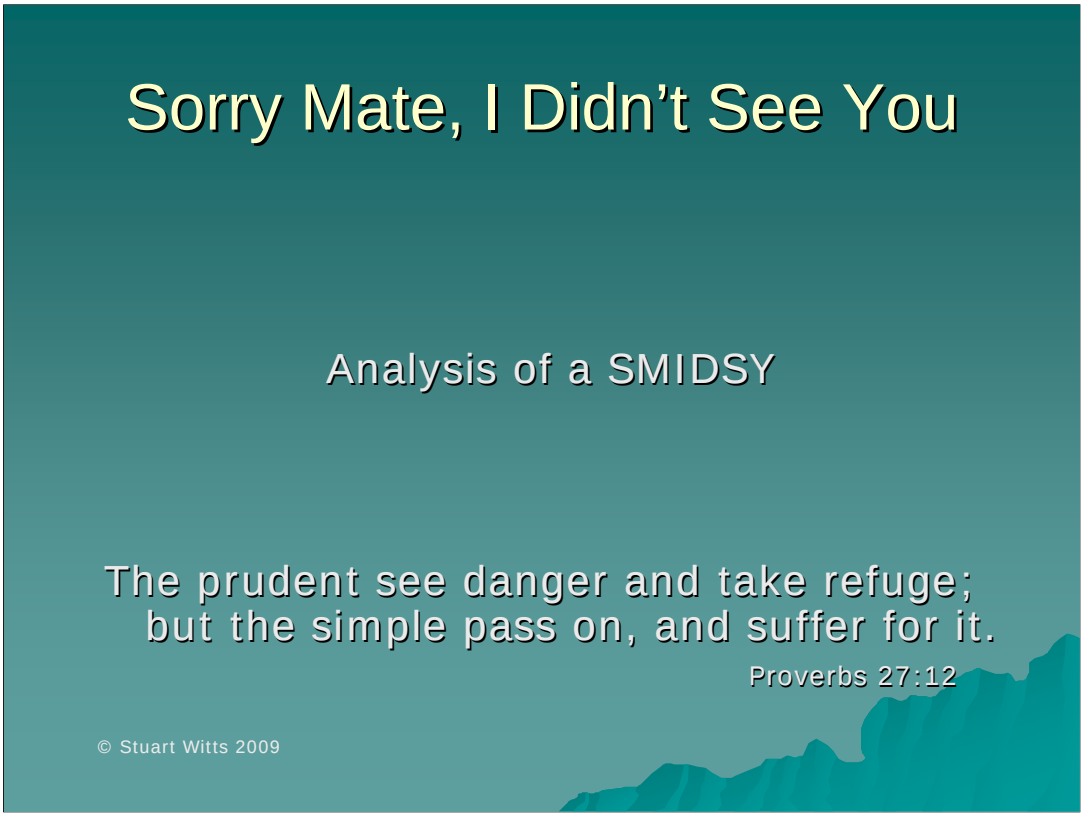


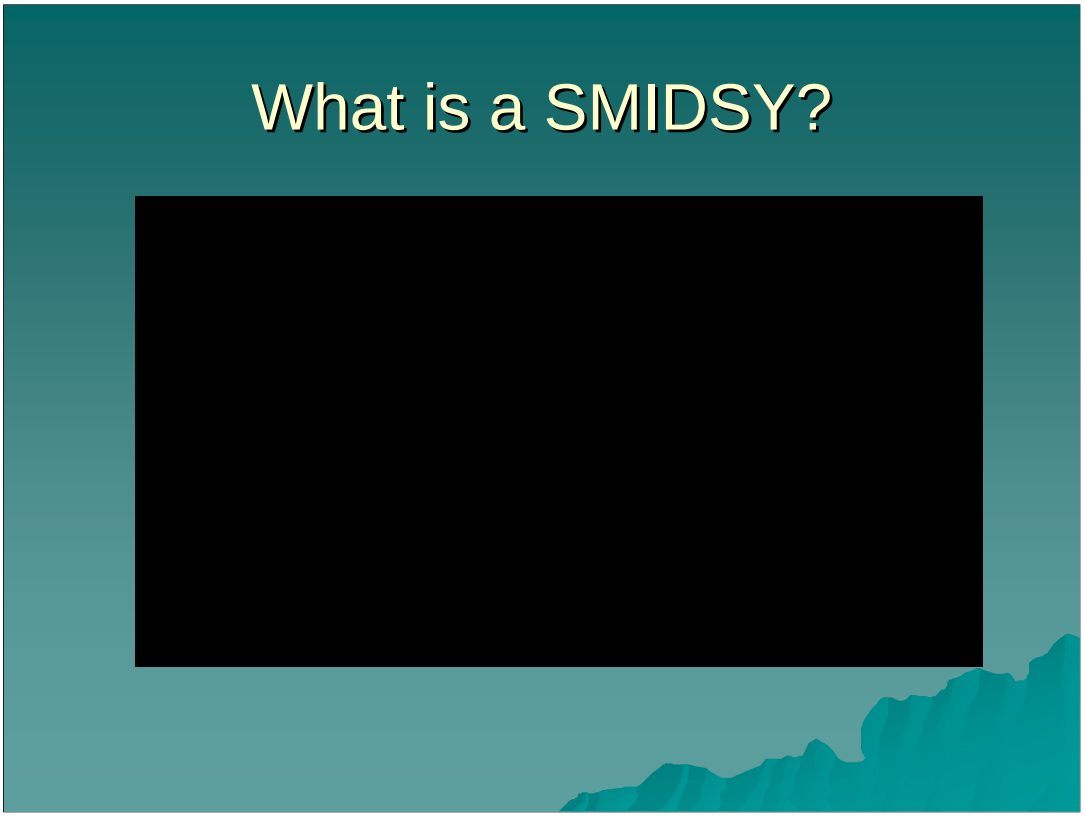
Welcome, Intro, House Rules

Aim: to reduce your risk of being in a crash with a driver who claims not to see you

