

## Werk

**Titel:** Managing and marketing of urban development and urban life

**Untertitel:** proceedings of the IGU-Commission on "Urban Development and Urban Life", Berlin, August 15 to 20, 1994

**Jahr:** 1994

**Kollektion:** fid.geo

**Signatur:** XX

**Digitalisiert:** Niedersächsische Staats- und Universitätsbibliothek Göttingen

**Werk Id:** PPN1030505985

**PURL:** <http://resolver.sub.uni-goettingen.de/purl?PPN1030505985>

**OPAC:** <http://opac.sub.uni-goettingen.de/DB=1/PPN?PPN=1030505985>

**LOG Id:** LOG\_0102

**LOG Titel:** Problems of mobility and traffic in the Ruhr

**LOG Typ:** article

## Übergeordnetes Werk

**Werk Id:** PPN1030494754

**PURL:** <http://resolver.sub.uni-goettingen.de/purl?PPN1030494754>

**OPAC:** <http://opac.sub.uni-goettingen.de/DB=1/PPN?PPN=1030494754>

## Terms and Conditions

The Goettingen State and University Library provides access to digitized documents strictly for noncommercial educational, research and private purposes and makes no warranty with regard to their use for other purposes. Some of our collections are protected by copyright. Publication and/or broadcast in any form (including electronic) requires prior written permission from the Goettingen State- and University Library.

Each copy of any part of this document must contain these Terms and Conditions. With the usage of the library's online system to access or download a digitized document you accept the Terms and Conditions.

Reproductions of material on the web site may not be made for or donated to other repositories, nor may be further reproduced without written permission from the Goettingen State- and University Library.

For reproduction requests and permissions, please contact us. If citing materials, please give proper attribution of the source.

## Contact

Niedersächsische Staats- und Universitätsbibliothek Göttingen  
Georg-August-Universität Göttingen  
Platz der Göttinger Sieben 1  
37073 Göttingen  
Germany  
Email: [gdz@sub.uni-goettingen.de](mailto:gdz@sub.uni-goettingen.de)

## PROBLEMS OF MOBILITY AND TRAFFIC IN THE RUHR

**Lienhard Löttscher and Stephan Fleisgarten**  
Ruhr-University, Bochum, Germany

A comprehensive review of literature on transport and transport behaviour of residents of the Ruhrgebiet reveals that most studies tend to use indicators based on individual municipalities or counties. On this level of aggregation, an empirical investigation of modal split, purpose and duration of trips etc. presents few problems. Correlating these with the existing level of infrastructure and service provision, however, seems to be too complex a task.

Since the Ruhrgebiet is characterized by a polycentric spatial structure with notable disparities regarding population densities and infrastructure, future studies ought to adopt a micro-scale approach focussing on local areas. To be able to counteract the expected increase in the number of trips, obvious deficits in infrastructure and service provision would have to be dealt with, especially to fulfill the basic needs of residents within the above-mentioned local areas.

We are currently developing a research project which aims to analyze this relationship between the provision of services and infrastructure on the one hand and the transport behaviour of urban residents on the other. Furthermore, we are seeking to establish the factors explaining mobility and demand for transport as far as they are related to settlement structure as well as investigating the preconditions, acceptance and potential for changing consumer behaviour towards more environmentally friendly means of transport. We are aiming to develop a framework for action, serving as a basis for future decision-making processes in urban and spatial planning - not only in a national, but also in a global context.

### 1. Problems

The growth of car and truck traffic is a world-wide phenomenon particularly in large cities and conurbations. It is well known that improvement of infrastructure seldom helps to manage increased traffic: the expansion of freeways only increases the traffic jams (as the examples of the 401 in Toronto, or of a three storey freeway - one on top of the other - in Tokyo show). In Germany the opening of the free trade area in Europe is expected to drastically increase the volume of traffic on the present freeway system even more. Indeed, transportation engineers have warned that the whole system might collapse.

However, "the limits to growth" are not only a problem of infrastructure capacity but - even more important - an ecological problem, as the Club of Rome pointed out in its famous publication more than 20 years ago and as the "Earth Summit" of Rio reiterated two years ago.

### 2. Strategies

What can be done to manage the growth in car and truck traffic? Up to now three strategies have been applied:

1. ban car and truck traffic from certain areas
2. shift it to public transit (people) or railroads (goods)
3. reduce the mobility of people and goods.

