

# Rejecting the “Human Error” Explanation

*An Evidence-Based  
Approach to the Rise in  
Traffic Fatalities*

**THERE ARE  
NO  
ACCIDENTS**

The Deadly Rise of Injury  
and Disaster — Who Profits  
and Who Pays the Price

**JESSIE SINGER**

# Layers of Dangerous Conditions = Rise in Traffic Deaths



VEHICLE SAFETY STANDARDS



AVERAGE VEHICLE SIZE AND  
WEIGHT



RURAL HOSPITALS



AVERAGE AGE OF VEHICLES  
ON THE ROAD



INFRASTRUCTURE SPENDING



URBAN POPULATIONS

A human error is **a mistake**.

A dangerous condition is **an environment**.

After an “accident,” whichever you focus on decides whether or not the same “accident” will happen again.

# The Bad Apple Theory vs. The New View

## **“The Bad Apple Theory”**

- A few bad apples cause accidents.
- Driving and roads are inherently safe. Accident-prone people make it unsafe.

### *“Bad Apple” Solutions*

retraining, issuing punishments,  
creating new rules

## **“The New View”**

- Dangerous conditions cause people to be hurt in accidents.
- If people are getting hurt on the road, then conditions on the road are inherently unsafe.

### *“New View” Solutions*

separating people in time and space  
from dangerous conditions

# Rejecting the “Human Error” Explanation

“Overstating the role of road-user error may result in a reduced focus on effective countermeasures that address systemic failures in this causal chain.”

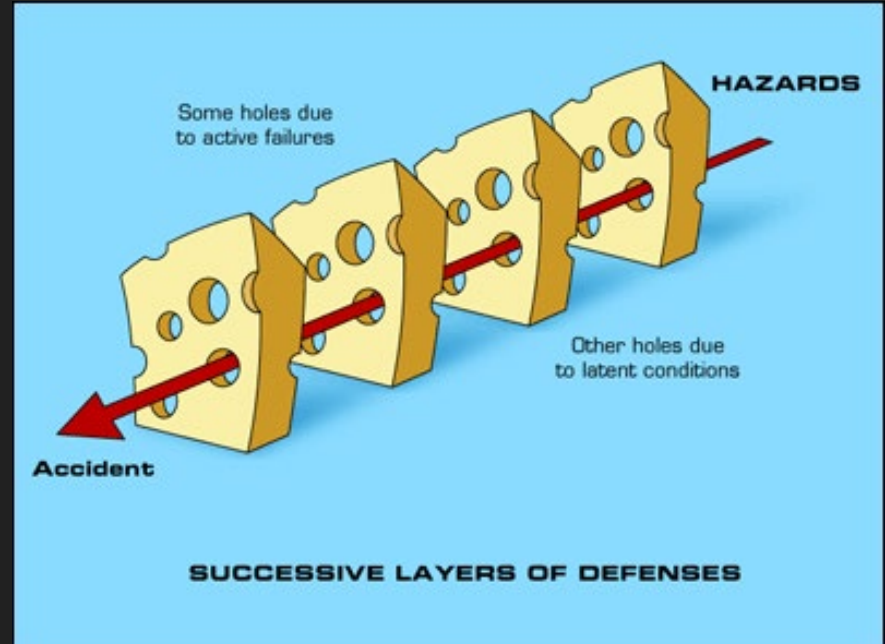
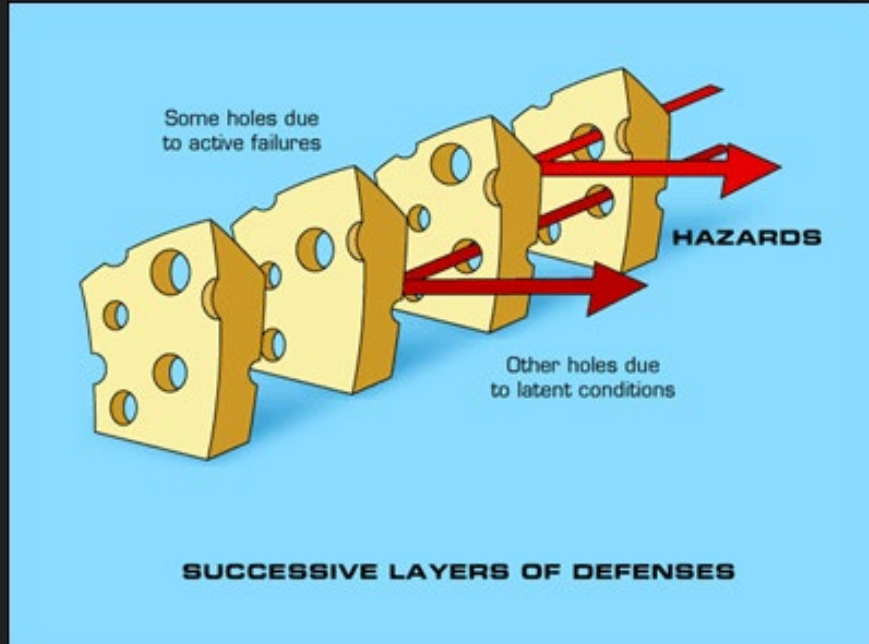
– World Health Organization

