

## **The Creative Meditation Technique as a Psychological Tool in Acquiring Defensive Driving Skills**

**Emil R. Gâtej\*<sup>i</sup>, Laurențiu Mitrofan\*\*<sup>ii</sup>**

\* Psychology Department, University Hyperion of Bucharest, Bucharest, Romania

\*\*Psychology Department, University of Bucharest, Bucharest, Romania

### **Abstract**

**Introduction:** *The Unifying Creative Meditation, used as an emotions carrier, becomes an access gate towards the cognitive area of the brain and it helps establishing some pieces of knowledge meant to keep the participants in such a programme safe on public roads. The combination between the technical field, meaning the computerised simulation, and the profoundly humanistic field of the human psyche turn this training into an interdisciplinary product that sends deep roots in the social area, and it is constructed in such way to impact each beneficiary in a specific way. Purpose: Outlining a new approach model, of the experientialist type, starting from the informational and operational resources in the field, by reviewing similar research projects and studies.*

**Methods:** *literature review.*

**Results:** *Setting a landmark for our activity so far and presenting a starting point for the development of new humanistic training programmes for driving vehicles. Setting out the humanistic psychologists' preoccupation with the cultural particularities of traffic in Romania, wishing to help reduce the number of accidents on the roads in a profoundly humanistic manner, which can be then applied worldwide, with some small adjustments, in order to save human lives through prevention and awareness.*

**Conclusions:** *The training based on Unifying Creative Meditation focused on developing the abilities to drive vehicles improves the individual's life quality through emotional development, learning procedures, knowing, mindfulness, and awareness, with the purpose to increase safety on public roads and to save lives.*

**Keywords:** *creative meditation, defensive driving, awareness, personal development*

---

<sup>i</sup> Corresponding author: Emil R. Gâtej, PhD, Department of Psychology, University Hyperion of Bucharest, Calea Călărașilor, Nr. 169, Bucharest, Romania. Email: emilrgatej@gmail.com.

<sup>ii</sup> Corresponding author: Laurențiu Mitrofan, PhD, Department of Psychology, University of Bucharest, Șos. Panduri, Nr. 90, Bucharest, Romania. Email: laurentiu.mitrofan@fpse.unibuc.ro

## **Introduction**

In general terms, meditation is a biophysical mental phenomenon describing a state of attention to a thought, experience, consciousness, subconsciousness or unconsciousness (Gâtej, 2011). Over time, meditation underwent a complex process of definition, often contradictory. In the beginning, the definition of meditation was defective and often “mystified”, gradually moving towards a definition resulted from the encounter between the most advanced and modern methods of science. In this context, specialists in neurosciences have shown that there is a significant change in the brain activity of the persons who undergo a modified state of consciousness such as meditation. Modern techniques of brain imaging indicate a movement of waves specific to brain functioning from the right frontal cortex (the area specific to stressful activities) towards the left frontal cortex (the area of calm and relaxation). Behaviourally speaking, this modification is reflected in a state of wellbeing and calm, leading to the limitation of the negative effects of stress, depressive states and anxiety. Moreover, there was noticed a certain modification – the reduction of the activity in the amygdala area, the centre which is responsible for inducing fear.

Meditation is one of the most known ways to access modified states of consciousness, not only in eastern practices, but lately in western practices as well; as the level of the attention focus gets higher, unsolved psychological conflicts tend to emerge and the individual becomes aware of his/her own limits, so he/she can ameliorate his/her psychological development (Vasile, 2009).

Physiological results demonstrate the presence of some hypometabolism phenomena during meditation. Research referring to the bioelectrical flow of the brain revealed the existence of some manifestations observed through EEG, which are specific to meditation. These demonstrate a relaxation of the cortex and a great synchronization, with the predominance of alpha waves (7-14 cycles/second). Even deeper relaxations were registered in those who had been practicing meditation for a long time (theta 407 cycles/second) as well as a development of the capacities specific to the right hemisphere (Manish et al., 2010).

## **What is the unifying creative meditation? Origins and particularities**

The Unifying Creative Meditation (UCM) is a special type of meditation. It partially falls under the types of meditation using inner perception. These types

are characterized by the cultivation of awareness and attention, each and every moment, in relation to the present experience. The UCM is an intercession of transcending common consciousness, only focused on causal type of interactions; moreover, it is an integrative intercession in which the polarities within the human being tend to unify in a whole of resources meant to determine the individual look at reality from different perspectives and choose the one appropriate to their personality system. As well as in the case of other types of meditation, the effects of practicing this type of meditation have been observed over time. Persons who practice personal development techniques based on creative meditation manifest several improvements in their life quality due to the subjective increase in wellbeing, improvement of creativity in the personal field, lowering-in the level of depression and anxiety states, a higher level of independence achieved by activating one’s own resources, increase in self-confidence, and self-respect by discovering creative ways of acting and by creating some new strategies of optimal adaptation to reality.

*The meditative state* is one of the structural dimensions of meditation, which Maslow (1962) described as *inner enlightenment*, namely a feeling of vital, spontaneous, but ephemeral plenitude. The same author named this consciousness state – *peak experience* – which is similar to those moments of inner respite, specific to *Za-Zen* practices and to meditation (Maslow, 1962).

