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RISK COMPENSATION KEEPS POPPING UP WHERE IT'S TOTALLY IRRELEVANT

Death and taxes aren't the only inevitables. Equally certain is that every now and then someone will resurrect the idea of risk-compensating behavior to claim that this or that highway safety program is costing lives instead of saving them. The hypothesis is that anytime a safety program is introduced — airbags are added to vehicles, for example, or belt use is mandated — motorists will compensate by taking more risk behind the wheel. The latest resurrection is in the April 15th issue of *Risk & Insurance*, in which Beaumont Vance covers John Adams' claim that Britain's safety belt law "failed to achieve the life-saving benefits claimed for it" because its proponents including the British Medical Association, Royal Society for the Prevention of Accidents, and Royal College of Surgeons weren't "aware of risk compensation."

Actually they probably were aware, but they knew, like everyone else who follows this subject in the scientific literature, that risk compensation in response to occupant protection innovations repeatedly has been debunked. This doesn't mean drivers never change their behavior in response to safety technologies. Sometimes they do. There's evidence of this when vehicle designs are changed in ways that give motorists direct and immediate feedback — for example, when vehicle acceleration capabilities are boosted or brakes are improved. Such features change the driving task, and some motorists respond by changing their behavior. This could explain why antilock brakes have so little effect on crashes and why benefits from studded snow tires have been less than expected. Some people drive faster because of how their vehicles handle.

If the driving task doesn't change, there won't be any compensation

But there's no evidence to support the notion that drivers operate vehicles any differently when safety features like energy-absorbing steering columns, high-penetration-resistant windshields, or safety belts are introduced. Nor do they change when belt use is required. These factors don't alter how vehicles drive or how people drive them.

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The Insurance Institute for Highway Safety and the Highway Loss Data Institute are independent, nonprofit scientific and educational organizations dedicated to reducing the losses — deaths, injuries, and property damage — from crashes on the nation's highways. This work is wholly supported by automobile insurers. Of special interest to insurers, advisories are published for member companies.

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People's levels of risk aren't homeostatic

To believe Adams you'd have to believe that people have a certain tolerance for risk and that their levels of risk are regulated by a homeostatic mechanism so that, if forced to "consume" more safety than they voluntarily would choose, people will balance the safety increase by taking more risks. It's a stretch, isn't it? But Adams isn't the only one to make it. People have been misapplying the idea of risk compensation to driver behavior since at least the 1970s, when economist Sam Peltzman claimed there would have been no change in crash deaths, or perhaps even fewer deaths, if occupant protection hadn't been enhanced by new safety regulations. Drivers responded to the enhancements by taking more risks, Peltzman asserted. But he didn't provide any credible evidence that driving behavior had changed or that any such changes actually caused the results he reported.

Claims like those of Peltzman and Adams often are based on simplistic analyses of aggregate death or injury statistics over time. In contrast, controlled studies have refuted claims about risk compensation for most safety interventions, and Insurance Institute for Highway Safety studies have refuted Adams' specific claim that drivers take more risks when they're required to use safety belts. Here are a few of the studies:

Levy, D.T. and Miller, T. 2000. Review: risk compensation literature — the theory and evidence. *Journal of Crash Prevention and Injury Control* 2:75-86.

Lund, A.K. and O'Neill, B. 1986. Perceived risks and driving behavior. *Accident Analysis and Prevention* 18:367-70.

Lund, A.K. and Zador, P.L. 1984. Mandatory belt use and driver risk taking. *Risk Analysis* 4:41-53.

O'Neill, B.; Lund, A.K.; Zador, P.L. and Ashton, S.J. 1985. Mandatory belt use and driver risk taking: an empirical evaluation of the risk-compensation hypothesis. *Human Behavior and Traffic Safety* (eds. L. Evans and R.C. Schwing), 93-118. New York, NY: Plenum Publishing Corporation.

O'Neill, B. and Williams, A.F. 1998. Risk homeostasis hypothesis: a rebuttal. *Injury Prevention* 4:92-93.

Robertson, L.S. 1977. A critical analysis of Peltzman's 'The effects of automobile safety regulations.' *Journal of Economic Issues* XI:3.

Williams, A.F. and Robertson, L.S. 1975. The fatal crash reduction program: a reevaluation. *Accident Analysis and Prevention* 7:37-44.

Adams probably won't be the last to misuse risk compensation

Adams' claim that belt laws aren't effective because of risk compensation isn't any more credible now than when he first proposed it in the 1980s. Studies show that deaths are reduced when states enact belt laws, and Adams doesn't provide any evidence to the contrary. But don't expect claims like this to cease. Someone else is likely to come forth with stop-the-presses insights about highway safety programs based on the risk compensation hypothesis.

Don't believe them, not until they produce credible evidence that people compensate for safety and not for factors that change the driving task. No one has produced such evidence in the past. Adams doesn't either.

To believe Adams you'd have to believe ... that, if forced to 'consume' more safety than they voluntarily would choose, people will balance the safety increase by taking more risks. It's a stretch, isn't it?