

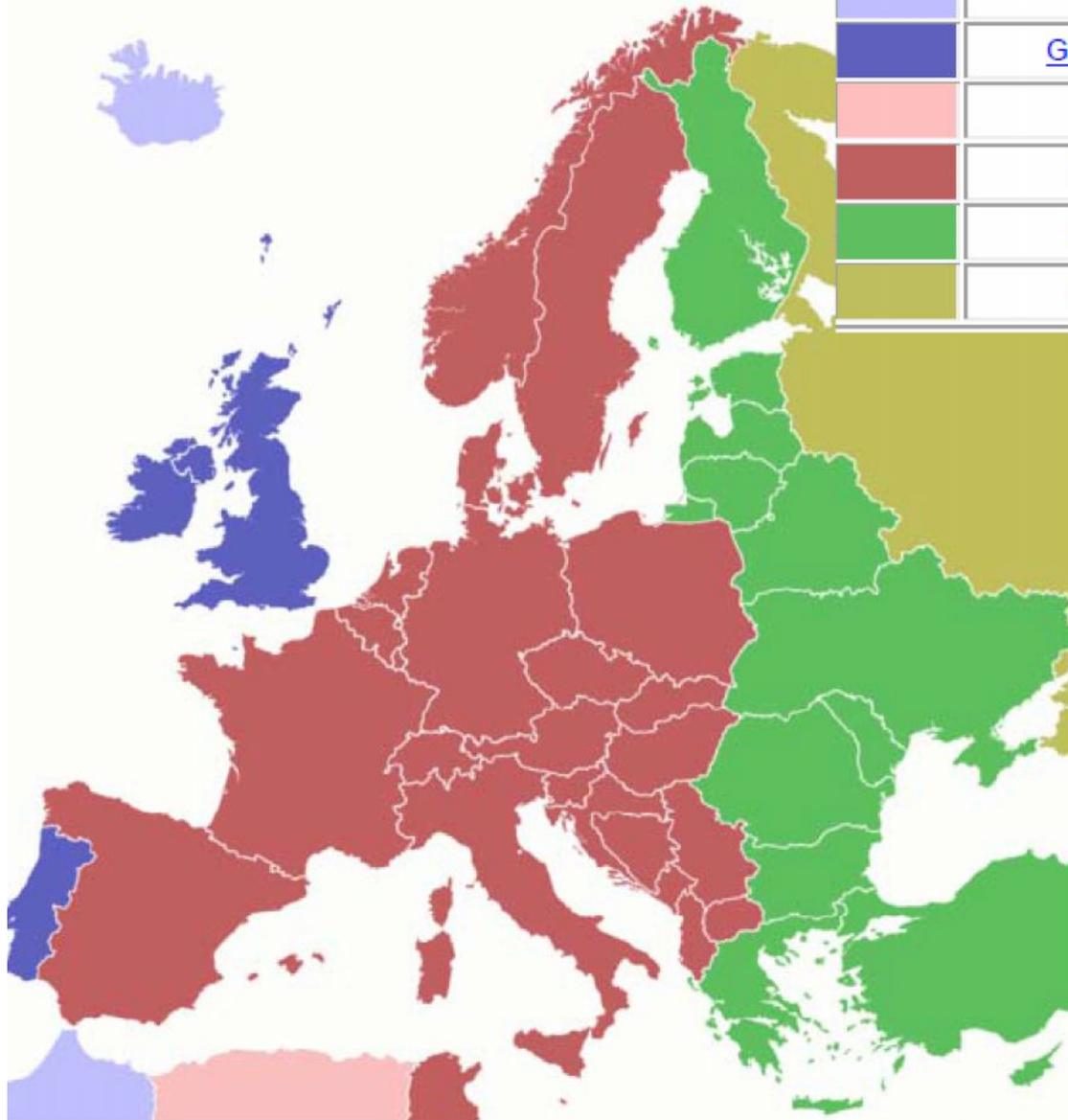


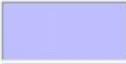
Road safety implications of changing the time

Presented by Brian Lawton
Road safety researcher – March 2015



European time zones



Colour	Time zone during the winter	Time zone during the summer
	<u>GMT / WET</u> (UTC)	
	<u>GMT / WET</u> (UTC)	<u>BST / IST / WEST</u> (UTC+1)
	<u>CET</u> (UTC+1)	
	<u>CET</u> (UTC+1)	<u>CEST</u> (UTC+2)
	<u>EET</u> (UTC+2)	<u>EEST</u> (UTC+3)
	<u>MSK</u> (UTC+3)	<u>MSD</u> (UTC+4)