## 2.1 First Strategy

German economists (i.e. Paul Klemmer) suggested charging private commuters for freeway access in order to reduce the number of private cars using the freeway so that more room is given to trucks. Policies such as this might have serious consequences for densely populated areas such as the Rhine-Ruhr conurbation. Traffic jams would be shifted to residential areas and pollution or accidents would increase dramatically.

Some cities such as Singapore, Hong Kong or Freiburg have started to restrict access to certain areas. Singapore developed a method of area licensing, Hong Kong introduced a road pricing system, and Freiburg banned cars from the downtown area. Such policies tend to displace cars to other areas. Most of those policies are supposed to support the second strategy: forcing people to use public transit.

## 2.2 Second Strategy

This strategy only works in cities with excellent public transit systems and in cities able and willing to reinforce these policies by political means.

Other policies are based on incentives such as reducing fares for public transit. The so-called „Umweltschutz Abonnement“ was invented in Basel in 1983. The reduced fare for a monthly transit pass was supposed to attract new customers, especially car drivers, in order to reduce pollution and assist environmental protection. Basel was so successful that its policy was copied widely in Swiss and German cities.

The increased use of public transportation was supposed to reduce car traffic by 25%.

This, however, did not happen. Why?

Many commuters did use public transportation as studies showed ( - even though not all of them liked it, as the faces in the tramway of this cartoon suggest). However, the so-called "green widows", housewives living relatively isolated lives in green but dull suburbs, finally got the chance to get away by using the family car. And they did (as shown on this cartoon: „Since my husband has been taking the tram I can get my organic vegetables fresh from the market everyday!“).

Figure 1 Basel invented the so-called "Umweltschutz Abonnement" in 1983. Car traffic, however, was not reduced as much as expected.



(Cartoon by Ernst Feuer-Mettler, in Nebelspalter and THEMA - Forschung und Wissenschaft an den Schweizer Hochschulen, Transport und Gesellschaft (1988), no. 5, p.33)

This criticism is not directed against women. It is directed against the way our cities are planned and built - traditionally by men without considering female needs. This point leads directly to the third strategy.

### 2.3 Third Strategy

There are not many policies enabling us to reduce the mobility of people and goods. Most of them are from the seventies. They were aimed at rebuilding and reconstructing our cities in a more human way, but none of those strategies were successful. We remember slogans and buzz words like:

- the compact city
- the city of short distances
- the liveable city.

### 3. Preliminary conclusions

During my work with a commission set up by the „KVR“ („Kommunalverband Ruhrgebiet“, a regional association of local authorities in the Ruhr), I had the idea that we ought to go back to basics. For this reason, the „KVR“ asked me to analyse

all studies dealing with mobility or transportation patterns over the last 10 years. Some results of this research are of interest here:

### 3.1 Modal Split

The modal split shows that the Ruhr conurbation has a smaller share of public transportation than other German cities (9.5% : 12%) while the use of private cars is more intensive (56.7 : 45). If we compare the modal split of the average city in the Ruhr conurbation with Basel the dominance of the automobile in the Ruhr is even more extreme.

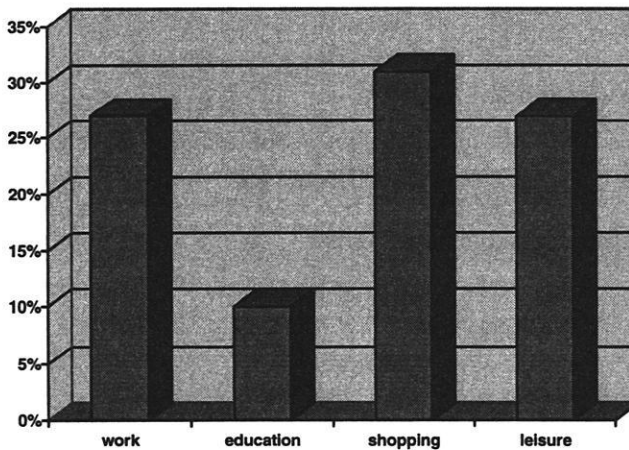
	Ruhr	Basel
Public transport	9.5%	43%
Private cars	56.7%	21%

### 3.2 Trip Purpose

The data disprove the thesis that most trips are related to work. More than half of all trips (57%) are related to shopping and leisure activities. Indeed, the share of traffic related to these activities is still increasing.

