Influence of Normative Models on Social Representations: The Case of 30kph Zones

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Abstract
Our research fit into social representations' framework (Moscovici, 1961), defined by Jodelet (1997) as "modalities of practical thought orientated towards the communication, comprehension and control of the social, material and conceptual environment". We are especially interested in the influence of normative models in the field of social representations (Flament, 1999; Gaymard, 2009). To the demand of Angers' city (France) which is financing this study and wishing to promote the emergence of a culture of public space sharing, we focus on one of measures they are using in this initiative: 30kph zones. We seek to determinate the part of different models (especially friends' and parents' models) in the speech of young drivers. We submitted a questionnaire on the 30kph zones representation to 32 young drivers. They had to answer in their name, but also as they think their parents, their friends and drivers in general, would do. An analysis of multiple linear regression shows the influence of parental model on the answers of young people. So, with regards to the 30kph zones, representations and practices of young drivers fall more within parental model than peer's model. These results are discussed in comparison with anterior studies realized with an identical population.

Keywords: social representations, normative models, influence, road safety, zones at 30kph

Framework

This study fits into the framework of social representations (Moscovici, 1961) and more specifically the structural approach of social representations (Abric, 1976; Flament, 1987). Social representations are a social way of thinking and seem like a form of common sense knowledge (Jodelet, 1991). Social representations emerge and evolve in communication processes and interpersonal relationships (Moscovici, 1961). They are related to conditional practices (Flament, 1994; Gaymard, 2014).

The study of normative aspects has revealed the importance of reference models in social representation (Flament, 1999, 2001 ; Gaymard, 2003, 2009 ; Gaymard & Andrés, 2009 ; Gaymard & Bessin, 2014). This research highlights the weight of certain models such as the models of teachers, peers or parents. Thus Flament (1999), when studying the social representation of higher education among a student population, showed that students' answers were more influenced by the models "well thought of by the parents" and "well thought of by the teacher". Gaymard (2003) showed that female Franco-maghrebian students in a negotiating situation were influenced by the model "well thought of by their parents". Gaymard (2009) showed that young motorists are influenced by their peers in their relation with speed. Gaymard & Bessin (2014) demonstrated that young teenage moped riders are closer to risk-taking than to safety and that this is esteemed by their peers. Nevertheless, in some aspects, the parental model weighs on the teenage moped-drivers' representation.

The study of normative aspects in the field of social representations has also led to the elaboration of the conditionality theory (Gaymard, 2014). In the field of road transport, for example, studies showed the role of conditionality in the young drivers' representation of driving (Gaymard, 2007, 2009) but also in comparison with elderly people (Gaymard, Allain, Osiurak & Le Gall, 2011). The respect towards pedestrians likewise appears conditional (Gaymard & Tiplica, 2012, 2014).

In this study, the question focuses on urban mobility and the appearance of new measures such as zones at 30kph, which implies the emergence of new representations (Bordarie & Gaymard, submitted; Gaymard & Bordarie, 2014a, 2014b). Here, we look into reference models: friends, parents, motorists in general, and their impact on the young drivers' representation of the zones at 30kph.

Hypothesis

Considering the results of previous studies, it can be thought that young drivers should be influenced by the model of peers.

Method

Tool

We created a questionnaire starting from a first study of social representation of 30 zones. This questionnaire includes 15 binary proposals associated with driving at 30kph. For example, we proposed "*driving at 30kph is for safety*" vs. "*driving at 30kph does not solve the safety problems*" or "*driving at 30kph is useful*" vs. "*driving at 30kph is useless*".

Instruction

"*For every binary proposal concerning driving at 30kph, check the proposal which corresponds most to what you think. Then, check the one that you think motorists in general would check, as well as the one that your friends would check, and that your parents would check*".

Population

Our population is composed of 57 young drivers (average age=19.05; SD=0.91) with 80% women and 20% men. All are French students in the first year of psychology.