- The sun rises in the east and sets in the west
- Spring forward
- 'Fall back

Daylight Saving Time - why we change our clocks

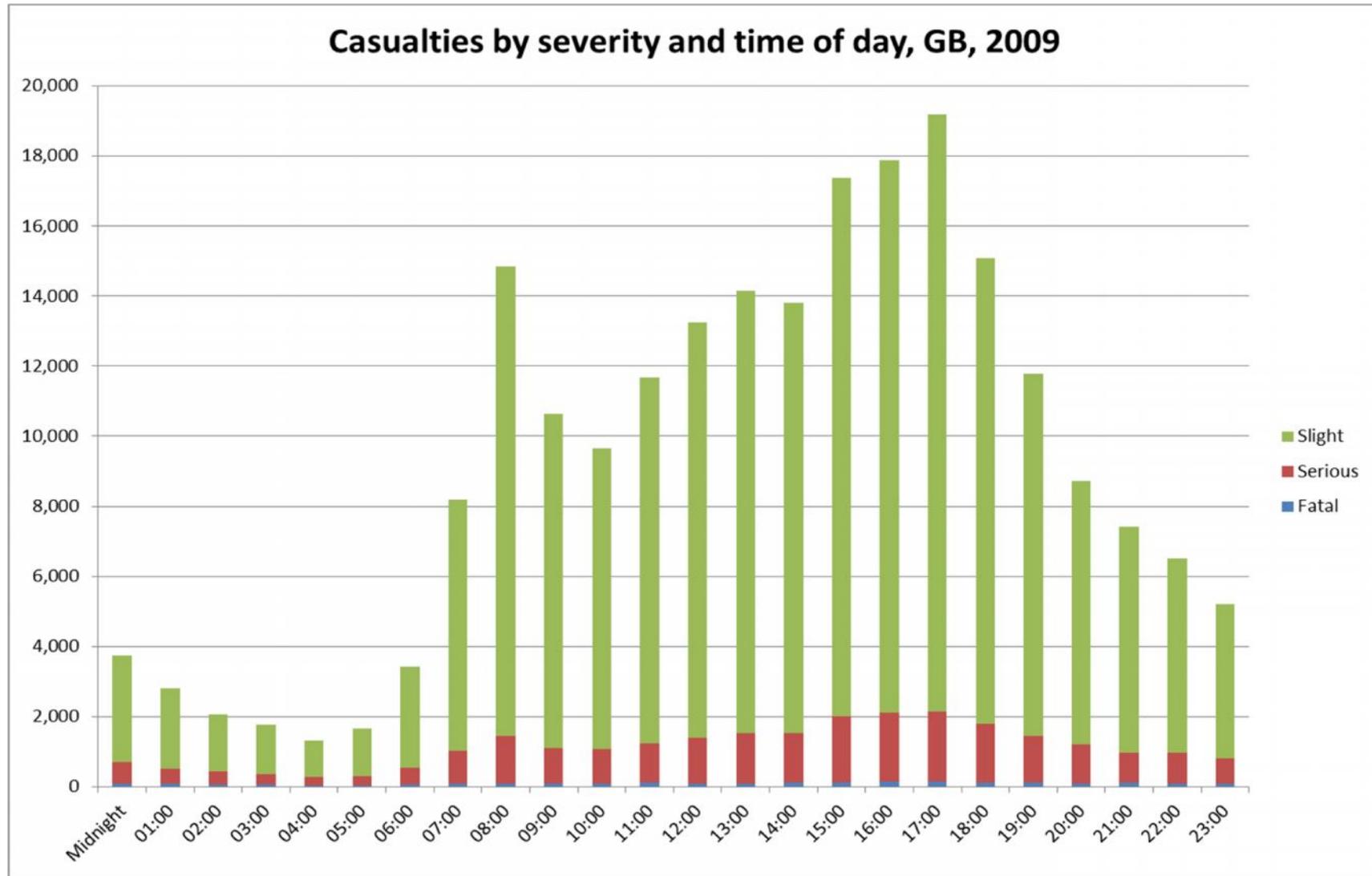
- More daylight hours in summer
- Fewer daylight hours in winter
- We can't save daylight!
- But we can make better use of the daylight that we do have ...

- For example:
 - Are we leaving home when it is already light?
 - Are we getting home when it is already dark?

