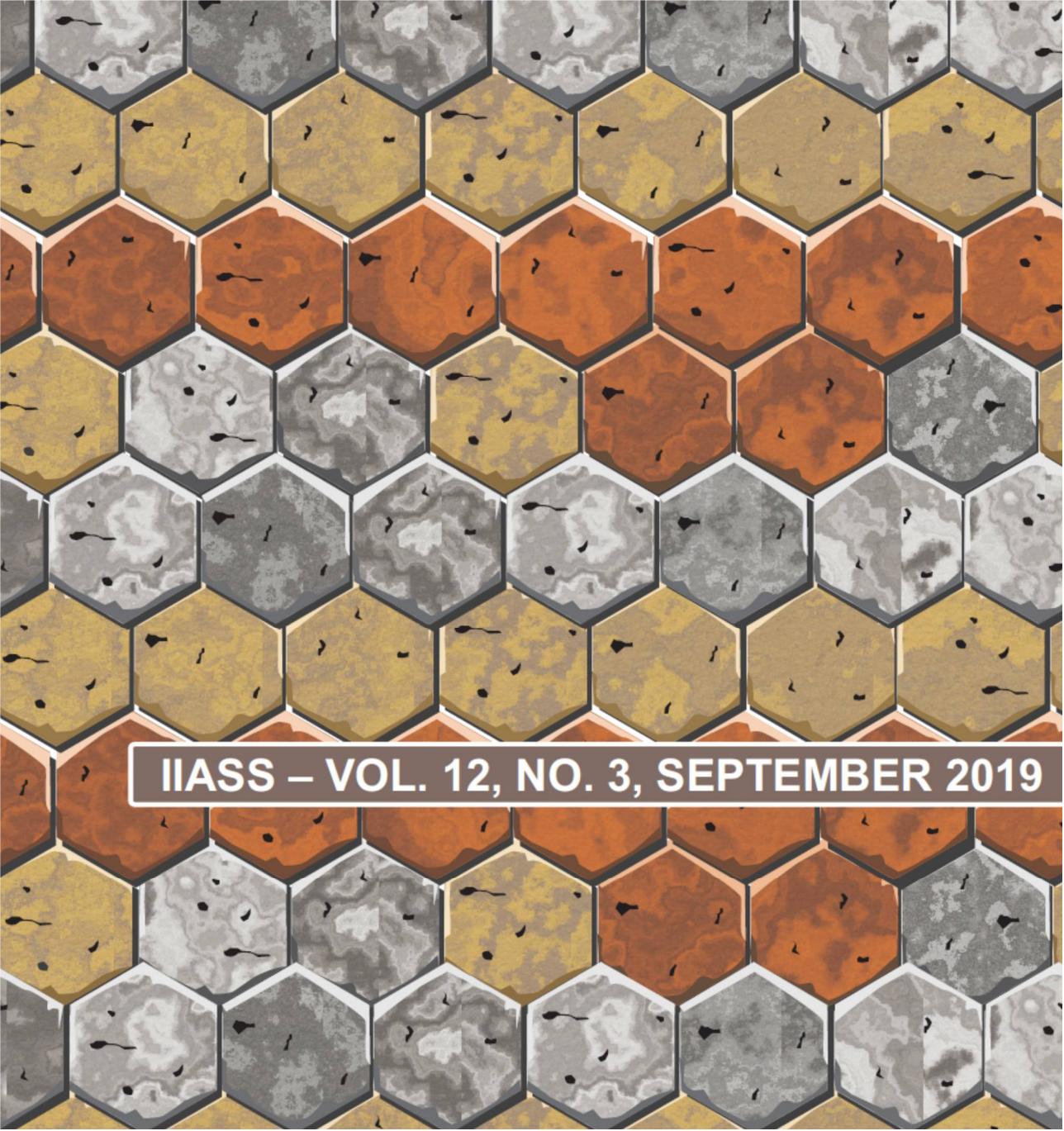


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THE FUNCTIONS OF INNER DIALOGUE WHILE DRIVING A CAR

Primož Rakovec¹

| 6

Abstract

The purpose of our article is to research the functions of inner dialogue while driving a car. We assumed the following: (1) driver is aware of the inner dialogue; (2) inner dialogue affects driving style; and (3) negative inner dialogue increases aggressive driving of car drivers. To answer those questions, we describe various theories of inner dialogue and (aggressive) driving. Further, we connect and present inner dialogue and aggressive driving within the theoretical model of impact of inner dialogue on aggressive driving. Connectedness of inner dialogue and aggressive driving is also checked using qualitative research with a population sample of 29 Slovenian drivers. The results of the research show that drivers are aware of inner dialogue while driving, evaluative, self-directing and self-encouraging functions of inner dialogue are present while driving a car, that inner dialogue co-influences the emergence of aggressive driving, and inner dialogue of aggressive drivers is negative.

