

R I S K P E R C E P T I O N I N D R I V E R S W I T H D I F F E R E N T D R I V I N G L I C E N C E S

SUMMARY

The problem of the risk in driver's profession is on the one hand a clear fact as a result of participation in traffic but on the other hand that problem appears seldom in public discussion. It is sure, that some risk must be accepted by every road user in the moment, when they enter the road. A certain amount of risk is simply the part of road users' status.

The perception and acceptance of risk could be tied with many factors, such as: age, sex and experience of drivers. It is possible to formulate the hypothesis about relation between the level of risk and the kind of vehicle which has been driven, the category of driving licences, etc.

To study that problem, the Transport Psychology Unit of Jagiellonian University together with the Traffic Research Group of Institute of Psychology of the University of Uppsala has prepared the special form of questionnaire consisting of 126 questions. The group of subjects consisted of 448 Polish drivers with different categories of driving licences.

The level of Risk Acceptance Factor (RAF) for owners of different driving licence is significantly different. RAF is tied with the practice of risk behaviour on the road.

We used two following measures: The Scale of Declaired Risk and the Scale of Undertaken Risk. The result of our research has shown two important trends. The highest level of RAF we observed in the group of lorry drivers (category C). Quite lower but near average RAF was characteristic for the group of car drivers (category B). The lowest RAF was typical for the group of bus drivers (category D). We could not find a clear tendency in the group of motorcyclists (category A) and drivers of heavy lorries with trailers (category E).

1. INTRODUCTION

Problems tied with risk taking on the road belong to the group of problems which are very important from the point of view of traffic safety. Practically risk must be taken by everybody who wants to become a road user. Very often two kinds of risk are mentioned: objective risk which is a direct result of the situation on the road, and the subjective risk which is tied with the individual attributes of road user (NÄÄTÄNEN & SUMMALA 1976). The level of the subjective risk influences directly driver's behaviour in dangerous situations. Undoubtly the risk is related in bigger part with the character of personality (BENA, HOSKOVEC & STIKAR 1968). But the risk is also tied with other factors. From a technical point of view we can fix several factors of risk minimalization. Engineering parameters of the road (the width, the shape of the road, the kind of its surface, the environment etc.) could increase or reduce the level of risk. The technical parameters of vehicles play a similar role (KLEBELSBERG 1969). The kind of driven vehicle is a very important thing. It is usually tied with the category of driving licence in accordance

with international regulations. In reality, the category of driving licence contains components such as age and experience. Therefore, it could be a general determinant of risk.

For that reason we can formulate the general hypothesis:

The level of accepted risk and the level of risk taken is connected to the category of driving licence.

2. METHOD

In our research we used the special questionnaire whcih has been prepared together by the Traffic Psychology Group of University of Uppsala (Sweden) and Transport Psychology Unit of Jagiellonian University in Cracow (Poland). The questionnaire contains 126 questions. In the bigger part they allowed to measure the Risk Acceptance Factor (RAF). The respondents had to give answers on 6-degrees scales:

1.....	2.....	3.....	4.....	5.....	6
never	very seldom	rather seldom	sometimes	often	very often

In the last part of the questionnaire we asked for data about the number of kilometers driven by respondents, their places of living, possibilites of using a car, evaluation of their own quality of driving and frequency of errors made by themselves. Very important were such data as: age, sex, education and the type of vehicle. The subject had to inform us about his/her accidents in the last time. The questionnaire was anonymous.

3. SUBJECTS

In our investigation 445 persons (72 females and 373 males) took part. 100 of them lived in villages, but others in the city. The range of age was 18 - 65 years. The group of 143 respondents have had basic education, the group of 212 respondents had a middle education and 90 persons had high education. The research took place in May 1990 in Cracow District.

4. RESULTS

The analysis of the results shows several groups of drivers with different degrees of accepted risk and risk-taking. The category of the driving licence is a basic criterion of that differentiation. As shown in Figure 1, the safest group are bus drivers (cat. D) and international truck-transport drivers (cat. E). They present the relatively low level of RAF (1,87). The RAF level = 0-6; the level "0" means very low risk taking and risk acceptance in traffic acitvity; the level "6" means full risk and complete ignoration of traffic safety.

The most dangerous group of drivers are lorry drivers (cat. C) with a RAF level of 3,67 and car drivers (cat. B) with a RAF level of 3,34. In the group of motorcyclists we could not find a clear trend in the RAF level.

It is clear, that the category of driving licence as the feature of one of the elements of the system - DRIVER-ROAD-CAR - cannot be dependent on the variable describing the system. It can be a parameter only. In this sense it describes the system. Table 1 shows the power of influence of driving licence category on the differentiation in RAF area.

Table 1 Multiple correlation of some variables tied with the risk

.	A	B	C	D	E.
A	-	0,197	0,062	0,421	0,238
B	0,197	-	-0,045	0,503	0,147
C	0,062	-0,045	-	0,611	-0,018
D	0,421	0,503	0,611	-	0,627
E	0,238	0,147	0,018	0,627	-

A...Experience		I			
B...Kind of vehicle		I			
C...Taking part in accident		I			
D...Category of driving licence		I			
E...Number of driven kilometers per year		I			

We can see that kind of category of driving licence cannot be identified with other variables such as: experience, number of driven kilometers etc. The category of driving licence is the main factor creating RAF level.

