Walking in Vienna: Quality Aspects from the user's perspective

Clemens Kaufmann, Karin Ausserer

FACTUM OHG
Danhausergasse 6/4, 1040 Vienna, Austria
clemens.kaufmann@factum.at, karin.ausserer@factum.at

Abstract

Walking is a basic need of the human being. Walking, however, is experienced differently by different people. The perceived quality of the walking infrastructure has a direct impact on the choice of traffic mode, if you rather decide for walking or other means of transport. In the Viennese study "Gehen in der Donaustadt" (walking in the 22nd district of Vienna called "Donaustadt") quality aspects of walking were evaluated in four parts of the Viennese outlying district Donaustadt from the user's perspective. The study was carried out by FACTUM Chaloupka & Risser OHG in 2007 on behalf of the Municipality of Vienna (department 18: urban planning and development). The central issue of the project was the question of what kind of aspects promote walking and of what kind of aspects prevent people from walking. The results have shown that people like to walk. Walking is associated with positive feelings. Donaustadt is the biggest district of Vienna. In comparison with the inner city pedestrians have more space to move around. In two of the four investigation areas streets are still places where people not only walk, cycle or drive, but where streets are whereabouts to communicate with each other. Problems connected with walking are of infrastructural character (e.g. missing pavements, bad ligthening at night time) or they are caused by bad traffic organisation (e.g. long waiting times at traffic lights, short green intervals for pedestrians at crossings). Some deficiencies result from a lack of social responsibility of each citizen (e.g. not respecting speed limits, parked cars or dog droppings on pavements). Suggestions for improvements refer to soft and hard policy measures (e.g. partly deconstruction of roads, awareness campaigns for walking).

1. Introduction

Walking is a crucial element of our everyday mobility. Every outdoor trip starts and ends with a walking trip. Walking is considered as natural mode, which can be done without any technical instruments. This might be one reason that the needs of pedestrians used to be of minor importance in traffic policy. This, however, has a direct impact on the share of people who choose walking as their transport mode. The share of pedestrians in Vienna for example dropped from 33% in 1995 to 27% in 2001 (Socialdata 2003). At the same time in Austria the risk of being involved in an accident as a pedestrian increased despite the reduction of pedestrian accidents (see e.g. Frey 2008). For pedestrians the same axiom can be presumed as for cyclists: All the more pedestrians are on the road the safer walking is. Walking should not only be promoted because of safety reasons, but because of life quality reasons, too. A city which is walking-friendly usually correlates with a high life quality (e.g. Zürich is on the first place in city-life quality rankings. It is a walking-friendly city at the same time.). Pedestrians should be considered as emancipated road user, with there special needs in safety, comfort, time efficiency and attractive surroundings. Technical solutions e.g. speed humps are one way to improve the traffic safety for pedestrians. In the study "Gehen in der Donaustadt" the user's perspective on walking issues were in the focus of the research work.

2. Aims

The project „Gehen in der Donaustadt“ can be seen as a national contribution to the European COST 358 Action “Pedestrian Quality Needs (see www.walkeurope.org). Within this COST-Action important factors shall be identified in a systematic and cross-national way which are necessary to make walking an attractive and safe mode.

The main aim of the study in Vienna was to assess walking conditions in four parts of “Donaustadt” from the user`s perspective in order to get hints and helpful suggestions how walking can be successfully promoted. The following questions were of crucial interest:

- What kind of conditions make walking to an attractive mode?
- What kind of conditions are considered as unpleasant while walking?
- How do existing preconditions for walking influence our quality of life?
- What kind of measures would citizens appreciate in order to promote walking?