Key words: inner dialogue, driving style, aggressive driving, defensive driving, behaviour, road safety

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Introduction

A complex combination of factors influencing a road safety, which entail an intertwinement of external circumstances, such as road and weather conditions, and internal factors ensuing from drivers' physical and psychical state. (Bilban & Zaletel-Kragelj, 2007; Brittany, Smith, & Najm, 2004; Dunaway, Will, & Sabo, 2011; Gimeno, Cerezuela, & Montanes, 2006; May & Baldwin, 2009; McCammon, 2001; Miles & Johnson, 2003; Nordbakke & Sagberg, 2007; Philip et al., 2005; Regan, 2010; Sagberg, Giulio, Piccinini, & Engström, 2015; Underwood, Chapman, & Wright, 1999; Young, Mahfoud, Walker, Jenkins, & Stanton, 2008). However, human factors prevail. It has been shown external factors cause only 5% of all accidents, while human factor dominates in 65% of all traffic causalities (Wierwille et al., 2002).

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Among human factors there is a big interest in researching aggressive driving as very important and common factor influencing road safety, and factors that influencing this dysfunctional behaviour (Blankeship & Nesbit, 2013; Bogdan, Mairean, & Havarneanu, 2016; Deffenbacher, L. J., Deffenbacher, D. M., Lynch, & Richards, 2003; Hennessy & Wiesenthal, 2004; Hennessy & Wiesenthal, 2002; Hennessy, Wiesenthal, & Kohn, 2000; Jovanović, Lipovac, Stanojević, P., & Stanojević, D, 2011; Kenrick & MacFarlane, 1986; Krahe & Fenske, 2002; Marušič & Peršak, 2011; Shinar, 1998; Stephens & Ohtsuka, 2014; Suhr & Nesbit, 2013; Tasca, 2000; Underwood, Chapman, & Wright, 1999). In the context of researching those proximal factors, the negative emotions, mostly unhealthy anger, lead (Bogdan, Mairean, & Havarneanu, 2016; Blankeship & Nesbit, 2013; Deffenbacher, L. J., Deffenbacher et al., 2003; Deffenbacher, 2016; Dula & Ballard, 2003; Fuller, 2005; Galovski et al., 2003; Howard, 2004; Lajunen, Parker, & Stradling, 1998; Sullman, 2014). But resultant Ellis (Ellis & Dryden, 1997) ABC model and Beck (1976) cognitive model, activating events in road traffic (like congestions, time pressure, noise, heat ...) don't influence on occurrence of unhealthy negative emotions, and consequently on tendencies to aggressive driving or aggressive driving. Unhealthy negative emotions can appear only after dysfunctional or irrational appraisal of inferences about activating event. Inferring and appraising are processes which are impossible without inner dialogue. Considering this interpretation, we can assume that inner dialogue co-influences on aggressive driving or just tendencies to this dysfunctional behavior.

Inner dialogue

Inner dialogue, which is in average performed in the 26 % of the awake state during the day by an individual (Heavey & Hurlburt, 2008), is a subject of the researches in various scientific disciplines and sub-disciplines: psychology, sociology, social psychology, neuropsychology, linguistics, anthropology, philosophy etc. In the scientific literature, one can also perceive many different denominations of the same construct. Inner speech, personal talk, self-talk, concealed talk, silent talk, word thinking, word meditation, inner monologue, inner dialogue, inner voice, word media, image media, speech media, listening-verbal media, and reflexivity are mentioned (Alderson-Day & Fernyhough, 2015).

Inner dialogue was a subject of the debates already in the ancient philosophy. In the Dialogue Theaetetus Platon wrote that Socrates named thinking as a dialogue of mind with themselves. When a mind thinks, it simply speaks to itself, it sets questions and provides answers (Burnyeat, 1990). Russian psychologist A. N. Sokolov in his work Inner

Talk and Thought states that in psychology a phrase “inner speech” usually means voiceless mental speech arising in the moment of thinking about something, planning, when we solve problems in our mind, recall what we read and heard, when we write, and read silently (Sokolov, 1972). In his researches, Bertau (1999) proved that the nature of the inner talk is dialogic. His idea of dialogic nature of inner talk is based on the presumptions of the dialogic and symbolic (semiotic) self (DeSouza, 2008).

