

18. THE PAEDAGOGICAL USE OF TRAFFIC CONFLICT TECHNIQUE

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18.1 INTRODUCTION: TRAFFIC SAFETY EDUCATION IN AUSTRIA

Traffic safety education in Austria starts with the attendance at the kindergarden. The kindergarden teachers are prepared for that task by their education. The focal point of traffic safety education is situated in the area of elementary school, that are the children from 6-10 years, where the traffic safety education is mandatory in all four classes as subject like reading and arithmetic. The lessons are in fact realized in a high degree. This education ends for nearly 80% of the Austrian children by the voluntary cycling examination with the exception of Vienna, the only large city in Austria, where cycling is seldom.

After elementary school the children go to other schools with fan-shaped lessons: while in the elementary school the same teacher gives lessons in all subjects, the children have now in each subject an other teacher. The consequence is, that quite a lot of the teachers push the task to realize traffic safety education towards their colleagues although according to the principle of teaching traffic safety education each teacher is obliged to enter into traffic safety education in his subject where it fits.

Quite wide-spread is the neglect of traffic safety education in the higher classes of grammar schools (persons from 15-18 years). The reason is, that the traditional kinds of traffic safety education do not fit to that stage of life. It will be regarded as too "childish" by the pupils. But at the same time at that age the participation in motorized traffic starts (Mopeds and small motor-cycles). Motorised road users of this age have an extremely high accident risk. There is therefore a strong need for traffic safety education. However, so far the appropriate means to educate the juveniles at that age for traffic safety were missing.

An advantageous kind of working with these stages of age are the project-lessons, that means that one class is treating a theme self-acting under the supervision of the teacher. The pupils gain understanding through their own activities and investigation, which are more convincing for them than results reported by the teacher. Here applicable methods are to observe traffic, to count events, to interview traffic participants and to carry out action, always with the background of their own reflections about the observed matters. These activities have provide implicit feed back to the participating pupils, which is operative for traffic safety education.

18.2 TRAFFIC CONFLICT TECHNIQUE IN THE PROJECT-LESSONS

The traffic conflict technique meets exactly the conditions for project-lessons in the higher classes of grammar schools. It needs more intellectual capacity in the sense of learning the technique of observation, but pupils are able to learn it within a short training period. Traffic is for juveniles mostly an interesting matter for young people and therefore they are rather highly motivated to deal with traffic topics. Moreover, in the frame of project work a complete task with a defined beginning and a defined goal is pursued. It is easy to judge whether the goal was achieved or not: From the outcome concrete conclusions may be derived. The occupation with the own behaviour will be stimulated by the observation of the other people's behaviour. The pupils are able to act independently and they are taken seriously.

The following routine seems to be adequate for carrying out project work including the application of traffic conflict technique:

1. The goal of the project has to be defined.
2. To establish the working plan and the project design.
3. The class has to make the choice between several methods for their project (Traffic conflict technique, behaviour observation etc.)
4. Selection of the observed site and determination of the observer positions.
5. Reading of the features of the observed site and of the traffic flows.
6. Observer training (e.g. in traffic conflict technique.)
7. Realization of traffic conflict observations.
8. Statistical evaluation of the observed traffic conflicts with reference to reported accidents.
9. Graphical presentation of the results.
10. Report with recommendations.
11. Presentation of the project to the public for example:
 - "the school public"
 - "the parents public"
 - "the public of the district"
 - "the common public by print and electronic media"

The last point is especially important for the personal identification of the pupils with the result of the project and with their consequences. The interest of the mass-media for the results of such projects is mostly high.

18.3 AN EXAMPLE FOR THE APPLICATION OF TRAFFIC CONFLICT TECHNIQUE IN THE FRAME OF PROJECT WORK

At the Austrian Road Safety Board in Salzburg Walter Tamme (1991) was concerned and engaged with that subject and he has documented four projects of that kind. One of them was a traffic conflict observation in the city of Salzburg.

