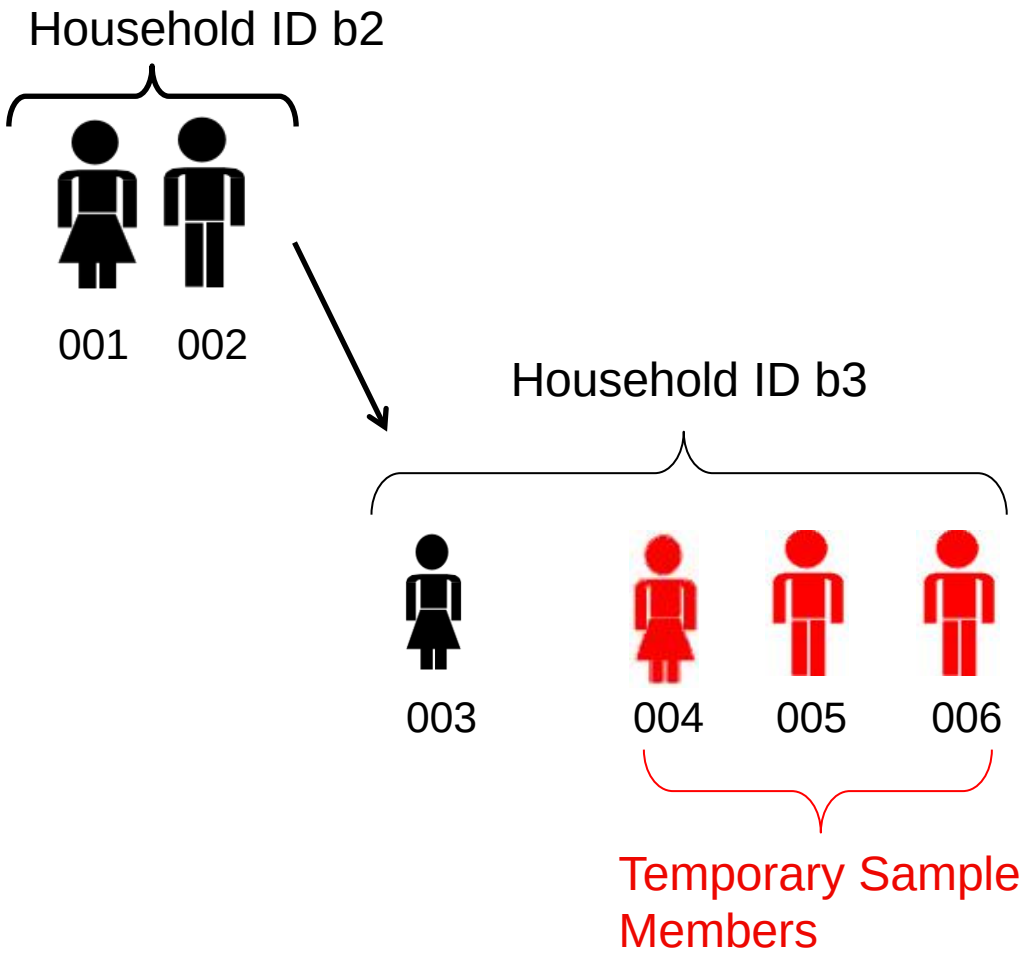
Wave 2

Daughter moves to university and shares house with others



Sample design

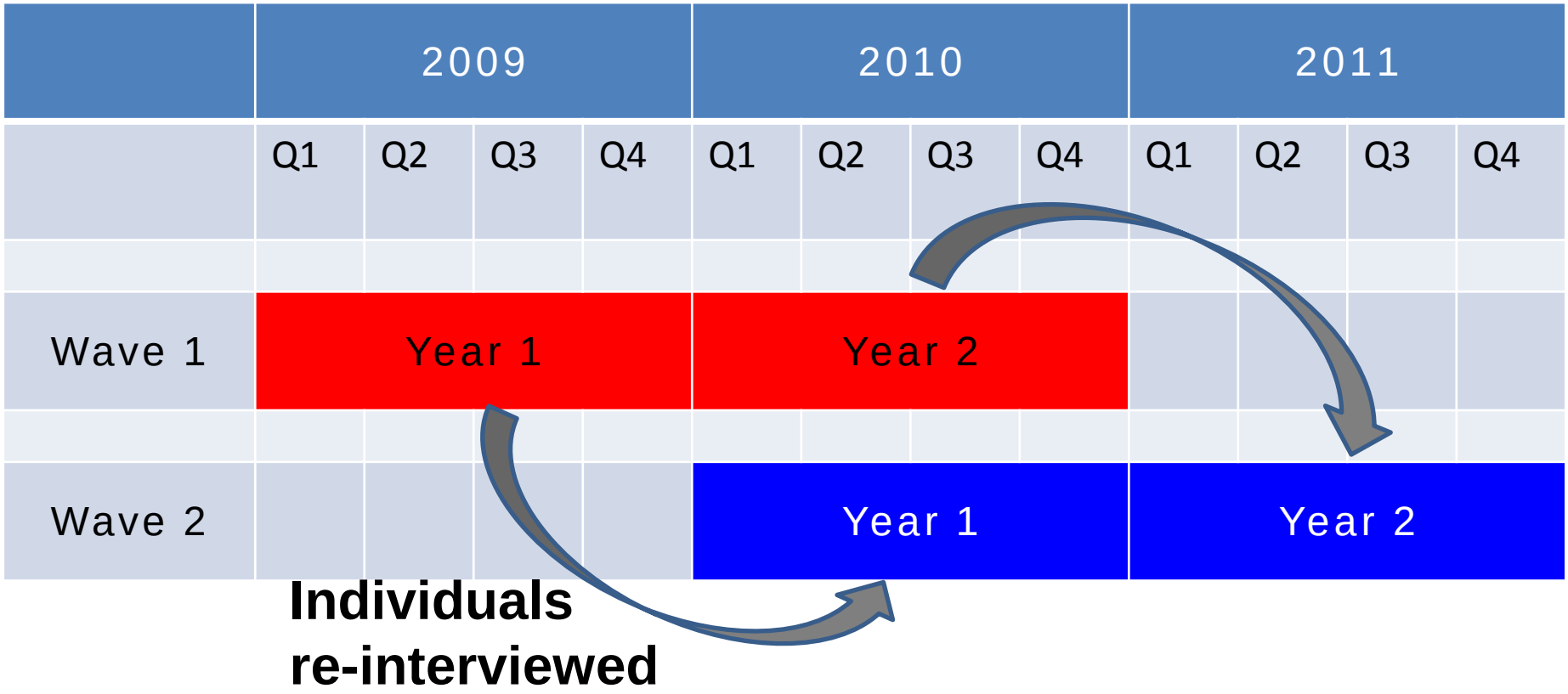
- Primary sampling unit – postcode sectors (adjacent postcode sectors grouped together when they had fewer than 500 addresses)
- Postcode sectors assigned to 108 strata based on: location, % non-manual occupations, popn. density
- Then 2640 PSUs selected using systematic random sampling (based on number of addresses within each postcode sector)
- From within each selected PSU 18 addresses selected using systematic random sampling

Understanding Society transport variables

Variable	Wave		
	1	2	3
Number of household cars	x	x	X
Commute mode	x	x	x
Commuting time / distance	x	x	x
Driving licence availability	x	x	x
Access to a car as driver		x	x
Frequency of public transport use / cycling / car sharing	x		
Difficulties travelling to work by car		x	
Ease of getting to work by non-car modes		x	
Availability of non-car modes for commuting		x	
Willingness to use non-car modes		x	
How would you rate public transport services in your local area?			x

See handout and www.understandingsociety.ac.uk

The two waves of data used



Data requirements

Dependent variables:

- No. of household cars (and change between waves)
- Commuting mode (and change between waves)

Explanatory variable groupings:

- Demographics and socio-economics
- Mobility (driver licence, commute distance)
- Attitudes
- Residential context spatial variables – obtained through data linking
- Life events – obtained by deriving from comparison of wave 1 and 2 variables

