



International (On Line) Symposium
on
**“Mahatma Gandhi’s Principles:
In the Perspective of Alcoholism and the Road Crashes”**

On the Eve of 150th Birth Anniversary of Mahatma Gandhi

29th August, 2020

by

SPARC Team # 1442

Indian Institute of Technology Kanpur, India and La Trobe University, Australia

The behavioural patterns of automobile drivers and the victims of road crashes have a significant impact on the accident rates. Moreover, the mortality and morbidity costs of road crashes have considerable implications for the parties' quality of life, productivity and income.

According to secondary data, the top ten reasons for road crashes in India are: over-speeding, bad weather, consumption of alcohol (drunk-driving), consumption of drugs, lack of sleep (drowsiness), talking on cell phone, distractions, recklessness, rubbernecking and road hazards. Moreover, the drivers who hold valid driving licences are responsible for a majority (approximately 80 percent) of accidents in the country.

Drunk-driving is a major cause of road crashes in India. The road safety regulations and their ineffective implementation does not provide sufficient incentives to reduce drunk-driving. According to Mahatma Gandhi, “...Drink makes a man forget himself. He loses control over his tongue and other limbs.” Therefore, we propose a symposium at IIT Kanpur that focuses on the Gandhian values concerning prohibition of alcohol.

The symposium will be a part of the ongoing project titled “The Socio-economic Costs of Road Crashes in India - Evaluation of the Role of Ex-ante and Ex-post Policies”, under the Scheme for Promotion of Academic and Research Collaboration (SPARC, Project No.1442). The project underscores that the rapid economic progress in India due to market liberalization has resulted in a substantial growth in the number of automobiles.

However, unfortunately, the remarkable growth in automobiles on Indian roads has not been supported by commensurate efforts to provide sufficient driver-education and driver-skill testing before granting of driving licences, safe transportation infrastructure (roads, traffic lights, traffic signs, pedestrian-crossing bridges, rest areas etc.), adequate police patrolling and law enforcement, accident registry systems, emergency trauma services and insurance coverage. Not surprisingly, the users of Indian roadways are subjected to a high incidence of road crashes, leading to disabilities, productivity and income losses, exorbitant medical costs, and loss of life and emotional trauma.

Our research aims to analyze the socio-economic costs of road crashes across multiple cities/towns in India. The study will utilize primary and secondary data collected from multiple sources and visual surveillance aids, to critically examine the role of *ex-ante* and *ex-post* policies concerning road crashes in India.

For the symposium, we will invite various stakeholders to have an interaction focusing on the main causes of road crashes in India, with a special emphasis on consumption of alcohol (drunk-driving). This will help to create awareness among the stakeholders and to enhance the existing networks to reduce accident rates in India.



THE INVITED SPEAKERS

Justice Abhay Manohar Sapre, Hon'ble Chairman, Supreme Court Committee on Road Safety, New Delhi, India.

Mr. Raja Srivastava, Ips, Addl Director General of Police, Uttar Pradesh, India.

Inspector Donna Mitchell, Local Area Command Goldfields Police Service Area, Victoria Police, Australia

Dr Anne-Marie Laslett, Senior Research Fellow, Centre for Alcohol Policy Research (CAPR), La Trobe University, Australia.
<https://scholars.latrobe.edu.au/display/alaslett>

Dr. Anubha Goel, Associate Professor, Department of Civil Engineering, Indian Institute of Technology Kanpur. <https://www.iitk.ac.in/New/Anubha-Goel>

Professor, A. Raghuramaraju, Professor, Department of Humanities and Social Sciences, Indian Institute Of Technology Tirupati, India <https://iittp.ac.in/Dr-A-Raghuramaraju>

Professor, Adarsh Kumar, Forensic Anthropology & Forensic Radiology, All India Institute of Medical Sciences, New Delhi, India.

Mr. Vijay Kalakala, Dy. General Manager, Occupant Safety – Cae Simulations Mercedes-Benz Research and Development India.

