

Motivations, Travel Habits, Attitudes and Behaviour of European Pedestrians

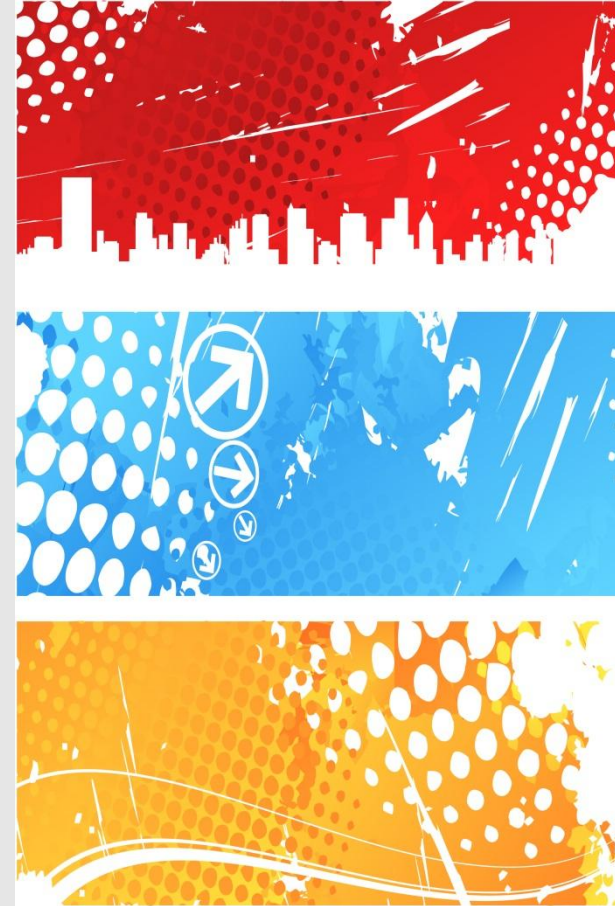


The 13th World Conference
on Transport Research
Julho 15- 18, 2013
Rio de Janeiro, Brasil

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Research Objectives

- Pedestrians in Europe are **the most vulnerable users** of transport networks (lack of mass, protection).
- The **literature review** shown that there are several studies analyzing road users' attitudes and/or behaviour, however not many of them focus on pedestrians' attitudes and behaviour, especially at international level.
- Pedestrian attitudes and perceptions toward road safety and risk need **further investigation** since they may reflect their actual behaviour.
- The objective of the study is the **analysis of pedestrian behaviour, travel habits and attitudes** towards road safety in Europe, by using a Pan-European survey.



SARTRE 4 Survey

- **SARTRE-4** Pan-European survey deals with road users' attitude and perceptions in Europe in relation to road traffic risk.
- Based upon a **common survey** with personal interview carried out in each participating country and upon a shared analysis of the database.
- 21,280 questionnaires from **18 European countries** and Israel (November 2010 – February 2011), 200 pedestrians of simple random sample.