Data set preparation

1. Selection of raw USoc variables and construction of *individual level* wave 1-2 long format file
2. Linking of USoc data to spatial variables
3. Derivation of life event and behaviour change variables
4. Construction of a *household level* wave 1-2 long format file (for car ownership change analysis)
5. Data inspection and variable cleaning

Sample size

Wave	Individual respondents	No. of unique households
1	42,972	25,099
2	35,729	19,806
1 balanced panel	32,151	19,263
2 balanced panel	32,151	19,615

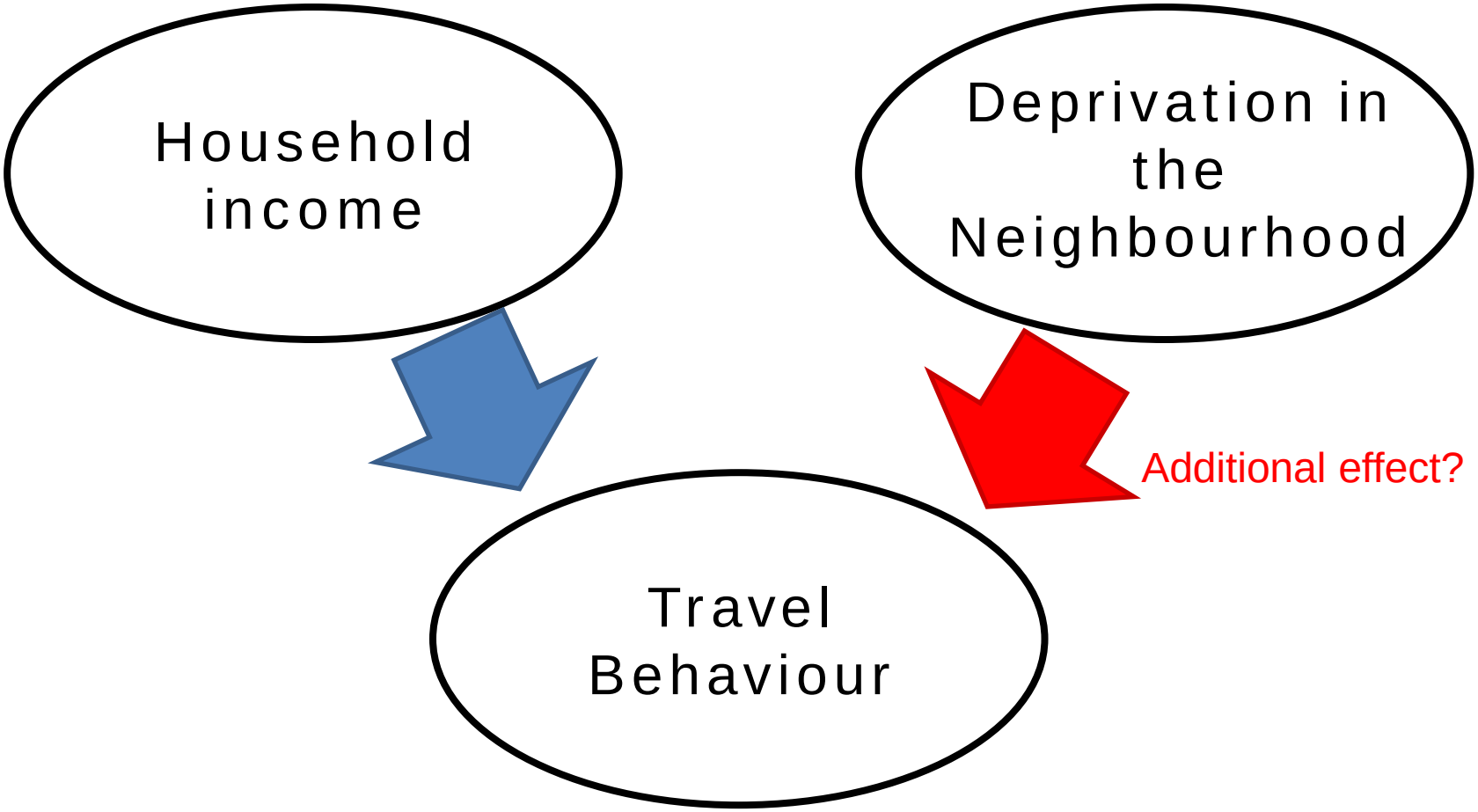
Transport and the built environment

Substantial literature – contested area. Some key themes:

- Population density – generally acts as a proxy for other factors
- Local spatial factors – affect walking behaviour in particular
- Regional spatial factors
- Range and distance of employment choices
- Range and distance of access to public transport
- Special importance of access to rail?

Interaction between these factors and life transitions?

Neighbourhood and individual factors



Spatial variables

Variable	Source
Settlement type	National Travel Survey
Population density	UK Census 2001
Proportion of population economically active	UK Census 2001
Travel time to the nearest employment centre	DfT accessibility indicators 2009
No. of employment centres with at least 100 jobs accessible by PT/walk*	DfT accessibility indicators 2009
Travel time to nearest town centre by PT/walk	DfT accessibility indicators 2009 *
Number of food stores accessible by PT/walk*	DfT accessibility indicators 2009 *
Overall Index of Multiple Deprivation (IMD)	IMD 2010
Living environment IMD	IMD 2010
Presence of railway station in LSOA or surrounding LSOAs	Ordnance Survey Open Data Initiative
No. of bus stops in LSOA	National Public Transport Data Repository

* weighted by distance decay factor [* ENGLAND ONLY]

Linked data – single time point

Accessibility

Deprivation
Bus & Rail

	2009				2010				2011			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Wave 1	Year 1				Year 2							
Wave 2					Year 1				Year 2			