The project Salzburg 1991

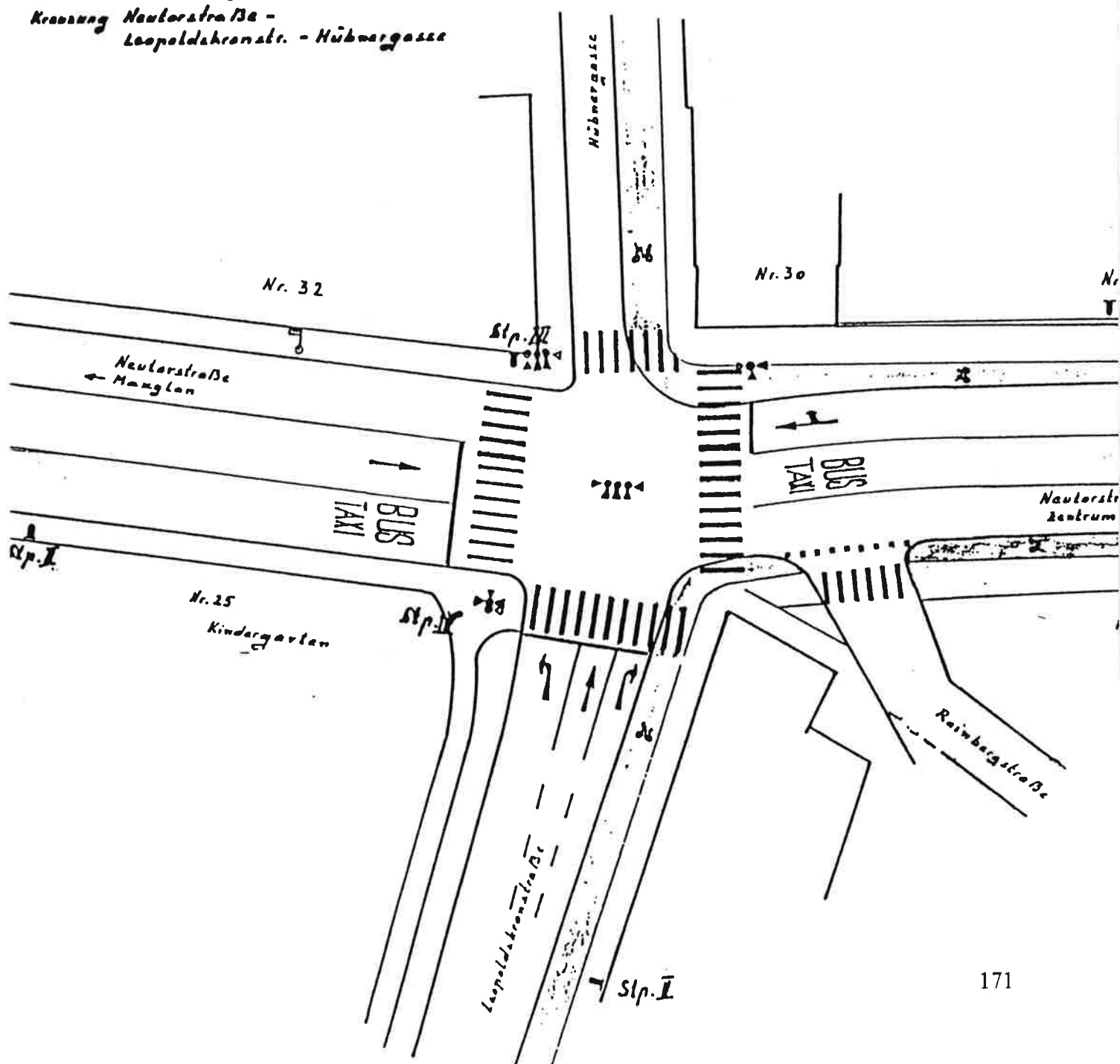
The schoolgirls of the 6th class of the federal secondary school for household and economy had to pass a practical course in the subject of psychology. The teacher applied to the Austrian Road Safety Board for cooperation to carry out the practical course in the field of traffic psychology. The schoolgirls of about 16 years age choose traffic conflict technique as method out of several offers and carried out an investigation on the traffic conditions of a highly frequented crossroad in the center of the city of Salzburg. This crossroad was selected from the schoolgirls out of several black spots named to them.

