

Session 2: Behavioural change – Creating a culture of sustainability

Some insights from the GREAT survey

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$$P(i|V) = \frac{\partial \ln G(e^V)}{\partial V_i} \int_a^b \epsilon \Theta^{\sqrt{17}} + \Omega \int \delta e^{i\pi} = \{2.7182818284\}$$

χ^2 Σ \gg \approx

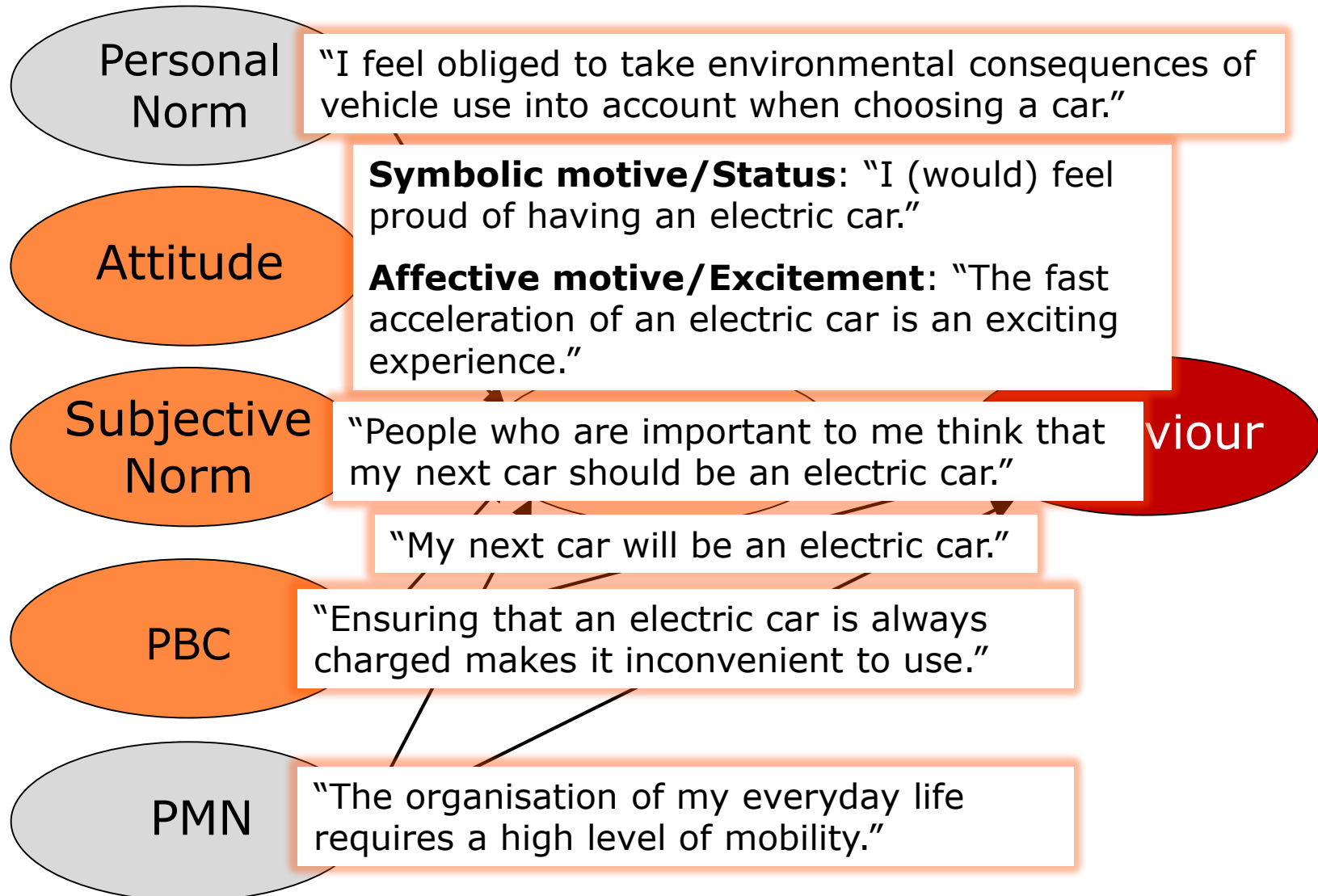
Background

Aiming for behavioural change requires an understanding of the factors that influence behaviour.

Theory of Planned Behaviour (Ajzen, 1991)

- among most frequently applied theories to explain transport choices
- 4 factors only = parsimonious model
- open for inclusion of additional factors

Theory of Planned Behaviour applied to EV adaption



Method

Design

- Longitudinal online-survey in Denmark and Sweden
3 observations; partly with same participants

Sample (1st wave, Nov 2016-Feb 2017)

- 731 EV users in DK and Sweden
- 1793 CV users in DK and Sweden

Content

- Travel behaviour
- Recharging behaviour
- EV and charging experience
- TPB factors
- Demographics

Which factors influence EV intention?

Method

- Linear regressions analysis for EV and CC users separately
- Controlling for other possibly relevant factors

EV intention (TPB only)

	CV users	EV users
Perceived barriers (PBC)	-.24***	-.34***
Attitude: symbolic	.31***	.21***
Attitude: affective	.24***	.22***
Personal norm (PN)	.11***	ns
Subjective norm (SN)	.18***	.09**
Satisfaction with price / public incentives	.07**	ns
Satisfaction with environmental performance	ns	.08**
R^2	.56	.41

ns = not significant; other not significant variable: PMN

* $p < .05$; ** $p < .01$; *** $p < .001$

EV intention

	CV users	EV users
Perceived barriers (PBC)	-.22***	-.33***
Attitude: symbolic	.32***	.18***
Attitude: affective	.20***	.22***
Personal norm (PN)	.12***	ns
Subjective norm (SN)	.18***	.08*
Satisfaction with price / public incentives	.08**	ns
Gender (female)	-.09***	ns
University education	.05*	ns
Country: Sweden (reference: Denmark)	.09***	.08**
Access to a private parking place	.05*	ns
Change: Plan longer car trips more carefully	not included	.07**
Change: I do not travel long distances by car anymore	not included	-.07*
R^2	.58	.44

Not significant: PMN, satisfaction with maintenance costs, age, self-employed, household size, income, children, nr. cars in hh, gasoline/diesel car, Tesla, ever travelled in EV, ever charged an EV

Conclusions: CV users

- **Symbolic motives** are strongest factors for CV users' purchase intention:
 - promote EV as a status symbol for advanced green technologies
- **Affective motives** also important (“driving an EV is fun”):
 - provide possibilities for experience driving performance in test rides, car rental
 - focus on driving pleasure/excitement in campaigns/ advertising

Conclusions: EV users

- **Functional barriers** most important:
 - (communicate) expansion of the charging infrastructure
- **Ability to cover long-distant trips crucial**
 - support behaviour adaption (“plan longer trips more carefully”)
 - actual improvements to cover long-distance trips (chargers along the motorways; compatible payment solutions across countries)