The theory of the dialogic self, connects the concept of self and dialogue. The dialogic self is described as a dynamic diversity of self-positions, among which a dialogic exchange can be developed. Every self has its story based on own experience and views. Self is therefore a small society, a society of numerous selves, in which processes of inner conflicts are present, inner criticism, inner agreements, and self-advocacy are present. The basis for understanding a dialogic self is James' (1890) distinction between self as a subject (“I”), which changes, and self as an object (“Me”), which is relatively stable (physical, social, spiritual self). James as well as Mead (1934) attribute self the ability of independent decision-making (Hermans & Gieser, 2012). Also, the symbolic interactionist Blumer (1973) follows Mead's principle of the independent decision-making and states that people act on the basis of meanings attributed to objects and events. Meanings arise from interaction and change during the course of interaction (Morrione, 2004). Planning of action is possible on the basis of the inner dialogue or individual's reflexivity. As the psychologist Margaret Archer says, individual in the inner dialogue or reflexivity defines and clarifies their beliefs, views, and objectives, social circumstances and defines their actions (Archer, 2010).

In the context of reflexivity – in the form of setting and answering questions – inner dialogue assumes that the position of self is constantly changing from subject to object and vice versa. Self is a subject that sets the question in the inner dialogue, which is at the same time the object to which the subject can react. Also, a response in the form of an answer is an object to which a self as a subject reacts with a new question, whereas a new answer represents a new object, which is can again be followed by the question set by the object. This lasts until unity is reached, or the subject of conversation is stopped. In this circular process of reflexivity, individual's way of thinking is internally controlled, and their actions are guided (Archer, 2013). In this context, Pierce (1934) asks himself who sets and who answers the questions. He differs various phases of self: (1) Present self acting alone, but in constant dialogue with (2) future self (“You”) and (3) critical self (“Me”). Critical

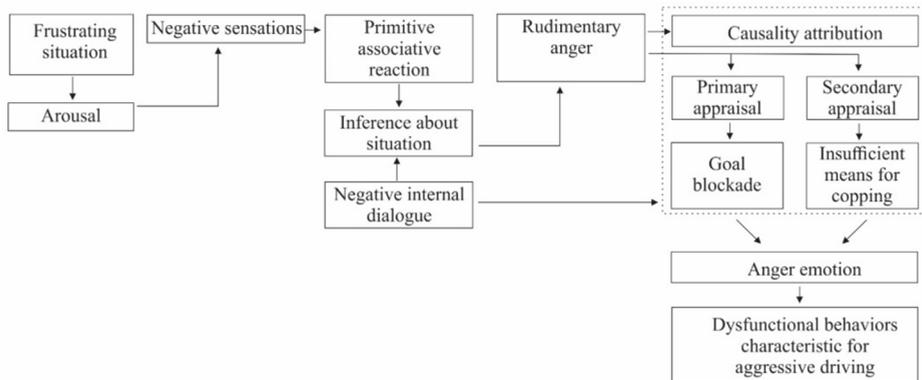
self is a past self that consists of habits, experience, memories, and inner insights; by the present statements, it directs an individual towards future. Therefore, in self-questioning “What to do?” critical self-forwards answers on the basis of the past experience or memories. Thus, we can talk about two forms of reflexivity: (1) A reverse reflexivity that relates to the past self or Mead’s “Me”, and (2) future reflexivity that applies to the conversation among the present and future self, which, in the course of time, is only waking up into life, the self, which was named tuism, I-thou by Pierce. Each of the both forms of reflexivity brings 180-degrees self-awareness, but only unified they ensure 360-degrees, comprehensive self-awareness. With the help of the inner dialogue as the intermediary of the reflexivity processes, past and future can be merged in the presence, which indicates the connection of the past, present, and future self into the construct of the complex self, a comprehensive self. As such, inner dialogue also has an important influence on individual’s processes of self-directing. These processes include the following: (1) Mental construction of possible functioning, (2) a choice among the possible ways of acting, and (3) behavioural implementation of the chosen operation. Thus, within the processes of self-directing, individual constructs, chooses, and implements. Primarily, the process of self-directing is located in the inner dialogue. Argument supporting this is that we can always listen to how dialogic self creates individual operation. Despite not perceiving the inner dialogue, it is thus unconscious, it still guides the choice among the possible forms of operation. When the choice is simple, the prior inner dialogue can be very short and only has the function of approving the chosen way of operation. When the choices are more complex, the inner dialogue is more complex and more systematic (Wiley, 2010).