Key Analyses

➤ Descriptive analysis

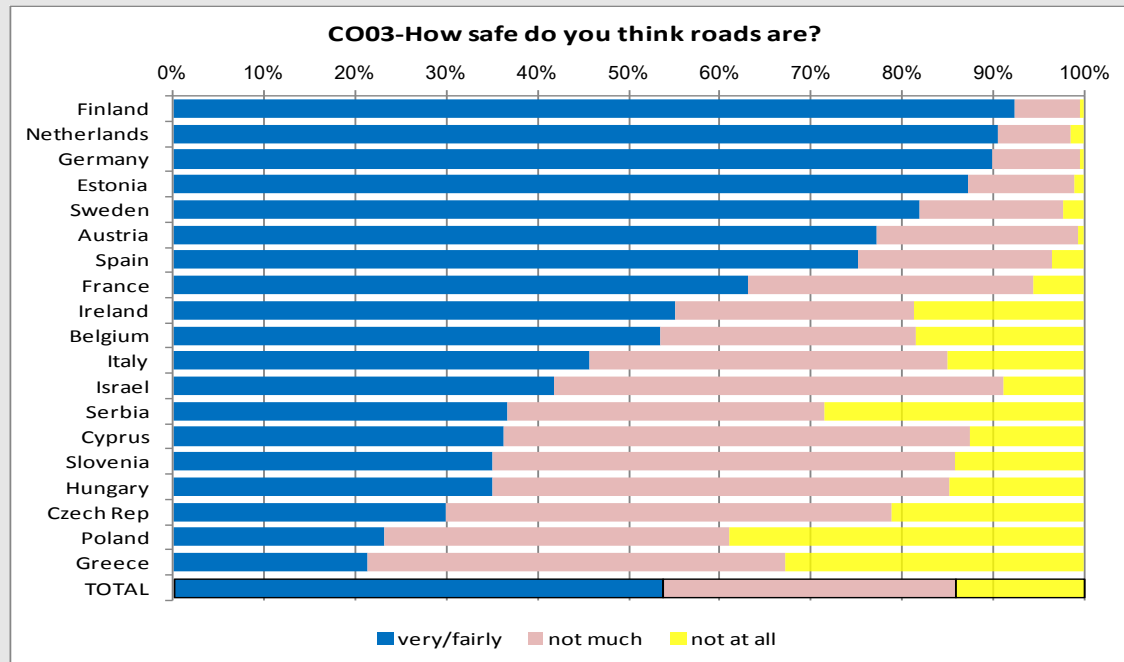
- Road safety attitudes and perceptions;
- Frequencies;
- Percentages and country comparisons for pedestrians' travel habits;
- Town size and area type;
- Effect of gender, age.

➤ In-depth analysis

- Statistical analysis and modelling of pedestrians' travel habits;
- Attitudes and behaviour by means of a cluster analysis.



Road Safety Perceptions



- The percentage of pedestrians in Europe who consider the roads to be very/fairly safe ranges from 24% (Greece) to 92% (Finland).
- Pedestrians in Northern and Western European countries are more satisfied with their roads compared to Central and Southern European countries.

Road Safety Attitudes

- The majority of respondents are “very” or “fairly” in favour of **using speed limit devices** in cars (greater than 70%), black boxes (approximately 80%), fatigue detection devices (around 85%), and alcolocks in cars (greater than 60%).
- Pedestrians in Europe seem to support more strongly all **in-vehicle devices** compared to car drivers and motorcyclists in almost all countries.
- The vast majority of pedestrians are “very” or “fairly” in favour of using **cameras** for red light surveillance (more than 80%), surveillance of speeding (approximately 75%).
- Most pedestrians (approximately 70%) are “very” or “fairly” in favour of more car and motorcycle **free zones**.
- Most pedestrians in Europe (about 76%) “strongly agree” or “agree” with more severe penalties for using **handheld phones** while driving.



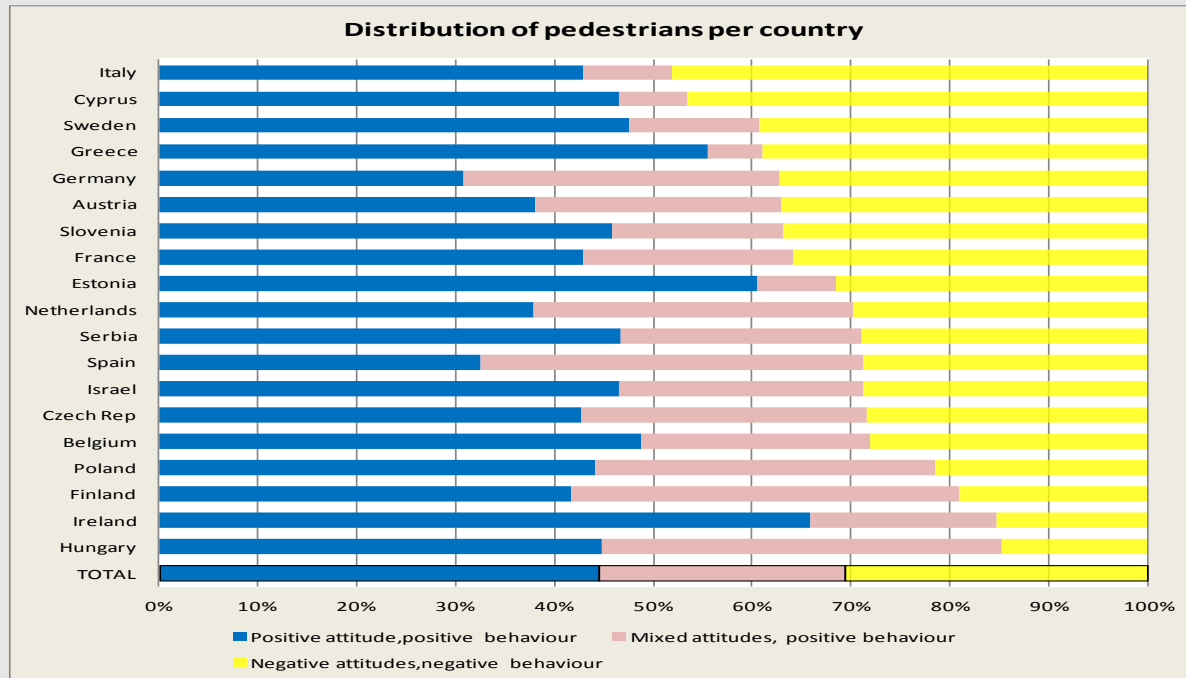
Identifying factors of attitudes & behaviour