One of the Hindu spiritual leaders identified two steps in meditation: “the first one, the active one, cannot be called meditation, but a form of relaxation and the second one, which is truly meditation, a completely inactive factor, just passive awareness” (Rajneesh, 1972).

It is well known that hypnosis implies entering a modified state of consciousness; just like hypnosis, meditation implies entering the same kind of trance, a modified state of consciousness. In this case, the right question is: are, in fact, hypnosis and meditation the same thing or, on the contrary, are they different?

At this point, it is worth mentioning the major distinction between the two experiences, targeted by the present analysis. This distinction is rather connected to the intensity of the experience than to its quality. In hypnosis, the contact between the subject and the external environment is very limited. The egress from the hypnosis state is followed by confusion because the subject cannot remember what happened to

him during the trance. On the other hand, meditation states can often be experienced even spontaneously; the explanation lies within the fact that these states are less deep than the ones from hypnosis. Meditation has less dangerous implications than hypnosis and it can be experienced by everyone, sometimes even spontaneously. Specialists also talk about some mild states of trance; they only imply the focus of attention, which results in cognitive and perceptive modifications. Basically, our pattern of perceiving external and internal reality decreases and thus the effect of *trance* appears (Holdevici, 1991).

The meditation technique is “a highly effective method of reducing stress” (Thomson, 2000). This author highlights a series of specifications from his personal practice: “If we have to deal with certain anxious feelings, meditation will lead to their reduction through the induced calm. Moreover, meditation facilitates mental health because it brings a higher level of self-acceptance and self-knowledge” (Thomson, 2000).

Mark Epstein, a psychiatrist from New York and practitioner of meditative techniques, believes that, besides the positive effects in diminishing anxiety, special attention should be granted to an important risk: once you lose the censorship of attention, an extremely risky “channel” may open up and uncontrollable anxious states may emerge through it (Epstein, 1991, apud Barbor, 2001). This assertion makes many authors militate for combining meditation, regardless of its type, with psychotherapy. “Both therapeutic processes bring the client back to the present and lead to the diminution or annihilation of defences” (Thomson, 2000).

An important, defining aspect for creative meditation is the conceptual and applicative delimitation of this technique. This technique does not annul consciousness and does not lead to losing control over one’s own psyche, but mediates the access to the individual’s inner resources and possibilities, increasing the mindfulness level (Gâtej, 2013). The idea postulated by Thomson (2000) according to which the combination between meditative techniques and psychotherapy is useful because they both bring the client back to the present, focusing on “the here and now” and on the client’s available resources, as supported by the Unifying Experiential Therapy as well (Mitrofan, 2008). An important step in conceptualizing this way of accessing a modified state of consciousness, used for therapeutic purposes, we reckon is the specification and the brief analysis of the psychic processes, functions and mechanisms involved

in constituting it. To enumerate them, we can assert that representation, thinking, imagination, memory, language, attention, will and affectivity play a special part in the unfolding of a restructuring process. During the meditative processes, attention has an essential role.

Creative meditation can also be defined as a therapeutic psychic state, in which the subject focuses his/her inner attention and his witness state on his Self, contacts his/her own inner states and feelings, by noticing, creating and activating his/her own informational flux of sensations, perceptions, emotions, feelings, images, thoughts and actions; the person is not disconnected from his/her psychic system – as in other types of meditation – on the contrary, he or she becomes an active part in processing psychic information. This meditative process, using metaphor to access deep emotions, constitutes itself in a transconscious process, which unifies and activates the individual’s inner resources (Răban-Motounu, 2014).

### **What is defensive driving?**

The defensive driving concept refers to the capacity to manifest a defensive attitude towards the mistakes that can occur in traffic caused either by you or by other participants. From the psychological point of view, this concept includes a state of mindfulness, awareness and empathy, presence of mind and the capacity to make decisions quickly in the context of here and now (*hic et nunc*). The defensive driving concept implies the awareness of potential problems and taking action to avoid them before they occur, not just reacting correctly in limit-situations, but also anticipating the potential ones (Lund & Williams, 1985).

Most drivers respond to what happens around them, but do not adequately take into account the potential danger of various situations. The goal of the experiential learning of defensive driving is to become a driver that is less reactive and more proactive. Risk reduction by avoiding dangerous situations helps maintain road safety.

There are two perspectives in the specialized literature when one deals with the defensive driving concept. The first perspective postulates the fact that a responsible driver with the necessary aptitudes for driving must never end up in a limit-situation. From this perspective, preparing oneself before driving and acquiring a defensive driving style entails safety and, basically, the impossibility of reaching a dangerous limit-situation. The second perspective postulates the fact that limit-situations are inherent and are not necessarily caused by the driver’s poor preparation or

dangerous behaviour, but most of the times they derive from the simple physics laws or from the traffic participants' mistakes and the preparedness to react correctly in such situations can constitute a real life-saving mechanism (Lund & Williams, 1985).

During the defensive driving training programme through meditative techniques, we witness a synthetic approach in which, based on the two perspectives, we try to prepare participants emotionally and cognitively for driving vehicles in maximum safety conditions.

