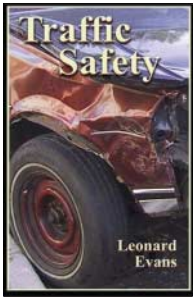


# reviews

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## Traffic Safety

Leonard Evans



Science Serving Society,  
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Rating: ★★★

On 7 April 2004 hundreds of organisations around the globe hosted events to raise awareness of road traffic injuries and their grave consequences and enormous costs to society. For the first time in the history of the World Health Organization, this day—world health day—was devoted to road safety. Dr Lee Jong-wook, WHO's director general, officially launched the *World Report on Road Traffic Injury Prevention* in Paris and handed a copy to President Chirac. Around the same time Leonard Evans published his second book, *Traffic Safety*. In the preface Evans says he has tried to place more emphasis on policy and to go "to the heart of the problem, with unconstrained analysis of the inadequacies of government in one of its chief responsibilities—to protect life and enhance public safety." The book, though centred on the United States, succeeds in doing this.

According to WHO estimates, each day as many as 140 000 people are injured on the world's roads, more than 3000 die, and some 15 000 are disabled for life. If present trends continue, by 2020 the number of people killed and disabled every day on the world's roads will have grown by more than 60%, making road traffic crashes the third leading contributor to the global burden of disease and injury. Already, young adults have a higher probability of dying after a road traffic crash than from an infectious or non-communicable disease.

The number of deaths resulting from road traffic crashes shows no sign of decline except in a handful of high income countries. This is partly because traffic safety has still not developed as a scientific course of study in most countries and because the number of job openings for people who want to pursue a career as a full time road safety professional is small. Scientific information is hard to find, mostly scattered piecemeal in technical periodicals, as the field of traffic safety is a complex, multidisciplinary

gathering together of expertise in specialised areas of study. Therefore *Traffic Safety* is a timely addition to a small number of books that present the evidence on road safety logically and scientifically.

The book explains the complexities involved in recommending road safety measures. It includes numerous examples that illustrate the common mistakes researchers make when they use simple methods to try to understand complex and confounding variables.

Evans is at his best explaining counterintuitive results. Antilock braking systems were expected to reduce crashes significantly, but the data show an increase in rollover crashes, because better braking performance encourages greater speed. The rate of crashes in the winter months (with snow on the roads) is substantially lower than in summer. Evans suggests that unfavourable driving conditions in winter reduce speed and the amount of travel. Expensive, high tech driving simulators do not contribute to our understanding of road safety, because simulators measure what "the driver can do," whereas "safety is determined primarily by driver behaviour, what the driver in fact chooses to do."

### Young adults have a higher probability of dying after a road traffic crash than from an infectious or non-communicable disease

The introduction of measures in the United States to reduce exhaust emissions was accompanied by increases in the use of sport utility vehicles (SUVs), in the number of miles travelled per vehicle each year, and in the number of injuries and deaths resulting from traffic collisions. These unintended effects arose because people changed their preferences as ordinary cars became more fuel efficient and lighter and because SUVs seemed to offer greater protection and more powerful engines at relatively low prices.

The book is a valuable collection of facts about traffic safety, including facts related to vehicles themselves, the environment, roads, drivers' performance and sex and age factors, alcohol consumption, air bags, and enforcement and policy issues.

It is an excellent primer that teaches you how to examine and analyse data on traffic



IMAGE SOURCE: REK FEATURES

The rate of crashes in winter is substantially lower than in summer

and crashes. Its strength is in its cold statistical approach. Evans is right in saying that the future of road safety lies in the prevention of crashes, and few people are likely to contest his recommendations of automatic alcohol detection devices, speed control, and cameras that record drivers who run red lights. His chapter on air bags will be controversial, as he believes that "it is indefensible public policy to compel consumers to purchase items (air bags) that cost more than the benefits they provide." Similarly, many would not agree with his views on past US policies and future directions.

Evans is upset that the road safety record in the United States has not kept pace with the "best" in Europe. He tries to look at failures in US safety policy ("led by lawyers") but does not examine the influence of lifestyles that depend on cars. The book has little discussion of traffic patterns other than those seen in the United States.

The treatment of broader policy issues is not the strength of this book; this should not, however, detract from the value of this highly readable, entertaining, and educational volume on the scientific evidence regarding road safety interventions. There is far too much ignorance about road safety measures among transportation professionals and policy makers, most of whom rely on folklore. Evans's book dismisses much of the folklore very effectively, and this is its most important contribution.

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Items reviewed are rated on a 4 star scale (4=excellent)