

Factors and frames that shape public discourse around road user safety (*R29*)

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Outline

- Background and introduction
- Research questions
- Methods and procedures
- Results
 - Descriptive
 - Statistical modeling results
 - Story archetypes
- Study implications
- Media framing guidance

Background and introduction

- An average of 40,000 people die in traffic crashes in the United States each year.
- Despite municipal- and state-led efforts to improve road user safety, the public has yet to prioritize road trauma as a public health problem.

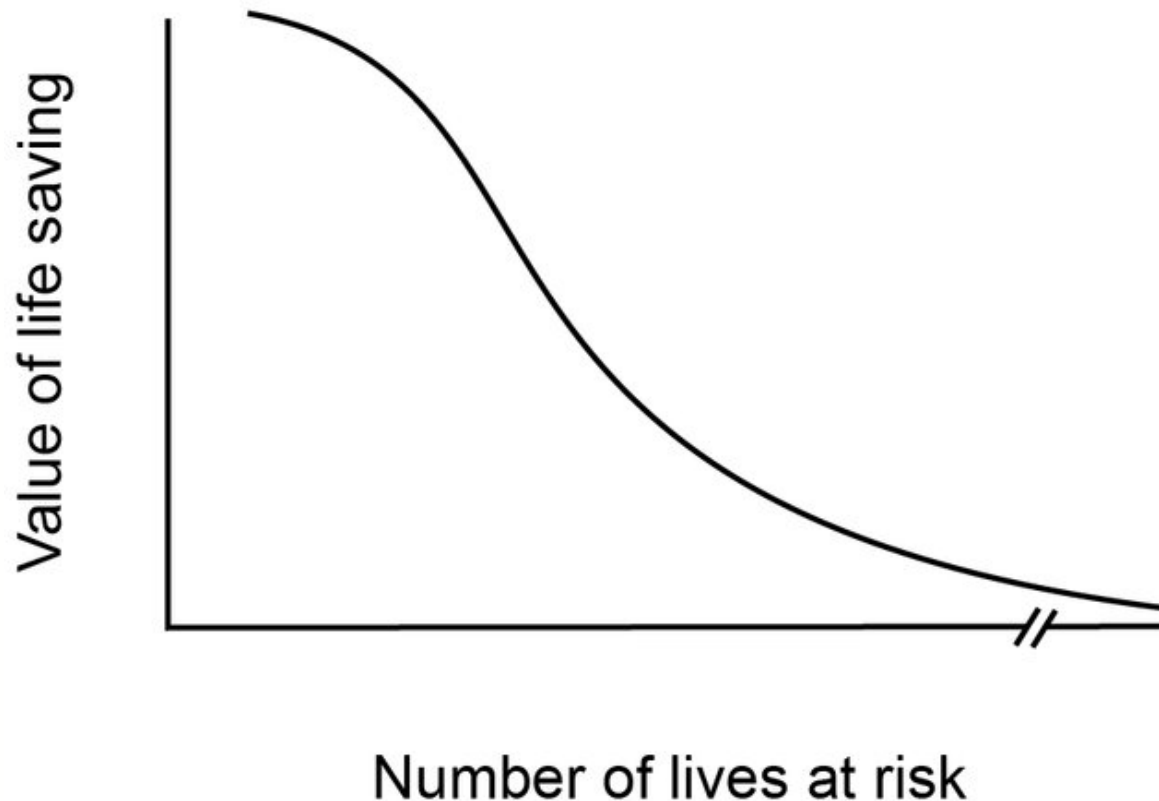
Background and introduction

Two inter-related psycho-social factors are likely at play in this general malaise:

1. Compassion fade
2. Cultural mindsets

Background and introduction – compassion fade

- **Compassion fade** unfolds once the scale of a problem begins to appear too large and hopeless to tackle (*Butts, Lunt, Freling, and Gabriel, 2019*).



Source: Västfjäll, Slovic, Mayorga, and Peters (2014)

Background and introduction – cultural mindsets

- **Cultural mindsets** identifies “individualism”, “otherism”, and “fatalism” as prevailing North American cultural mindsets—culturally specific ways of organizing lived experience (*Oyserman, 2015*).
- **Individualism** is the notion that the outcomes of people’s lives are a sole result of choices individuals make;
- **Otherism** advances a perpetual zero-sum competition among people perceived as different from one another; and
- **Fatalism** is the idea that many problems are simply unpreventable, especially given the ineptitude of governing bodies (*Kendall-Taylor, 2019*)

The role of framing

- **Framing** - focusing attention on certain events over others, thus placing stories within a field of meaning.
- Media frames guide the audience in discerning which story details are most pertinent, such as who is involved, how they were involved, and who may be responsible for a traffic crash (*Ralph, Goddard, Thigpen, and Iacobucci, 2019*).