### **Computerised Programs in Developing Drivers' Attitudes and Behaviours**

Studies have shown that distracted drivers manifest slow reactions and responses and that they are prone to missing important information in traffic (Alm & Nilsson, 1994; Brookhuis, de Vries & de Waard, 1991; Horrey & Wickens, 2006; McKnight & McKnight 1993; Strayer & Johnston, 2001); in addition, studies have also shown that drivers have a higher risk of accidents when they use their mobile phone while driving (Laberge-Nadeau et al., 2003). Young drivers represent an important group for the aimed research because they tend to be the group with the most users of new technologies, including the ones that can be used during driving, such as mobile phones, texting, MP3 music player and other players (Lee, 2007); moreover, young drivers tend to get involved in activities with a greater potential for distraction during driving in comparison with middle-aged adults and older people (Lerner & Boyd, 2005).

A series of research investigated the effects of a training module based on computer simulations regarding the development of some attitudes and behaviours in the case of drivers who are under the pressure of attention distraction in the vehicle. The results of the research conducted by Horrey et al. (2009) highlighted the fact that the drivers pertaining to the group undergoing the training module based on computer simulation registered a decline in the tendency towards engaging in distraction activities (for instance, as far as the use of mobile phones is concerned), along with an appropriate increase in the perceived risk. Furthermore, the drivers from the group benefitting from the training have more chances to correctly perform the necessary tasks for driving the vehicle safely. Another aim of this study was to examine the effect of a training module based on computer simulations regarding the process of making decisions while driving and the results indicated an improvement in drivers' metacognitive abilities, the same drivers also

demonstrating a better strategic adaptation to the increase in the tasks of the roadway (Horrey et al., 2009).

Although, ever since the early '70s, a series of educational programmes have aimed at increasing the awareness of risks and at reducing accidents, reality has demonstrated that results were not as expected. There have been few modifications in the drivers' training content or methods over time, however, advanced computer programs have been developed lately; these use videos or photorealistic simulations of risky traffic scenarios requiring quick responses without jeopardizing the participant. As far as the proliferation of these types of programs is concerned, the assessment of their efficiency represents a major challenge. The effects of a driving simulator have been investigated for experience and risk awareness, by using three groups of drivers: a group trained on PC (young drivers without any experience) and two groups that did not benefit from any PC training (a group of young drivers with no experience and a group of drivers with experience). Generally, the young ones, the unexperienced drivers who were trained on PC engaged in risky scenarios in significantly different ways from the young drivers who were untrained and unexperienced, and in terms of risk exposure, their behaviour was generally similar to the experienced drivers' behaviour (Fisher et al., 2002).

Research suggests that the training programmes of awareness of the risks based on training programmes performed on PCs have the potential to reduce the high rate of accidents among young drivers with no experience. A study conducted by NHTSA in 1993 showed that amongst the main reasons for the involvement of young drivers in accidents one could find the lack of experience, the high propensity to take risks and immaturity. Studies that are more recent suggest that the lack of experience is responsible for 70% of the accidents amongst young drivers (Gregersen, 1996). Empirical experience has shown over time that an extremely severe effect of the lack of experience is that of the incapacity to manage the vehicle in limit situations. Difficult scenarios, as they were called by specialists, are impossible to handle by young drivers because the ability to manage emotions is fundamental in order for the higher cognitive level procedures to be implemented at behavioural level when behind the wheel. (Mayhew & Simpson, 1995; Ranney, 1994)

Despite all these, given the advanced video possibilities of modern PCs, the training of awareness of risks can now include images of real risky scenarios over which a trainer has a certain control. A series of

researchers made use of this technological development to create programmes especially designed to train abilities to become aware of risks (Blank & McCord, 1998; Lonero, Clinton & Douglas, 1998; McKenna & Crick, 1997; Regan, Deery & Triggs, 1999; Triggs, 1994; Triggs & Regan, 1998; Triggs & Stanway, 1995; Willis, 1998).

As far as the long-term effects of the PC assisted training are concerned, we notice that the young drivers' awareness increases significantly in the first two weeks after attending such training. It would also be useful to investigate if the training effect is still present after six months, thus covering the critical vulnerability period of a beginner teenager driver. It would become defining for the future studies in this research direction (Fisher et al., 2002).

When reviewing young drivers' training programmes for hazard anticipation, Mc Donald et al. (2015) revealed the fact that most of them used a variety of training methods, including interactive programs on PCs, video materials, simulations or a combination of approaches. The effects of the training by means of these programs were mainly measured through computer testing and eye tracking driving simulation. In all studies, the results highlighted the fact that young drivers presented an improvement in the results regarding danger anticipation, after the formative training.

A great deal of experimental research shows that beginner drivers have deficits especially in the relevant cognitive abilities for driving. Thus, there were noticed differences in perceiving danger and situations of awareness of danger between beginner drivers and experienced drivers (Whelan et al., 2004). A model proposed by Gregersen and Bjurulf (1996) tries to explain the involvement of young people in driving accidents. The social circumstances and the individual context, as well as the learning process, are identified as causality factors inevitably influencing the involvement in accidents. The social influence and the individual emotional context create the preliminary conditions that favour the occurrence of accidents among young drivers. Subjective factors are different in young drivers and they fundamentally influence the time and cause of the accident, creating this predisposition of young drivers to be more involved in such accidents as opposed to older drivers. At the same time, the lack of driving experience, and consequently, the underdeveloped abilities necessary for driving safely constitute the most accentuated predisposing factor (Gregersen & Bjurulf, 1996).