Professor, Uday S Racherla, Innovation Management Consultant, Fort Lee, New Jersey, USA
<https://Udayracherla.com>



ABSTRACTS



Abhay Manohar Sapre is a former Judge of Supreme Court of India. He had earlier served as the Chief Justice of Gauhati High Court from 19 October 2013 to 12 August 2014 and as the first Chief Justice of Manipur High Court from 23 March 2013 to 18 October 2013 and he also served as former Judge of Chhattisgarh High Court, Rajasthan High Court and Madhya Pradesh High Court also. Currently, he is serving as the Chairman, Supreme Court Committee on Road Safety.

Prohibition from Gandhi's Perspective and its Effect on Road Safety

Mahatma Gandhi was a champion of the Temperance Movement in India and viewed foreign rule as an obstacle to the national prohibition. He viewed liquor worse than any other evil. After India gained independence in 1947, prohibition was included in the Directive Principles of the Constitution. The Directive Principles have directly linked prohibition with the standard of living and public health. At present, 4 States viz. Gujarat, Bihar, Nagaland and Mizoram and a Union Territory of Lakshadweep have policy of total prohibition.

Drunk driving has been one of the major cause of road accidents in India and account for around 100,000 fatalities directly or indirectly. The Hon'ble Supreme Court has therefore completely banned sale of liquor on the National and State Highways with effect from 1st April, 2017. The National and State Highways account for more than 60% fatalities in India.

Deeply concerned with the growing number of road accidents in India, the Hon'ble Supreme Court, had constituted a Committee in 2014 under the chairmanship of a retired Judge of the Supreme Court to monitor the implementation of road safety laws in the country. The Committee has since been monitoring and issuing various directions to the States and the concerned Central Ministries with a view to improve road safety in the country. Justice (Retd) Abhay Manohar Sapre is the current Chairman of the Committee.

1:10pm IST 5:40pm AEST 3:40am EDT



Shri Raja Srivastava is an Indian Police Service (IPS) Officer of 1994 batch of Uttar Pradesh Cadre with over 25 years of experience in Management and Administration of Police Organizations, Policy formulation and Implementation for Civil Aviation Security, Law Enforcement, Training, Security, Intelligence, Counter-terrorism and Organized crime control etc.

In the state, he has served in various capacities and has contributed tremendously in controlling law and order and crime situations in UP through innovative policing techniques. He was in charge in many Districts including Gorakhpur, Bareilly, Jhansi, Firozabad etc. IG Range Agra and is presently working as ADG PTC Sitapur. He has been playing a critical role in advancing the mission and vision of UP Police.

On Deputation to the Government of India, he served in the ITBP and the BCAS, Ministry of Civil Aviation and the National Crime Records Bureau (NCRB), Ministry of Home Affairs, Government of India.

During these periods he - Oversaw maintenance of law and order, crime detection and prevention, Intelligence collection and analysis, Traffic Management etc; Formulated the capacity-building framework and delivery of training and skill development initiatives; Managed Police Administration, Human and Financial resources; Implemented innovative tools of conflict resolution to bring communal harmony between various sects of the society; Coordinated with the various international and national agencies; Safeguarded citizens' rights by being fair and balanced. He has received awards and medals-Decorated with the President Medal for Meritorious Service; United Nations Service Medal; DG Commendation Disc; and,



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Gold Medal Masters in Business Administration. His interests are- Traffic Management, Community Policing, Cyber Security, and, Cricket.

Gandhi's Principle, Road Safety and Alcohol: A Policing Perspective

"Generations to come will scarce believe that such a one as this ever in flesh and blood walked upon this earth." -Albert Einstein

Gandhi's Principles

"The drunkard forgets the distinction between wife, mother and sister and indulges in crimes of which in his sober moments he will be ashamed".

"As human beings, our greatness lies not so much in being able to remake the world – that is the myth of the atomic age – as in being able to remake ourselves."