Source: cjr.org/analysis/when-covering-car-crashes-be-careful-not-to-blame-the-victim.php

Research questions

1. How does media framing of traffic crashes vary as a function of the crash details included in stories (e.g., road users involved, the age of the victims, references to the physical environment)?
2. Relative to U.S. cities yet to adopt Vision Zero, in what ways have media frames changed within Vision Zero cities from 2012—i.e., prior to Vision Zero adoption in the U.S.—through 2018—i.e., when 11% of mid- to large-sized U.S. cities had adopted Vision Zero programs?
3. How do patterns of framing traffic crashes in news media affect public discourse related to crash events and road user safety more generally?

Methods – TV news station selection

- The team selected the top two most viewed TV broadcast news stations across 18 population size and geographic region-matched core-based statistical areas (CBSAs).
- 9 CBSAs contained one or more principal cities that had adopted a Vision Zero program by 2019.
- Another 9 CBSAs did not contain a Vision Zero adopting city by 2019.

18 CBSAs involved in study

With Vision Zero-adopting cities

- Boston-Cambridge-Newton, MA-NH
- Charlotte-Concord-Gastonia, NC-SC
- Denver-Aurora-Lakewood, CO
- New York-Newark-Jersey City, NY-NJ-PA
- Phoenix-Mesa-Scottsdale, AZ
- San Antonio-New Braunfels, TX
- San Francisco-Oakland-Hayward, CA
- Seattle-Tacoma-Bellevue, WA
- Tampa-St. Petersburg-Clearwater, FL

Without Vision Zero-adopting cities

- Dallas-Fort Worth-Arlington
- Houston-The Woodlands-Sugar Land, TX
- Detroit-Warren-Dearborn, MI
- Pittsburgh, PA
- Orlando-Kissimmee-Sanford, FL
- Cleveland-Elyria, OH
- Las Vegas-Henderson-Paradise, NV
- Salt Lake City, UT
- Erie, PA

Methods – Search procedure

- 1. Crash-involved entities:** pedestrian, walker, person walking, bicycle, bicyclist, cyclist, person riding a bike, person riding a bicycle, driver, motorist, truck, SUV, vehicle, car, motorcycle, train, bus, child, student, man, woman, bike, traffic
- 2. Focusing events:** strike/struck, hit, collide/collided/collision, crash, kill/killed, injure/injured, wreck/wrecked, hit and run, fatality, injury, accident, incident, drive/driving drunk driving/drunk driver
- 3. Event descriptors:** fatal, crash, collision, accident, wreck, severe, serious, dead, death, disabling, disabled

Methods – Codebook development

- ***Examples of news covered crash attributes:** time of day; light conditions; weather conditions; the age of road users involved; the travel mode involved persons were using during the crash; references to drug or alcohol use; references to physical environment features; crash attribution, “at fault” parties, and legal ramifications, etc.
- ***Example framing devices:** use of thematic vs. episodic frames, employing victim narratives, and referencing agentic drivers vs. passive vehicles.

*(Adapted the content analysis methodology employed by De Ceunynck and colleagues (2015) and Ralph, Iacobucci, Thigpen, and Goddard (2019)).

Methods – Inter-rater reliability procedure

- Randomly selected 120 (~10 percent) of the collected Facebook posts and requested that the four coders code all 120 stories independently.
- After 2 weeks, the coders abstracted the crash-featuring Facebook posts, and the team calculated Krippendorff's alphas for all 55 coding elements.
- Based on the percent agreement among coders and the alpha coefficient, 7 of the 55 coding elements (e.g., discerning 'active' from 'passive' voice, the number of words in each story) evinced low inter-rater reliability and were revisited in a series of facilitated meetings to develop consensus around how to interpret the elements.
- After these meetings, all coding elements achieved acceptable levels of inter-rater agreement (i.e., $\alpha \geq 0.70$).

Methods – Statistical approach

- “Engagement” with crash-featuring Facebook posts = number (#) of times Facebook users reacted to—using one of the emoticons—, shared, or commented upon the post.
- Given:
 - Use of counts of Facebook reactions (emotive) per media post (N = 1,156); and
 - the over-dispersed number of Facebook reactions to media posts (Mean = 565.90, SD = 1,111.62)
- the team estimated **mixed effects negative binomial regression models**, regressing total Facebook reactions and comments onto a matrix of post-related covariates, and estimating random effects at the level of CBSAs.



