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 Information about **Traffic Safety** This is at the core of in Ch. 16 of **SSS HOME**
 2004 book

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A New Traffic Safety Vision for the United States

Although the tragic events of September 11, 2001, are indelibly burnished into America's consciousness, the equally tragic events of October 2001, November 2001, December 2001, January 2002, and all subsequent months attract little public note. In a typical month, more Americans are killed on our roads than were killed by the terrorists.¹

If we could stimulate new approaches to the problems of risk in road traffic as we did about airline security after 9/11, every year we could save many times more lives than were lost that day. This can be achieved with far less reduction of mobility, convenience, freedom, or civil rights than was produced by our ongoing response to 9/11.

THE UNITED STATES COMPARED WITH OTHER COUNTRIES

Over 42 000 people died on US roads in 2002.¹ If US traffic safety policy had kept pace with the policy in a number of other countries, the total would have

been about 15 000 less.^{2,3} While traffic fatalities from 1979 to 2000 declined by 50% in Canada,⁴ 46% in Britain,⁵ and 48% in Australia,⁶ the decline in the United States was only 18%.¹ The better-performing countries did nothing remarkable, let alone draconian. They made many poor decisions. All their laws are passed by democratic legislative bodies answerable to electorates similar to ours. Prior to the 1970s, the United States was number one in the world in traffic safety.⁷ As measured by the number of traffic deaths per million vehicles, the United States has slipped to 13th place,⁸ and is still sinking.

These better-performing countries view traffic deaths and injuries as much more of a public health problem than does the United States. They support more scientific research aimed at exploring and evaluating countermeasures. Sweden and Australia, with populations less than that of many US states, have more institutions devoted to road safety research than the United States. Rather than respecting technical

knowledge, Americans have been persuaded that lawyers such as Ralph Nader and Joan Claybrook should guide policy.

ROLE OF US LITIGATION

Since the period when the United States was the world's safety leader, litigation here has acquired a role not approached anywhere else in the world. It has been spectacularly successful in directing focus away from the very countermeasures known to be successful in favor of vehicle factors that are of minor safety importance but are major sources of litigation wealth. The unbalanced nature of US safety policy is estimated to have killed well over 100 000 Americans in the last 2 decades.^{2,3}

Airline safety has improved dramatically because it focuses mainly on preventing crashes, not on surviving them. We continue to kill so many people on our roads because of the mistaken belief that the main way to reduce these deaths is to make every crash marginally more survivable,

while largely accepting crashes as inevitable. Litigation can always point out that if the institutions that made the vehicle, road, or traffic control system had done something differently, the outcome of a crash would have been different. This is a trivial truism. Yet the litigation system skillfully transforms this truism into billions of dollars and deflects attention from the countermeasures that could really reduce harm.

THE 2 MOST IMPORTANT FACTORS

Of the over 42 000 traffic fatalities in 2002, 13 000 were drivers killed in single-vehicle crashes. The majority of victims—more than 29 000—were killed in crashes in which a driver other than the victim plays a role. This majority includes all pedestrians, passengers, and drivers killed in multiple-vehicle crashes.¹ My more than 30 years of traffic safety research leaves little doubt that the 2 factors that overwhelmingly determine an individual's risk in traffic are (1) the individual's behavior and (2) the behavior of other road users. The total risk in the nation is simply the summation of the risks to each of its citizens.

An individual's behavior is under his or her control. The more clearly road users acknowledge this, the safer they will be. Yet in the United States the very opposite message is repeatedly reinforced by media coverage of product liability trials. A high-profile trial may perhaps involve a driver who was severely injured (but not killed) after being ejected in a rollover crash. The public is informed that a tire manufacturer was responsible, but not informed that the driver was speeding and not wearing the legally required

safety belt that would have made ejection nearly impossible. In some states, a jury must be kept ignorant of the fact that an injured plaintiff was not wearing a safety belt, even though such unsafe behavior is also illegal.⁹ Instead of encouraging drivers to obey traffic laws, actions over which they have control, the US media coverage defines the problem in terms of manufacturing and design decisions over which drivers have no control.

The actions of other road users pose greater threats to our lives than those of terrorists. About 850 people are killed annually in the US by drives running red lights.¹⁰ We are more likely to be killed by a driver running a red light and crashing into the side of our vehicle than by a terrorist bomb on an aircraft. There is no vehicle engineering change that can appreciably reduce this risk. It is a cruel hoax to imply otherwise—side airbags can produce no more than marginal risk reductions.

THE SOLUTION

The threat posed by other drivers can provide the key to more effective safety policy that will influence the behavior of all drivers. We accept invasive scrutiny of our persons and luggage before boarding an aircraft, even though we know we are not carrying a bomb. We realize that the only way to protect ourselves from someone else carrying a bomb is for all to be searched. A much larger risk reduction can be obtained if we agree to allow all vehicles, including our own, to be automatically monitored to reduce illegal driving.

Modern technology provides the means to automatically detect such illegal behaviors as running red lights, speeding, or tailgating.