Various deficits in the cognitive abilities, such as danger perception, seem to have a great influence upon the younger drivers' involvement in traffic accidents. Nonetheless, the conventional forms used for training the drivers, more than often, do not succeed in developing abilities that are supposed to exceed the limits of some descriptive knowledge of driving. The Computer Based Training has the potential to stimulate new modalities to deal with the problems occurring during driving activity. The study conducted by Petzoldt et al. (2013) emphasized the role of developing a computer based training programme necessary for filling in the gaps in the already existing drivers' training programmes. By approaching the topic of cognitive abilities, a new perspective on making decisions while driving has been tackled. The computer based training used video sequences, illustrating driving situations with a potential for danger, and included questions with several types of answers and a differentiated feedback, to increase the level of development and comprehension. In order to test the effects, a sample of beginner drivers was included in a computerised training, another sample in a paper-based type of training programme and a third sample did not benefit from any training. The experiment on the simulator confirmed the fact that the participants pertaining to the first sample showed better results after the computerised training, than the other two samples. The results refer to the critical situations that they had dealt with and to a much clearer perception of danger within the visual field. We can therefore draw the conclusion that the computerised training can constitute a complementary modality of developing the cognitive abilities necessary for driving safely. The results of this study, based on computerised training aiming to improve visual perception, reveal the fact that this type of training has a positive effect. The analysis of the results has shown that the participants pertaining to the experimental sample detected the danger indicator more quickly than the participants from the control sample or those from the paper-based training. The results support the hypothesis according to which the computerised training represents an efficient manner of acquiring the abilities necessary for driving vehicles.

### **The psychological training for driving – previous research**

As the principles of gestalt therapy postulate, there are three types of psychological boundaries: wall-type impenetrable boundaries, inexistent boundaries and filter-type boundaries (Perls, 1973). This principle presents great significance for the field of driving

vehicles. The wall-type boundaries manifest in those persons who are self-centred and focused on their own vehicle, which inevitably leads to the transformation of some important stimuli in noise-type stimuli that will not be intercepted at a conscious level. Accidents may occur in this case by omitting stimuli and because of the tube effect. The inexistent boundaries lead to the incorrect evaluation of the surrounding environment under the effect of an optimistic bias. Persons manifesting boundaries disorders in this direction will handle the wheel without checking the mirrors and they will do dangerous or inadequate manoeuvres in relation to a certain context. Their slogan in terms of danger is “it cannot happen to me”. The accidents they are prone to are caused by not being aware of the traffic context, incautious manoeuvres and by not adjusting the speed to road conditions and everything included.

Defensive driving offers limits, but also the necessary resources for the functional filtering of reality. Approaching reality responsibly offers the possibility of a safe trip with an increased degree of psychological comfort. Functional filters refer to the protection from one’s own probable mistakes and to the defence against others’ mistakes. This approach of defensive driving requires a mediator who can help acquire a healthy boundary system, which can provide a correct calibration for emotions, cognitions and actions in our day-to-day reality or in front of exceptional situations that might occur.

In previous research, we revealed the effects of the experiential training, unifying creative meditation, as well as the effects of aggressiveness and anxiety on the performance behind the wheel, thus validating the method of training the driving activity through creative meditation and of the experiential type of training. One of our first studies, *The Effects of Unifying Creative Meditation on Drivers’ Attention*, aiming at revealing the effects of unifying creative meditation, is a study conducted on a relatively large number of participants, which constituted the foundation for further research and for the development of the programme used today within the research infrastructure in the field of road safety. The aim of this research was to check the effectiveness of the unifying creative meditation programme doubled by a computer-simulated programme in increasing attention and vigilance as parameters of safe driving. We developed a training programme of 8 sessions. The 160 participants were equally divided in an experimental sample and a control sample. The experimental sample benefitted from the training based on unifying creative

meditation and computerised simulation of driving. The sessions were focused on the driving activity and all the involved details. The research hypothesis, according to which the training based on unifying creative meditation and on computerised simulation leads to increased attention and vigilance while driving, has been confirmed due to the significant difference between the two tested samples. The experimental sample had much better results in “the effectiveness of attention” parameter, as compared to the control sample (Gâtej & Golu, 2013).

*The Effects of Unifying Creative Meditation on Drivers’ Attention* represents an experimental study supporting the idea of the positive effects of creative meditation on the driving activity, revealing the effects of unifying creative meditation on young drivers’ attention. This study also aimed at discovering the gender differences as far as the receptiveness to the unifying creative meditation-based training is concerned. The results highlighted some statistically significant differences regarding the training based on unifying creative meditation and gender differences. Women tend to be more receptive to the meditative-type of sessions than men are (Gâtej & Golu, 2013).

The study *Experiential Learning with a Role in Decreasing Traffic Aggressiveness* revealed the fact that the experiential type of training presented effects in reducing aggressiveness and in acquiring correct procedural reactions, as well as in becoming aware of the negative effects of breaking the rules as a consequence of uncontrolled emotional reactions (Gâtej & Maier, 2016).