His ideas transcend time and space. He was relevant then, and he is relevant today; perhaps more so in the chaos that the modern world finds itself. Prohibition was a very important plank of his constructive programme. His arguments for prohibition both for individual and social reasons have a moral, psychophysical, socio-psychological, economic and religious basis, which he has put forth in a considerable detail. An indication of the impact of Gandhi's movement for prohibition is its inclusion as a Directive Principle in Indian Constitution.

Road Safety and Alcohol: The past few decades have seen significant socio-economic development in urban India. This has resulted in an unprecedented growth of vehicle use in the cities and a growing imbalance in demand and supply of urban road space. India has registered as one of the nations with highest road accident fatality rates globally 1,51,417 persons were killed and 4,69,418 people were injured in 2018 (MoRTH 2019). The Road Accidents impose a huge social and economic cost in terms of untimely deaths, injuries, disabilities and loss of potential income. Road safety has thus become a pressing social concern and therefore, it is pertinent to put in significant and holistic efforts towards enhancing road safety. Alcohol related road traffic injuries are major threat to society including premature deaths on road with uncountable quantity and quality of socioeconomic effects on family as well as the community that need to be prevented by a holistic approach. Alcohols adverse effects like decrease in cognitive and psychomotive skills are well documented, with special regard to driving performance. Various police and other research data shows correlation between alcohol consumption and accidents.

A Policing Perspective: People should perceive that enforcement measures are reasonable and effective. It is important to engage people in large numbers and make an impression of the presence of enforcement 24X7. Police personnel, at all levels, should be trained to improve their traffic management capacity. First aid and scientific procedures for handling accident victims should also be part of their training. Systematic investigation of all accidents should be mandatory, and it should include not only the police investigation, but also technical investigation for identifying the real causes of accidents and formulating appropriate interventions.

"You must be the change you want to see in the world." M K Gandhi

1:40pm IST 6:10pm AEST 4:10am EDT



Inspector Donna Mitchell joined the Victoria Police after 20 years in sports coaching (gymnastics). After two years performing uniform duties, she transferred to the Transit Safety Division where she patrolled the public transport system. Donna sharpened her emotional intelligence due through her engagement with people in a range of situations. On returning to mobile patrol duties, she employed her passion for learning and developing others by designing and delivering training packages to reduce risk and build capacity. She was then appointed as an instructor in the recruit training program, followed by her role as Senior Sergeant in the Media and Online Learning Unit where she developed e-learning programs. More recently, Donna managed a team responsible for designing, developing and delivering behavioural change programs promoting diversity and inclusion in the workplace. She was



attached to the Victoria Police Monitoring and Assessment Centre, responsible for monitoring real time crime calls, identifying and notifying relevant resources and enhancing safety and investigations through social media scanning. Her more recent role is Local Area Commander of the Goldfields Police Service Area. Goldfields PSA is located in the centre of the southern state of Australia, Victoria. The PSA incorporates three local government areas and covers a total area of 9759 square kilometres. The total estimated population for the PSA is 38,569. The PSA is serviced by 12 police stations – 2x 24 hr stations, 2x 16 hrs stations and 8x One Member Stations. I lead 93 police officers in delivering community safety through a Community Web of Protection strategy and a Road Safety Action Plan.

Regional Road Trauma, Victoria, Australia

2:10pm IST 6:40pm AEST 4:40am EDT

BREAK

2:40pm IST 7:10pm AEST 5:10am EDT



Dr Anne-Marie Laslett is a Senior Research Fellow at the Centre for Alcohol Policy Research (CAPR). She has worked in public health on alcohol and drug epidemiology for over two decades. She is internationally renowned for her research on Alcohol's Harm to Others. This includes analyses of harms to children and adults in the workplace, at home and in public from partners, family members, friends, colleagues and strangers.