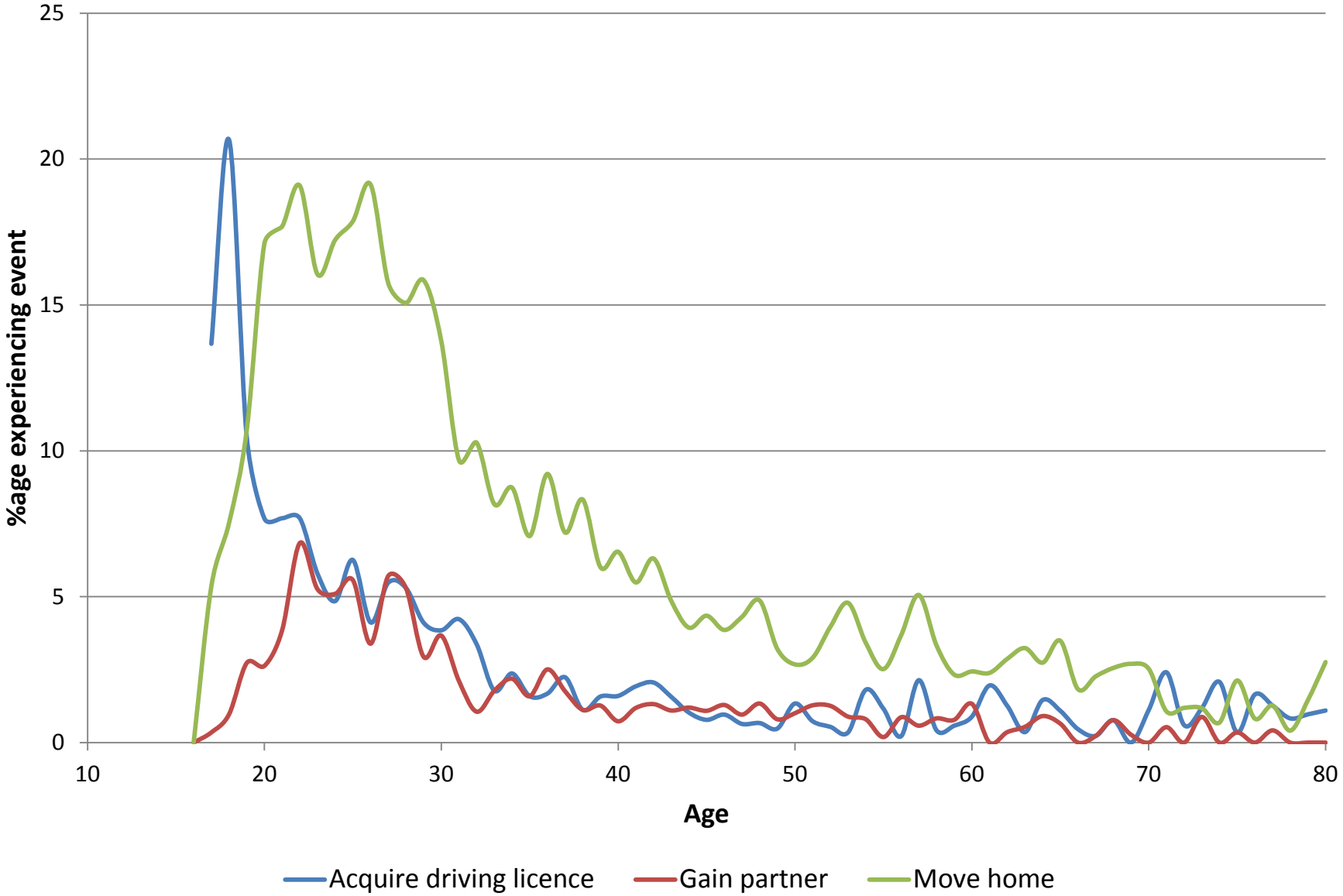
Life event derivations

- Moving home
- Having children
- Partnership formation and dissolution
- Moving into employment from non-employment
- Moving into non-employment (excl. retirement)
- Changed employer
- Retirement
- Gaining a driving licence

Life event prevalence

Life event	% English adults (weighted)
Residential relocation	6.9%
Switched employer	6.2%
Entered employment from non-employment	5.1%
Lost employment (excl retirement)	3.3%
Had child	3.1%
Gained a driving licence	2.5%
Gained a partner	1.6%
Lost a partner	1.3%
Retired	1.2%
Source: Understanding Society, Waves 1 and 2 (2009/10 - 2010/11), English residents only, n=32,151	

Volatility in early adulthood



Any Questions

Life Transitions and Travel Behaviour

Household Car Ownership

Ben Clark

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Department for Transport

University of Essex

Overview

1. Using households as the unit of analysis
2. How many households change car ownership level year to year?
3. Are households more likely to change car ownership level at the time of different life events?
4. What factors (including life events) predict different types of household car ownership level changes (0 to 1 car, 1 to 2 cars, 2 to 1 car, 1 to 0 car)?
5. Illustrative case study
6. Headlines

Households

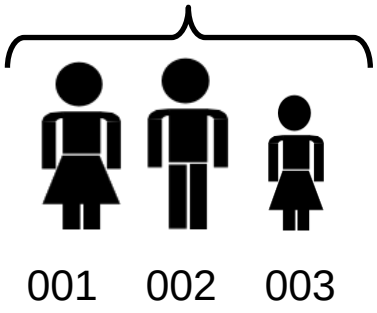
Two challenges:

1. Deriving household level variables
    - Life event experienced by any household member
    - Highest educational qualification in the household
    - Highest category of employment in the household
    - Age of eldest household member
2. Dealing with changes in household composition between waves

Changing households:

Wave 1

Household ID a1



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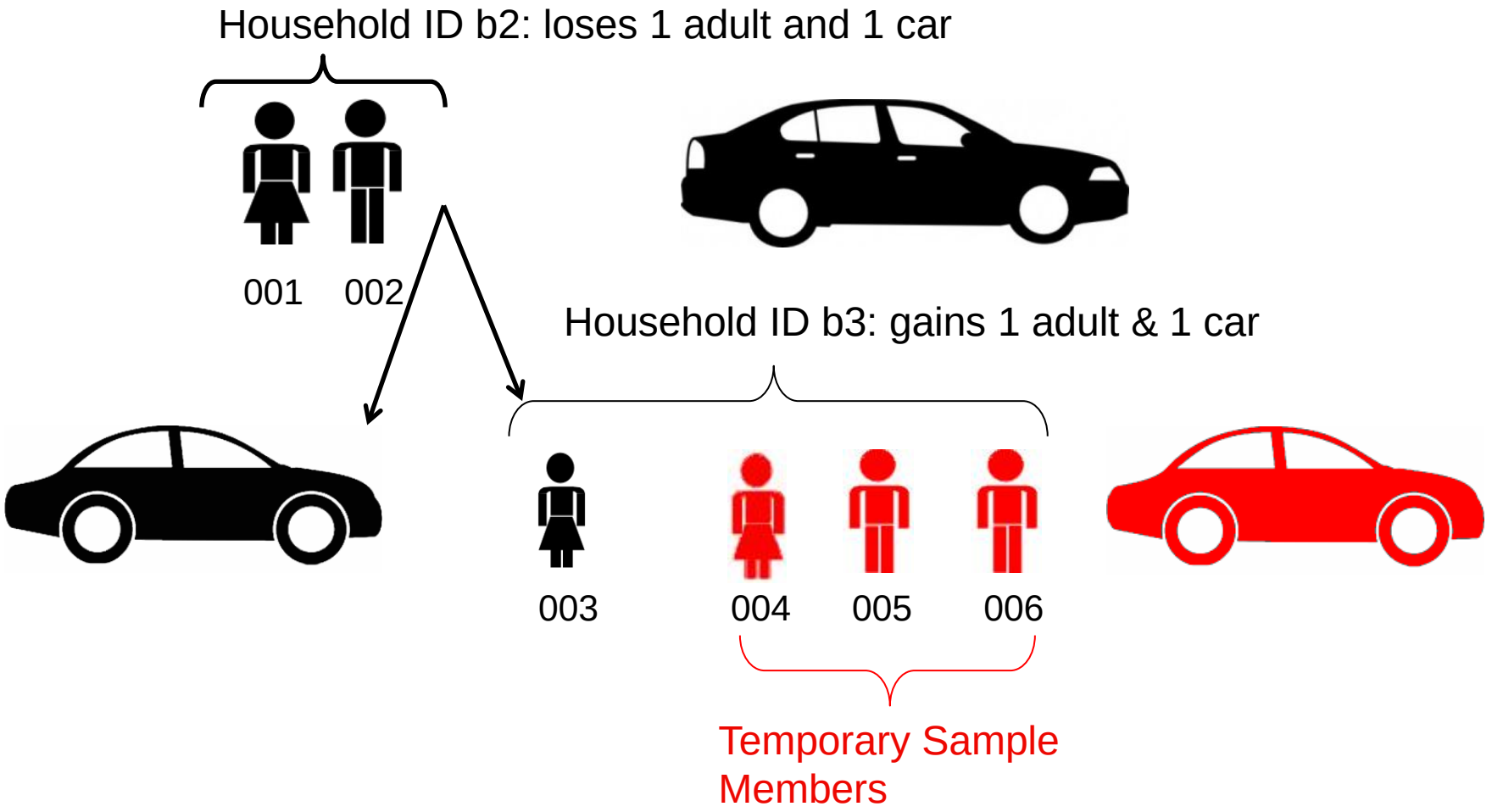
Wave 2

Daughter moves with car to share house with others



Year to year car ownership changes

	Cars year t+1				
Cars year t	0	1	2	3+	Total
0	*20.8*	2.2	0.2	0.0	23.2
1	2.4	*37.5*	3.5	0.3	43.7
2	0.3	3.7	*20.3*	2.0	26.3
3+	0.1	0.5	1.6	*4.7*	6.9
Total	23.6	43.8	25.6	7.0	100

Year to year car ownership changes

	Cars year t+1				
Cars year t	0	1	2	3+	Total
0	*20.8*				23.2
1		*37.5*			43.7
2			*20.3*		26.3
3+				*4.7*	6.9
Total	23.6	43.8	25.6	7.0	100

9%

9%

N=19,545 households

To what extent do car ownership changes coincide with life events?

