Title: The turning point in the number of traffic fatalities: two hypotheses about changes in underlying trends

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The number of traffic fatalities reached a peak in many highly motorised countries around 1970. Previous studies have suggested that the turning point in the number of traffic fatalities does not necessarily reflect a change in the underlying trends influencing the number of traffic fatalities. If traffic grows gradually more slowly, and the fatality rate per kilometre of driving declines by a constant percentage each year, the number of traffic fatalities will stop growing and start declining when the percentage growth in traffic volume becomes smaller than the percentage decline in fatality rate. This will occur even if the long-term trends in traffic growth and fatality rate are the same both before and after the turning point. This paper proposes two hypotheses about the turning point in the number of traffic fatalities. One hypothesis is that the long-term trends in traffic growth and fatality rate were the same before and after the turning point. The other hypothesis is that the long-term trends in traffic growth and fatality rate were different before and after the turning point was reached, in particular that the annual percentage decline in fatality rate became greater after the turning point than before. Such a change would suggest that road safety policy became more effective. Analysis of data for six countries (Denmark, Great Britain, Netherlands, Norway, Sweden, United States) lends stronger support to the latter hypothesis than to the former.