Effect on road collisions

- Lower crash risk – particularly for pedestrians and pedal cyclists
 - in daylight than in the dark, so ...
 - Darker mornings are bad for road safety
 - But lighter afternoons/evenings are good for road safety
- More travel in the afternoons/evenings than in the mornings, e.g.
 - Collecting children from school less likely to be combined with travel home from work
 - Shopping and leisure activities
- Therefore, there are fewer collisions if it is light in the afternoons/evenings rather than in the mornings

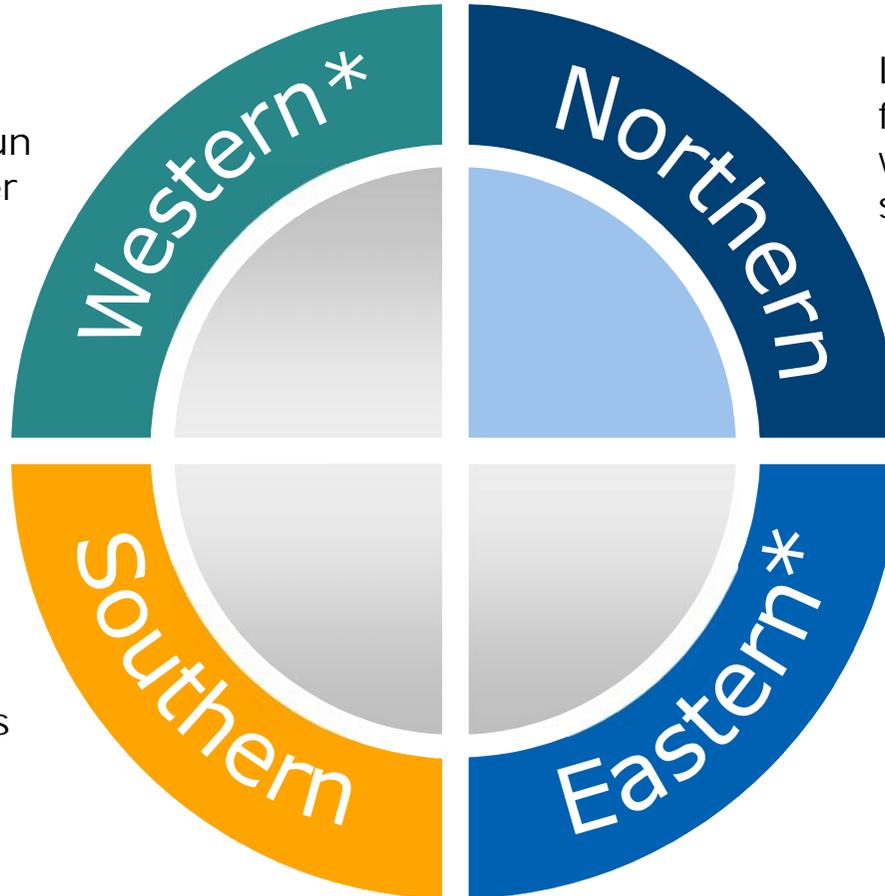
Example: GB Road Traffic Casualties



Notes about the extremities ...

*Within timezone

Less benefit because sun rises later and sets later



Less benefit because so few daylight hours in winter and so many in summer

Less benefit because daylight hours vary less between winter and summer

*Within timezone
More benefit because sun rises earlier and sets earlier

Case study for going further: GB

- 'British Standard Time' experiment, 1968-1971 – GMT+1 all year round: 12% reduction in KSI between 7-10 and 16-19
- But clearly not a success for those who lost friends or family in the darker mornings
- And no one can identify as someone whose life was saved
- Since then, travel habits, school opening hours etc. have changed

- TRL research in 2009 estimated that a change to 'Single Double Summer Time' could prevent 80 deaths and 200+ serious injuries on the roads each year
- But less certainty around whether there would be a benefit in Scotland – in the furthest north, there may even be a disbenefit

Other European experiences

- Portugal, 1966-1972 and 1992-1996 – CET:
 - too far south to gain a discernible road safety benefit
 - light in the mornings and evenings anyway
- Sweden: no change in crashes following changes to/from DST
- Summertime introduced in Germany in 1980: people went out more in additional daylight hours, increasing fatalities
- European Commission report in 1999: “in most countries and most sectors, the summer-time clock is a non-issue”, but recommended more research on the effects on road crashes
- Agricultural Development Advisory Service (1995):
 - adjusting clocks had no significant effect on casualties;
 - limited effects of changing to GMT+1 throughout Europe all year round;
 - further benefits if SDST adopted throughout Europe

Summary

- Lighter mornings are good for road safety
- But lighter evenings are even better

- Reducing the amount of travel in the dark appears to improve road safety
- But this may disproportionately increase the amount of travel in daylight

- There may be a case for going further, at least in some countries
- But much uncertainty remains so up to date research is required
- And changes may also be challenging politically

Thank you!

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Do You
Have Any
Questions?