- A factor analysis was performed on thirty three selected variables of the questionnaire to obtain **meaningful groups of variables** reflecting pedestrians' responses.
- Factor 1: Satisfaction with pedestrian environment;
 - Factor 2: Attitudes towards penalties;
 - Factor 3: Attitudes towards electronic in-vehicle devices;
 - Factor 4: Attitudes towards speed limitations and surveillance;
 - Factor 5: Pedestrian behaviour and distraction;
 - Factor 6: Attitudes towards pedestrian safety measures;
 - Factor 7: Annoyance with other road users;
 - Factor 8: Changing behaviour (adapt to dangerous situations).



Grouping Pedestrians according to Attitudes and Behaviour

- A cluster analysis was carried out, aiming to group pedestrians in Europe in meaningful groups in terms of attitudes and behaviours based on the eight factors.



- Group 1: “Positive attitudes, positive behaviour” (44.4% of pedestrians);
- Group 2: “Negative attitudes, negative behaviour” (30.7% of pedestrians);
- Group 3: “Mixed attitudes, positive behaviour” (24.9% of pedestrians).

Effects of Town size and Area type

- Results show that inhabitants of big and middle size towns in Europe cross the road more often when a **red light** is showing for pedestrians, they use music devices while walking more often, they use their mobile phones more often while walking and they more often cross streets at places other than the pedestrian crossing.
- In most cases, **satisfaction** with various road safety factors is higher in big cities and gradually decreases with the decrease in town size.
- **Differences** between urban, suburban and rural areas in Europe are mostly visible in crossing when a red light is shown, mobile phone use and listening to music while walking, which are much less common in rural areas and small towns.
- All answers in urban areas showed higher satisfaction with **pedestrian infrastructure** in these areas, less in suburban areas and small towns and the least in rural areas.



Effects of Gender

- Men cross streets on a **red light/inappropriate place** more often than women, and women avoid dangerous streets/intersections more often than men.
- Concerning **reflective clothing**, in Finland, Hungary and Sweden males wear reflective clothing more often than females.
- As far as **distraction** is concerned (phone calls and music devices), male pedestrians in Europe are more distracted than females. However, making/answering a **phone call** while walking was done equally often by female and male respondents.
- Male respondents were more satisfied with road safety issues than were females. The difference between male and female respondents in Europe was clearest in the **satisfaction** with pavements (20% of males “very” satisfied vs. 13% of females).



Effects of Age

- Older age groups in Europe are reporting less often **dangerous behaviour**, especially for questions about using a mobile phone/music device while walking. Older respondents avoided dangerous streets/intersections more often than other age groups.
- Overrepresentation of younger pedestrians observed also in most of the countries in “crossing the street on **red light**”, in “crossing street on wrong places” and in “using hand-held mobile phone”.
- In general, the youngest and the oldest age groups in Europe responded more often that they are “very” **satisfied** with the road safety issues mentioned in the question (especially for pavements, separation of pedestrians and cyclists and safety).