		% Increase cars		% Decrease cars	
Life event	**n**	**with life event**	**without life event**	**with life event**	**without life event**
Lost a partner	372	7.0	9.0	**42.7**	8.4
Gained a partner	447	**38.7**	8.2	14.8	8.9
Gained a driving licence	794	**34.0**	7.9	5.7	9.2
Residential relocation	1426	**14.4**	8.5	**23.4**	7.9
Entered employment from non-employment	1525	**15.0**	8.4	9.8	9.0
Lost employment (excl retirement)	1023	9.4	8.9	**14.8**	8.7
Changed employer	1647	**15.6**	8.3	**11.4**	8.8
Had child	622	**11.4**	8.9	**11.9**	9.0
Retired	355	6.8	9.0	**12.7**	9.0

N=19,344 households

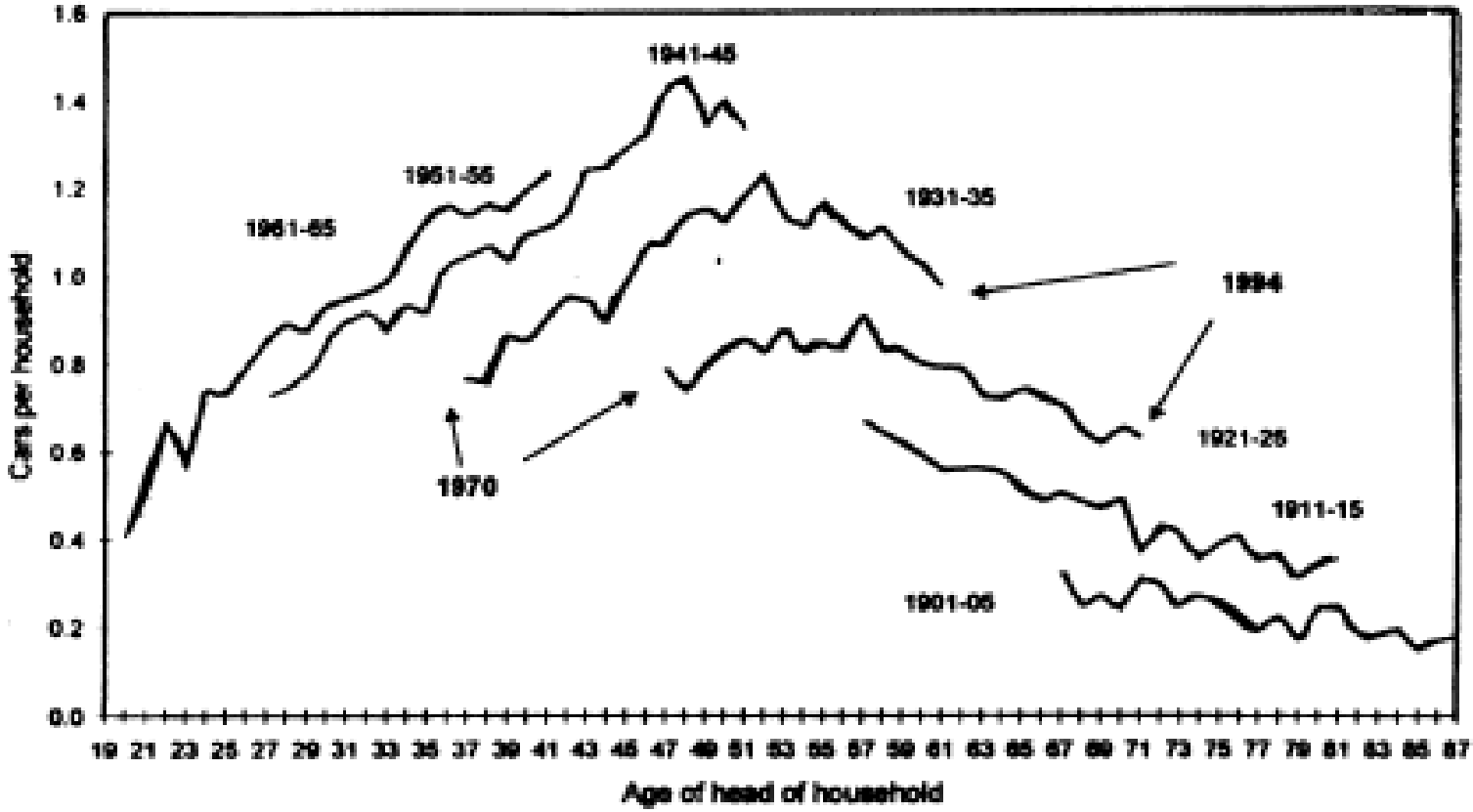
What factors (including life events) predict car ownership changes?

Analytical framework

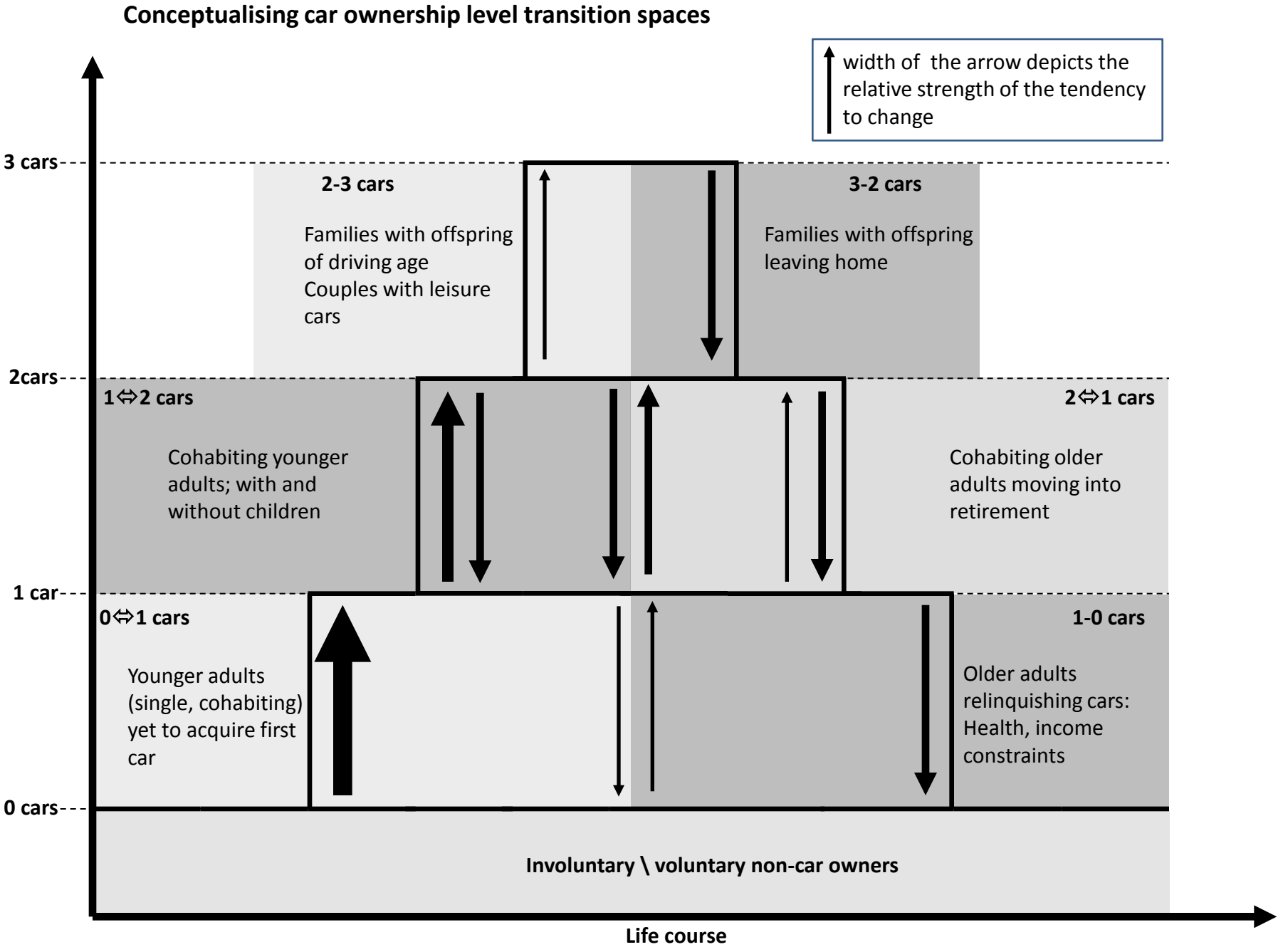
- Cross-sectional car ownership state (0 car, 1 car, 2 car) modelled as function of:
  - Baseline conditions (wave 1)
    - Household composition and life stage
    - Socio-economics
    - Residential context (built and social environment)