Aggressive attitudes behind the wheel, as well as aggressive-type emotional states lead to inappropriate reactions in specific situations of danger, which are due to the unawareness of the procedures to be followed and which are altered by an aggressive approach of the driving activity. In the study *Effects of Aggressiveness on the Performance of Handling a Swerve Vehicle* (Gâtej et al., 2016), we used the Pearson correlation test as a statistical procedure and we revealed a significant correlation between the reaction of getting out of a skid and the driver’s aggressiveness level. The simulator measured the capacity to manage a skidding vehicle and the results were correlated with a test that measured the driver’s aggressiveness level. The results have shown a statistically significant negative correlation for the 30 tested subjects. This correlation is translated into the fact that correct, non-instinctive reactions are affected when negative emotions appear. Hostility, as a parameter of aggressiveness, strongly correlates with the wrong

reaction in case of skidding. Therefore, the management of emotions while driving is very important and the psychological assistance in this matter is highly necessary.

The results revealed in the study *The Effects of the Experiential Learning upon Drivers' Reactions in Case of a Side-Slip* have shown the importance of the bidirectional intervention consisting in both defensive driving and psychological training for controlling emotions and procedures behind the wheel. Significant improvements in the reaction in case of a side-slip have been noticed after the participation in an experiential training and the meditative and experiential intervention has led to the acquirement of much faster and more efficient defensive driving reactions (Gâtej & Maier, 2016).

An extremely important factor involved in driving automobiles is also anxiety as we have already shown. A great deal of drivers report phobic or anxious reactions in a particular traffic situation (left turn, close turns, changing lanes manoeuvres etc.) or even worse, during the entire activity (Matthew et al., 1982). Based on these observations and reports, we developed a programme of treating driving anxiety, considering that it may be a factor with an extremely dangerous impact. *The Effects of the Unifying Creative Meditation Technique as a Treatment of Self-Reported Anxiety in Romanian Amateur Drivers* represented one of the studies that validated the method developed in 2012, especially focused on young drivers dealing with such problems. In this study, we attempted to demonstrate the beneficent effects of the unifying creative meditation in reducing anxiety by applying an improvement and calibration technique on young drivers, based on what researchers call a defensive driving style with a low level of anxiety and aggressiveness (Gâtej et al., 2014). This idea was also supported by the study conducted during the same year, which included some psychophysiological measurements, namely *The Unifying Creative-Meditation Technique and the Physiological Measurement of Anxiety in Romanian Amateur Drivers*; once again, this study demonstrated the effects of unifying creative meditation on anxiety, effects measured this time in physiological parameters (blood pressure and pulse). The conclusions of the study also revealed the significant positive effects of creative meditation as far as driving performances and safety are concerned (Gâtej et al., 2014).

In conclusion, considering both the previous studies and the currently unfolding studies, we can

state that the creative meditation technique combined with defensive driving spreads their effects upon 3 fields: hitting the brake (attention and reaction time), skidding (response to the skidding situation in order to regain control) and awareness as a general parameter of attention while driving.

### **Defensive driving training programme based on unifying creative meditation**

Based on the beneficent effects of meditation in personal development, in 2012 we started developing a programme for reducing anxiety and acquiring a defensive way of thinking while driving. This way of thinking is addressed to those who cannot safely carry on this activity out of psychological reasons, as well as to those who wish for an increase in the level of mindfulness and performance in relation to what represents today the riskiest activity performed daily. Over time, there have been several forms of this type of training, but as of 2010 the infrastructure, from which the training benefitted, has been different. In the beginning, the initial training programme consisted in creative meditation and computerised simulation. The first improvement to this programme was the use of meditation before and after the driving sessions in traffic. At present, the programme has come to integrate all these methods and to be adjusted according to the beneficiary's needs within an infrastructure especially designed for road safety (Aur, 2016).

Following the structure of the unifying therapy which implies using three filters for reality testing – sensorial, cognitive and emotional (Mitrofan, 2008), we developed this programme which aims at optimising and learning the driving activity.

The structure of the training programme is made up of three fundamental modules in this order: **setting the theoretical knowledge** in the field of defensive driving, **assistance through counselling and personal development** based on creative meditation as the cognitive and emotional foundation of driving, **implementation** into reality through the experiential training, by using different types of simulators and by driving on a public road and attending a session of commentary driving with the trainer.

After we create a meaningful map of the activity and the awareness of the parameters related to the dynamics of the vehicle and to the context in which the driving takes place, the fundamental role is taken by the **assistance through counselling and personal development based on creative meditation**. This module consists of a series of 8 stages centred on

meditation meant to prepare the brain and the psychological processes for the driving activity.

The first stage aims at developing the level of awareness of one's own reactions when driving and at reducing anxiety through relaxation, a particular relaxation that emphasises the advantages of travelling by car and the creation of a feeling of awareness of the environment around the car. This stage has the role to defocus the person from anxiogenic stimuli and it constitutes a phase preceding the mindfulness state, which is extremely important for driving. A determinant role in car accidents is played by the so-called "tube effect", which implies the isolation of the individual from the exterior or the context, maintaining his/her look forward, not taking into account the peripheral vision. In this case, reactions appear too late and the danger to hit other cars or people intersecting the moving trajectory is almost imminent.