Her work has been published by the World Health Organization in a book "Harms from others' drinking: patterns in Nine Societies" and her current research focuses on alcohol's involvement in family violence in Australia as well as in Asia and the Pacific as well as the financial impact of others' drinking on men and women in 15 countries.

She is a co-investigator and technical advisor to the World Health Organization/Thai Health Promotion Foundation International Collaborative Research Project on the Harm to Others from Drinking, the President of the Kettil Bruun Society for Epidemiological and Social Research on Alcohol and the Acting Editor-in-Chief of the International Journal of Alcohol and Drug Research. Dr Laslett originally graduated as a dentist, and went on to complete a Master of Preventive and Community Dentistry (Oral Epidemiology), a Master of Public Health and a PhD in the School of Population and Global Health at the University of Melbourne.

Alcohol's Impact on Ourselves and Others: In Our Homes and on Our Streets

Anne-Marie will provide an overview of the ways in which alcohol affects drinkers and others in their social milieu in a range of contexts, including examples of harm in Australia, India and other regions of the globe. She will describe how alcohol affects drinkers and others, including harms to children and adults on the road, in the workplace, at home from partners, family members, friends, colleagues and strangers.

2:50pm IST 7:20 EST 5:20am EDT



Dr. Anubha Goel is an Associate Professor in the Dept of Civil Eng. (Environmental group) at IIT Kanpur where she has been a faculty member since 2010 post 2 years of environmental consulting experience in USA. She is also a contributing faculty in the Centre for Environmental Science and Eng. IIT Kanpur. Her research, focused on environmental quality management for sustainable built environment, involves both on field and in laboratory studies. Her knowledge sharing as a resource personnel and a panellist in national/international level committees has been well recognized. She received leadership award (Indoor Environment Lead Award) at the



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ACIEQ 2019. During her doctoral research at the University of Maryland College Park, USA she handled a USDA project and examined spatial and temporal variations in occurrence and behaviour of pesticides in the atmosphere. This was after her M. Tech at IIT Kanpur where she was awarded the DAAD scholarship for research work in Germany. Dr. Goel is quite involved in outreach and public awareness activities and is one of the founding faculty members of CDAP (Centre for Differently Abled Persons) at IIT Kanpur

Drunk-Driving Road Accidents and the Survivor's Perspectives

Driving under the influence of alcohol accounted for > 4000 deaths and more than double that (~10000) people injured in the year 2017 in India (MORTH). The impact of such accidents on the victims can be physical, psychological, and emotional. It further imposes risks on the survivor's families, friends, and colleagues. The talk highlights on restarting life after a traumatizing and life-changing incident. The availability of resources and support from society is a critical factor for the victim's rehabilitation. The talk, overall, emphasizes the survivor's perspective on what issues should be given priority to minimize drunk driving accident, especially among the younger generation.

India's Census 201 reveals that the youth (15-24 years) in India constitutes one-fifth (19.1%) of India's total population. India is expected to have a 34.33% share of youth in the overall population by 2020. Keeping in mind this demographic distribution, increasing incidents of rash driving, more people driving under the influence of alcohol in our country, raise the alarm. We need to educate people that driving is not an act of 'entertainment' but is 'responsibility' that saves lives.

3:20pm IST 7:50pm EST 5:50am EDT



A. Raghuramaraju is Professor of Philosophy in the Department of Humanities and Social Sciences, Indian Institute of Technology Tirupati, Andhra Pradesh, India. His published books include *Debates in Indian Philosophy: Classical, Colonial and Contemporary* (OUP 2006); *Enduring Colonialism: Classical Presences and Modern Absences in India Philosophy* (OUP 2009); *Modernity in Indian Social Theory* (OUP 2011); *Philosophy and India: Ancestors, Outsiders and Predecessor* (OUP 2013); *Modern Frames and Premodern Themes in Indian Philosophy: Border, Self and the Other* (Routledge 2017). He has co-edited *Grounding Morality: Freedom, Knowledge and Plurality of Cultures* (Routledge 2010), and edited *Debating Gandhi: A Reader* (OUP 2006); *Debating Vivekananda: A Reader* (OUP 2014); *Ramchandra Gandhi: The Man and his Philosophy* (Routledge 2013), *The Seven Sages: Selected Essays by Ramchandra Gandhi* (Penguin 2015); *Desire and Liberation by Vaddera Chandidas: Biography of a Text* (OUP 2018); *Calibrating Western Philosophy for India: Rousseau, Derrida, Deleuze, Guattari and Vaddera Chandidas*, (Routledge 2019) and *Ramchandra Gandhi: Talks and Writings*, (Orient BlackSwan 2020). He writes in Telugu on literature. He also writes a monthly column for the daily newspaper, *The Telegraph*.