Objectives: After this session you should be able to

Explain what a SMIDSY is and where they occur;

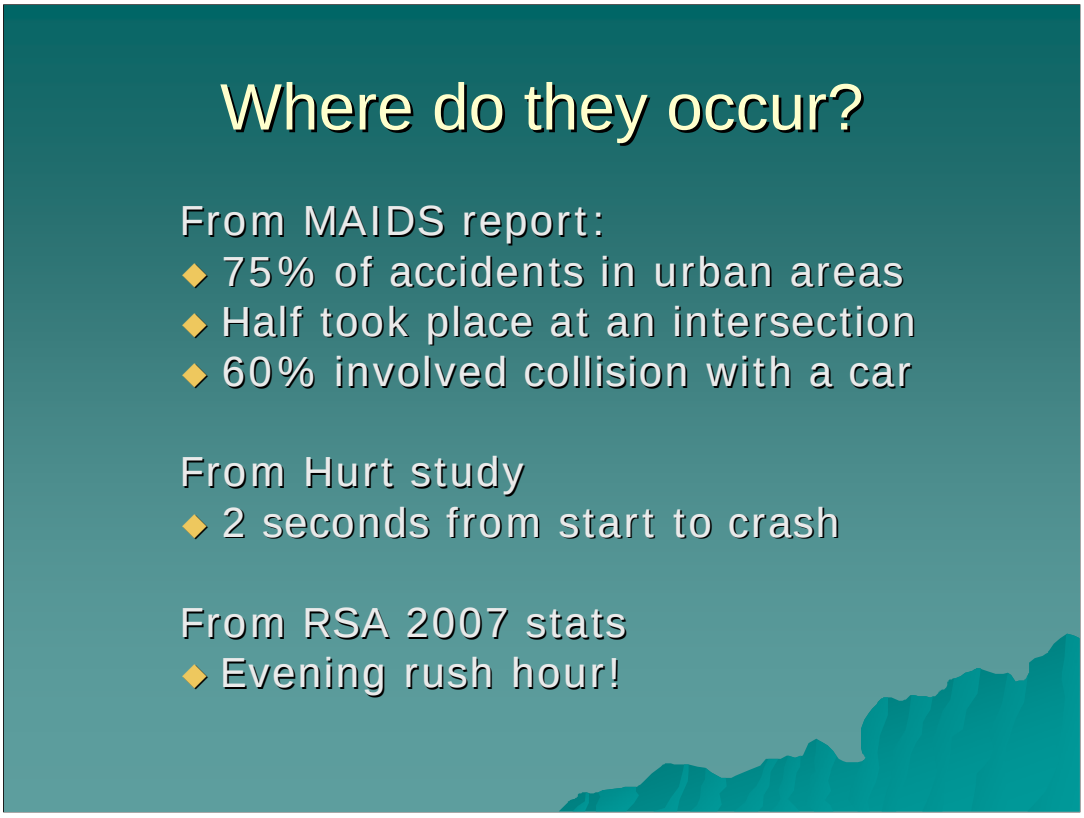
Know why other drivers may fail to perceive you, and Know ways of reducing your risk of being involved.



