Is Metro Too Safe?

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When a Metro subway rider was killed this past November because her clothing became entangled in an escalator, a proposal to install safety sensors -- at a cost of $8 million -- received serious attention. Had these sensors been installed 13 years ago, perhaps five lives would have been saved, at an assumed cost of $1.6 million each. With more recent overloading and breakdowns on the Metro, however, the focus shifted from compassionate concerns about public safety to angry demands just to make the trains run on time.

At $1.7 million per life saved, automobile air bags represent a more expensive safety investment, while seat belts are a bargain at only $150,000 per life saved. Automatic activation devices (AADs, or "air bags for sky divers") are practically a steal at only $125,000 per lifesaving incident. Of course, the most cost-effective safety investments are the brakes on cars and trains, which save lives every time they're used.

But it's not just a simple matter of doing the math. In July 1998 a Metro rider collapsed and died of a heart attack after climbing the stairs of an out-of-service escalator in the sweltering mid-summer heat. Unfortunately, the escalator sensors designed to save those whose clothing becomes entangled also would increase escalator downtime, forcing riders to climb stairs more often -- thus increasing the probability of heart attacks for others and inconveniencing everyone.

Simply put, installing escalator sensors benefits members of one subgroup at the expense of another. It's even possible that installing these sensors might kill more people than doing so would save.

But this wouldn't be the first time that vulnerable segments of the population were unwittingly targeted in the name of public safety. For every 30 people saved by air bags, one is killed. These would be very good odds if the effects of air bags were random, but they're not. If you're on the short end of the scale of human beings -- mostly women and children -- then air bags are more likely to kill you than to save you. Sitting in the front seat is equivalent to staring at a loaded gun pointed directly at your face.

When air bags were introduced in the mid-'80s, the public wasn't informed that it was serving as guinea pigs in a life-or-death study of their effectiveness. Literally adding insult to injury, when the accumulated data illuminated the dangers air bags posed to smaller people, consumers were denied the right to eliminate this risk by disarming the devices.

Unfortunately, this aberration may not be an exception but a trend. A recent move by the Nevada state legislature requires sky divers to use AADs. Like an air bag, which measures force applied to a car's bumper, the AAD measures air pressure around a falling sky diver to calculate altitude.

It fires the reserve parachute when it detects that a sky diver is still in free fall at too low an altitude. While the dividing line of the risk-reward barrier for air bags is occupant size, Tonney Boan, co-owner of Skydive Virginia, says that with AADs, it's the experience level of the sky diver.

In the case of air bags and escalators, experienced and informed experts are assigned the task of calculating the risks and making decisions for an inexperienced and uninformed public. Amazingly, the state of Nevada is turning this process upside down and having inexperienced and uneducated legislators dictate safety standards for educated and experienced sky divers.

Since it's inevitable that public safety standards introduce risk-reward trade-offs that benefit some segments of the population at the expense of others, two ethical standards become obvious for those responsible for making the decisions. First, minority groups placed at risk have a right to be informed about their situation in advance. Second, they have the right to take any actions necessary to reduce or eliminate those added risks to their safety.

Like the victims of the notorious Tuskegee syphilis study in the 1930s, smaller women and children should have been warned in advance (as the auto manufacturers tried to do) that their safety was about to be compromised. And they should have been offered the choice of opting out of this unprecedented nationwide auto safety experiment. Similarly, those with heart problems should be warned that an increase in escalator downtime may pose a threat to them. And it goes without saying that legislators who have never put on a parachute shouldn't be dictating safety standards for sky divers who literally put their lives on the line every time they jump.

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