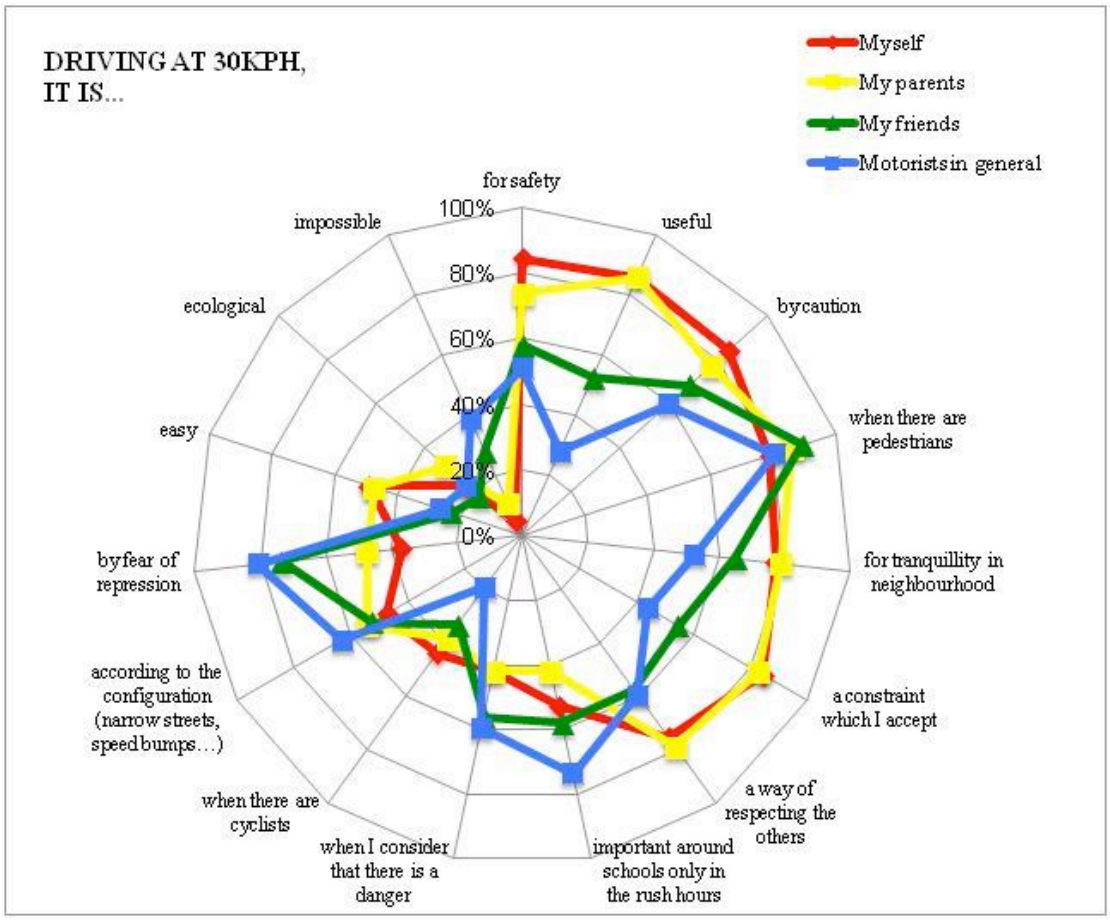
Analysis

We performed a linear regression analysis to highlight which model is the most predictable of the subject's answers.

Results

The graph shows the curves of the subjects' answers and the one of each reference model for each proposal (we only present one of the two proposals for every pair). We observe (Graph 1) that the curve of the subjects' answers (red) draws closer to the parents' curve (yellow). It can also be seen that the friends' curve (green) is closer to the motorists' curve (blue).

In a first step, we analyze the subjects' social representation of 30 zones. We observe that the zones at 30kph and the fact of driving at 30kph are a useful action related to the necessary safety and caution. It seems that students match 30kph with the presence of pedestrians, tranquillity in the neighbourhood or also with the notion of respect for others. This speed limit is an accepted and understood constraint, which does not appear impossible to comply with. There is a consensus among the population about the fact that this speed limit is not a result of environment-friendly behavior. On the other hand, conflicts can be seen in the representation of 30kph because a part of our population considers that driving at 30kph is not easy and is not linked to the fear of repression. Furthermore, students are divided about the presence of cyclists as a condition for driving at 30kph. A certain number of them say that they drive at 30kph when they consider that there is a danger or near a school when school starts or finishes.



Graph 1: Representation of subjects' answers to "Driving at 30kph, it is…"

If the students' curve follows the parents' curve, it is noteworthy that the friends' curve and the motorists' curve are closer to each other, but very different from the curve of the students' answers. This means that there is a difference between the students' representation and the one they think their friends or motorists in general have. Linear regression analysis confirms this idea and reveals that the parental model is the most predictive of the young drivers' models.

Table 1. Regression analysis

Model	Unstandardized coefficients		Standardized coefficients	Sig.	r2
Variable	B	Std. Error	Bêta	Pr > t	
Constant	-0,414	3,816		0,916	0,935
Parents	1,048*	0,159	0,966	**0,000**	
Friends	0,037	0,338	0,028	0,916	
Motorists in general	-0,088	0,255	-0,070	0,736	

*. Significant at .001

Discussion

This study is interesting from several points of view. The first of them is the orientation of the results which could appear to be a new consideration concerning the influence of normative models in the field of road safety. Unlike the speed limit (Gaymard, 2009) the representation of zones at 30kph does not appear to be influenced by the peers' model, but by the parental model. Until now, research has highlighted the greater role of the peers' model in relation to the respect or transgression of laws and traffic regulation. However, our results highlight the role of the parents' model more than any other model. It can be seen that they think 30kph is mainly for safety. On the other hand, when they talk for their friends, the results reveal that peers drive at 30kph above all from fear of repression or when there are pedestrians in the public space. In these two conditions, we have a potentially dangerous condition (presence of pedestrians) and a condition which is explained by the fear of losing one's driving license or fear of repression. This last condition illustrates the role of repression in following the highway code for young drivers.

Several explanations can be put forward. It is possible that social desirability comes out in these results owing to the university context of the survey. In our case, people were invited to answer the questionnaire in front of the researcher who was also the teacher of the course. In this situation, the researcher-teacher embodies a certain form of "law" or an adult to please. It can be imagined that students wanted him to be pleased with their answers. Thus it is possible that they answered the questionnaire to be well thought of by the teacher. The differences with the other young people and motorists in general suggest they consider themselves more aware of the importance of safety for 30 zones, which can be a bias of self-enhancement. It is also possible to have a sample of specific young motorists who identify more with their parents than their peers for other objects. Moreover in the sample, there is a strong imbalance between females and males and we know that females are more law-abiding (Axa Prévention, 2013) and have fewer fatal accidents than men. Indeed, during the year 2013, 77% of deaths as a result of a road accident were men, against only 23% women. It is also possible that the object 30kph is too normative in that it greatly induces respect (unlike speeding). Finally the method used is not strictly the usual analysis method (Flament, 1999; Gaymard, 2003, 2009). Consequently in a further study these different elements should be taken more into consideration.

With regard to public policies, it is therefore important to communicate about the safety of vulnerable users in zones at 30kph and about the aim of sharing public space (Gaymard & Bordarie, 2014a, 2014b).

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