When the need for the decision arises due to the inner conflict within self, a negotiating process is set up. In such negotiating, different self-positions defend their needs, wishes, worries, fears, and expectations. The purpose of such alternate communication is termination of a conflict followed by operation (Nir, 2012). The operation itself or merely a tendency for operation can be more or less functional regarding the rationality of the inner dialogue. Cognitive-behavioural approaches define inner dialogue as a conflict or constant fight among positive and negative statements for oneself, whereas negative statements, including mental errors, represent irrational inner dialogue that guides individual toward dysfunctional behaviour or operation (Ellis & Dryden, 1997; Meichenbaum, 1977; Schwartz, 1986).

Inner dialogue while driving

Unexpected traffic congestion as frustration (Shinar 1998; Berkowitz 1993), activating event (Ellis & Dryden, 1997; Trower, Jones, & Dryden, 2016) or situation (Allen, Anderson & Bushman, 2018) is by definition of aggressive driving (Shinar, 1998; Tasca, 2000) one of the factors which could impact on occurrence of anger emotions and consequently on occurrence of aggressive driving or tendency to aggressive driving. But this phenomenon is not sufficient by itself. When an individual run into unexpected congestion, which represent arousal (Pover & Dalgleish, 2010), negative sensations arise. Those sensations lead to primitive association reaction (Berkowitz, 1993). At that level appears an individual inference about the situation (Ellis & Dryden, 1997; Trower, Jones, & Dryden, 2016). Irrational beliefs (Ellis & Dryden, 1997) in those inferences can influence on occurrence of rudimentary anger (Berkowitz, 1993). Thoughts of higher order or appraisal follow. If the situation is evaluated as frustrating blockade of an individual's goal (Lazarus, 1991) in which an individual doesn't have sufficient resources to getting by (Allen, Anderson, & Bushman, 2018) there could arise anger emotion which leads to tendency to dysfunctional behaviour or dysfunctional behaviour itself characteristic for aggressive driving. That could be weaving in and out of traffic, non-cooperation with drivers unable to merge or change lanes due to traffic conditions, taking advantage self-confidently, impatient horn-honking, light flashing, rude gestures, dirty talk ... (Tasca, 2000). In that process an importance of internal dialogue as important means of self-management (Bandura, 1997; Brinthaup & Dove, 2013) turns up in two segments. First at inferencing about the situation. Where negative internal dialogue can lead to rudimentary anger. And second in processes of attribution of causality. In those processes an individual is looking for intentional or intentional causes for the situation, and appraising it as blockade on the way to his goals. This blockade is appraised as unbearable or is overgeneralised.

Figure 1. Theoretical model of the impact of internal dialogue on aggressive driving.



Source: modified by Allen, Anderson, & Bushman (2018, p. 76); Berkowitz (1993, p. 54); Ellis & Dryden (1997, pp. 52–54); Pover & Dalgleish (2008, p. 86); Shinar (1998, p. 140); Trower, Jones, & Dryden (2016, p. 9).

Method

As the inner dialogue is a subjective experience of each individual, we have chosen a phenomenological approach that imposes understanding and explanation of many various experiences of individual to the researcher (Mesec, 1998), and within that, also a qualitative method of a semi-structured interview. Semi-structured interview encompassed five short open questions on the inner dialogue during car driving. In that way, we have also avoided the possible suggestions regarding the function of the inner dialogue that could be represented by the closed-type questions. The participants of the survey were asked the following questions: (1) whether and to what extent you are aware of the inner dialogue while driving a car; (2) describe your inner dialogue while driving; (3) did inner dialogue evoke any feelings; which ones; (4) how would you describe your driving; and (5) can inner dialogue affect your driving.

Sample description

We invited twenty-nine Slovenian driving-licence holders who have driven a car in the last twelve months. The sample, which is not representative and cannot be generalized to population, is represented by twenty-nine drivers (N = 29), eleven females (37,9 %) and 18 males (62,1 %). The average age of participants was 37,4 years (SD = 5.98).