3. Investigation areas - methods

The four areas for investigations were chosen according to certain criteria:

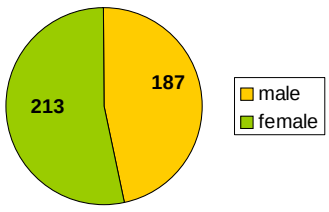
- ✓ good public transport connections
- ✓ the stop of the public transport should be not further away than 500 meters (= 5 to 7 minutes of walking)
- ✓ two central (Kagraner Platz, Rennbahnweg) and two de-central areas (Aspern, Eßling)

Two different approaches were used for this study. The first part consists of a qualitative approach, in which focus groups were carried out with citizens of the four investigation areas. The central issue of the interviews were the questions of what kind of aspects promote walking and of what kind of aspects prevent people from walking. Infrastructural aspects (e.g. traffic light regulations) and the way how traffic is organised (design of crossings) played an important role in this context. Within the second part a quantitative approach was selected. On the basis of the focus group a questionnaire was elaborated. For the quantitative analysis 400 telephone interviews were carried out (100 for each area). The sample was representative for the investigation areas and quoted in age and gender (see table 1 and figure 1).

Table 1: Age distribution of the sample

Age	Frequency	Percent
16-25	49	12,25%
26-40	132	33,00%
41-60	143	35,75%
61+	76	19,00%
Total	**400**	**100%**

Figure 1: Distribution of women and men



4. Results

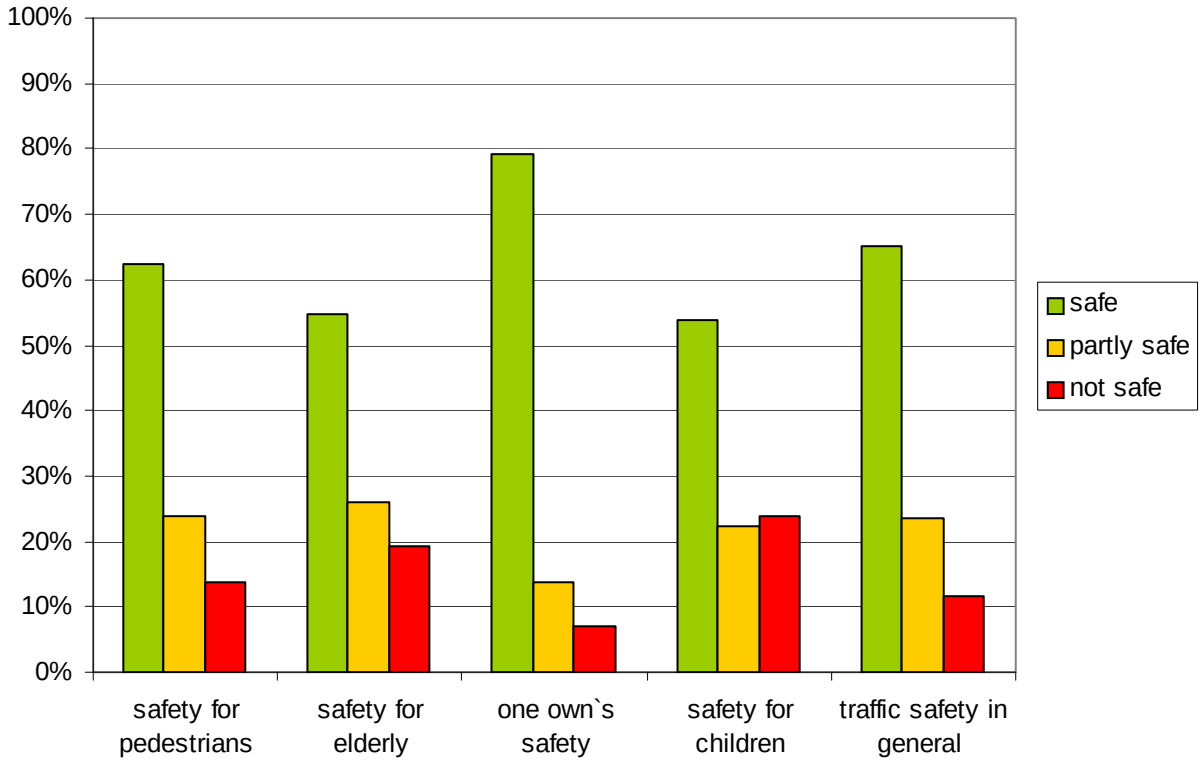
In the frame of the evaluation a factor analysis and a reliability analysis for testing the factors was carried out (Testindicator: Cronbachs Alpha). The following areas were identified:

- Traffic safety
- Comfort and traffic flow for pedestrians
- Life quality, traffic noise and air quality
- Social interaction with other road users