The second stage emphasises on the emotional reactions, which play a fundamental part in the field of attention and behaviour. In this stage, in the meditative exercise, the subject goes through various emotional states, both pleasant and frustrating, and situations from daily traffic. The analysis of what they experienced leads to a higher understanding of themselves, which also leads to a better management of the emotions influencing reactions and behaviour while driving (anxiety, aggressiveness, frustration states, anger etc.).

To continue this meditative phase, the third stage is a module of awareness of the way in which we tend to react when we are sad, angry or happy while driving. The tendency to project our emotions onto other traffic participants leads to experiencing more powerful emotions which are somehow taken out of the context. These emotions can lead to dangerous behaviours or emotional states with no real correspondent in the context, negatively influencing the driving activity and the driver's subjective state.

In the fourth stage, we will explore, at meditative level, the possible reactions in various traffic situations, including in highly dangerous ones. The exploration of these possible reactions leads to an increased level of self-knowledge and to the creation of a foundation for the development of correct reactions, which often do not subscribe to the area of instinctive reactions. The instinctive reactions imply the centering on the physiological reaction of *fight or flight*, which, in the driving activity, translates into hitting the pedals of the vehicle and pushing the wheel with the hands regardless of the contextual and particular requirements of the situation people are dealing with.

In the fifth stage of the training programme, we will integrate the psychological information previously activated in the other stages in a meaningful map, which goes from sensorial and emotional to actions managed cognitively and consciously.

The sixth stage sets the transition to the cognitive-procedural side implying specific reactions in several situations that might occur while driving. These reactions refer to the mental training for reactions that do not belong to instincts, reactions in various weather conditions, in skidding situations, imminent danger or unexpected behaviours of the vehicle.

The seventh stage is focused on exploring the effects in the emotional area, with the role of integrating emotions, giving a personal and pragmatic meaning. After discovering the emotions sabotaging driving and after unblocking some emotions able to support positively this activity, we set the psychological premises of safe driving by controlling them. Expressing more precisely the states coming together with driving and setting some concrete behaviours to control them and to use them for this activity represents the goal of this stage.

The eighth stage implies the preparation for moving to the next module, activating resources in order to implement the right reactions first in an optimal learning environment and then in real traffic. The association between psychological counselling and the learning of some concrete manoeuvres makes this programme work as a personal development module implemented in the aimed reality.

**The implementation module** implies the application of the emotional and cognitive management acquired in the first two modules to some defensive driving exercises. In the first phase, we will visualise some dangerous situations such as in the case of impact, buffering or anxiety-provoking situations such as the rollover. Afterwards we will do some practical exercises on simulators especially designed for these situations. Dealing with these extreme situations leads to desensitisation and to the consolidation of the idea that if an individual has already dealt with this type of extreme situations, then the current situations will be much easier to handle. In terms of personal development, the main theme of these exercises is the management of emotions and actions when we have to face the lack of control over the physical environment.

The following exercises aim to use the vehicle in various manoeuvring situations, thus targeting two directions in the defensive driving field: to prevent ourselves from ending up in limit situations, on the one



hand, and, on the other hand, to manage them in case they appear for various reasons. The “oversteering vehicle simulator”, a real car with two steering wheels, with the right hand steering wheel controlling the backside axle, which creates the sensation and specific movement of the oversteering wheel, is very useful for creating surprising situations and for learning the correct reactions in case of skidding ([www.research.titiaur.ro](http://www.research.titiaur.ro)). The experiential learning is very helpful, as the correct reactions may be integrated and the psychological effect is represented by the insight of controlling instinctive reactions.

In the particular case of oversteering, the reaction is opposed to the instinctive one, which makes the subject experience difficult situations from the psychological point of view. This exercise represents the provoking point in the personal development exercises. The subject learns how to face limit situations on the one hand and to control the associated emotions on the other hand. We will bring the skidding situation closer to reality by using the in-turn-controlled-sideslip simulator (Aur, 2016). As the speed increases, the oversteering and understeering behaviour will manifest with a common vehicle. Then, by using a common vehicle, we will make a new step in the implementation into daily reality of the cognitive and emotional schemas of defensive driving acquired during the training. The beneficiary practices in a secure environment the way to control an already skidding vehicle or which is about to skid. After practicing the brake in order to become aware of the limits of the vehicle and the necessary time for the reaction, we will proceed with a session of meditative analysis and one of cognisance of everything he/she experienced. Conclusions are extremely important especially for diminishing aggressiveness and anxiety while driving. The next phase consists of driving both in the city and around it while the commentary driving technique will be applied as an element of verifying, stabilizing and consolidating the knowledge and emotional experiences.

### **Conclusions**

This article represents a synthesis and a summary of the unifying creative meditation method used to train drivers. It also represents an invitation for humanistic psychologists to become aware of the method we implemented and to participate in the development of some elaborate methods of driving trainings. The presented studies constitute a reference point for the activity up to now and a starting point in

the development of some new training programmes. Based on Romanian humanistic psychotherapy and taking into account the cultural particularities of the traffic in Romania, this method aims at reducing the number of accidents in a profoundly humanistic manner that can be adjusted and applied anywhere in the world in order to save human lives through prevention and awareness.