Like



Love



Haha



Wow



Sad



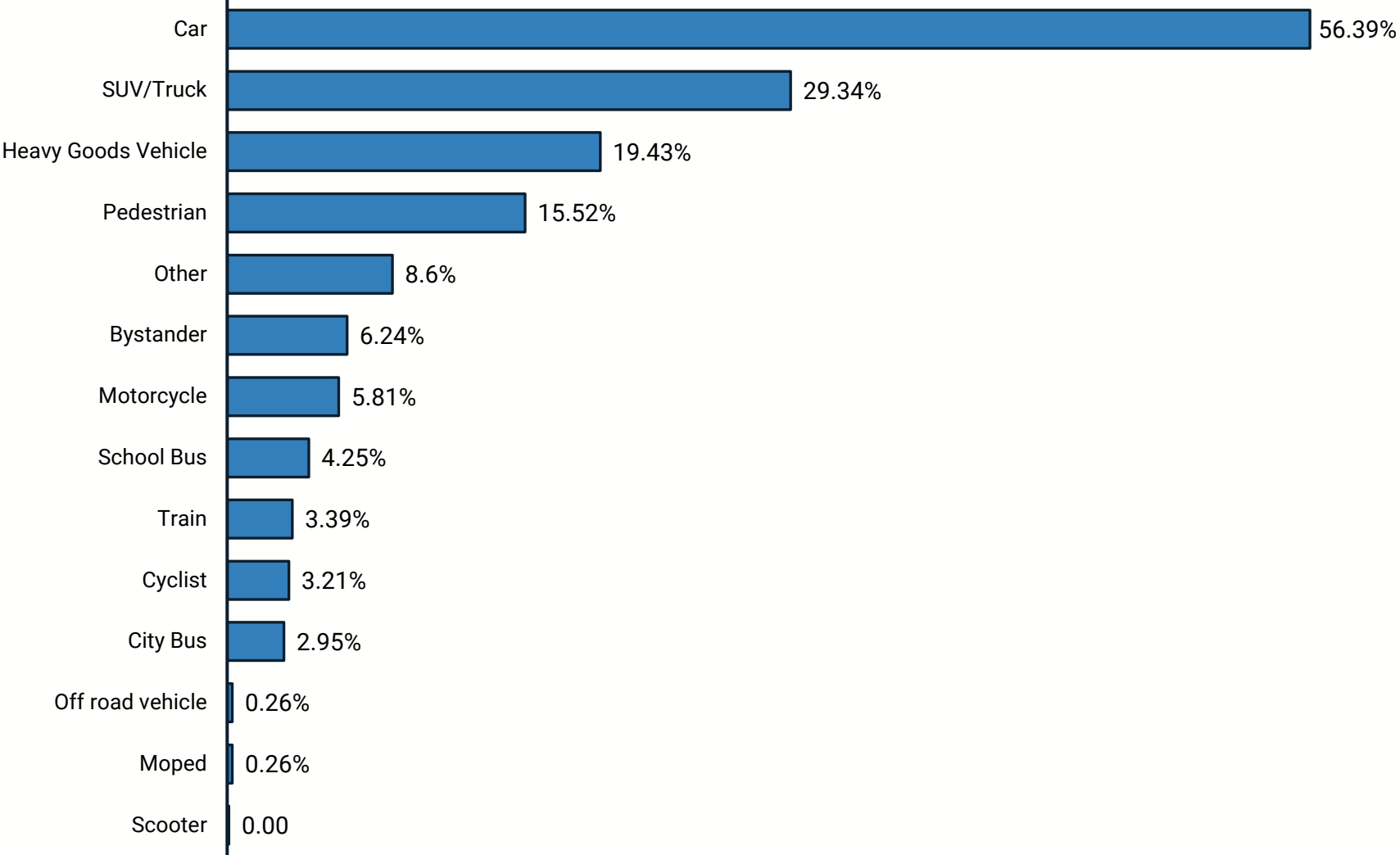
Angry

Source: about.fb.com/news/2016/02/reactions-now-available-globally/

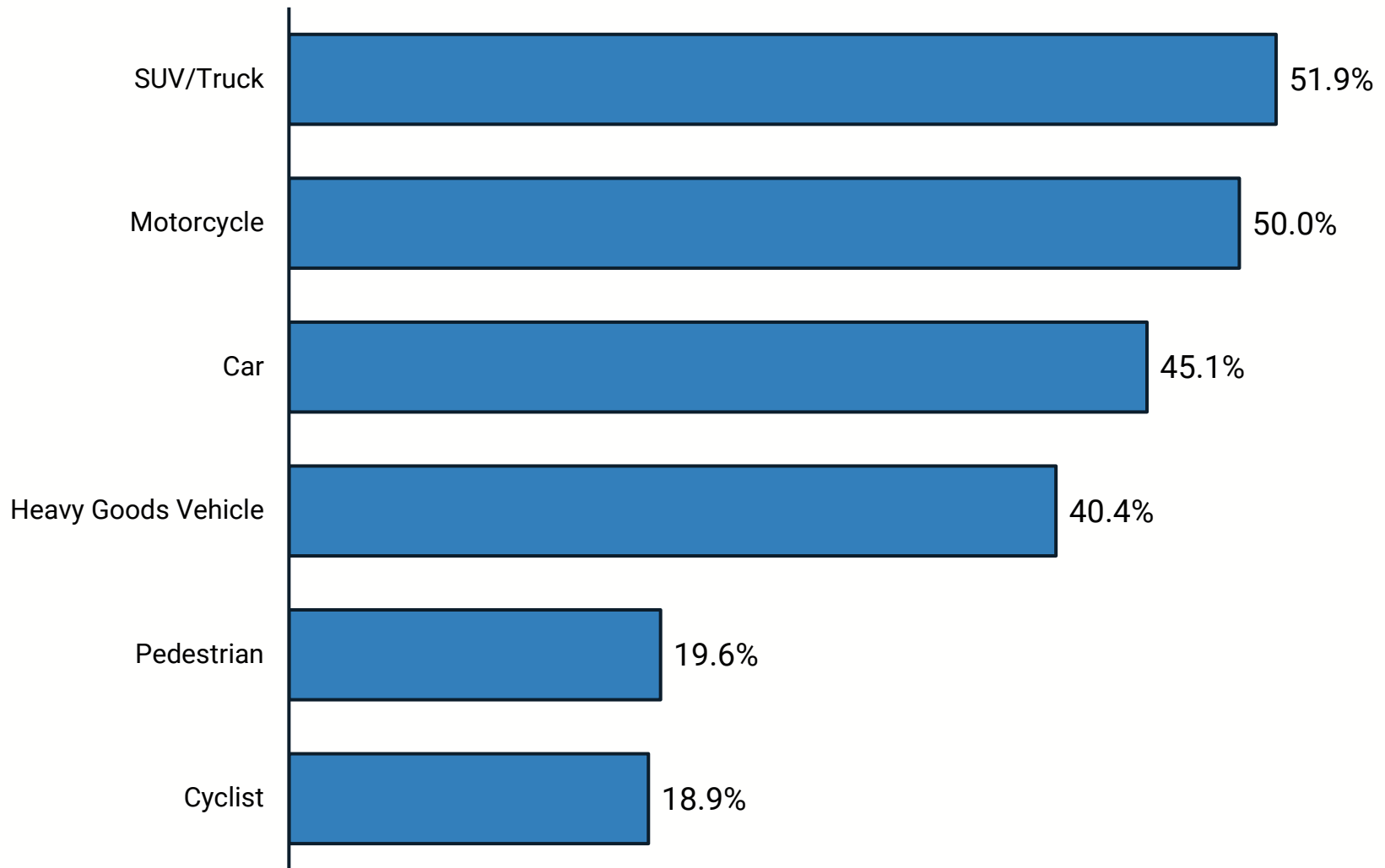
Methods – Statistical approach

- ‘Shares’ on Facebook adhered to a normal (gaussian distribution around the mean) and thus were regressed onto a matrix of covariates using a mixed-effects generalized linear model with an identity link.
- Across means of engagement (reactions, comments, and shares), a random intercept was estimated at the level of the TV news source (N = 36) that distributed the crash-featuring story.