“The Safe System approach opposes the often-repeated but simplistic claim that driver error is the cause of 90% of road fatalities. At best, driver error is the last failure in a causal chain of events leading to a crash.”

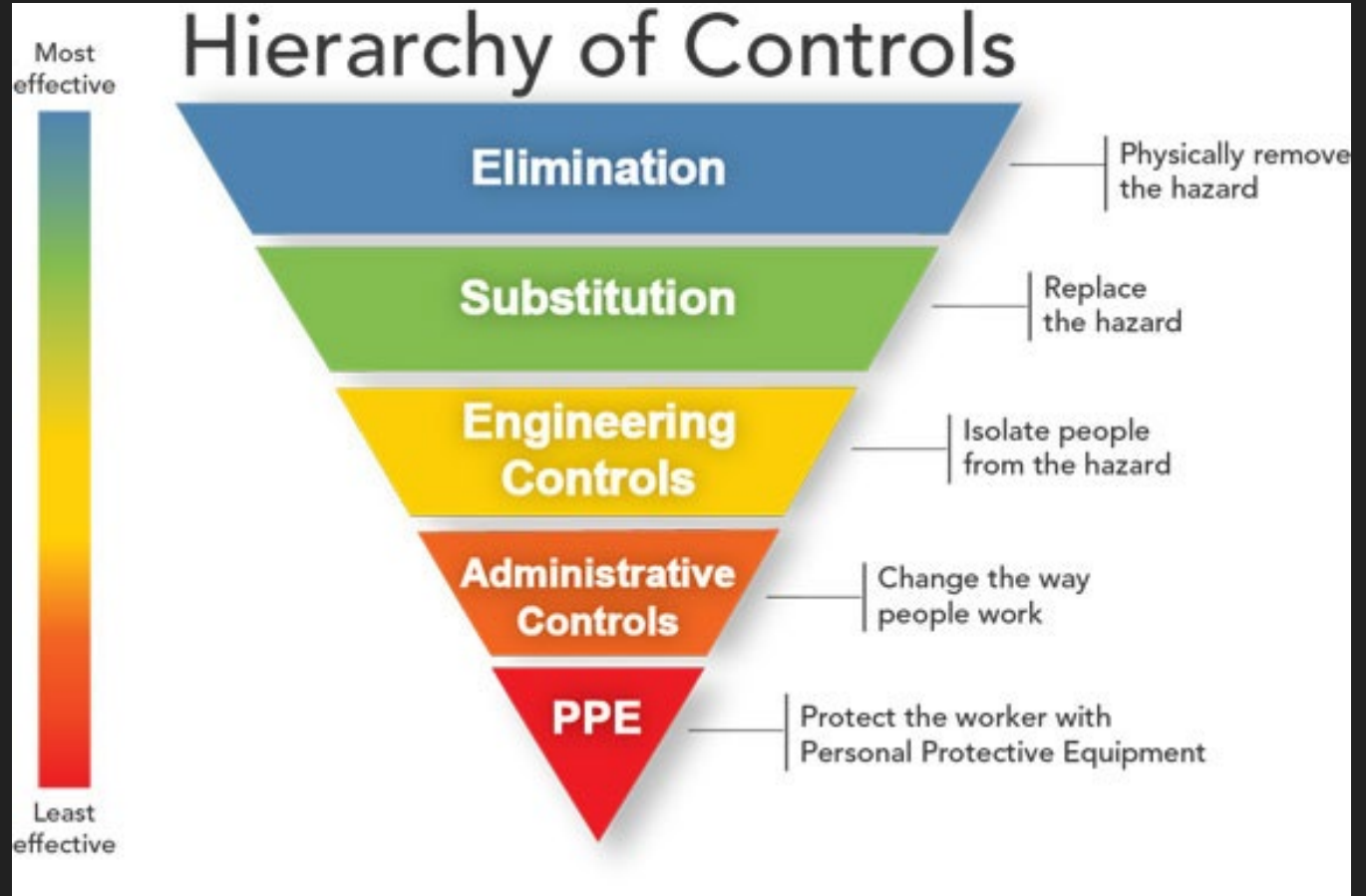
– World Health Organization

The Chair of the National Transportation Safety Board has described the statistic attributing 90 percent of traffic crashes to human error as “dangerous.” Jennifer Homendy told the *Associated Press* that using that statistic, “relieves everybody else of responsibility they have for improving safety, including DOT.”

# Dangerous Conditions Stack Up. Failures Cascade.



Most traffic safety efforts exist at the bottom of the pyramid. **The least effective controls are focused on behavior not conditions.** When we focus on rooting out bad apples rather than reducing harm for everyone then everyone suffers.



# Education Campaigns = Fix the “Bad Apples”

“Information-only [roadway safety] programs are unlikely to work, especially when most of the audience already knows what to do. Therefore, **highway safety messages conveyed in signs, pamphlets, brochures, on buttons, are unlikely to have any effect on behavior.**”

– *National Academies of Science  
Engineering, and Medicine’s  
Transportation Research Board*

“If you ask people if they think speeding is a problem, most say yes. But **most will say they still do it** anyway.”

– *Jessica Cicchino  
Insurance Institute for Highway  
Safety*



# Police Traffic Enforcement = Get Rid of the “Bad Apples”

In a 2021 study in *The Journal of Trauma and Acute Care Surgery*, epidemiological researchers analyzed 12 years of police traffic stop and traffic fatality data from 33 states.

Researchers could find NO CORRELATION between police traffic stop and traffic deaths.

By contrast, there is ample evidence that automated enforcement DOES work: reducing crashes, violations, and most importantly, traffic deaths.