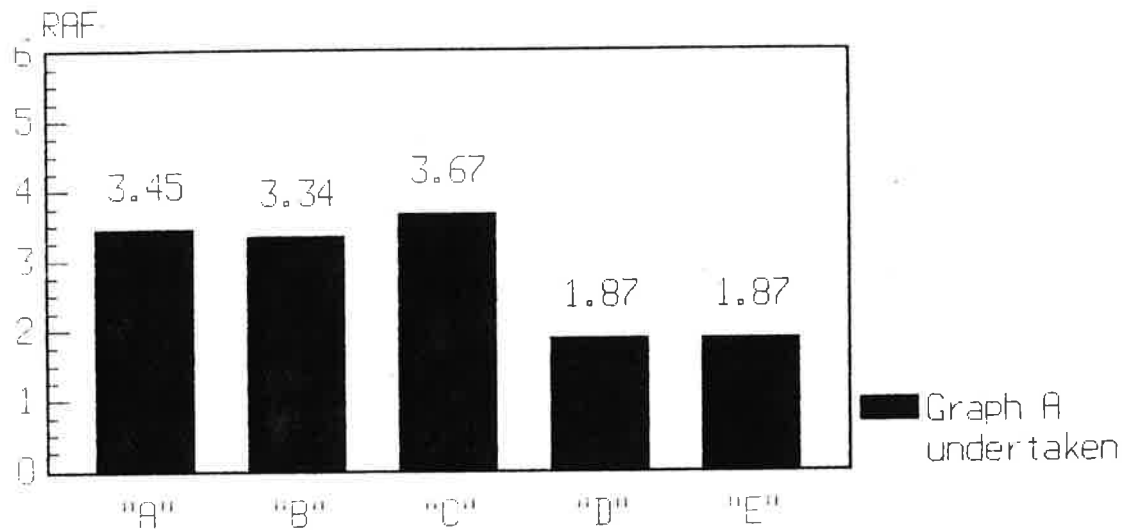
Additionally we compare the values of two scales of risk: accepted and taken (Fig.2).

The level of taken risk bases on a level of self-criticism of drivers. We are very surprised because of big differences between the risk accepted and risk taken characterizing the different groups of drivers. We could observe that if the level of accepted risk is extremely high the level of taken risk is very low. This relation is characteristic for bus drivers (cat.D) and truck-drivers of cat. E.

On the contrary, car and lorry drivers (cat.B and C) are in reality very dangerous road users, but in their opinion they are driving very gentle and safe.

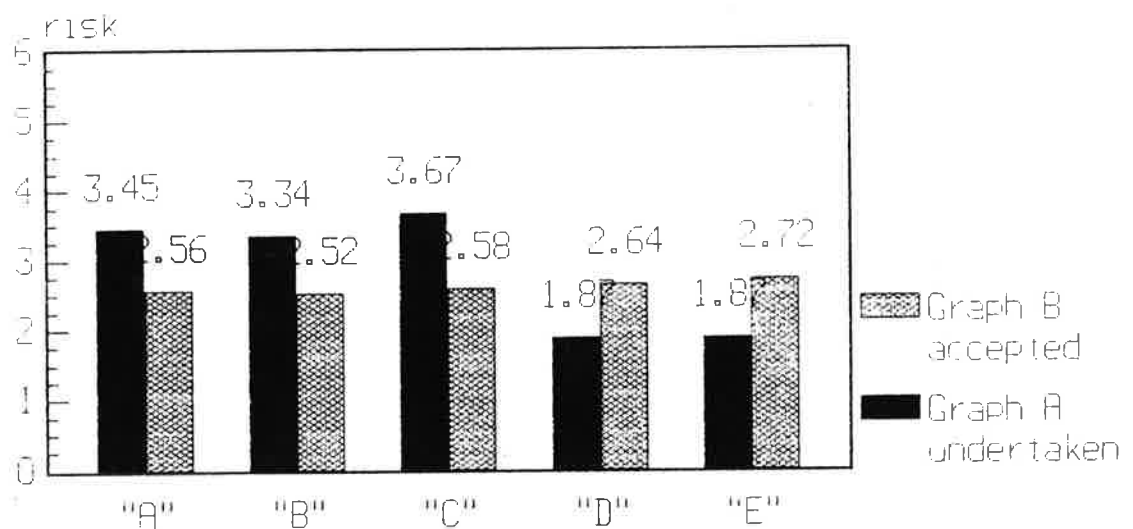
These two important relations urge us to find another additional variable which describes the measure of risk more precisely. Such a variable exceeds the system "Driver-Vehicle-Road" and it has psycho-social character. We could define it as "playing the social role of drivers". The role needs a special demand and special expectation of society. It is tied with a system of social orders and law regulations. It is clear, that a scale of demands and expectations of society directed to bus and international truck are different from drivers those directed to lorry and cardrivers. The danger of kinds of vehicles is very similar but the social role of drivers are different.

Fig.1 Relationship between undertaken risk and the category of driving licence



The category of driving licence

Fig.2 Relationship between the different category of driving licence and accepted risk and undertaken risk



The category of driving licence

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