Mahatma Gandhi on the Idea of the Normal

Alcoholism and Road Crashes are rare, though frequent in society. They are not natural but come under non-natural aspects of life. However, both do bring much suffering to many people, including themselves and others related to them. Thus demarcated these aspects can be discussed from two vantage points: from ideas and cases. Mahatma Gandhi provides an excellent example of both ideas and cases. He has definite ideas about alcohol, and he also provides a good case study as his rebel son Harilal Gandhi took to alcohol. His son has caused excruciating pain and suffering to parents. This presentation will focus on the former, keeping the latter in the background.

Both these unnatural themes can be discussed from Gandhi's idea of normal. He did not accept the traditional idea of normal though he does not reject it either. He identified the ascetic and spiritual life with the tradition of Santana dharma. Leading this simple though not simplistic life if not easy but demanded regular and rigorous practice woven around his other idles of *Satya*, *Ahimsa* and *Sarvodaya*. He laid particular emphasis on identifying and eradicating evils in the tradition, including the practice of untouchability. He also did not accept modern material life which he characterised as 'satanic civilisation' that is irreligious, over emphasises the material aspects of life. Instead, his idea of normal lays more emphasis on



'need' and seeks to exclude the 'greed'. From this idea of moral, both alcoholism and road crashes can be seen as non-normal. So if they are not normal, then there is a need to find out how to do deal in either reducing or eliminating them.

3:50pm IST 8:20pm EST 6:20am EDT

BREAK

4:20pm IST 8:50pm EST 6:50am EDT



Prof. Adarsh a Gold medallist obtained his medical degree from prestigious King George's Medical College, Lucknow & post-graduation in Forensic Medicine. He is lone member from India in International Academy of Legal Medicine, British Association in Forensic medicine, The International Association of Forensic Toxicology and Canadian Society of Forensic Sciences besides being life member of many scientific associations from India and abroad. He was awarded Honorary Diploma in Legal Medicine by International Academy of Legal Medicine at Portugal in 2009. He is the first person in world to receive Commonwealth Fellowship at UK twice in year 2011 and 2015. He is also a Fellow of Royal Society of Medicine, London, Indian Association of Medicolegal Experts (2014), International Science Congress Association (2015), Indian Society of Toxicology (2016) & Indian Academy of Forensic Medicine (2019). He is honorary medicolegal Expert to National Human Rights Commission and Central Bureau of Investigation-topmost agency of criminal investigation in India. Prof. Adarsh is Visiting Faculty to Anglia Ruskin University, Cambridge, UK, National Piragov University, Vinnitsya Ukraine, National Police Academy, Hyderabad, CBI Academy Ghaziabad, National Institute of Criminology & Forensic Sciences, New Delhi & Central Detective Training School, Chandigarh. He has more than 21 years of teaching experience and medicolegal field work. Has guided 15 PhD/postgraduate students and conducted around 5000 autopsies. His PhD students have been from field of forensic toxicology and forensic anthropology who have done their MSc in Forensic Sciences from various universities. Has been examiner and subject expert in Forensic Medicine in various universities of 15 states of India as well as Nepal & Mauritius. He is Board of Studies Member in Forensic Sciences for Manipal University, Karnataka and Amity University Noida where has been instrumental in designing and improving curriculum of these universities. Delivered 2 orations & about 100 lectures in various scientific conferences all over the world, published 70 papers, written 5 chapters in various textbooks of forensic medicine, acted as Editorial board member and peer reviewer in 20 journals of speciality from India and abroad including Romanian Journal of Legal Medicine, Egyptian Journal of Forensic Sciences, HSOA Journal of Forensic, Legal and Investigative Sciences USA, Adli Tip Bulletin Turkey, Journal of Forensic & Legal Medicine, UK, Biomedical and Biosocial Anthropology Ukraine etc. Currently also Editor of Indian Journal of Forensic Medicine & Toxicology.