4.1 Traffic Safety

In general the respondents feel safe in traffic in their residential area (65%; see figure 2). Especially the own subjective safety is scored high (79%). The traffic safety for children and elderly is ranked lower (53 % and 54%). There is a significant coherence between the following issue: People who assess traffic safe for children and elderly feel general safe in traffic. One can draw the following conclusion from this result: If the weakest road users like children and elderly are taken as indicator for any traffic safety measure, then one ***can assume that the situations for all road users will be improved.***

Figure 2: Assessment of traffic safety



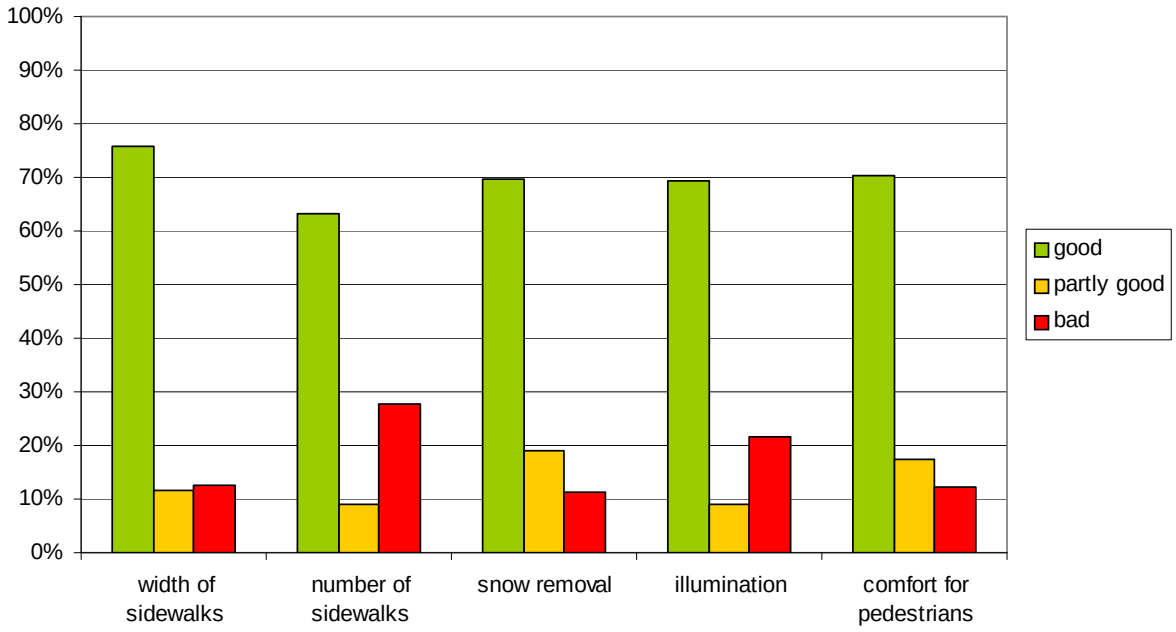
Besides there are significant differences between men and women. Women feel less safe in traffic than men.

4.2 Comfort and traffic flow for pedestrians

The majority of respondents think that walking in Vienna is comfortable (70%). There are lots of pavements (64%). The pavements are wide enough (76%) well illluminated (69%) and at winter time pavements are cleared from snow (70%). One, however, should not neglect those 22% who complain about badly illuminated sidewalks or those 28% who think that the number of sidewalks should be increased (see figure 3).

There are significant differences with respect to the different road users and different age groups. Respondents, who walk regularly, are more critical about comfort aspects in connection with walking than interviewees who consider themselves as car drivers. Elderly people complain more often about small and badly illuminated sidewalks than younger people. There are however no significant differences between men and women.

Figure 3: Assessement of comfort and traffic flow for pedestrians



A majority of the respondents is concerned about the combination of sidewalks from cycle paths. Only 5% of the interviewees have no problems with mixed sidewalks and cycle paths (see figure 4).