Data analysis

Transcripts of thirty semi-structured interviews were coded. In the first step, we searched the key concepts in the participants' answers. In the next step, we joint the related concepts into categories, whereas categorization is understood as the definition of the overarching term or common denominators of the related concepts (Mesec, 1998).

Results and discussion

All twenty-nine participants were aware of their own inner dialogue while driving the car. On the Likert scale from 1 to 10, where 1 meant that the participant is almost not aware of the inner dialogue, and 10 that they are very well aware of the inner dialogue, the participants evaluated the awareness of the inner dialogue at an average of 7.38 (SD = 1.24).

In accordance with the Inner dialogue scale, the related concepts perceived in inner dialogues were grouped into four categories representing five basic functions of the inner dialogue: (1) self-directing, (2) evaluative, (3) self-critical, and (4) self-encouraging function. The self-directing function assesses general self-regulatory inner dialogue (e.g., giving oneself instructions or directions about what to do or say or needing to figure out what to do or say). The evaluative function refers to inner dialogue related to a person's social interactions (e.g., replaying something said to another person or imagining how other people responded to things one said). Self-criticism refers to inner dialogue regarding negative events (e.g., feeling discouraged about oneself or criticizing oneself for something one has said or done). Finally, the self-encouraging function reflects inner dialogue that focuses on positive events (e.g., feeling proud of something one has done or when something good has happened) (Brinthaupt & Dove, 2012).

We detected negative inner dialogue at thirteen respondents: "Fucking idiot!", "Inept wimp!", "Are you crazy?", "Are you alone on this road, moron?", "Stupid bonehead!", "Who gave you a licence?", "If you can't drive, go with bus!", "Fuck, what is she doing? Stupid women!", "Look at that fool!", "Fuck off!", "What are you doing, jackass?", "I'm in a hurry, get off me!", "Son of a bitch!", "Shit!", "Fuck, how he is driving?", "Who gave you a licence? I am sure that driver is a woman", "Are you stupid?", "Not again, fuck!", "Are you normal?", "That is sick!", "Get off!" In all cases negative inner dialogue was intended to third person and it had an evaluative function. That kind of inner dialogue was a reaction on other driver's behaviour, which was evaluated as frustration for the respondent. Triggers were unexpected traffic situations and astonishment at traffic events.

In other cases inner dialogue was positive. In most cases with evaluative function, when respondents were asking themselves about the traffic situations: "What is going on?", "What he will do next?", "What he is doing?", "What is he thinking?", "Oooo!", "How could he done that?", "That wasn't so safe for the driver and other participants!", "Stupid overtaking!", "I can't believe!", "Look how he is driving!", "Where is he looking?", "What is wrong with him?"

As part of the positive inner dialogue we also detected self-directing function: "Stay cool!", "Be cool, everything will be all right!", "Calm down!", "Don't rush. You have a plenty of time.", "Stay cool, you can't do anything!", "I have a child in car, and he is driving aggressive. Let him pass you!", "Slow!", "Forget that! We all do mistakes.", "What shall I do?", "How can I turn?", "Slow down!", "Be careful!", "Be tolerant!", "Carefully!"

That kind of inner dialogue was arising in situations when respondents were asking themselves how to act in the continuation, or when they were attentive on action in their surroundings. Opposite to negative inner dialogue, which was intended to third person, self-directing and evaluative inner dialogue as positive ones, were addressed inwards, to the person, which was performing inner dialogue, as also Hurlburt and colleagues demonstrated in their research (Hurlburt, Heavy, & Kelsey, 2013).

It has been shown that in self-directing function fragmented inner dialogue, that is, inner-dialogue in the form of second person statements (you can do it) and use of the imperative (drive carefully) was used. Fragmented inner dialogue should arise in situations requiring behavior regulation. An argument for this assumption is that, developmentally, the conscious control of human behavior is executed by somebody other than the actor, such as a caretaker or teacher. Therefore, initial commands associated with behavior control should have been committed to memory in the second person (Rieber, 1999), suggesting that future verbal executions may proceed in a similar fashion. What was fragmented because the commander and the actor were physically independent may engender self-fragmentation within an actor using the same communicative schema to self-command (Zell, Warriner, & Albaracin, 2012).

We also detected self-encouraging function within positive inner dialogues of respondents: "I have done everything, what was possible.", "Everything will be OK.", "That is the part of life.", "It is not my fault.", mostly, when they wanted to calm down themselves.

