An exemplum and its road safety morals

... in classical, medieval and Renaissance literature, consisting of lives of famous figures, and using these to make a moral point... Wikipedia
My exemplum

Is this OK?
With the exemplum in mind questions can be asked:

• What are the causes of crashes?
• How can they be prevented?
• Who should do the preventing?
• What is our responsibility?

... and morals can be drawn
Perspective 1: Imagine a crash; What caused it?

From P1 one tends to ask:

a. Was the driver distracted?

b. Was alcohol involved?

c. Did the rider wear a helmet?

d. Did the users obey the signal?

e. Was the rider in the blind spot?

f. ...
Perspective 2: Think of future crashes; what will cause them?

a. Is the absence of buffer (on both sides) going to be a cause of crashes?

b. Is the blind spot conflict with right-turning vehicles going to be a cause of crashes?
c. Would it not be safer to use these, instead of these?
G1: The two perspectives on causes

Generalizations

Forward-looking
Risk analysis

Causes of potential future crashes

P2

Backward-looking
Causation study

Causes of a crash

P1
Most agree that when prevention is the aim, ‘CAUSE' is something that were it different the probability of accident outcomes would be different.

Causes in my exemplum:
If drivers were more careful ...  
If more riders wore a helmet ...  
If cars had better mirrors...  
If the bike lane was on the other side ...  
If the intersection design was different ...
...
G3: About causes

1. Accidents have several causes

2. Causes come into existence at various times. (inattention, helmet, alcohol, no buffer, right-turn design)

3. Only by altering causes can one prevent accidents

4. Only causes that can be altered are of interest

5. What is thought ‘alterable’ is partly subjective
6. Two groups of actors can alter causes.
   a. Those “at-the-scene”  
      (driver, rider, pedestrian)
   b. Those “not-at-the-scene”  
      (planner, designer, politician)

7. Causes do not age. Careless door opening is cause and so is the decision not to provide a buffer.

8. There is nothing in the definition of ‘cause’ to make one more important than another; only prevention considerations (cost, effect, practicality) can do so.

If 1-8 hold water, we have a problem
G4. The problem

• (Clinical) Causation studies are all backward looking.
• They tend to leave some causes in the dark.
• Causes left in the dark do not get enough attention.
Myopia in clinical causation studies

Three clinical causation studies reviewed:
All are myopic. All concluded “...overwhelming majority”

(For details see: “An exemplum and its morals”
Can be downloaded from ResearchGate)
In applied ethics:
- Who is to blame?
- Who causes the problem?
- Who should solve it?

In accident prevention:
- Not of interest
- Answered

Those who can – should.

Those ‘at-the-scene’ should behave safely.

Those ‘not-at-the-scene’ should take into account the road safety consequences of their decisions.

Correction for myopia

G5: Who is responsible for what?
Return to exemplum: How did consider the crash risk

• A compilation of drawings,
• No information about safety
How did they consider the crash risk?

- A compilation of drawings,
- No information about safety
“...actual collision risk is one of the design considerations ...”, but no guidance on ‘how large is risk’ or ‘how to consider it’.

Assumption: Appropriate level of safety is built into manuals & standards. Is it true?
May one assume that safety is already appropriately incorporated in policies, manuals etc.?

No!

Ezra Hauer

“Roads designed to standards are not safe, unsafe or appropriately safe; they have an unpremeditated level of safety. There are only more or less safe roads.”

A myth to be dispelled: “Only drivers cause crashes, not roads.”

(1999)
What is the safety of this design?

I scoured the literature and consulted experts.

Portland, 34%
The design is sanctioned in 2013:

the source of which are TAC guidelines (2012, p.72)

and is already present in 2004.
and was copied from the granddaddy
Introduced into MUTCD sometimes here
The safety of this design was not known when first introduced, and is not known now.

Why then is it a ‘National Standard’?
G7: Is this ‘State’ responsible?

How does ‘content’ enter the MUTCD?
Research, good practice, common sense.

How is ‘content’ removed from MUTCD?
Complaints or research finding.

Responsibility of
“Those ‘not-at-the-scene should take into account the road safety consequences of their decisions.”

Is the responsibility of the ‘State’ met by these?
I think: No.
Here is why I think so:

- The State makes a 'product': roads.
- The product is known to be dangerous to health.
- It is put into use without first ascertaining its safety.
- It stays in public use unless someone says that it is unsafe.

This is not how we treat drugs, food, stoves, toys, etc.

Why do we treat this ‘product’ differently?

Quis custodiet ipsos custodes
How could the ‘State’ meet its responsibility?

Unlike others, we do not have pharmacology, laboratories, animal models, randomized trials etc.

• But we do have simulators for testing designs;
• We can simulate and observe conflicts on prototypes;
• In some cases randomized trials are feasible;
• And (in 40 years) we can conduct before-after studies.

What we do not have is the will and the tradition!
Drivers who door cyclists, use phones face tougher fines in Ontario

ADRIAN MORROW
The Globe and Mail
Published Tuesday, Oct. 21, 2014 9:19AM EDT

Careless drivers who hit cyclists when opening their doors will be dinged for $300 to $1,000 — up from the previous range of $60 to $300. They will also be slapped with three demerit points.
The role of professionals

“When the human nature of the road user, the properties of vehicles and the amount of traffic are taken as given, the number of accidents that will occur is largely determined by how roads are built.”

“...in the fulfillment of their professional duties engineers must hold paramount the safety, health, and welfare of the public.”
Needs to know. Professionalism blooms.

Cognitive dissonance. Ignorance is best.

Why we get away with this?

The ‘State’ builds and operates roads

Professionals work for the ‘State’
...if the public was aware of this state of affairs it might insist on change...