The site is on the one hand part of a street ("Neutorstraße") coming from the airport region in the west of the city of Salzburg going eastward to the center.

On the other hand there is a south-north going street ("Leopoldskronerstraße - Hübnergasse"). Both streets have bus traffic too. The intersection is signalized.

Salzburg

*Kreuzung Neutorstraße -
Leopoldskronerstr. - Hübnergasse*



After the choice of the site a working plan was established followed by a theoretical introduction to traffic conflict technique. Subsequently the traffic on the intersection has been observed for two days whereby violations by pedestrians and cyclists have been observed as well as problems with traffic signs, that were not well adjusted signaling to the traffic flow and to other characteristic of the traffic space. From five different observer positions the intersection has been observed and traffic conflicts have been registered.

The following problems were observed:

- The traffic light for pedestrians was neglected for 18 times by pedestrians, whereby conflicts occurred with cars. The street on that site is so narrow, that only one car may pass at the same time (one lane and one-way). Therefore even short gaps between the passing cars were accepted by the pedestrians for prohibited crossing. By that traffic conflicts occurred between the pedestrians and the cars turning to the right from the "Neutorstraße" into the "Hübnergasse".
- Repeatedly conflicts were observed between line-busses and the other motorized traffic in the direction "Neutor" (east bound) because the busses on that point have to change from the extreme right to the middle lane of the street.
- About one third of the cyclists did not use the cycle path along the "Neutorstraße" because it was not clearly perceptible due to insufficient colouring. In the city of Salzburg cycle paths usually have a red coloured pavement.
- There are often conflicts due to busses stopping in the bus-stop in the "Neutorstraße". The cars following the busses often try to pass the stopping bus, sometimes there is imminent risk of collision with the oncoming traffic.
- The cycle paths repeatedly were used by cars for parking, whereby cyclists were forced to dodge to the street. Both dodging maneuvers of the cyclists and cars leaving their illegal parking in some cases caused conflicts with the following traffic. At the end of the conflict observation the results were analysed and recommendations were formulated how to reduce or to abolish the existing problems.

The following recommendations were given:

1. The traffic lights for pedestrians and cyclists should be attached in the level of the eyes, as some of the infringements seemed to be due to the fact that pedestrians have difficulties to keep an eye both on the traffic lights and traffic, as the lights are positioned outside the central field of vision of the pedestrian.
2. To make it more clear that left turning is prohibited from the "Neutorstraße" to "Hübnergasse" when green for traffic going straight on is flashing, a red arrow for left going traffic should appear (=forbidden to turn left).
3. For line busses in the "Neutorstraße" going to the center lane a particular green phase should be installed to avoid the critical interactions between line busses and car traffic going in the same direction.
4. The cycle path in the "Neutorstraße" should be better marked and pedestrian area and

cycle paths should be clearly separated.

5. On the observed intersection a general green phase for all pedestrians should be installed. Thereby waiting times and law infringements by the pedestrians could be avoided.
6. "Leopoldskronstraße" should be changed from actually three lanes to two lanes in the future. There should be a common lane for traffic going straight on and the one turning to the right.
7. The bus stop in the "Neutorstraße" before the shop row in the direction away from the city should be designed in that kind, that vehicles could pass the stopping bus without getting into troubles with oncoming traffic. Therefore it was regarded necessary to diminish the width of the pedestrian lane for 0,5 meters.

The results of the study and the recommendations were conveyed to the authorities and presented to the public in the frame of a press-conference together with other matters, whereby three schoolgirls reported on their project.

Some weeks ago we had the opportunity to carry out traffic conflict observations with another group on the same crossing.

The recommendations implemented by the authorities in the meantime proved to be so efficient, that only a few conflicts on that crossing could be observed.

This method seems to us to be a good example that experiences of "hard core" practitioners, namely road users themselves, could play a valuable role in the development and evaluation of new measures, both concerning road and infrastructure design and vehicle equipment.

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