Representing the country at highest level as Governing Council Member of 3 International scientific organisations viz. International Academy of Legal Medicine (IALM), Indo-pacific Association of Law Medicine & Sciences (INPALMS) & Asia Pacific Association of Medicolegal Agencies (APMLA). Earlier was General Secretary of Indian Academy of Forensic Medicine for 3 years(2010-13).In June 2018 at Japan has been nominated as Executive Member of most prestigious International Academy of Legal Medicine for period 2019-2021. Developed online courses (MOOCs) in three subjects ie Forensic Medicine, Forensic Anthropology & Forensic Serology & Biology under Digital India Mission for Ministry of Human Resource and Development which are now freely available on YouTube for learning by police personnel, forensic scientists and medical students all over world .

He was honoured with Commendation Certificate for his exemplary work in field of Forensic Investigations & Human Rights by National Human Rights Commission in 2014. He was awarded with Education Award for Excellence by Indo-US Global Foundation in 2016. Honoured with International Cooperation Medal by Government of Ukraine in 2020.

Drunk/Drunken Driving vis a vis Disability and Death

Globally Road traffic injuries account for eight largest cause of death and the leading cause death among young people aged 15–29 years and are among the top three causes of morta among people aged 15–44 years. As per WHO every year the lives of approximately 1.35 mil people are cut short as a result of a road traffic crash. Between 20 and 50 million more peop



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suffer non-fatal injuries, with many incurring a disability as a result of their injury. Road traffic injuries cause considerable economic losses to individuals, their families, and to nations as a whole. These losses arise from the cost of treatment as well as lost productivity for those killed or disabled by their injuries, and for family members who need to take time off work or school for the injured. Road traffic crashes cost most countries 3% of their gross domestic product every week nearly 2,650 people get killed and 9,000 get injured due to traffic accidents traffic fatalities constitute 16.6% of all deaths, making it the sixth leading cause of death, a major contributor to socio-economic losses, the disability burden and hospitalisation.

The two most frequent causes of road deaths are over-speeding and drunk driving, followed by driving on the wrong side, jumping the red light and the use of a mobile phone while driving. According to the Ministry of Road Transport and Highway, 4.6 % of India's road fatality figures are directly linked to drunk driving. The figure may seem small, however the report also stated that there were more fatalities in accidents due to drunk driving than in accidents due to any other causes; as many as 42% victims of drunk driving accidents ended up a fatality.

Section 185 of The Motor Vehicles Act (MVA), 1988 of Government of India states that driving by a drunken person or by a person under the influence of drugs.—Whoever, while driving, or attempting to drive, a motor vehicle has, in his blood, alcohol exceeding 30 mg per 100 ml. of blood detected in a test by a breath analyser is punishable. As per this section on first offence, the punishment is imprisonment of six months, a fine of 10,000 Indian Rupees or both. If the second offense is committed within three years, the punishment is two years, a fine of 15,000 Indian Rupees or both. The clause of 30 mg/dL was added by an amendment in 1994 which came into force on 14 November 1994. Earlier limit of BAC in India was 80 mg% which was reduced to 50 mg% and now stands at 30 mg%. The limit of BAC in various countries differs, however, most of the countries, it is 50 mg% like Australia while Canada, USA & UK (except Scotland) have BAC as 80 mg%.