- Car ownership *level changes* (0 up, 1 up, 2 down, 1 down) modelled as function of:
  - Life events (occurring between wave 1 and wave 2)
  - Baseline conditions (wave 1)

Life cycle hypothesis



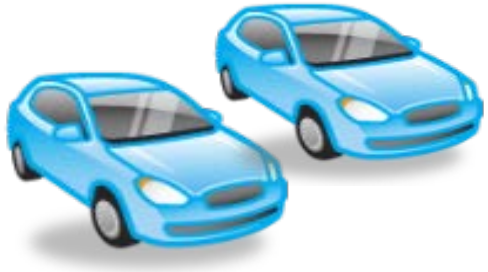
Dargay and Vythoulkas (1999)


Conceptualising car ownership level transition spaces
width of the arrow depicts the relative strength of the tendency to change
3 cars
2cars
1 car
0 cars
2-3 cars
Families with offspring of driving age
Couples with leisure cars
3-2 cars
Families with offspring leaving home
1⇔2 cars
Cohabiting younger adults; with and without children
2⇔1 cars
Cohabiting older adults moving into retirement
0⇔1 cars
Younger adults (single, cohabiting) yet to acquire first car
1-0 cars
Older adults relinquishing cars: Health, income constraints
Involuntary \ voluntary non-car owners
Life course

Model results part 1

Predictors of car ownership states…

2 cars



1 car

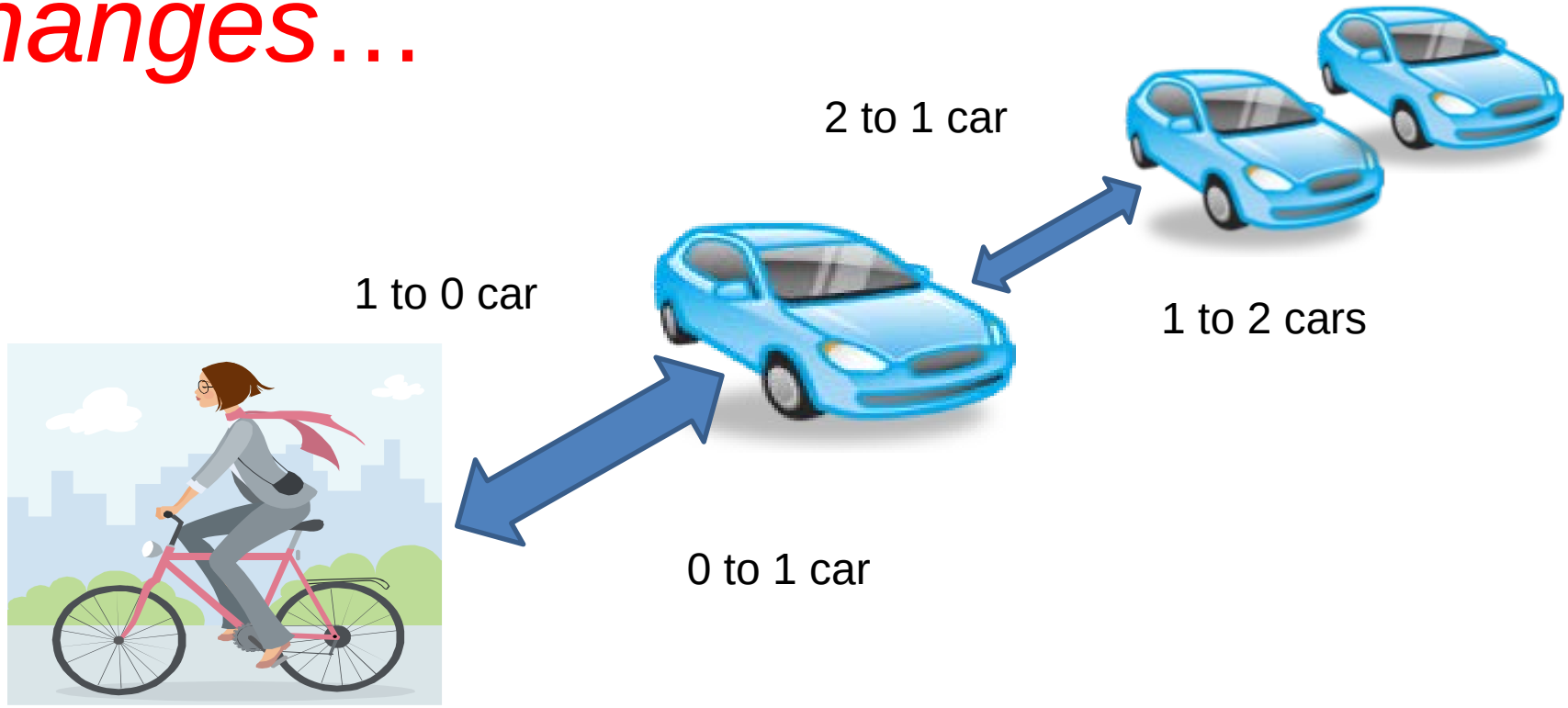
0 car

Predictors of car ownership states

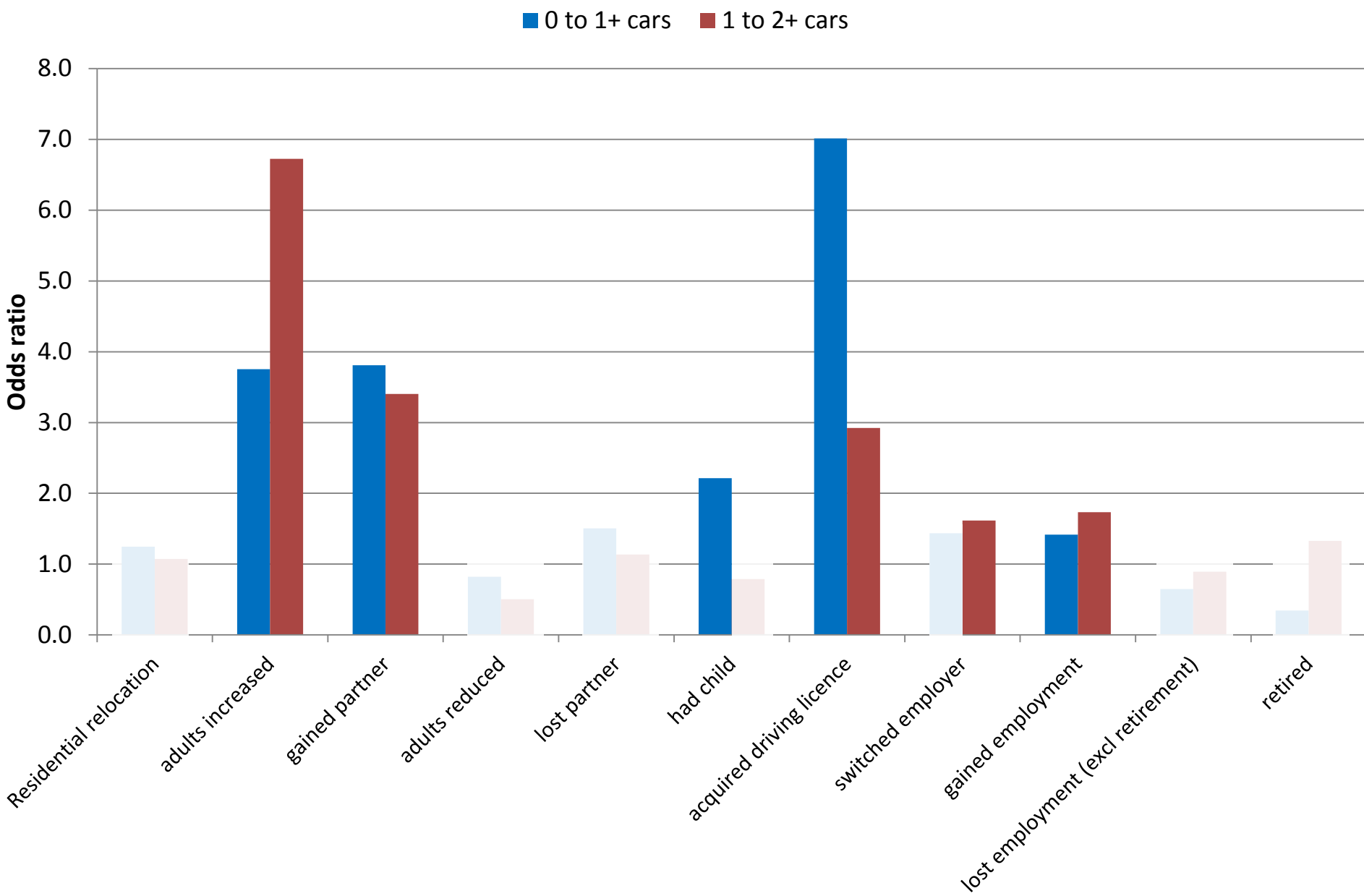
		0 car	1 car	2 cars
Household composition and life stage	Household size	-	-	+
	Cohabiting	-	+	+
	Children present		+	
	Eldest householder <44	+	-	-
	Eldest householder 75+	+	+	-
Socio-economics	Income	-	-	+
	Educational qualifications	-	+	+
	In employment	-	+	+
Neighbourhood attributes	Settlement size	+		-
	PT, accessibility and pop density	+		-
	Deprivation	+		-