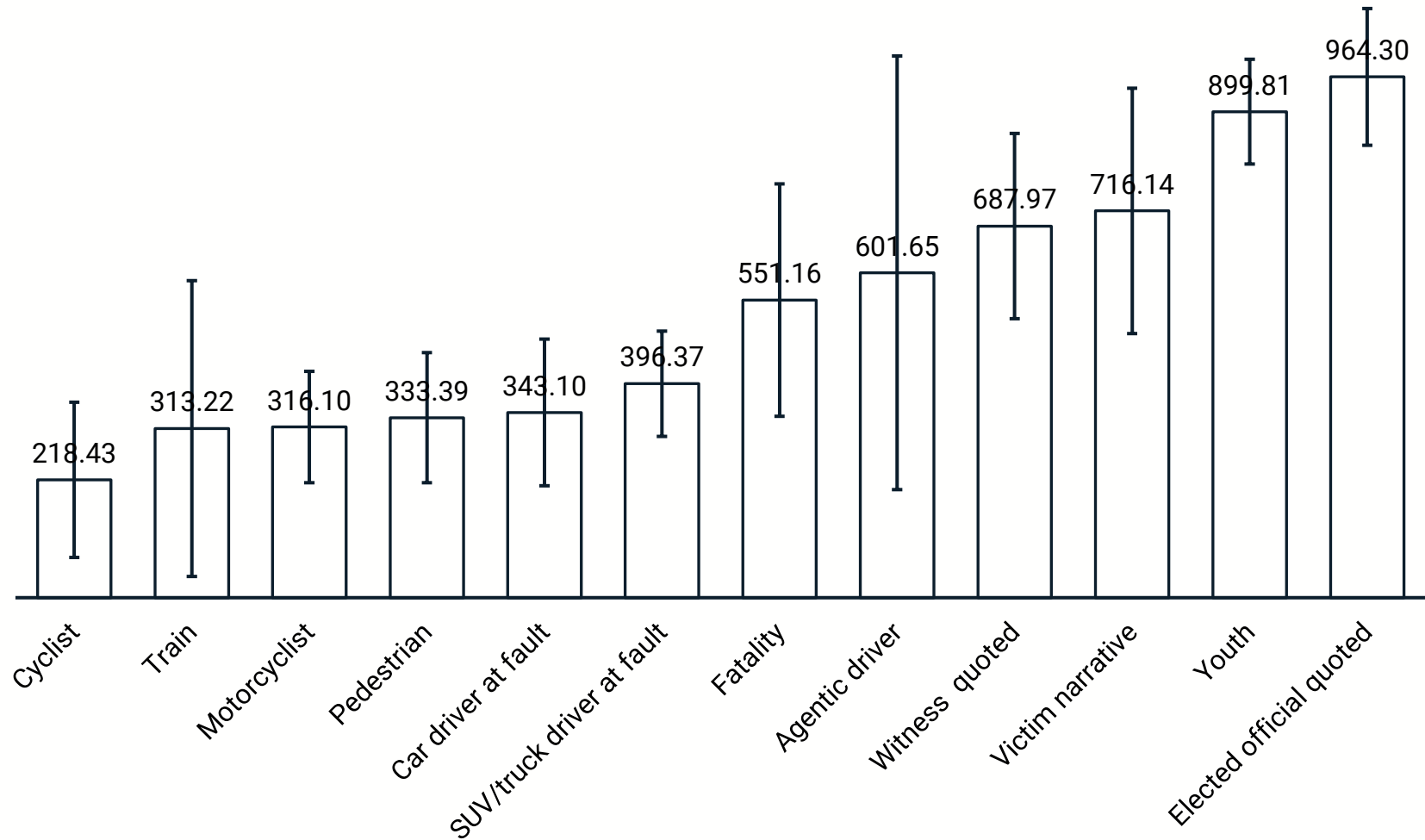
Results – Road users involved in crashes



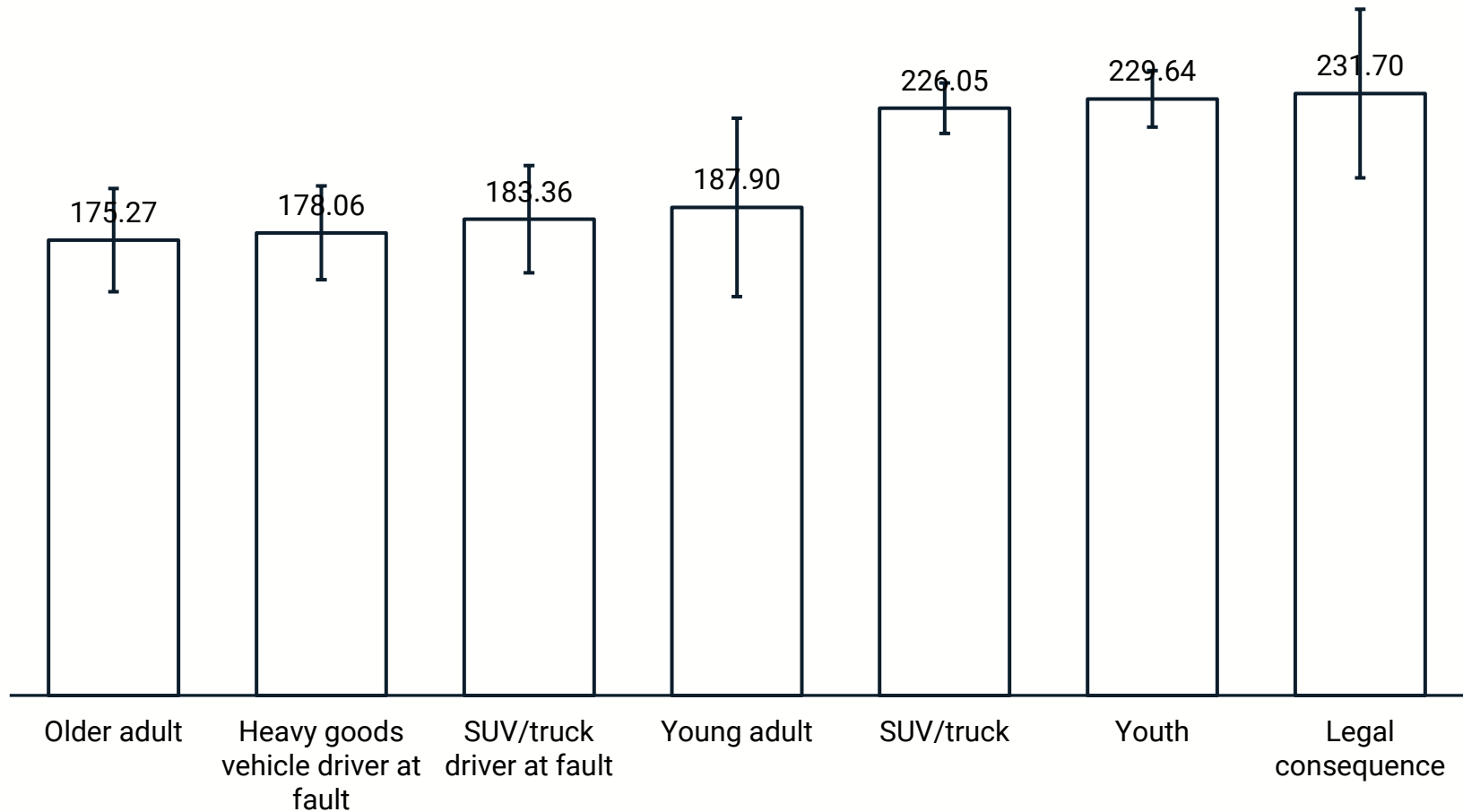
Results – % of time road users were identified as “at fault” for crashes