A crash where one party claims not to have seen the other.

Regardless of fault or blame, the rider comes off worst. It's no consolation saying 'It wasn't my fault' as you are being loaded into the ambulance. Self preservation should make us try to avoid the situation.

Sketch typical intersection types, and scenarios



MAIDS – Motorcycle Accident In-Depth Study 1999-2000 in France, Germany, Netherlands, Spain and Italy

Three quarters of the (MAIDS collected) accidents took place in an urban area

Half of all PTW accidents were found to take place at an intersection

60% of collision partners were passenger cars. But 6.9% of PTW crashes involved another PTW!

Two seconds from the start of the manoeuvre to the collision – and typically it takes over half a second to react.

In two seconds at 50 km/h you cover 28m

Fast reactions may simply not be enough, you need a strategy to detect them before they begin.

Rush hour traffic? Most dangerous time to be on the road, based on deaths and injuries reported by RSA 2007 Road Collision Facts.

Vision, Obstructions, Distractions

How do we see – and what?

The blindspot, or *physiological blind spot*, is the place in the visual field that corresponds to the retina where the optic nerve passes through it. Since there are no cells to detect light on the optic disc, the brain fills in with surrounding detail and with information from the other eye, so the blind spot is not normally perceived.

The first documented observation of the phenomenon was in the 1660s by Edme Mariotte in France.

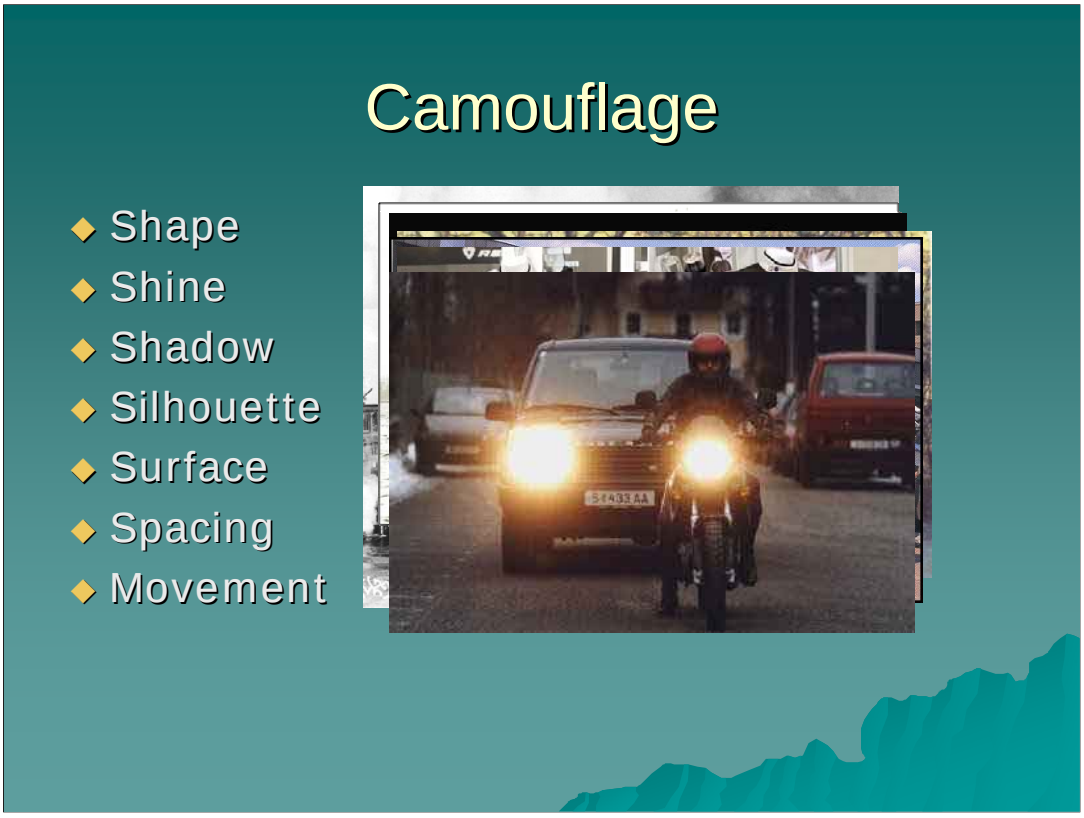
Photo taken of a Lufthansa 747-400 and a United Airlines 757-200 on simultaneous approaches to runways 28L and 28R at San Francisco (SFO). Lufthansa 747 being three times larger than the 757 and being slightly behind gives this illusion, although the two aircraft are at a safe distance for the approaches they are each flying.