Model results part 2

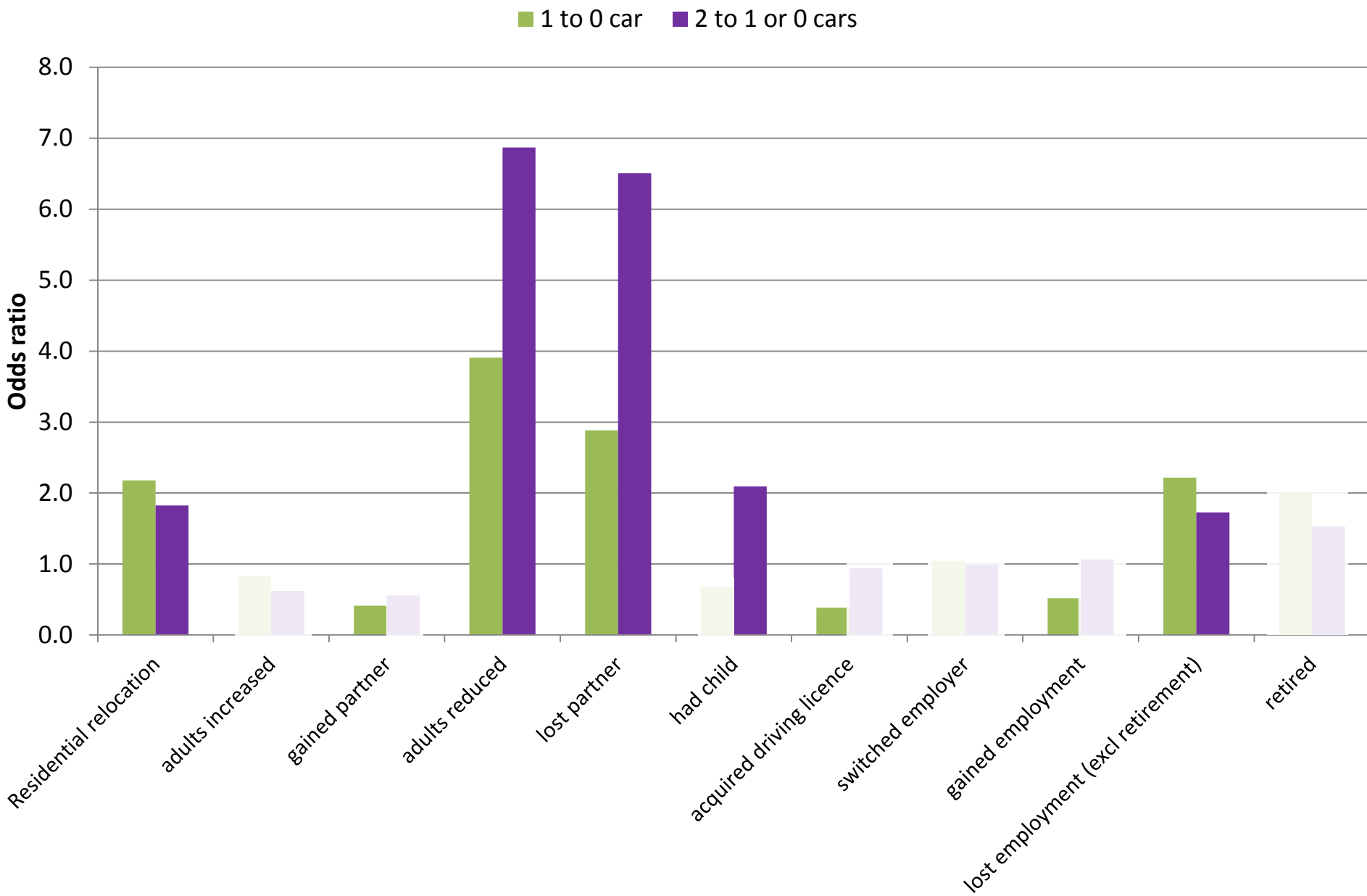
Predictors of car ownership *changes*…



Gaining a car and life events



Losing a car and life events



Life-event relationships 1

- **Partnership formation and dissolution** produces households with higher and lower numbers of cars respectively
- Cars are brought and taken with people when these events occur and not shared by partners

Life-event relationships 2

- **Child birth** increases likelihood of moving from zero to one car but also predicts increased likelihood of moving from two to one car
- Households seek a one car solution when having children

Life-event relationships 3

- **Gaining a driving licence** increases likelihood of a household gaining a car, regardless of number of cars owned (0-1, 1-2 cars)
- Those gaining a driving licence want access to a car of their own

Life-event relationships 4

- **Moves into and out of employment** increase the likelihood of acquiring and relinquishing a car respectively
- **Changing employer** increases the likelihood of acquiring a car
- Employment necessitates a car and provides financial resources to afford one
- **Income changes** have an independent effect

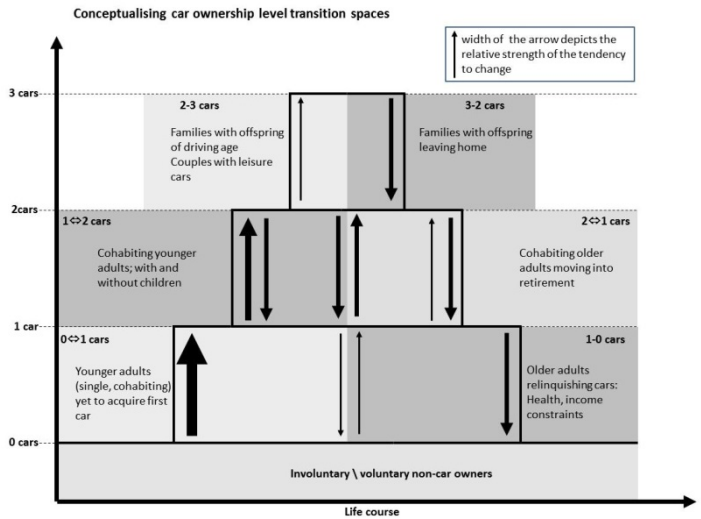
  Car ownership reductions more sensitive to income in 2009/10

Life-event relationships 5

- **Residential relocations** are predictors of reductions in car ownership level (2 to 1 and 1 to 0 car), but not increases in car ownership level
- Residential moves generate deliberation over car ownership needs.