### **References**

- Aur, C. (2016). *Car Simulator With Two Steering Wheels*. Available: <http://www.research.titiaur.ro/simulators/two-wheels-simulator> [Accessed 23 January 2017.]
- Aur, C. (2016). *In Turn Controlled Side Slip Simulator*. Available: <http://www.research.titiaur.ro/simulators/in-turn-controlled-sideslip-simulator> [Accessed 23 January 2017.]
- Alm, H., & Nilsson, L. (1994). Changes in Driver Behaviour as a Function of Handsfree Mobile Phones: A Simulator Study. *Accident Analysis & Prevention*, 26(4), 441–451.
- Barbor, C. (2001). The Science of Meditation. *Psychology Today*. Available: <https://www.psychologytoday.com/articles/200105/the-science-meditation>. [Accessed 20 July 2016.]
- Blank, D., & McCord, R. (1998). Design and Presentation of a CD-ROM Driving Program (Driver-ZED). *Proceedings of the Human Factors and Ergonomics Society 42nd Annual Meeting*, 1401–1402.
- Brookhuis, K. A., de Vries, G., & de Waard, D. (1991). The Effects of Mobile Telephoning on Driving Performance. *Accident Analysis & Prevention*, 23(4), 309–316.
- Fisher, L. D., Laurie, E. N., Glaser, R., Connerney, K., Pollatsek, A., Duffy, A. S., & Brock, J. (2002). Use of a Fixed Base Driving Simulator to Evaluate the Effects of Experience and PC-Based Risk Awareness Training on Drivers’ Decisions. *Human Factors*, 44(2), 287–302.
- Gâtej, E. R. (2013). *The Creative Meditation Technique in Driving Training*. Bucharest, Romania: Romanian Society of Experiential Psychotherapy.
- Gâtej, E. R., & Golu, F. (2013). Attention, Its Role in Regulating Driving Behaviour. *International Journal of Traffic and Transportation Psychology*, 1(2), 37–45.
- Gâtej, E. R., & Golu, F. (2013). “Unifying Creative Meditation Effects on Driver Attention”. *The International Conference “Psychology and the Realities of the Contemporary World” – 4th edition – PSIWORLD 2013*. (Volume 78, 13 May 2013, pp. 200–204.)
- Gâtej, E. R., & Maier, R. (2016). Experiential Learning with a Role in Decreasing Traffic Aggressiveness. *Journal of Experiential Psychotherapy*, 19(4), 13-16.
- Gâtej, E. R., & Maier, R. (2016). The Effects of Experiential Learning on the Reactions of Drivers in Case of a Side-Slip. *Journal of Experiential Psychotherapy*, 19(3), 3-10.
- Gâtej, E. R., Rizeanu, S., & Ciolacu, M. (2016). Effects of Aggressiveness on Performance in Handling of a Swerve Vehicle. *Romanian Journal of Experimental Applied Psychology*, 7(4), 16-21.
- Gregersen, N. P. (1996). *Young Car Drivers: Why Are They Overrepresented in Car Accidents? How Can Driver Training Improve Their Situation?* (VTI Rapport 409A). Linköping, Sweden: Swedish National Road and Transport Institute.

