



THE EFFECTS OF NONVERBAL ENFORCEMENT ON DRIVING BEHAVIOUR

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Abstract

The main objective of this pilot-study is to reveal the effects of nonverbal enforcement considering cultural specific differences on Romanian drivers. Driving psychology involves the responsibility of social norming, enforcement psychological strategies, methods of keeping the drivers safe from their tendencies of speeding, all this based on a complete awareness of the driver for the consequences of his behavior.

We made this experiment on a very busy road from Romania in order to measure the speed when a stimulus associated with enforcement is applied and the situation in which the driver saw no consequences of his speeding behavior. The study was conducted on national road 21, between Slobozia and Braila.

The results shown a difference of 44 km/h between the two experimental situations.

Keywords: *psychological enforcement, driving behavior, speeding behavior, social responsibility.*

1. INTRODUCTION

Social norms regulate the behaviour of people in the most diverse spheres of society, social life cannot normally unfold without the action of social norms. This is because social norms contain rules addressed to individuals, describing and detailing the ways in which values must be concretized into legitimate and accepted behaviors by society. Social norms ensure the adaptation of the individual's conduct to the needs and needs of the group, individualize and value the subject, ensure its integration into the social values system of the community.

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We define social norms as rules of conduct that contribute to the rationalization of social life through the following effects. First, the rules create a system of rights, obligations and prohibitions that materialize different interests, goals and social ideals (Gatej, Rizeanu, Ciolacu, 2016). Second the rules ensure human sociability, as well as the predictability of social behaviours and actions. Third norms ensure that conflicts and social tensions are avoided, by mutually limiting individual, unconstrained and free conduct. The norms establish rules of social action and social conduct, stipulating what means an individual must adopt in social conditions determined to achieve his desiderata.

Norms are a social one: individuals perceive, accept and respect them due to the intervention of three factors.

The first one is the social pressure of the group / collective / society exercised formally / informally, organized / not organized, institutionalized / not institutionalized. The more comprehensive society, the social pressure is more pressing, becoming normative pressure, being exercised through administration, police, justice, prosecution. The second factor is the moral and normative socialization process through various social agents or social institutions and the third factor is the existence of a system of social sanctions by which, on the one hand, prizes are awarded the conduct conforming to the ethical model of the respective society and, on the other hand, they are sanctioned, suppressed, disavowed by nonconformist, deviant, delinquent conduct (we are talking about the existence of a complex system of organized and unorganized social sanctions, formal and informal).

Representing, in essence, standards or standards of social behaviour, whose "observation and respect for society can alert us through a more or less intense constraint" (Carbonnier, 1969), social norms are extremely diverse (moral, legal , economic, religious, etc.), being elaborated in certain forms and emanating from different instances, agents or social groups.

Addressing the normative aspects of social life, the members of a social community comply with rules and rules of conduct for two reasons. The first reason is because they are self-absorbed and internalized in the process of socialization, individuals wanting to comply with these norms because they regard them as part of their social "ego" and the second reason is because group members expect each other to behave according to the group's rules, and when they deviate from this behaviour, the others manifest their disagreement in some ways.

These expressions of approval / disapproval of the social group towards a particular type of individual behaviour form the system of social sanctions (Gatej, Rizeanu, Ursachi, 2017).

Sanction, in the most general sense of the term, is a punishment or reward, the purpose of which is to achieve compliance with the rules of conduct considered desirable by a social group (Gould, Kolb, 1964).

Any sanction includes punishment or reward, the purpose of which is to make the conduct compliant with rules considered legitimate and desirable in a society. It is constituted by certain ways of approval or disapproval towards a particular mode of behaviour. Social sanction begins to act when internal control becomes ineffective when "the individual loses the inner feeling of what is and what is not allowed, becoming necessary to be in the interest of the group brought to order by others or removed from group" (Szczepanski, 1972).

Failure to comply with social norms and values leads to a reaction of the social environment in which they are valid, a series of diffused or precise sanctions, organized or not, based on the social constraint and pressure that the group, community or society exerts against nonconformist or deviant behaviours. Often, however, sanctions do not ensure the absolute effectiveness of the rules, but they "substitute a norm (the sanction) of another (the one that imposes unregulated conduct), they open an alternative, they allow a choice" (Pinto, Grawitz, 1965).

Sherif and Asch's studies show that people are fitting for two different reasons (Moscovici, 1991). On the one hand, people have information needs, and on the other hand people have normative needs (Deutsch & Gerald, 1955). In case of informational needs, people are complying because they want to judge correctly, and so in special situations I suppose that four or six eyes see better than two. We often orient ourselves better in our world, especially when we are in a foreign territory, looking at the ideas, perspectives and knowledge of others. In the case of normative requirements, people comply because they are afraid to look deviant, being driven by a strong need to belong to the group and to replace differences with similarities. The two types of needs help us to understand both the correspondent types of conformism, namely private conformism and public conformism (Allen, 1965).