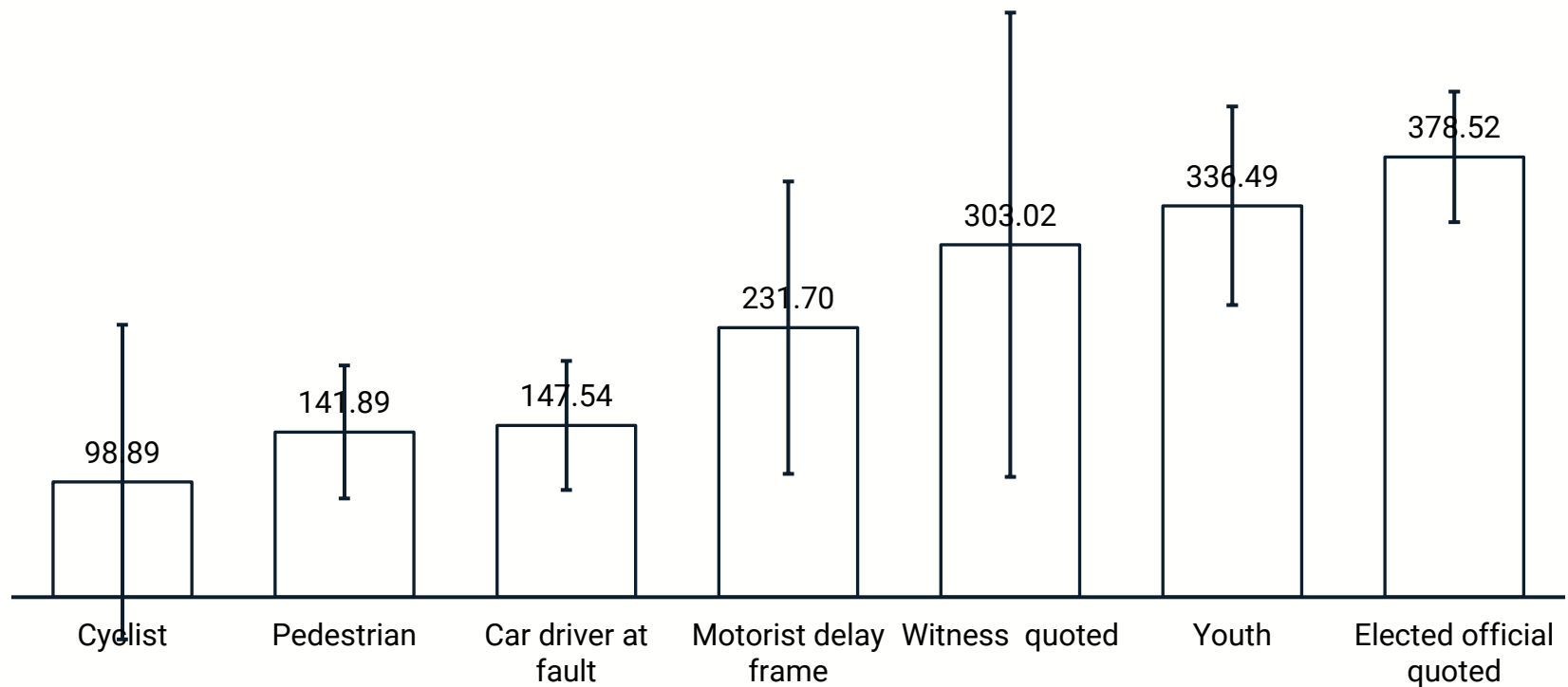
Results – Modeled # of reactions per post