Figure 4: Importance of separation of sidewalks from cycle paths

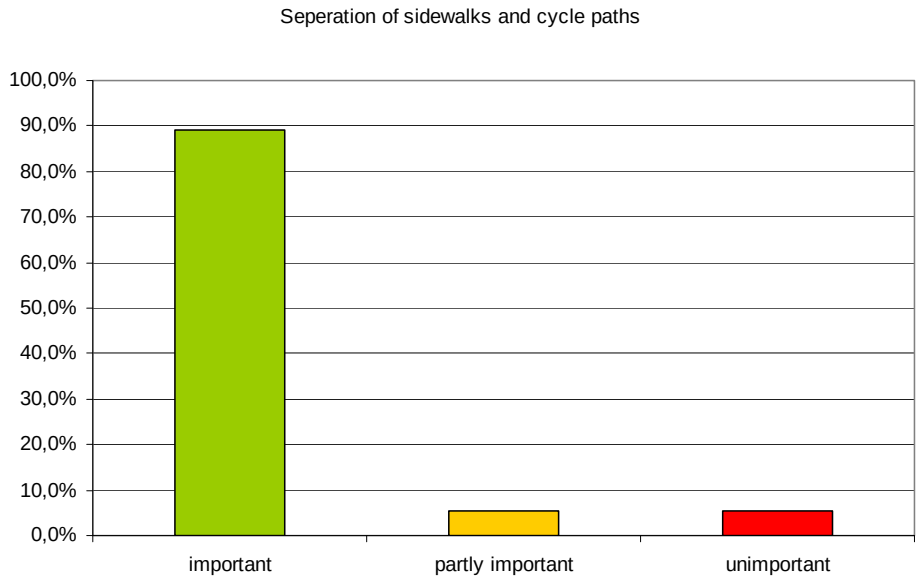
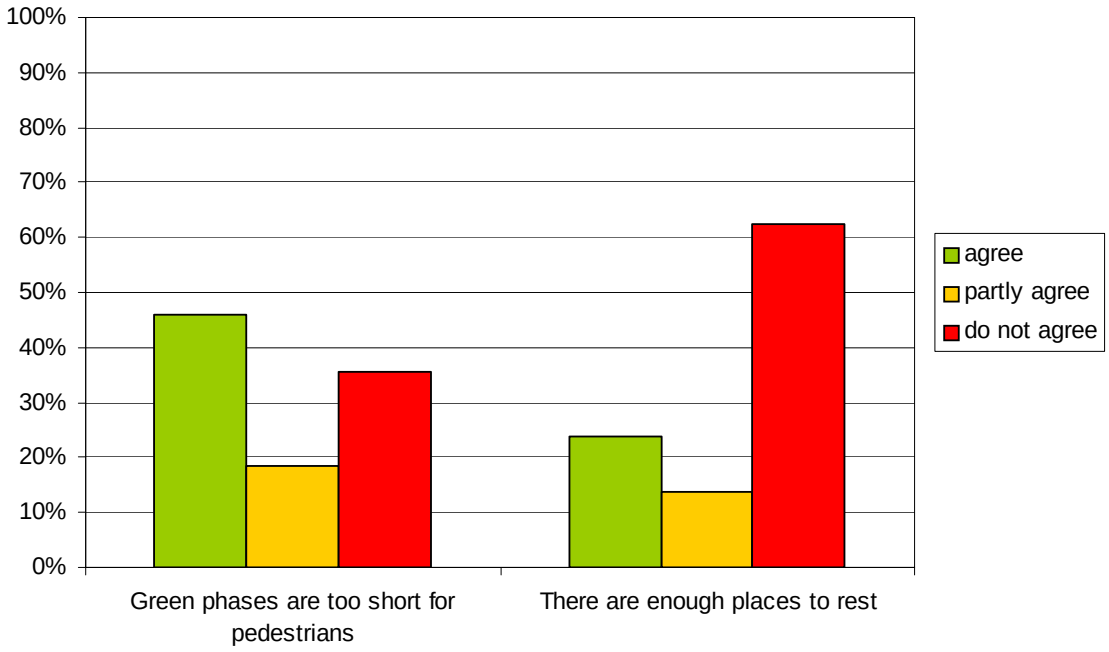


Figure 5 shows that 46% consider that crossing times at regulated crossings are too short for pedestrians. Our hypotheses that more elderly people examine crossing times at regulated crossings too short could not be verified. Independent of age respondents feel disturbed by too short crossing times. (see figure 5)

Figure 5: Assessment of crossing times at regulated crossings and places to rest



There are however significant differences between regular pedestrians and regular car-drivers (mean value 3,16 car drivers and 2,42 pedestrians). 58% of respondents who consider themselves as pedestrian complain about short crossing times, but only 36% consider crossing times for pedestrians as problem and 45% are completely satisfied with the existing traffic light regulations (see table 2).