Life-stage

- Households with younger aged household heads (<30) are **more likely** to reduce car ownership level (2-1, 1-0 car)
- Confirms greater volatility in early adulthood



Contextual factors

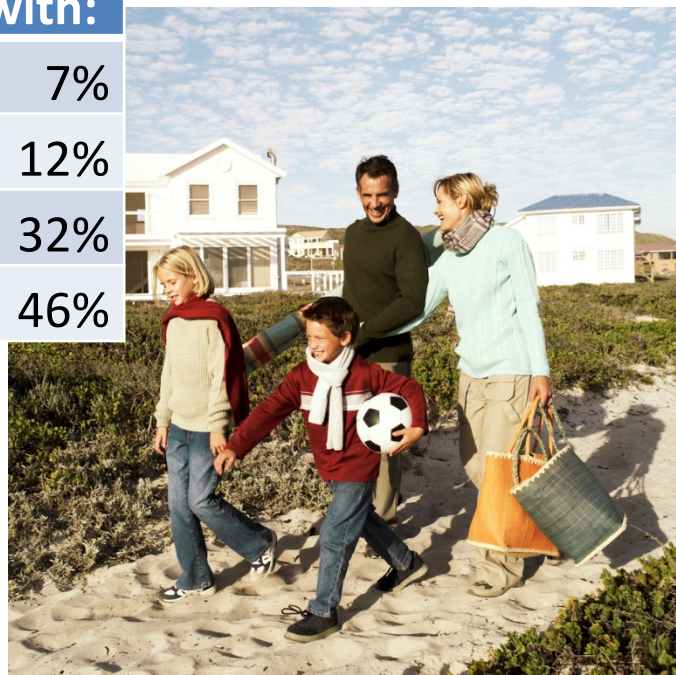
- **Poor access to employment opportunities by public transport** increases likelihood of non-car owning households acquiring a car
- **Better access** increases likelihood of one-car owning household relinquishing a car.
- Good public transport provision to jobs can restrain demand for car ownership.

Illustrating the effect of life events

Example two car household:

- A couple aged 45-59, educated to degree level, working in management, with 2 children aged 5-11

Probability of relinquishing the second car with:	
No life event	7%
Move home	12%
Lose partner	32%
Move home & lose partner	46%



Returning to the Research Objectives

1. To identify the extent to which **life transitions** are associated with **major turning points in travel behaviour** related to car ownership
2. To understand in what **circumstances** life transitions are likely to lead to turning points in car ownership

Headlines

- **Familial life-cycle events -** marking changes in household composition - are the **strongest** drivers of changes in household car ownership
  - People bring/take cars with them at the time of partnership formation/dissolution
  - **Child birth** is linked to moves to one car ownership
- **Moving in and out of employment** is linked to car ownership gains and losses
  - **Changing employer** increases likelihood of acquiring a second car
- **Moving home** moderately increased likelihood of car ownership reductions in 2010/11
- **Public transport access to employment** affects car ownership decisions

Any Questions

Life Transitions and Travel Behaviour

Commuting Mode

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(University of the West of England)

E·S·R·C ECONOMIC & SOCIAL RESEARCH COUNCIL

Department for Transport

University of Essex

Overview

1. How were people commuting to work in 2009/10?
2. How many people *changed* commute mode between 2009/10 and 2010/11?
3. Longer term stability and volatility in car / active commuting
4. Are people more likely to change commuting mode at the time of life events?
5. What factors are associated with **car commuting** and changes to/from this?
6. What factors are associated with **active commuting** and changes to/from this?
7. Headlines

Commuting patterns 2009/10

Commute mode	Percentage of English workforce (weighted)
Car (as driver or passenger)	64.2%
Walk	10.0%
Working from home	7.8%
Bus/coach	5.4%
Train	4.5%
Cycle	3.6%
Underground/light rail	2.7%
Other	1.7%
Total	100.0%

Year to year commute mode switching

	%age of people switching to commute mode by year t+1							
Commute mode in year t	Car	Walk	WFH	Bus/coach	Train	Cycle	Metro	Other
Car	**91.4%**	2.5%	2.1%	1.1%	1.0%	**0.6%**	0.3%	1.0%
Walk	13.3%	76.1%	1.5%	4.6%	1.3%	1.6%	0.5%	1.0%
WFH	26.5%	3.5%	62.4%	0.8%	3.0%	0.6%	1.0%	2.3%
Bus/coach	16.6%	8.4%	1.1%	**65.8%**	2.7%	1.7%	2.5%	1.4%
Train	9.3%	2.9%	2.7%	5.7%	70.7%	1.0%	6.6%	1.0%
Cycle	**16.3%**	9.0%	0.8%	1.7%	1.9%	**67.4%**	1.0%	1.9%
Metro	6.8%	2.0%	2.4%	8.3%	13.1%	1.5%	64.3%	1.5%
Other	29.4%	10.6%	4.1%	2.4%	4.5%	3.3%	2.9%	42.9%

Stability in car commuting

- BHPS recorded individual commuting behaviour over an 18 year period
- Car commuting sustained for twice as long as non-car commuting

Commute mode	Mean length of commuting spell (no. of consecutive years)
Car / motorcycle	6.3
Walk or cycle	3.2
Public transport	3.0

- People do not sustain non-car commuting over the longer term
- Once people start commuting by car they remain commuting by car for a significant period

Understanding commuting behaviours

Car to non-car

Active to non-active

Method

To what extent are life events associated with commute mode switching?

Step 1: Cross-tabulation of life events with commute mode switches

What factors (including life events) predict commute mode changes?

Step 2: Regression modelling

Life events and changes to and from car commuting

	% car to non-car		% non-car to car	
Life event	with life event	with no life event	with life event	with no life event
Gained a driving licence	**18.48**	8.49	**34.68**	16.10
Switched employer	**18.21**	7.38	**29.39**	15.08
Gained a partner	**16.32**	8.40	23.86	16.65
Residential relocation	**15.01**	8.04	**23.24**	16.15
Had child	8.54	8.58	**22.85**	16.56
Lost a partner	**16.45**	8.48	15.78	16.81

Life events and changes to and from active commuting

	Active to non-active		Non-active to active	
Life event	with life event	with no life event	with life event	with no life event
Switched employer	**63.62**	18.99	**9.04**	3.41
Gained a driving licence	**53.67**	22.38	**7.65**	4.00
Residential relocation	**38.22**	21.78	**8.23**	3.70
Gained a partner	31.73	23.42	5.39	4.00
Had child	29.56	23.35	2.74	4.11
Lost a partner	23.62	20.92	6.95	4.02

Method

To what extent are life events associated with commute mode switching?

Step 1: Cross-tabulation of life events with commute mode switching

What factors (including life events) predict commute mode changes?

Step 2: Regression modelling

Regression approach

- Wave 1 cross-sectional commuting state (car / active commuting) modelled as function of
  - Car use opportunity
  - Distance to work
  - Residential context
  - Economic status
  - Gender and life-stage
  - Attitude

- Commute mode switches (car to non-car / active to non-active) modelled as function of:
  - Life events (occurring between wave 1 and wave 2)
  - Baseline conditions (wave 1)

Predictors of car commuting

Factors	Likelihood of car commuting
Car use opportunity	
Have driving licence	++++
Number of cars in household	++
Number of people in the household	-
Distance to work	++++
Residential context	
Live in London	--
Population density	-
Local rail station available	-
Higher deprivation	+
Poor living environment	-
Economic status	
Higher educational qualifications	--
Income	-
Full time employment	+
Self-employed / small employer	-
Lower supervisory / technical role	+
Gender and life-stage	
Children present in household	+
Female	+
Aged 25-44, 60+	+
Environmental personal norm	**-**