Results – Modeled # of shares per post



Results – Modeled # of comments per post



Story archetypes

- 1. Episodically framed travel delays** that lack victims and feature vehicles rather than drivers. E.g., *“A multi-injury crash shut down the Las Vegas Strip Sunday, right outside the Miss Universe pageant. One person reportedly died, and dozens others were hurt. The crash resulted in a massive traffic backup.”* - Denver (Denver Channel), 12/20/2015
- 2. Thematically framed stories** that end in calls to action. E.g., *“Truck crashes through Bear Lake intersection, buildings for 3rd time in a year. the city is working with UDOT and UHP to install a temporary brake check at the top of the canyon and a runaway truck ramp.”* - Salt Lake City (Fox 13), 8/20/2019
- 3. Driver exonerations** where drivers themselves are often framed as victims of crashes, even in crashes with pedestrians or cyclists. E.g., *“Driver mistakenly hits gas, crashes into Dallas Metro PCS”* - Dallas (Fox 4 DFW), 3/24/2018
- 4. Episodically framed victim narratives** to describe the life of a crash-involved person who fell victim to an unpreventable, isolated incident. E.g., *“She was just sitting on the couch with her sweet baby boy, when the unthinkable happened: A driver came crashing into their home, killing her.”* - Cleveland (Fox 8 News), 7/25/2015

Study implications – Traffic delay framing is common

- A few TV news stations have adopted a “traffic delay-centric” approach to reporting.
- These travel delay frames most often lacked crash victims, featured vehicles rather than agentic drivers, and implied that the isolated crash events “simply happened”, yet **in 37.9% of these story types one or more people suffered a fatal injury.**

“SR 347 back open in one direction following crash”- Phoenix (FOX 10), 5/31/2019

“Traffic Alert! A major crash has closed several lanes of WB I-10 at Medical Drive. Avoid the area!”
- San Antonio (KSAT), 12/11/2017

Study implications – Youth garner more engagement

- Facebook posts featuring people < 18 years old garnered more frequent and deeper engagement.
- This finding is consistent with a study by De Ceunynck and colleagues (2015), who surmise that the overrepresentation of youth-featuring crash stories might contribute to the societal shift toward chauffeuring children places in wealthier countries.
- This steady decline in children's participation in independently bicycling and walking to and from school has also manifested in the United States in recent decades (*Kontou, et al., 2020*).



Source: pedbikeimages.org, Dan Burden

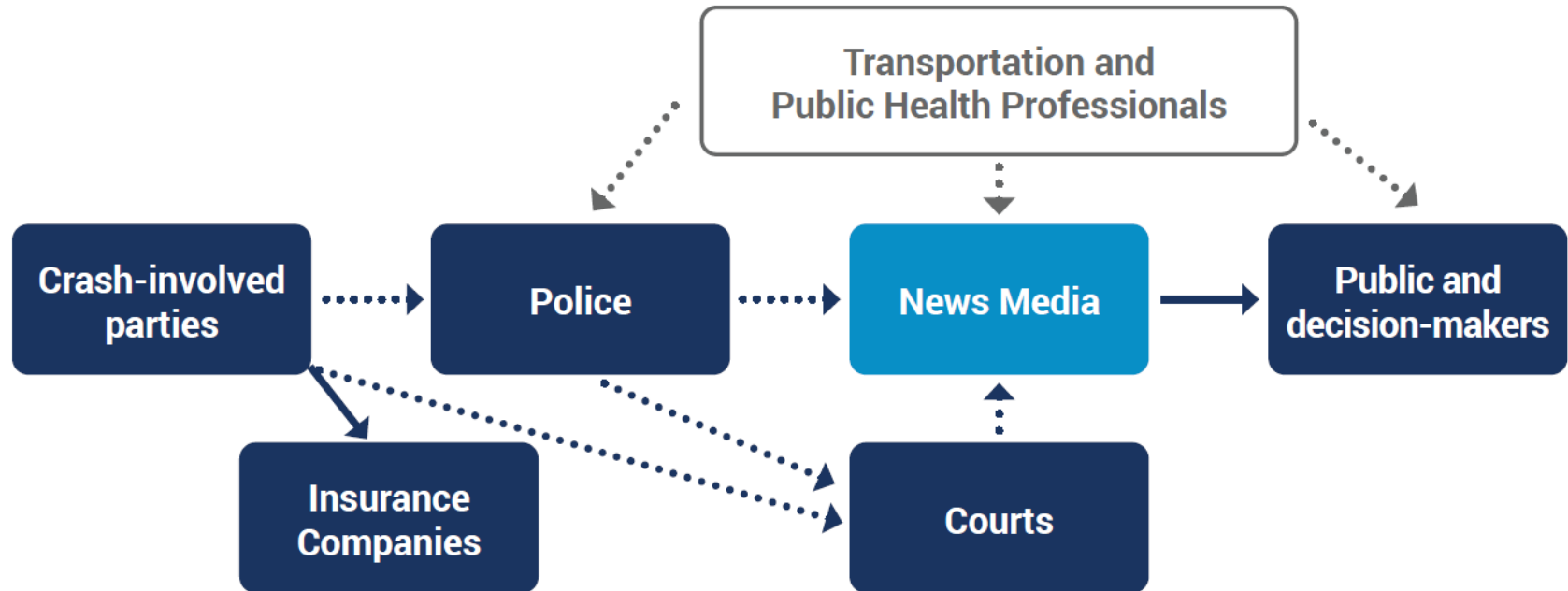
Study implications – Stories featuring less used travel modes garner less engagement