Besides the availability of benches, places to rest is criticised by more than 60% of the respondents. Again there are no significant differences in the various age groups.

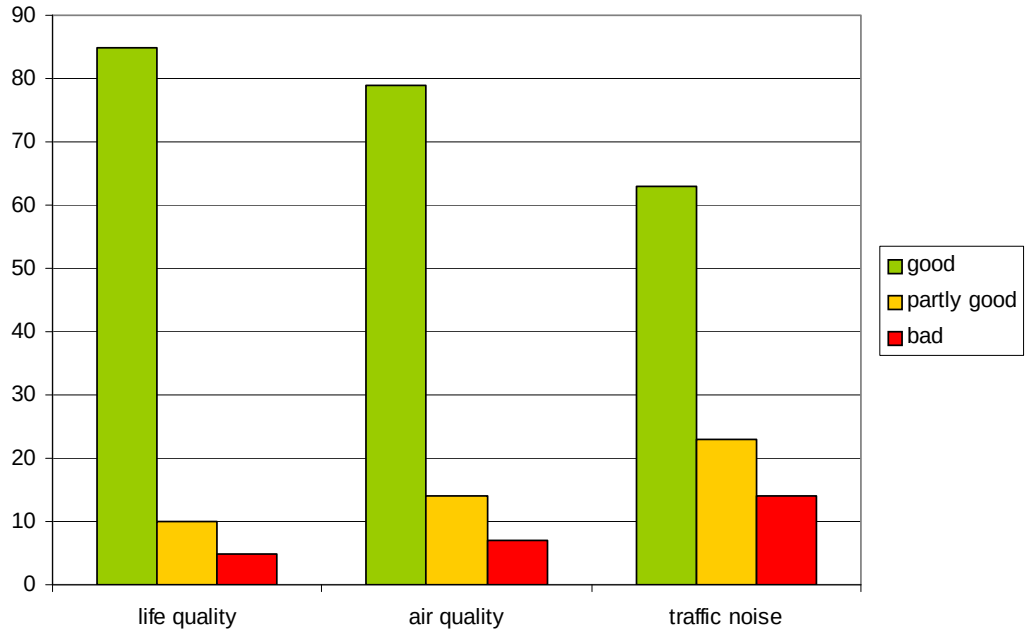
Table 2: Assessment of crossing times at regulated crossings by pedestrians and car drivers

Crossing times are too short	Pedestrians		Car-drivers		Total
	Frequency	Percent	Frequency	Percent	
Agree	51	58,0%	58	36,2%	109
Partly agree	17	19,3%	30	18,8%	47
Do not agree	20	22,7%	72	45,0%	92
Total	**88**	**100 %**	**160**	**100 %**	**248**

4.3 Life quality, traffic noise and air quality

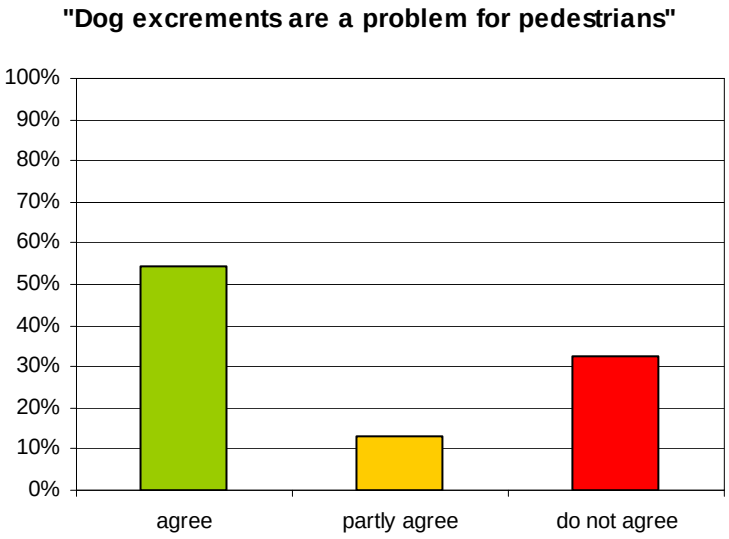
As figure 6 illustrates, people who live in the investigation areas, seem to have a high quality of life. The majority of the respondents are satisfied with the air quality. Only traffic noise seems to be a problem for more nearly 15% of the interviewees.