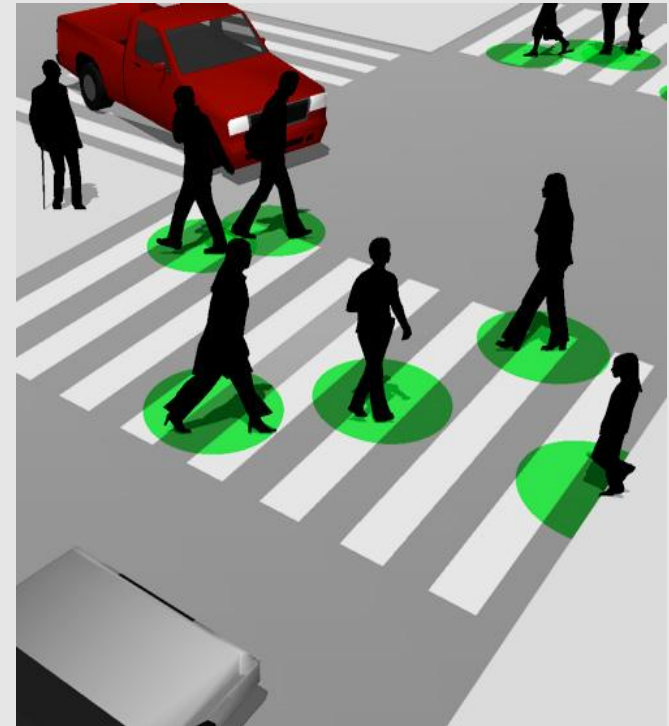
Travel Habits

- 71% of the pedestrians in Europe travelled less than once a month by car as a **driver** last year.
- The majority of pedestrians travel as a **car passenger** more frequently; either one to four times a week or one to three times a month.
- More than 80% of the pedestrians in Europe travelled less than once a month by **motorcycle** as a driver or passenger last year.
- Nearly 52% of pedestrians travelled less than once a month by **cycling** (except the Netherlands, 79%: everyday to one to four times a week).
- In most countries, the percentage of pedestrians that used **public transport** at least once a week is greater than 50%.