Cameras that automatically record the license plates of vehicles entering intersections after traffic lights have turned red are already reducing deaths and injuries in many countries (including limited applications in the United States).¹⁰ Radar speed cameras have been widely deployed in Britain, Australia, and New Zealand.¹⁰ Technology to measure the distance between cars has been developed and field-tested in Israel.¹¹

To reap the enormous safety benefit that such technology can ultimately deliver, we must more warmly embrace a principal that is already implicitly accepted: that driving is a public, not a private, activity. The privacy that is rightly sacrosanct for private activities should not apply to driving because of the enormous threat it poses to others.

Airline pilots are denied privacy on the flight deck, and the speed and altitude of aircraft are routinely monitored. There is already universal acceptance that driving a ground vehicle is not an entirely private activity. Nobody advocates that anyone of any age has the right to drive a vehicle at any speed on either side of the road after consuming any quantity of any intoxicant. The breakthrough that is required is an agreement that other drivers pose so great a threat to our lives that we have the right to enforce traffic laws effectively. Assigning skilled police officers to monitor traffic is an ineffective misuse of valuable public resources. What humans do poorly, technology can do well at a microscopic fraction of the cost.

I believe that the public would warmly embrace the use of technology to effectively enforce traffic law if it were a central component of a fundamental change that included the following 4 policy changes.

1. Traffic law should have one purpose—to prevent injuries and deaths. Using traffic law to raise revenue brings it into disrepute, rendering it ineffective. Like other aspects of public health, traffic safety should be a government service supported by taxes. Given that traffic crashes cost our nation \$200 billion per year,¹² public expenditures that reduce crashes pay handsome dividends.
2. Automatically detected minor violations should receive no punishment for first or very infrequent offenses. A gentle letter explaining the purpose of traffic law would enhance safety more than punishment. Repeat and more major violations would receive increasing fines. The goal is to increase public support for safer traffic, not to alienate average citizens.
3. All traffic fines should be kept in a separate account and distributed equally to all license holders as an annual bonus (perhaps just before Christmas). This could come with an upbeat letter from the secretary of state, expressing the hope that everyone would work together to ensure that the small bonus would be even smaller next year. Such a process would remind people, in a positive way, of the importance of traffic safety and reinforce the understanding that law enforcement's goal is to prevent harm, not to raise money.
4. Automatic monitoring associates law violations with vehicle license plates, not drivers. Law changes would be necessary to make owners responsible for taking care of citations, ideally by persuading the actual driver to respond. Serious driving offenses would continue to focus on the driver.

Unlike airport security, these proposals would save tens of thousands of lives annually and

would not inconvenience, delay, embarrass, or disadvantage any law-abiding citizen. ■

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References

1. National Highway Traffic Safety Administration. Fatality Analysis Re-

porting System. Available at: <http://www.fars.nhtsa.dot.gov>. Accessed August 2003.

2. Evans L. Traffic crashes. *Am Scientist*. 2002;90:244–253. Available at: <http://americanscientist.org/articles/02articles/Evans.html>. Accessed August 2003.

3. Evans L. Transportation safety. In: Hall RW, ed. *Handbook of Transportation Science*. 2nd ed. Norwell, Mass: Kluwer Academic Publishers; 2002:67–112.

4. Transport Canada. Canadian motor vehicle traffic collision statistics: 2000. Available at: http://www.tc.gc.ca/roadsafety/tp/tp3322/2000/en/page5_e.htm. Accessed August 2003.

5. Department for Transport. Transport statistics, Table 9.10. Road accidents and casualties: 1950–2001.

Available at: <http://www.transtat.dft.gov.uk/tables/tsgb02/9/download/91002.xls>. Accessed August 2003.

6. Australian Transport Safety Bureau. Road safety statistics—fatalities. Available at: <http://www.atsb.gov.au/road/stats/timefat.cfm#roaduser>. Accessed August 2003.

7. *MVMA Facts and Figures 1981*. Detroit, Mich: Motor Vehicle Manufacturers Association of the United States; 1981.

8. Organization for Economic Cooperation and Development. International road traffic and accident data. 2001. Available at: <http://www.bast.de/htdocs/fachthemen/irtad/english/englisch.html>. Accessed August 2003.

9. Blair D. Seat belt defense deserves a fair hearing in Texas [editorial]. *Houston Chronicle*. February 18, 2003: 19A.

10. Insurance Institute for Highway Safety. Officials nationwide give a green light to automated traffic enforcement—cameras to stop red light runners attract far more support than speed cameras. *Status Rep*. 2000; 35(3):1–3. Available at: <http://www.highwaysafety.org/srpdfs/sr3503.pdf>. Accessed August 2003.

11. Richter ED, Ben-David G, Ortiz R, Cortes J. A traffic monitoring and driver behavior modification system. USAID CDR Project C8-043, 1995. Also available at: <http://www.ukspeedtraps.co.uk/speed01.htm>. Accessed August 2003.

12. Blincoc LJ, Seay AG, Zaloshnja E, et al. *The Economic Impact of Motor Vehicle Crashes, 2000*. Washington, DC: National Highway Traffic Safety Administration; May 2002. Report DOT HS 809 446.

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