- Audiences engaged significantly less with stories featuring pedestrians, cyclists, motorcyclists, and train crashes.
- This suggests that members of the American public may identify less readily with users of their less commonly used travel modes (e.g., *Andronis, Mavridis, Oikonomou, and Basbas, 2019; Bielinski and Wazna, 2020*).



Source: pedbikeimages.org, Dan Burden

Study implications – professionals need to get involved in shaping crash narratives



Media framing guidance




Shaping the narrative around traffic injury:

A media framing guide for transportation
and public health professionals

Source: roadsafety.unc.edu/docs/CSCRS_R29_FGuide.pdf

Ways to re-frame the conversation around traffic injury

- Appeal to **intrinsic** values
- Depict **themes** over events
- Inspire **pragmatic** “can-doism”
- Identify opportune times to get involved



A proposed **Intrinsic-Thematic-Pragmatic** Framework

Appeal to intrinsic values

- **Appeal to people's intrinsic values** of concern for others by coordinating with people affected by road trauma to share their stories.



Describe themes over events

- Place traffic injury into a broader time- or place-based context.
 - “this is the fifth serious traffic crash on Thomas Blvd this year.”
 - “the area where the driver struck the pedestrian lacks lighting and clearly marked crosswalks.”
- It takes the focus off the road users and onto the places in which crashes occur (*Ting, 2017*).
- Focusing on places over people can inspire readers and viewers to call for collective action (*Benjamin, 2017*).

Inspire pragmatic “can-doism”

- Too often, traffic injury is framed as inevitable, even expected.
- Frame serious crashes as **preventable and addressable** through use of **commonsense approaches**, e.g.:
 - slowing travel speeds
 - separating people inside and outside of motor vehicles either in space or time
- Such frames can **reduce fatalistic thinking** about road injury and tap into an **American sense of “can do”** (*Thompson, 2016*).

Identify opportune times to get involved

- **Timely, consistent communications** play a critical role in sustaining open dialogue around traffic safety (*Chisalita, 2006*).
 - World Day of Remembrance (3rd Sunday in November)
 - Just before:
 - Daylight saving time
 - The first day of school or university
 - Halloween
 - Thanksgiving, winter break, spring break, summer season travel
 - Prior to, during and after:
 - City safety policy changes (e.g., lowering citywide speed limits)
 - Major corridor retrofits
 - City-scale traffic calming
 - Injury prevention events and programs
 - Vision Zero planning, etc.

Advance a new story about road trauma in the U.S.

- **Let's transcend the “crash not accident” dialogue** by framing crashes as part of a broader culture that privileges speed and automobility over equitable access to and participation in civic life.
- Moreover, though the tools exist to realize a future with significantly fewer deaths and injuries on our roads (*Vision Zero Network, 2021*) without a sufficient proportion (~25%) of the public perceiving road trauma as a pressing social problem, the U.S. is unlikely to witness significant and lasting amelioration of road trauma.
- **What our culture needs is a new story**, one told by representatives reflective of the U.S. population that challenges compassion fade and prevailing mindsets of *individualism, otherism, and fatalism*, one that speaks to what is possible and how we can get there.



Thank you