- Gregersen, N. P., & Bjurulf, P. (1996). Young Novice Drivers: Towards a Model of Their Accident Involvement. *Accident Analysis and Prevention*, 28(2), 229-241.
- Holdevici, I. (1991). *Hypnosis and the Unlimited Forces of Human Mind*. Bucharest, Romania: Aldomars Publishing House.
- Horrey, J. W., Lesch, M. F., Kramer, A. F., & Melton, D. F. (2009). Effects of a Computer Based Training Module on Drivers' Willingness to Engage in Distracting Activities. *Human Factors*, 51(4), 571-581.
- Horrey, W. J., & Wickens, C. D. (2006). Examining the Impact of Cell Phone Conversations on Driving Using Meta-Analytic Techniques. *Human Factors*, 48(1), 196-205.
- Laberge-Nadeau, C., Maag, U., Bellavance, F., Lapiere, S. D., Desjardin, D., Messier, S., & Saïdi, A. (2003). Wireless telephones and the Risk of Road Crashes. *Accident Analysis & Prevention*, 35(5), 649-660.
- Lee, J. D. (2007). Technology and Teen Drivers. *Journal of Safety Research*, 38, 203-213.
- Lerner, N., & Boyd, S. (2005). *On-Road Study of Willingness to Engage in Distracting Tasks* (Report no. DOT HS 809 863). Washington, DC, USA: National Highway Traffic Safety Administration.
- Lonero, L. P., Clinton, K. M., & Douglas, M. B. (1998). "Driver Education Curriculum Outline". In *Proceedings of the Human Factors and Ergonomics Society 42nd Annual Meeting* (pp. 1396-1400). Santa Monica, CA, USA: Human Factors and Ergonomics Society.
- Lund, A. K., Williams A. F. (1985). A Review of the Literature Evaluating driving Course. *Accident Analysis & Prevention*, 17(6), 119-160.
- Manish, S., Stephen, R. A., Tonya, L. J., Anthony, P. Z., Bridwell, D. A., Maclean, K. A., King, B. G., Sahdra, B. K., Rosenberg, E. A., Shaver, P. R., Ferrer, E., Wallace, A., Mangun, G. R., Saron, C. D., Miikkulainen, R. (2010). A Computational Approach to Understanding the Longitudinal Changes in Cortical Activity Associated with Intensive Meditation Training. *BMC Neuroscience*, 11. Available: <http://www.biomedcentral.com/1471-2202/11/S1/O7>
- Maslow, A. (1998). *Toward a Psychology of Being*. New York, USA: Wiley Publishing House.
- Matthew, R. J., Weinman, M. L., Semchuk, K. M., & Levin, B. L. (1982). Driving Phobia in the City of Houston: a Pilot Study. *American Journal of Psychiatry* 139(8), 1049-51.
- Mayhew, D. R., & Simpson, H. M. (1995). *The Role of Driving Experience: Implications for Training and Licensing of New Drivers*. Insurance Bureau of Canada: Toronto, Canada.
- Mc Donald C. C., Goodwin, A. H., Pradhan, A. K., Romoser, M. R. E., & Williams, A. F. (2015). A Review of Hazard Anticipation Training Programs for Young Drivers. *Journal of Adolescent Health* 57, S15-S23.
- McKenna, F., & Crick, J. (1997). *Developments in Hazard Perception* (Transport Research Laboratory Report 297). Crowthorne, UK: Transport Research Laboratory.
- McKnight, A. J. & McKnight, A. S. (1993). The Effect of Cellular Phone Use Upon Driver Attention. *Accident Analysis & Prevention*, 25(3), 259-265.
- Mitrofan, I. (2008). *The Unifying Therapy*. Bucharest, Romania: Romanian Society of Experiential Psychotherapy.
- Mitrofan, L., Chraif, M., Golu, F., & Gâtej, E. R., (2014). "The Effects of the Unifying Creative-Meditation Technique as a Treatment for Self-Reported Anxiety in Romanian Amateur Drivers". *Procedia - Social and Behavioural Sciences, The International Conference "Psychology and the Realities of the Contemporary World" - 4th edition - PSIWORLD*, 2013 (volume 127, 22 April 2014, pp. 818-822).
- Mitrofan, L., Chraif, M., Golu, F., Gâtej, E.R., (2014). "The Unifying Creative-Meditation Technique and Physiological Measurement of Anxiety in Romanian Amateur Drivers". *Procedia - Social and Behavioral Sciences, The International Conference "Psychology and the Realities of the Contemporary World" - 4th edition - PSIWORLD*, 2013 (volume 127, 22 April 2014, pp. 823-827).
- National Highway Traffic Safety Administration (1993). Addressing the Safety Issues Related to Younger and Older Drivers (Report to Congress, January 6, 1993). Washington, DC, USA: US Department of Transportation.
- Perls, F. S. (1973). *The Gestalt Approach and Eye Witness to Therapy*. Michigan, USA: Science and Behaviour Books.
- Petzoldt, T., Weis, T., Franke, T., Krems, J. F., & Bannert, M. (2013). Can Driver Education Be Improved By Computer Based Training of Cognitive Skills? *Accident Analysis and Prevention* 50(1), 1185-1192.
- Răban-Motounu, N. (2014). Experiential Psychotherapy of Unification: Classical and Modern Humanistic Psychology. *Journal of Humanistic Psychology*, 54(3), 279-293.
- Ranney, T. A. (1994). Models of Driving Behaviour: A Review of Their Evaluation. *Accident Analysis and Prevention*, 26(6), 733-750.
- Rajneesh, B. S. (1972). *Secrets of discipleship*. Bombay, India: Life Awakening Movement.
- Regan, J. A., Deery, H. A., & Triggs, T. J. (1999). "A Technique for Enhancing Risk Perception in Novice Car Drivers". In *Proceedings of the Road Safety Research, Enforcement and Education Annual Conference* (pp. 51-55). Wellington, New Zealand: Land Transport Safety Authority and New Zealand Police.
- Strayer, D. L., & Johnston, W. A. (2001). Driven to Distraction: Dual-task Studies of Simulated Driving and Conversing on a Cellular Phone. *Psychological Science*, 12(6), 462-466.
- Thomson, R.F. (2000). Zazen and Psychotherapeutic Presence. *American Journal of Psychotherapy*, 54(4), 531-48.
- Triggs, T. J. (1994). "Human Performance and Driving: The Role of Simulation in Improving Younger Driver Safety". In *Proceedings of the 12th Triennial Congress of the International Ergonomics Association* (vol. 1, pp. 23-26). Toronto, Canada: Human Factors Association of Canada.
- Triggs, T. J., & Regan, M. A. (1998). "Development of a Cognitive Skills Training Product for Novice Drivers". In *Proceedings of the 1998 Road Safety Research, Education and Enforcement Conference* (pp. 46-50). Wellington, New Zealand: Land Transport Authority.
- Triggs, T. J., & Stanway, J. (1995). "Simulation in Driver Training: A report of an Australian Research Program". In *Proceedings of the Road Safety in Europe* (2a, part 3, pp. 1-17).
- Vasile, T. (2009). *Integrative Therapy. From Psychosomatic Degeneration to Psychosomatic Regeneration*. Bucharest, Romania: Pro Editură și Tipografie Publishing House.
- Willis, D. K. (1998). "The Impetus for the Development of a New Risk Management Training Program for Teen Drivers". In *Proceedings of the Human Factors and Ergonomics Society 42nd Annual Meeting* (pp. 1394-1395). Santa Monica, CA: Human Factors and Ergonomics Society.