In 2012, WHO conducted a review of existing laws and regulations within the MVA, with a particular focus on drink-driving and helmet-wearing and advocated for certain legal reforms. As per report of the Law Commission of India, 50% of road traffic accident victims died of preventable injuries which could have been saved if they had received care on time. The role of the bystander is critical in providing emergency care to the victim. Yet, in India, bystanders were hesitant to help the injured for fear of legal repercussions and procedural hassles. India's Good Samaritan Law was passed as a Bill by the apex court on March 30, 2016. Later, it has been included in the Motor Vehicle Act 2019 under sub-section 134A. Salient features of this act includes "Good Samaritan" means a person, who in good faith, voluntarily and without expectation of any reward or compensation renders emergency medical or non-medical care or assistance at the scene of an accident to the victim or transports such victim to the hospital. A Good Samaritan shall not be liable for any civil or criminal action for any injury to or death of the victim of an accident involving a motor vehicle, where such injury or death resulted from the Good Samaritan's negligence in acting or failing to act while rendering emergency medical or non-medical care or assistance. Further special provisions as to compensation in case of hit and run motor accident have been made a) in respect of the death of any person resulting from a hit and run motor accident, a fixed sum of two lakh rupees or such higher amount as may be prescribed by the Central Government; (b) in respect of grievous hurt to any person resulting from a hit and run motor accident, a fixed sum of fifty thousand rupees or such higher amount as may be prescribed by the Central Government.

Now these amendments have come into force on 9 August 2019 expanding its ambit, awarding higher monetary penalties and making it more stringent. The 'talk' will focus on



various forensic and legal aspects of drunken driving in context of road traffic injuries and recent judicial activism in India.

Key Words: road traffic injuries, drunken driving, blood alcohol concentration, Motor Vehicle Act, Good Samaritan

4:30pm IST 9:00pm EST 7:00am EDT



Mr. Vijay Kalakala, Dy has over 20+ years of experience in the field of occupant safety and project management. After graduating from Wayne State University (USA), he started his career in the field of Passive Safety at Key Safety System in Detroit, Michigan. He worked on numerical simulations for the development restraint systems in the field of occupant safety of different passenger vehicles. In May 2009, he joined Mercedes-Benz Research and Development India (MBRDI) and worked in child and rear adult occupant safety. Since June, 2015, he is leading the occupant safety team. He has numerous patents in the field of automotive safety and published several peer reviewed conference papers in International forums. He contributed to the established of a safe and sustainable brand image of Mercedes-Benz in India by executing SAFE ROADS project, a traveling multi-city road safety awareness programme for Indian road users. With his activities, he has considerably contributed to make road traffic safer for all road users.

Continuing the Decade of Action for Road Safety 2021-30

India ranks at the top with highest number of road traffic fatalities that contributes to about 11% of the global fatalities as observed by WHO's report on road safety 2018. Based on MoRTH 2018 report, the top three contributing factors to road fatalities in India are over-speeding (64%), lack of lane discipline (5.8%) and drunken driving (2.8%).

In 2015, India made a commitment at the second Global Conference on Road Safety in Brazil to halving deaths and injuries from accidents by 2020. Though Indian has not registered any significant reduction in fatalities by 2020, host of countermeasures were taken to reduce the deaths. Initiatives related to four pillar of road safety i.e., Education, Engineering (Infrastructure and vehicles), Enforcement and Emergency Care helped in improving the awareness about road safety. One of the big achievement was passing of Motor Vehicles (Amendment) Bill 2019 with key features including increase in penalties for road violations, Protection of Good Samaritan law and Introduction of new crash regulation. More initiatives to create awareness about road safety by corporates, NGOs, etc., were taken up and should continue the same in next decade in a sustainable manner e.g., Mercedes-Benz safety program "SAFE ROADS".