Obstructions - Other vehicles, road furniture, trees, buildings.

Distractions - In the street, In the car, In the head: Roadside activity, pedestrians, advertising; Passengers, music, satnav; Worries, plans, mood

Inattentional blindness – it is possible to miss seeing something we are not expecting to see, especially if we are busy with something else.

Low visibility of bike – narrow vertical target – our eyes are set to detect wider objects. (Predators exploit this.) Doesn't 'loom' much as it approaches. Small change in visual angle.



Camouflage:

There are seven basic principles of camouflage and concealment:

Shape Shine Shadow Silhouette Surface Spacing Movement .

Which of these are unintentionally incorporated in urban riding?

Dazzle camouflage used on warships in WW1 was intended not only to merge and conceal, but also to mislead. Ships were painted with bold, bright and confusing shapes, which recognised the disruption created by wave structures in order to make it difficult to identify the class of ship but also it's direction, speed and range. Zebra stripes presented many potential bows to the enemy, making it hard to judge direction and false bow waves were painted on to imply different speeds. The dazzle ships were targeted slightly more often than the grey or other camo scheme ships. However, they were hit much less often than the others.

Modern bike paint schemes may inadvertently mimic this.

In 1982, the officer commanding a tank squadron in Berlin felt that the normal paint scheme was incompatible with its urban environment. The green/black camouflage was a poor alternative when viewed against the urban backdrop of the city.

Certain camouflage patterns are ineffective when close up but improve as the distances increase. In this case, 50 to 60 yards was the minimum, as you got further away the target almost disappeared at 100 yards

The blocks break up the outline, some motorcycle clothing incorporates block patterns.

Perception:

Bikes are around 1-2% of traffic – if you were working on a line and only every 100th item was not what you wanted, your attention would be lessened.

Riders are often urged to 'make eye-contact' with the other driver. Since the nature of these collisions is that the driver 'looked but failed to see', then confidence in having established eye-contact may be misplaced.

Speed:

A 1999 US study <fhwa.dot.gov/tfhrc/safety/pubs/00022/intro > found a general tendency for people to underestimate the time required to complete a maneuver. Across a range of maneuvers, about 60 percent of all time or distance *required* judgments were underestimated, relative to engineering and empirical estimates. This misjudgment is safety-critical, because driver perception that a maneuver will take less time than is actually the case may lead to decisions to accept maneuver opportunities that actually afford a smaller margin of error than the driver perceives. Such misestimates were particularly common for judgments of the time to achieve the prevailing traffic speed during turning of merging maneuvers

Shaw (1979) Compared the accuracy with which subjects estimated the speed of a motorcycle with headlamp on, and off.
Subjects over-estimated the speed for lower speed of approach
Subjects under-estimated the speed for higher speed of approach
The reversal from over- to under- took place between 50-55mph with the headlamp off, and between 35-40mph with the headlamp on.