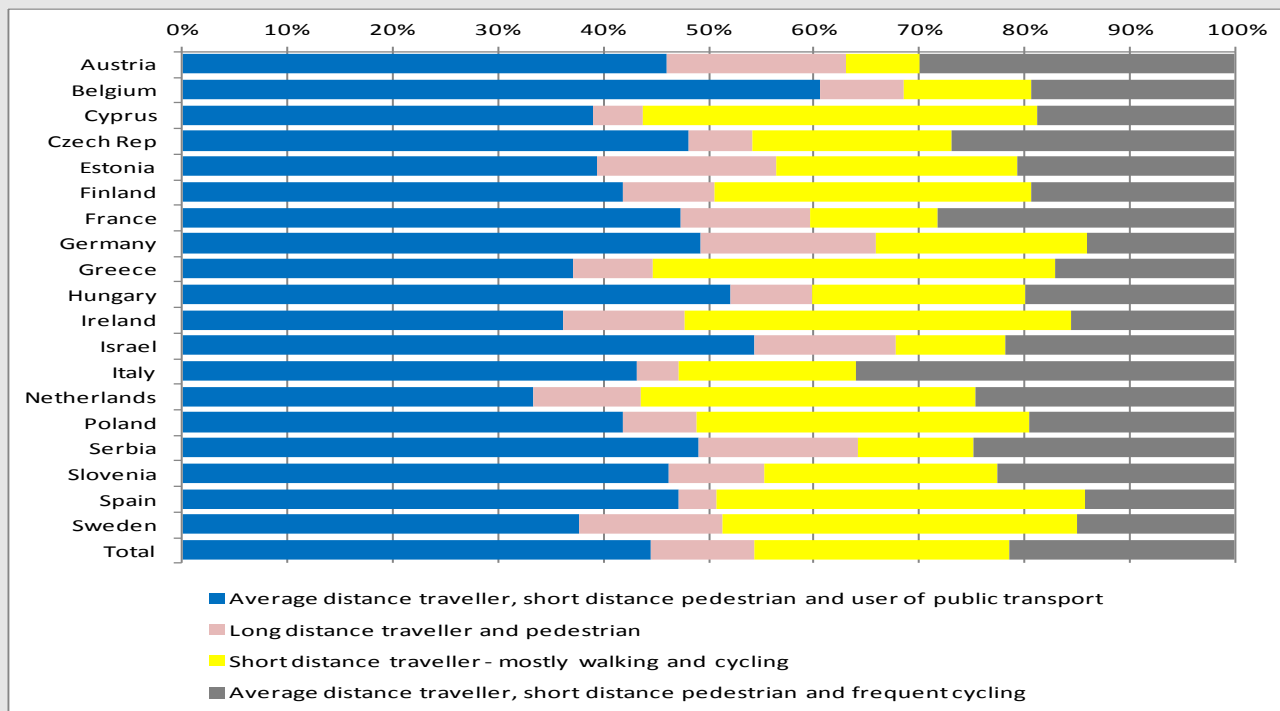


Grouping Pedestrians according to Travel Habits

- Cluster analysis to identify groups of pedestrians based on travel behaviour per country in Europe.
- Distance travelled per day in the four travel modes (walking, cycling, public transport, car passenger);
- Responses on how often the respondent walk in the past year.
- Production of dependent variables for cluster analysis:
 - Total daily travel distance;
 - Percentage of daily travel by four modes.



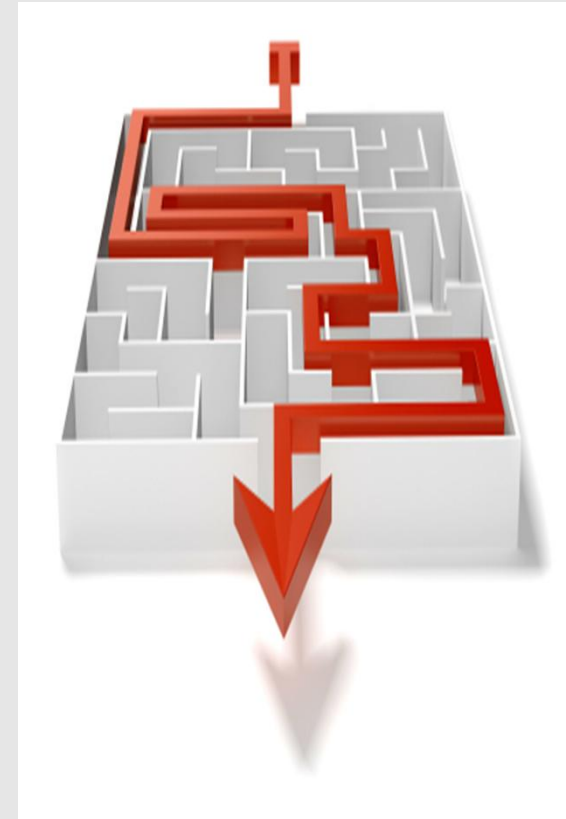
Grouping Pedestrians according to Travel Habits



- Type 1: “Average distance traveller, short distance pedestrian, user of public transport”;
- Type 2: “Long distance traveller and pedestrian”;
- Type 3: “Short distance traveller, mostly walking and cycling”;
- Type 4: “Average distance traveller, short distance pedestrian and frequent cycling”.

Conclusions (1/2)

- Evident **lack** of country comparisons and of large and detailed data at national and international level.
- Current study attempts to address those issues by **analysis** of travel habits, attitudes and behaviour of pedestrians in Europe.
- Planning and implementation of **measures** to improve pedestrian safety could be more effectively performed, concerning different groups of pedestrians and their particular needs.



Conclusions (2/2)

- Importance of pedestrian in Europe attitudes and perceptions, which affect their **behaviour/interaction with motorized traffic**. Policy makers could be assisted in further understanding the pedestrian behaviour issues and safety needs.
- Importance of **age, gender and area type/size** differences regarding attitudes and behaviour show that future analysis could be more focused on specific aspects of pedestrian safety.
- Pedestrians in **Northern and Western European countries** are more satisfied with their road infrastructure compared to Central and Southern European countries.



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Apoio



Patrocinadores