Figure 6: life quality, air quality and traffic noise



An interesting aspect with respect to life quality, is the problematic behaviour of dog owners, who do not clean the road of their dog's excrements. This is probably not only a Viennese specific problem. A majority of the respondents (54%) feel harassed by dog excrements on the pavement. There is a significant difference between pedestrians and car drivers. Pedestrians consider dog excrements on the pavement as bigger problem as car drivers.

Figure 7: question: “Dog excrements on the pavement are a problem for pedestrians”



4.4 Social Interaction with other road users

The mutual respect of the different road users is not optimal. The mean value of the item *“The mutual respect of the different road users is …”* accounts 2,67. This value is equivalent to the answer category *“partly agree”.* There is a significant difference between the various age groups. People over 61 and young people between 16-25 are not as critical about this item as the group of middle aged people.

Table 3: Mutual respect of different road groups, splitted in age groups
(Likert-Skala 1 = very good to 5 = very bad)

Age	16-25		26-40		41-60		61+		Total		Signifi-cance
	Mean Value	*N*	*Mean Value*	*N*	*Mean Value*	*N*	*Mean Value*	*N*	*Mean Value*	*N*	
Mutual respect of the different road users	**2,53**	49	2,70	130	2,84	141	**2,40**	73	**2,67**	393	0,006

Concerning 30km/h zone it is interesting to mention, that car drivers to not seem to stick to the speed limits in these zones. The majority of the respondents (59%) are hold that car drivers drive beyond the speed limit in 30km/h zones. There are no significant differences between car drivers and other road user groups. This means car drivers are aware of their “bad” behaviour.

5. Summary and conclusion

In the following table those aspects are summarised, which make walking attractive and which prevent people from walking.

Table 4: Attractors and Barriers

How can you promote walking?	How can you prevent people from walking?
Wide sidewalks	deficient maintainance (dog excrements, snow, etc.)
Seperation of sidewalks from cycle paths	Combined sidewalks and cycle paths
Good illumination	Missing of sidewalks
High feeling of safety (especially for children and elderly)	Missing of places to rest
Low speeds of cars	Inconsiderateness (e.g. not respecting speed limits)
A good public transport system	Short green phases

Wide Sidewalks

In contrast to car drivers, pedestrians are able to move under cramped conditions. Nevertheless pedestrians do need space to enjoy walking. In the Viennese „Masterplan Verkehr“ (Oblak 2003) it is stated that sidewalks have to have a minimum size of 2 metres. This probably meets the needs of pedestrians. It is however, important not only to set up good guidelines, but to stick to the guidelines consistently.

Maintenance and Cleaning of pedestrian areas

For the comfort of pedestrians, it is necessary to keep the sidewalks clean and in good condition. To find a solution for the “dog - excrement problem” is one important aspect in this context.

Separation of pedestrians and cycle paths

Combined sidewalks with cycle paths should be avoided. In several studies (eg. Fußverkehr Schweiz 2007; Risser, Ausserer, Ausserer, Koldas, Schmidt 1997) it is pointed out that the combination of sidewalks and cycle paths causes conflicts for both road user groups.

Providing places to rest in sufficient number

Places to rest increase sojourn quality on the road for pedestrians. More places to rest are not only demanded by respondents in this study, but also in other projects (e.g Viennese Project SALTO www.saltowien.at, EU-project SIZE www.size-project.at)

Low speeds of car drivers, 30km/h zones

The smaller the difference in speed between the various road user groups the merrier pedestrians will enjoy walking. For that reason it is highly recommended to extent the areas

of 30 km/h zones. At the same time infrastructural measures (e.g. humps) and more enforcement should guarantee that car drivers stick to the speed limits.