The problem of shifting this kind of travel to public transit is that these trips are not tied to specific places, and individuals are free to decide when and where to go.

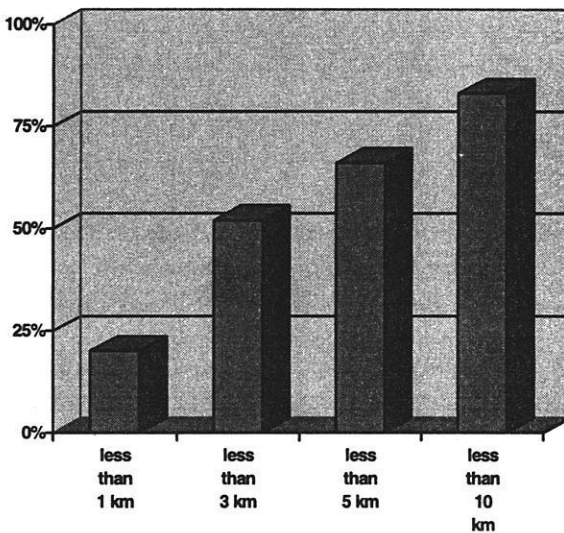
Figure 2 Trip Purpose (average) in the Ruhr



### 3.3 Distance

The data on trip distances also show that urban transportation planning started from premises that are obviously wrong. The planners assumed that on average people would travel long distances. In the Ruhr conurbation, however, one of four trips are of distances less than 1 km. One half of all trips end after 3 km and two out of three after 5 km. We may conclude that most of the trips involved are of walking or biking distance - at least in a European context!

Figure 3 Trip Distances (average) in the Ruhr



### 3.4 Time budget

The data concerning time budgets are also of considerable interest. Transport engineers calculate that in Germany the average person takes 3 trips per day. This is correct if data are related to the total population. If the data are related to mobile individuals, however, we end up with an average of 3.8 trips per person per day. However, on average a person is not on the road for as long as transport engineers suggest: on average 56.5 minutes a day for everybody and 70.8 minutes for mobile individuals. That is an average of 15 to 20 minutes per trip!

Figure 4 Time Budget in the Ruhr

trips / day (total population)	∅	2.9	trips
trips / day (mobile individuals)	∅	3.8	trips
on the road / day (total population)	∅	56.5	minutes
on the road / day (mobile individuals)	∅	70.8	minutes

### 3.5 Trip Origin and Destination

Between 70 and 85% of all trips start and end within the same city. These data show that the thesis of the Ruhr being a multi-nucleated and therefore strongly interconnected megalopolis is - at least related to transport - only a myth. This reinforces earlier conclusions about the relatively large number of non-work trips and the short distance and travel time of the average trip.

### 4. Future Research

The most important results of our research done for the KVR were - at least for us - the questions that we have raised. The main problem is that we still do not know much about the political, sociological and spatial context of behaviour patterns in transport.

The most serious deficiency of existing studies is the link between the level of infrastructure and provision of services within residential areas and the transportation behaviour of their residents. To begin, we need more detailed investigations of the purposes and motives for the choice of a specific mode of transportation. That would mean adding the question of „why?“ to the questions „how“, „when“, and „where“?

We argue here that one of the major aims of future urban development should be a sustainable city. Therefore, we have to raise the question of whether or not there is a connection between the behaviour of urban residents and spatial infrastructures. Hence, we will have to start with the residents' day-to-day surroundings and their actual needs, to find out about deficits (and perhaps disparities) and to show possibilities for action.

Based on these conclusions we have drawn up two complementary research projects.

The focal point of these projects will be on possibilities for influencing transportation behaviour and mode of transportation in order to reduce reliance on automobile traffic in the Ruhr.