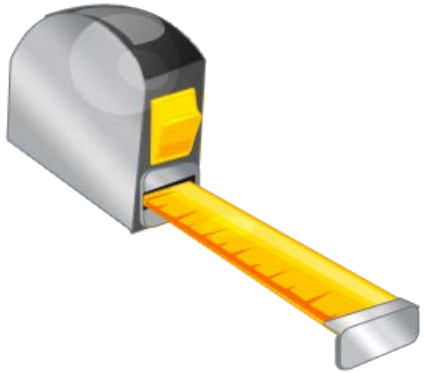
Predictors of active commuting

Factors	Likelihood of active commuting
Car use opportunity	
Have driving licence	--
Number of cars in household	-
Number of people in the household	+
Distance to work	----
Residential context	
Urban, non-London/Metro	+
Outer London	-
Population density	+
Close to food stores	+
Close to large employment sites	-
Number of bus stops	+
Journey time to employment by PT	-
Higher deprivation	-
Poor living environment	+
Employment type	
Higher professional status	-
Self-employed / small employer	--
Full time employment	-
Gender and life-stage	
Children present in household	-
Aged 60+	-
Environmental personal norm	+

General predictors of commute mode **switching**

The driving force…

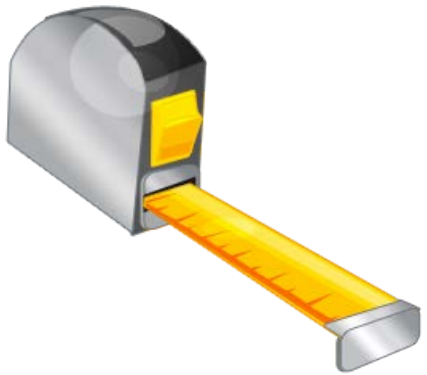
- **Change in distance to work** in association with **employment changes** and **moving home**
  - Changes to car commuting / non-active commuting are more likely if distance increases above **two miles**
  - Changes to non-car / active commuting are more likely if distance reduces below **three miles**



Distance asymmetry

Increases in work distance have a stronger effect than **reductions** in work distance

- Switching to car is 30 times more likely if distance increases beyond two miles
- Switching to active travel is 5 times more likely if distance reduces below three miles



Moving home

- Changes in residential context matter
- Moving home has independent effect beyond its impact on distance/residential context but it is weak

Car to non-car

Moves that reduce journey times to employment by public transport

Non-active to active

Moves to mixed land use areas

Active to non-active

Moves that increase journey times to employment by public transport

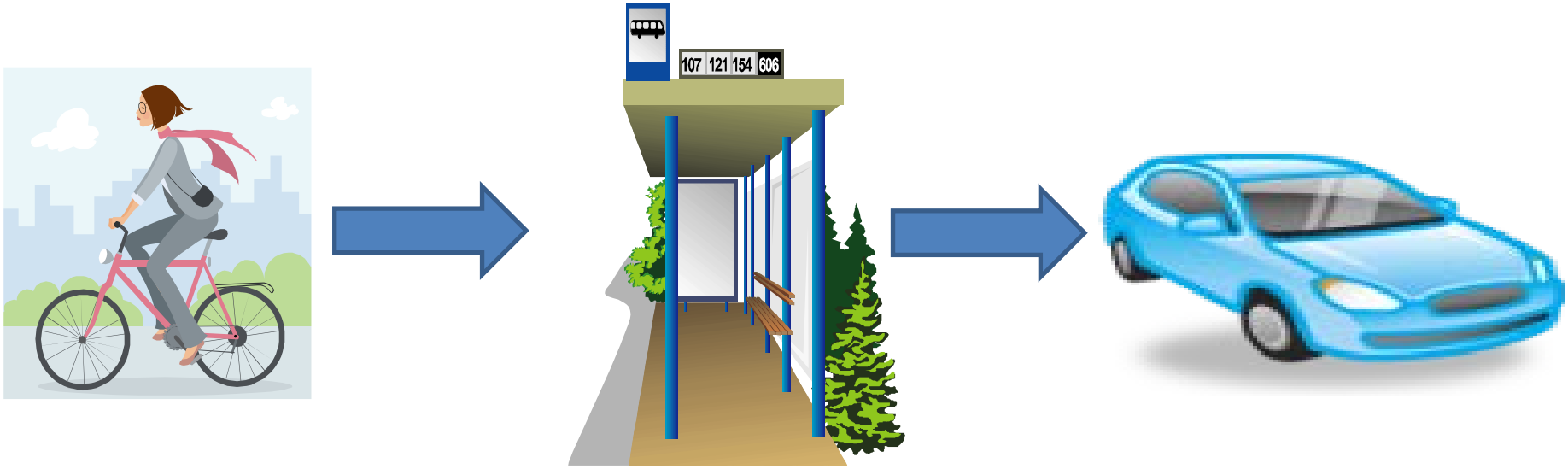
Employment changes

- Changing employer has an independent effect **beyond** changes in work distance
- This may relate to transport attributes of workplace and/or it could be that employment change prompts deliberation over commuting behaviour

Attitude

- Being willing to act to protect the environment predicts switching to active and non-car commuting
- Being unwilling to act does not predict switching to non-active / car commuting
- Attitude is relevant for whether employees make a change away from car commuting

Mode specific predictors of commute mode switching



To/from car commuting

To car

- Acquiring a driving licence
- Greater household car access
- Live outside London
- Live close to large employment centres
- Aged 16-29
- Male
- Do not have higher education qualification

To non-car

- Stopping cohabitation
- Less household car access
- Live in an area with a poorer living environment (main roads)
- Self-employed or working for a small employer (wfh)

To/from active commuting

To active

- Less household car access
- Live in mixed use, lower deprivation neighbourhood
- Part-time employed, not working in management

To non-active

- Acquiring a driving licence
- Greater household car access
- Live close to large employment centres
- Age 16-29
- Lower supervisory / self employed or small employer

Returning to the Research Objectives

1. To identify the extent to which **life transitions** are associated with **major turning points in travel behaviour** related to commuting mode
2. To understand in what **circumstances** life transitions are likely to lead to turning points in commuting mode

Headlines for commuting mode

- Car commuting is **far more stable** than non-car commuting
- **Young adults** experience more life changes and are attracted to car commuting
- Commute mode switches are driven by changes in **distance to work**
- Changes in spatial context matter
  - **High quality public transport** important for non-car commuting
  - **Mixed land use** important for active commuting
- Further to this, employment changes and moving home induce deliberation

Any Questions

Life Transitions and Travel Behaviour

Discussion

E·S·R·C ECONOMIC & SOCIAL RESEARCH COUNCIL

Department for Transport

University of Essex

Headlines for car ownership

- **Familial life-cycle events -** marking changes in household composition - are the **strongest** drivers of changes in household car ownership
  - People bring/take cars with them at the time of partnership formation/dissolution
  - **Child birth** is linked to moves to one car ownership
- **Moving in and out of employment** is linked to car ownership gains and losses
  - **Changing employer** increases likelihood of acquiring a second car
- **Moving home** moderately increased likelihood of car ownership reductions in 2010/11
- **Public transport access to employment** affects car ownership decisions

Headlines for commuting mode

- Car commuting is far more stable than non-car / active commuting
- Young adults experience more life changes and are attracted to car commuting
- Commute mode switches are driven by changes in distance to work
- Changes in spatial context matter
  - Mixed land uses important for active commuting
  - High quality public transport important for non-car commuting
- Beyond this employment changes and moving home induce deliberation

Overall messages

- Any behaviour change theory / policy / intervention that ignores life events is missing a key consideration
- Household car ownership state changes are driven by family composition and employment events
- Commute mode changes are driven by job changes and home moves
- Spatial context matters for both, e.g. public transport access

Discussion points

- Your views on the contribution of the research?
- How do the insights fit with existing knowledge?
- What implications are there for policy formulation?
- How can insights be used in practice? (new infrastructure/services, behavioural change initiatives, cross-sector working)
- What further research would be of value using Understanding Society, or studying life events/life course?

Our follow up idea

- A study aiming to identify and explain how travel behaviour evolves at different stages in the life course and how this affects wellbeing?
  - School days
  - Emerging adulthood
  - Working life
  - Later life
- Using longer duration data becoming available from Understanding Society and ELSA
- Make connection between travel and wellbeing (e.g. does sustained active commuting improve subjective wellbeing/physical health)?