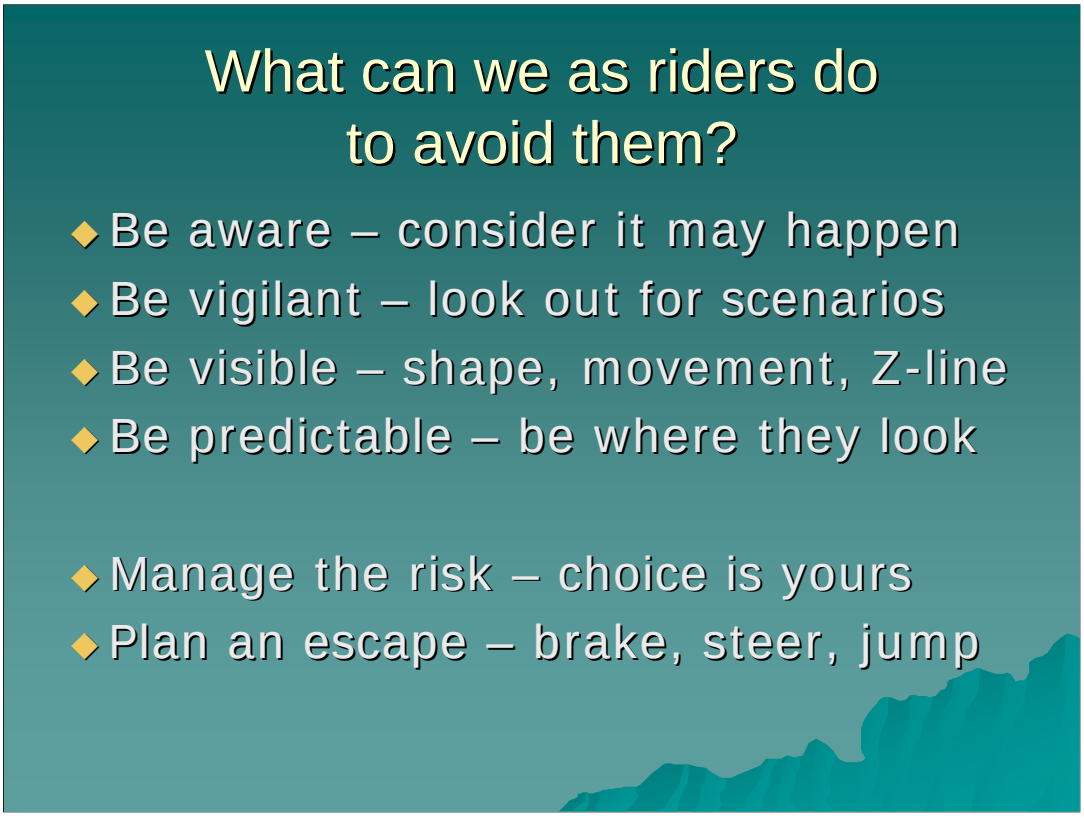
Thus, at, say, 50 mph, with headlamp on, drivers estimate that you are traveling slower than if you had headlamp off, and may judge that they have time to pull out.

Risk:

Air bags, side impact protection systems, all give a psychological 'cushion' to drivers that in the event of a crash they will be all right, so they may not try as hard to avoid one.

Riders may think 'I'm wearing hi-viz and I have my lights on, he must have seen me' and look ahead to the next hazard.

Either person may be in a rush (late for work, family member sick) and take a risk.



You can't solve a problem if you don't know it exists

Risk management is about assessing the risk and its chance of happening. If it's likely to happen, do something to reduce the consequences.

First requirement is to be aware of the type of collision – and that there is something that can be done about it. Circumstances in which SMIDSY's may happen –

Busy road, car waiting for gap in traffic, sees 'gap' but fails to see motorcyclist,

Less traffic, driver gives cursory glance and 'sees' road is clear,

Traffic jam, driver makes U-turn

Each situation could be a threat, <u>each time you encounter it.</u>

Think of how you appear to the other road user – give them something to see. Solid outline says 'person'. Sleeves more visible than torso. Any dirt on the bike is likely to be the same colour as the road.

Z-line – (sketch) - at the right point, and if safe, move across the lane to maximise the chance of detection

Choose a position where they expect traffic to be

You can't eliminate risk but you can manage it.

Know your bike's performance

Emergency Stop – when did you last do one?

Don't target fixate. Look where you want to go, not at the car.

Can you avoid hitting the car, even if the bike hits it? You may be able to jump clear.

Recap

A reminder that it’s not just drivers that make mistakes