Cambridge Future Transport Visions

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Cambridge Cycling Campaign

Cambridge Cycling Campaign

For better, safer and more cycling in and around Cambridge

- 1000+ members
- General Utility Cycling
- Active campaigners are all volunteers
- You should join!
- See me or Camcycle.org.uk
- You can join online

Who am I?

- Jim Chisholm
- Always a passionate interest in Traffic/Transport/Road Safety
- Worked at RRL/TRRL for 15 years
- Never sports cycling, always utility cycling
- (Walking is my leisure pursuit and I do own a car)
- Lived in Cambridge for 25 years?
- But I’ve always been a ‘campaigner’ if not an activist
- Member of Cambridge Cycling Campaign from Day One

Utopia or Dystopia??

- I’m not going to talk about ‘Dutch’style provision
- Nor am I going to talk about carbon reduction!
- I’m not even going to talk about the ‘Chisholm Trail’
- Instead I’m going to look at the effects of a ‘*No Cycling Day*’
- Or rather a simplified example

Cycles as an obstruction to ‘free flow’!

- Well that is what many drivers think, but for many with bikes they could switch mode to a car
- Most Campaign members outside the City have access to a car?
- County Council counts (2011) show:
  - 155,000 cars
  - 9,000 cycles
- cross the ‘radial’ cordon each day
- (ie entering Cambridge from ‘necklace’ villages or beyond)
- So what would happen if those who cycle from the villages drove?

Queuing Theory

- Early work by Bell Labs in USA for manual telephone exchanges
- Much used in traffic modelling
  - Once ‘capacity’ reached queues result
  - Any small extra delay added to everyone's trip time who follows
- Many examples in modern life
- Tesco’s!

Flow-Delay Curves

- **Exponential function appropriate to represent effects of congestion on travel times.**
- **At low traffic, an increase in flows would induce small increase in delay.**
- **At flows close to capacity, the same increase would induce a much greater increase in delays.**

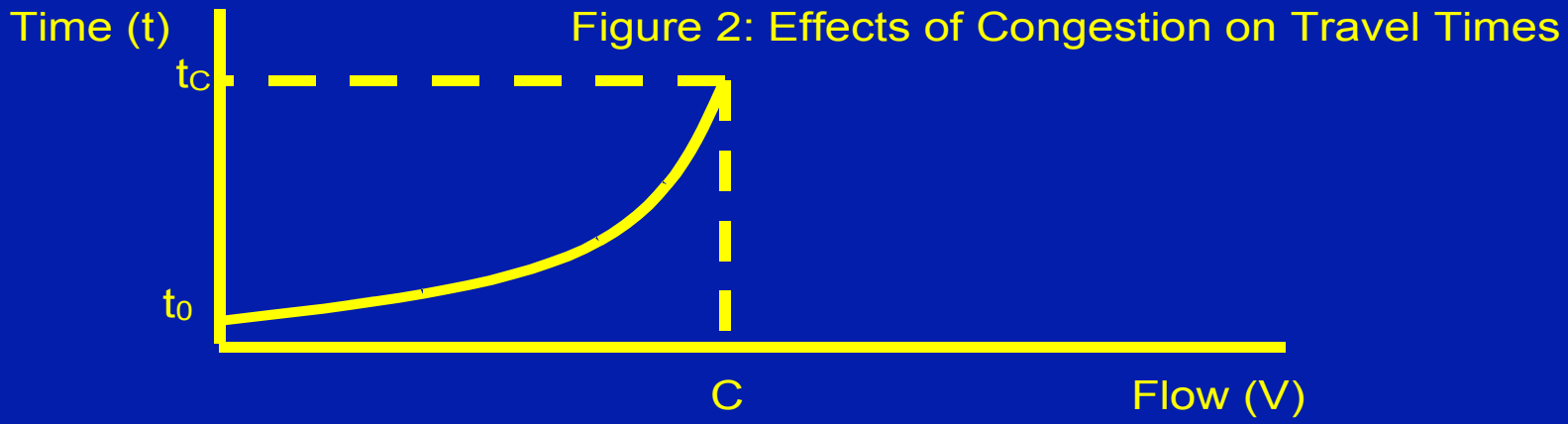

Figure 2: Effects of Congestion on Travel Times

Some Sums

- Assume 4,000 extra cars on 8 radials during peak time
- 100 extra cars makes a queue one kilometre long
- So that is 5 kms, say 3 miles, of extra queues on each radial?

Isn't this just theory?

- Traffic disappears in half terms
- Oh no it doesn't!
- It is just the queues that disappear
- Cars in Trumpington Road reduce by only about 10% over the peak hours in half terms
- Of course there are feed-back loops, but I did say this was a simple model

What about the reverse?

- Imagine if 10% of those in cars started to cycle
  - That's another 15,000 cycles
- A 3.5 metre lane can take:
  - 2,000 cars or 14,000 bikes
- Queues of cars would disappear
- Deliveries would be on time and cost less
- Essential trips by car would be stress free
- Cycling would be more enjoyable
- We would all be happier
- Even those who still drive!

A paradox for investment

- My theory:
- "*Every pound invested in cycling produces a bigger reduction in delays for those in cars than a pound invested in road space for such vehicles*"
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- We don't have to wait until 2030 for all these benefits
- We could start tomorrow
- and we could then be a exemplar for cities everywhere in the UK

- Is that:

- *Utopia?*

- Any Questions?