## BIBLIOGRAPHY

- BECKMANN, K.J. 1988. "Verständniswandel in der städtischen Verkehrsplanung - von den Chancen des Nachdenkens und Umdenkens für die Zukunft", in Institut für Städtebau und Landesplanung der Universität Fridericiana zu Karlsruhe, ed. Arbeitsberichte.
- BECKMANN, K.J. 1989. "Beeinflussung des Verkehrsverhaltens durch Öffentlichkeitsarbeit", in Vereinigung der Stadt-, Regional- und Landesplaner - SRL Bochum, ed. SRL-Arbeitsberichte.
- BRÖG, W. 1988. "Verkehrsverhalten im Einkaufsverkehr", in Bundesforschungsanstalt für Landeskunde und Raumordnung - BfLR Bonn, ed. Seminare, Symposien, Arbeitspapiere, Verkehrsberuhigung und Entwicklung von Handel und Gewerbe: Materialien zur Diskussion, Nummer 33, pp. 61-71.
- BRÖG, W. 1990. "Möglichkeiten der Verhaltensbeeinflussung - das Public-Awareness-Konzept", in Vereinigung der Stadt-, Regional- und Landesplaner e.V. - SRL Bochum, ed. Umweltorientiertes Verkehrsverhalten - Ansätze zur Förderung der ÖPNV-Nutzung. SRL-Schriftenreihe, Band 29: 135-154.
- BUTTON, K.J. 1993. Transport. The Environment and Economic Policy. Cheltenham.
- DIX, M.C.; CARPENTER, S.M.; CLARKE, M.I.; POLLARD, H.R.T. and SPENCER, M.B. eds. 1983. Car Use - A Social and Economic Study. Oxford Studies in Transport. Aldershot: University of Oxford.
- European Conference of Ministers of Transport - ECMT (OECD), ed. 1985. Changing patterns of urban travel. Paris.
- FLEISGARTEN, S. and KRUSE, S. 1991. "Autofreie Innenstädte - Eine Utopie?", Vortrag am Geographischen Institut der Ruhr-Universität Bochum. Bochum, Dortmund (Manuskript).
- FLEISGARTEN, S. and KRUSE, S. 1992. "Stadtentwicklung Weimar. Rahmenbedingungen, Handlungserfordernisse, Zielsetzungen - Darstellung integrativer Lösungsansätze", Diplomarbeit vorgelegt am Geographischen Institut der Ruhr-Universität Bochum. Bochum, Dortmund.
- HOLZ-RAU, H. 1992. "Autolos? - Nichts besonderes! Beobachtungen zum Verkehrsverhalten autoloser Bevölkerungsgruppen", in Institut für Landes- und Stadtentwicklungsforschung des Landes NRW - ILS Dortmund, ed. Autofreies Leben - Konzepte für die autoreduzierte Stadt. ILS-Schriften, Nummer 68, pp. 15-18.
- International Research Associates - INRA & European Coordination Office sa 1991: "European Attitudes towards Urban Traffic Problems and Public Transport. Survey Report for the Commission of the European Communities and the International Union of Public Transport - UITP Brüssel", Eurobarometer, Nummer 35.
- LÖTSCHER, L.; WITTMER, H. and ZIMMER, D. 1987. "Verkehrsberuhigung St. Johann", Basler Feldbuch - Berichte und Forschungen zur Humangeographie, Band 5.
- LÖTSCHER, L. 1992. "Aufgaben und Perspektiven geographischer Stadtforschung", Frankfurter Geographische Hefte, Band 60. Frankfurt am Main, pp. 11-29.
- LÖTSCHER, L. and MAYER, O. 1994 (in print). "Mobilität und Verkehrsverhalten im Ruhrgebiet", in Kommunalverband Ruhrgebiet - KVR Essen, ed.
- LÖTSCHER, L. and METZMACHER, M. 1994 (in print). "Straßengüterverkehr versus Lebensqualität im Ruhrgebiet", in Ruhr-Universität Bochum & Industriegewerkschaft Metall - Gemeinsame Arbeitsstelle, ed. Dokumentation, Berichte, Materialien: Zukunft des Güter- und Wirtschaftsverkehrs im Ruhrgebiet. Bochum.
- MENTZ, H.J. 1989. "Analyse von Verkehrsverhalten im Haushaltskontext", in Technische Universität Berlin - Institut für Verkehrsplanung und Verkehrswegebau, ed. Nummer 11.
- ROBERTS, J.; JAMES, N. and HASS-KLAU, C. 1988. Quality Streets. How Traditional Urban Centres Benefit From Traffic Calming. London.