Aligning to Global Sustainable Development Goals, achieving the reduction of 50% road traffic deaths and Injuries in 2030 will be challenging. Only by proper implementation of initiatives like identification and rectification of black spots, enforcement of over-speeding & drunken driving, digitalization of driver training centers, enforcing the mandatory usage of safety devices will help in realizing our target by 2030.

5:00pm IST 9:30pm AEST 7:30am EDT



Professor Uday Racherla is an innovation management expert and consultant, currently residing in Fort Lee, New Jersey, USA. During 2011-2017, he served as the Professor of Innovation and Intellectual Property Management at the Indian Institute of Technology Kanpur (India) before relocating to USA. Prior to this, he taught briefly at the Carey School of Business, Johns Hopkins University (USA). Professor Racherla's areas of teaching and research expertise are – Strategy, Innovation & Entrepreneurship, Technology Management, Intellectual Property Management and Sustainability. Prior to 2011, Dr. Racherla had 15+ years of strategic innovation and global commercialization experience in Fortune 500 Companies in USA. During 1992-2011, Dr. Racherla held many top executive leadership positions – including, Senior Director of Innovation at PepsiCo, Worldwide Director of R&D at S. C. Johnson, Director of R&D at New Skin Enterprises, and other senior executive positions at Unilever – and led global R&D programs. Dr. Racherla invented, innovated, patented and commercialized many technologies worldwide. His areas of business expertise are –



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Personal Care, Fabric Care, Home Sanitization, Nutritious Foods, Water and Air Purification. Dr. Racherla obtained Ph.D. degree in Organic Chemistry from Purdue University under a Nobel Laureate, post-doctoral research experience from the Ohio State University under a Distinguished Professor of Chemistry, and an Executive MBA from the Kellogg School of Management, all in USA. Dr. Racherla published over 120 research papers from academia and industry in prestigious journals such as Nature and Journal of American Chemical Society. In addition, he authored a book, served as an editor of 2 books, published 4 book chapters, graduated 2 PhDs & 5 MTech students, obtained 12 patents, conducted multiple executive training workshops, served as Visiting Professor at the Singapore Management University (SMU), and delivered many lectures at prestigious institutions worldwide.

Complex Interdependence of Multiple Factors Influencing Road Crashes; How Gandhian Thought Facilitates Innovative Thinking to Avoid Fatal Outcomes and Diminishing Returns

A complex interdependence of multiple factors contributes to the road crashes anywhere in the world, such as: *driver ability* (age, driving skill, vision, decision-making and judgement), *driving conditions* (day/evening/night, weather conditions, potholes, road illumination and visibility), *road design* (busy intersections, blind turns, bends, pedestrian crossings, exit and entry points, traffic signals and road signs), *vehicle* (size and mechanical condition), *regulations* (license grant and renewal, speed limits and passenger safety) and *law-enforcement mechanisms* (police-patrolling and fines). However, among all the factors, the *driver ability* plays a decisive role in a road crash because he/she is expected to be able to evaluate all the factors, exercise balanced judgement and make prudent decisions while driving. According to the American Medical Association (AMA), *alcoholism is a disease that alters the part of the human brain that controls a person's motivation and ability to make healthy choices*. According to Mahatma Gandhi, "*Nothing but ruin stares a nation in the face that is a prey to the drinking habit History records that empires have been destroyed through that habit*." Clearly, as research data in India and around the world shows, driving under the influence (DUI) of alcohol could have fatal consequences and high socio-economic costs. Therefore, applying the Gandhian wisdom and foresight along with AMA's scientific guidance, India could design an innovative evidence-based education for drivers starting in high schools, coupled with implementation of reliable law-enforcement mechanisms. This could prepare the drivers in India to consider all the interdependent factors influencing road crashes, exercise balanced judgement and make prudent decisions – which could eliminate the ever-increasing fatal outcomes and high socio-economic costs resulting from the road crashes.

5:30pm IST 10:00pm AEST 8:00am EDT

Close

6:10pm IST 10:40pm AEST 8:40 EDT