Contrary to this, public conformism, also referred to as compliance, refers to the superficial change of behaviour due to the desire to obtain benefits or to avoid punishment. Examples of public conformism are whenever someone gives up the normative pressure, choosing at the manifest level to agree on the position of the group.

The analysis of traffic violations and errors is based on the model proposed by Reason (1990), which supports the existence of two completely separate psychological determinants underlying the occurrence of road accidents. Reason (1990) argues that errors and violations are mediated by different psychological mechanisms. Violations require explanations in terms of social and motivational factors, while the errors could be explained by individual characteristics related to information processing (Rizeanu, Gatej, Ciolacu, 2017). Errors were divided into lapses, omissions and mistakes; violations were divided into simple violations, aggressive violations, or non-intentional violations (Havârneanu, Gheorghiu and Hohn, 2010).

2. OBJECTIVE AND HYPOTHESES

2.1. OBJECTIVE

The main objective of this study is to show how important is the nonverbal enforcement in order to keep a preventive and defensive driver behavior.

2.2. HYPOTHESES

While the coercive force becomes aware, the behavior of driving violation will be reduced.

There is a significant difference between the average speeds in the presence of a possible enforcement factor and the average speed in the absence.

3. METHOD

3.1. PARTICIPANTS/SUBJECTS

1000 participants were tested by measuring the speed on a Romanian main road (DN 21), both car drivers and truck drivers, males and females. The age and demographical information could not be registered regarding the experimental design and Romanian laws.

3.2. INSTRUMENTS/APPARATUS/STIMULI/MATERIALS

We used the Datacollect® system by an agreement with the Romanian official dealer Safety Camera System in order to collect speeds of the passing vehicles.

3.3. PROCEDURE

In the first experimental condition one of the researchers wearing a safety vest stayed in the proximity of a vehicle stopped on the road side. The SDR® system recorded the speed of the passing vehicles. After that in the second experimental condition there was no enforcement stimulus at all and also the speed was measured using the SDR® system.

4. RESULTS

In order to observe significant differences, the T test procedure for independent samples was applied on the data.

4.1. TABLES AND FIGURES

Table 1. Descriptive values for average speed

Code	N	Mean	SD*	Standard mean error
Average speed 1.00	500	54.0313	.67015	.05321
2.00	500	98.0159	.56541	.09634

*Standard deviation

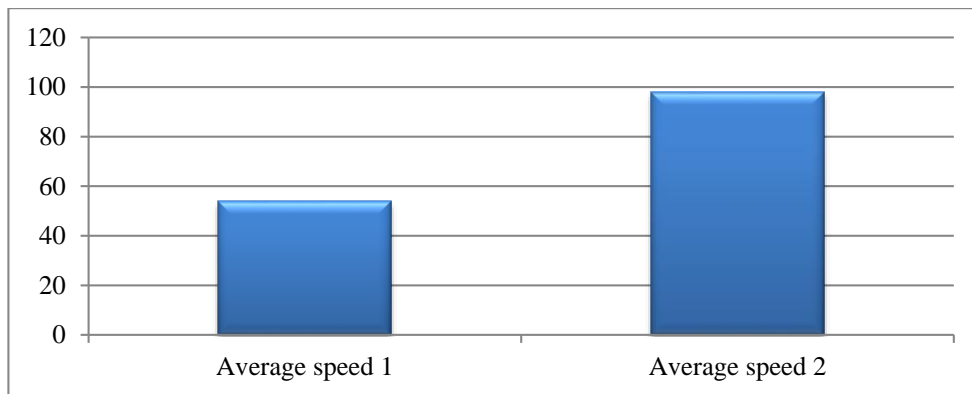


Figure 1. Differences between the two samples

Table 2. T test for the difference between the two experimental samples

		Levene		T test						
		F	Sig.	t	df	Sig. (2-tailed)	Diff. mean	Diff. SD *	95% Confidence interval of the difference	
Average speed	Equal variances	3.543	.017	7.888	998	.001	.75431	.10974	Inferior	Superior
									.55579	1.02214

*Standard deviation

The T test procedure that was applied to reveal a significant difference between the two samples means showed that the assumption of having important differences can be confirmed. Considering this fact we can assume that the experimental hypothesis of this study is confirmed, the drivers involved in the experimental sample had a lower speed than the ones that were recorded as simple drivers on a Romanian national road (DN 21) ($m_1=54.03$, $m_2=98.01$, $t=7.88$, $df=998$, $p < 0.05$).

The difference between the two means is significant, 44 km/h, revealing the effect of enforcement communication strategies to create a preventive and defensive driving environment.

5. CONCLUSIONS

The main conclusion of this study is a very specific for the Romanian enforcement strategy: in order to develop an effective prevention and defensive driving environment is necessary to have a good communication strategy including nonverbal strategies and the presence of enforcement officers in daily traffic.

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