Most drivers with negative inner dialogue while driving report about unhealthy negative emotions anxiety and anger as a result of that kind of inner dialogue: "I'm nervous when my expectations do not come true.", "I am angry when other drivers drive too slow.", "I am upset when I look at those morons.", "Anxiety. My heart starts beating faster when someone flashes his lights.", "I am nervous and angry when I am in a hurry." Even in theoretical concepts (Deffenbacher, Deffenbacher, Lynch, & Richards 2003; Deffenbacher, Lynch, Filletti, Dahlen & Oetting, 2003; Deffenbacher 2016; Jovanović, Lipovac, Stanojević, & Stanojević 2011; Tasca, 2000; Shinar, 1998) anger is that kind of emotion which stimulates an aggressive driving. Respondents also mentioned combination of anxiety and anger. Because of threatening situation first emotion is anxiety. When the driver calms down, arises an anger, interrelated with negative inner dialogue which is intended to scold the perceived behavior of other drivers. Fear is usually associated with self-directing inner dialogue, with giving self-directions how to respond in a specific situation.

We split up driver's descriptions of their driving styles into two categories: defensive and aggressive driving, according to theoretical definitions (Tasca, 2000). Defensive drivers drive calmly, safely, carefully. They pay attention to what is happening in surroundings, adjusting the speed to traffic conditions, predicting situations ... For those respondents is also significant, that they are aware of their mistakes behind the wheel. Regarding to Reason (cited in Delhome et al. 2009, 44), are those mistakes mostly lapses and slips: "Usually I drive carefully. Sometimes I forgot to turn on the indicator.", "I am trying to be a safe driver, sometimes mistakes just happen.", "I am careful and tolerant driver, but sometimes I drive automatically, I am just not aware of driving.", "I'm paying attention when there's a bigger crowd, but while driving at night I am thinking about other stuff, not about driving.", "I am a good driver, but I am also aware of my mistakes."

On the other side, respondents, which driving was categorized as aggressive, most times drive too fast and don't consider speed limitation. According to Reason (cited in Delhome et al. 2009, 44) those unsafe acts are intended violations. Those respondents also expose their intolerance and superior driving abilities and according to Tasca's definition (Tasca, 2000) all of this is typical for aggressive driving: "I prefer to be quick as a slow driver.", "I am very good driver in terms of the rest.", "I drive very fast on motorway.", "My car is old, but I can overtake BMW or Audi!", "I always control the situation!", "I know I am a good driver, dynamic, proactive ...", "I know my limits and limits of my car."

All respondents answered that inner dialogue can affect their driving in both directions, it can affect more aggressive driving or more defensive driving. They believe, they can calm down themselves with positive inner dialogue. We recognize that respondents with more negative inner dialogue report about more aggressive driving than those with more positive inner dialogue.

Conclusion

According to data analysis we can conclude that one of internal factors, influencing driving style is also inner dialogue. Most of respondents are aware of their inner dialogue while driving. Inner dialogue of aggressive drivers is negative, and drivers with negative inner dialogue more frequently conduct behaviors which are distinctive for aggressive driving. Positive inner dialogue is related with behaviors which are distinctive for defensive driving. According to reports of our respondents, three of four functions of inner dialogue were present while driving a car: self-directing, evaluative and self-encouraging function. Self-critical function wasn't recognized. Evaluative function was recognized as negative inner dialogue, causing aggressive driving. Self-directing and self-encouraging functions of inner dialogue are helpful to drive defensively, they don't evoke unhealthy negative emotions and can help the driver to handle specific situation more effective.

We are aware of the limitations of our research. The biggest one is application of self-assessment questionnaire. Reporting about types of inner dialogue is subjective, as well descriptions of driving behaviors. Because of that there is a big challenge for further researching of impact of inner dialogue on aggressive driving. By all means to find method which could provide more objectivity in data collecting, as far as researching of inner experience could be objective. One option is observation with participation in real setting. Second option is experiment in driving simulator. But in both options loss of anonymity could be a problem, when reporting about inner dialogue, and conducting behaviours, social acceptability factor could affect respondents self-reporting and behaviors.

By all means according to our results of the research we can consider in a way of prevention proceedings in road traffic. Learning how to perceive and change the inner dialogue could be one of the preventive actions for decreasing aggressive behaviors behind the wheel. Learning identifying dysfunctional thoughts and cognitive distortions, cognitive restructuring, alternative positive inner dialogue while driving could be some steps to increase safety on our roads.

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