Promotion of the social climate and the mutual respect of each road user

In several studies inconsiderateness and ruthlessness in road traffic are mentioned as a problem from pedestrians and cyclists (see e.g Hydèn, Nilsson & Risser 1998; Risser 2002; Ausserer, Kaufmann & Risser 2000). Awareness campaigns on the one side might help to support the mutual respect of road users. On the other side it is important to avoid conflicts between road users by diligent road planning (e.g. no mixed sidewalks and cycle paths) The planning principle of "shared space" for example seems to have a positive effect on the social climate (see e.g. www.shared-space.org or www.nationaler-radverkehrsplan.de/ neuigkeiten /news.php?id=1517)

Pedestrian-friendly traffic lights

Short green phases induce the feeling of stress not only for elderly people. Pedestrians need time to cross a road. They do not want to run just to be able to cross within the given time. Besides pedestrians get impatient, if they have to wait too long at traffic lights to become green. This increases the risk of crossing the road, when the traffic light is still red.

High feeling of safety

If you want to increase the traffic safety for pedestrians it is highly recommended to take the safety of children and elderly as indicator for a safe design of infrastructural measures. (see e.g. Fischer, Risser & Ausserer 2004; Risser, Bein, Plichtova, Sardi & Ståhl 2004).

Refernces

Ausserer, K., Kaufmann, C. & Risser, R. (2000). Radverkehr 2000: Radverkehr in Wien; Eine Befragung im Rahmen der Ausstellung „Wien setzt (sich) auf`s Rad". Bericht zu den Tiefeninterviews mit BezirkspolitikerInnen; MA 18, Wien

Brög W. 2003: Sozialdata Wien 2003

Fischer, D., Risser, R., Ausserer, K., (2004). Thesenpapier zur Förderung des Fußgängerverkehrs. Psychologische und sozialwissenschaftliche Überlegungen zum Thema Gehen. Im Auftrag der MA18 Stadtentwicklung und Stadtplanung. FACTUM. Wien.

Frey H. (2008): Verkehrssicherheit für FußgängerInnen – Trends und Situation in Österreich Vortrag im Rahmen des "Österreichischen Fußgänger- Seminars" 25.-26. September 2008, Wien

Fussverkehr Schweiz, Pro Velo Schweiz (2007). Fuss- und Veloverkehr auf gemeinsamen Flächen, Empfehlungen für die Eignungsbeurteilung, Einführung Organisation und Gestaltung von gemeinsamen Flächen in innerörtlichen Situationen, Zürich & Bern

Hydèn, Ch., Nilsson, A. & Risser, R. (1998). WALCYNG - How to enhance walking and cycling instead of shorter car trips and to make these modes safer, University of Lund, Sweden & FACTUM, Vienna; Project funded by the European Commission under the transport RTD Programme of the 4th Framework Programme.

Oblak, S., (2003). Masterplan Verkehr. In Magistratsabteilung 18 Stadtentwicklung und Stadtplanung (Hrsg.), Masterplan Verkehr Wien, Wien.

Risser, R. & Ausserer, K. & Ausserer, I. & Koldas, A. & Schmidt, L. (1997). Radeln statt kurzer Autofahrten: Radverkehrsförderung und gezielte Fahrradpolitik durch Kommunikation und Marketing als Beitrag der Stadtplanung zum Umweltverbund; MA 18, Wien

Risser, R. (2002). Gut zu Fuß, Fußgänger als Verkehrsteilnehmer 2. Klasse, Mandelbaum Verlag, Wien

Risser, R., Bein, N., Plichtova, J., Sardi, G.M., Ståhl, A. (2004). Kristianstad, June – October 2004, Pilot Study Report, Deliverable 7 of the EU-Project HOTEL: How to analyse Life Quality, an accompanying measure within the EU fifth Framework Programme Keyaction „Improving the Socio Economic Knowledge Base"; HPSE-2002-60057, Bratislava, Cuneo, Lund & Vienna

www.cost.esf.org

www.saltowien.at

www.shared-space.org

www.size-project.at

www.walkeurope.org