The difference is this: Humans do not respond to random or intermittent consequences. Humans do respond to guaranteed consequences.

# Design Streets for the Lowest Common Denominator User

“The bottom line is **if you make this world safe for drunks, you make it safe for everybody**. If you focus on making the world safe for the average, reasonably smart, sober person, then the drunks, the sleepyheads, the guy who is worried about his child’s operation and trying to get home in time for it, it is not going to be safe for them.”

– *Dr. Susan P. Baker*

*Johns Hopkins Center for Injury Research and Policy*

# Evidence-Based Approaches to Reducing Traffic Fatalities

- Daylighting
- Curb extensions
- Raised crosswalks
- Bike parking
- Leading pedestrian intervals
- Protected bike lanes
- Protected crosswalks
- Protected intersections
- Wide sidewalks
- Public transit availability
- Bus-adjacent crosswalks with traffic signals
- Automated enforcement
- Speed limits 25 mph or less
- Side guards on trucks
- Speed governors

# Design Streets for People Who Make Mistakes

“If a mother turns to look at her baby and she goes off the road and hits a pole that shouldn’t have been there, **that turns a mishap into a fatal event**. I think that’s too high a penalty for being human...We’ve all been miseducated that the way to solve this problem is to have more squads of police chasing Americans so that they wouldn’t drive 120 miles per hour rather than arranging cars so they can’t go that fast.”

– *Dr. William Haddon*

*National Highway Traffic Safety Administration*

# Thank You!

*Rejecting the "Human Error" Explanation: An Evidence-Based Approach to the Rise in Traffic Fatalities* was a presentation by Jessie Singer, journalist and author of the new book "There Are No Accidents: The Deadly Rise of Injury and Disaster -- Who Profits and Who Pays the Price" published by Simon & Schuster and available now wherever books are sold.

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