



# Response to George Yannis' lecture on "Distracted Driving"

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# EU Nomadic Devices report



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Study on the regulatory situation in the member states regarding brought-in (i.e. nomadic) devices and their use in vehicles

Study tendered by the European Commission (SMART 2009/0065)

Final Report

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It can be seen that Greece is very good at legislation:

- Bans handheld mobile phones
- Hands-free mobile phones must be used with a wireless headset
- Mobile phones must be fixed in a cradle
- Texting is prohibited
- Motorcyclists may not use any mobile phone

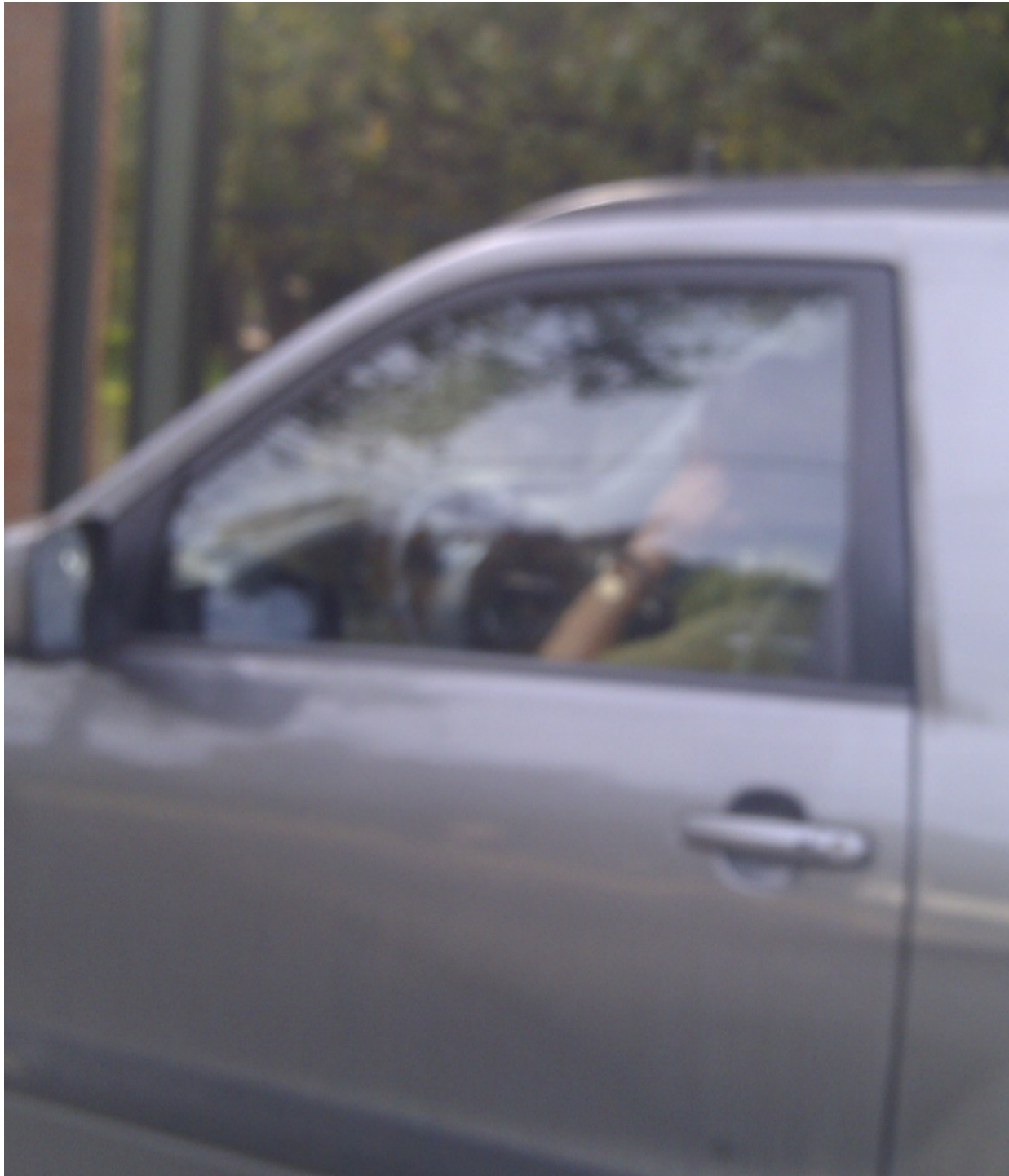


# More Greek regulations



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- No headphones connected to radios or music players may be used
- Placement of TVs and video players is regulated
- Regulations on how PNDs (Satnavs) must be mounted in the vehicle
- Setting of a PND is forbidden while the vehicle is moving
  - Penalty for improper mobile phone use is
    - a fine of €100 EUR+ three penalty on the driver's licence (out of 25 points in total)
    - Possibility of a 30 day suspension of the driver's licence
- Enforcement?
- Compliance?









# Policy recommendations from the report (1)



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- Media campaigns should be conducted at the member state level to provide drivers with better understanding of existing laws
- New technologies that enable nomadic device use (or certain functions of it) to be restricted or locked out in circumstances when it is unsafe to use the device (e.g. beyond certain speeds, in certain locations, etc.) could provide solutions to driver distraction
- It should be feasible to lock out or discourage texting while driving via specific software
- The issue of driver distraction should be better incorporated in driver training, education and licensing processes.



# Policy recommendations from the report (2)



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- Research efforts should be made to understand the role and effect of engaging in high-risk activities (such as texting) while driving, for young drivers specifically.
- A European target for reduction in the extent of distracted driving should be established and performance in achieving the target assessed.
- With regards to accident investigation, methods should be developed to enable better assessment of the role of distraction in accidents

# Visual and cognitive distraction



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- Some research is now claiming that hands-free mobile phone conversation is safe
- This is especially the proposition from 2 naturalistic driving studies (= observing drivers in real-world driving) by VTTI (Virginia Tech)

# From the HASTE project: distraction type



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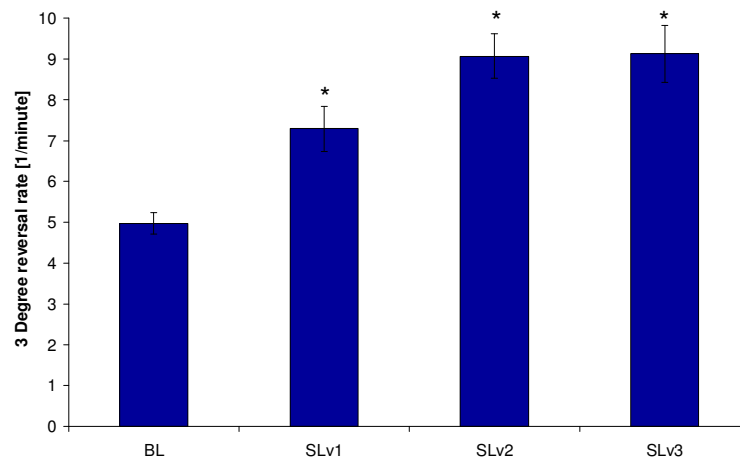
## Visual

- Affects steering behaviour and lateral control

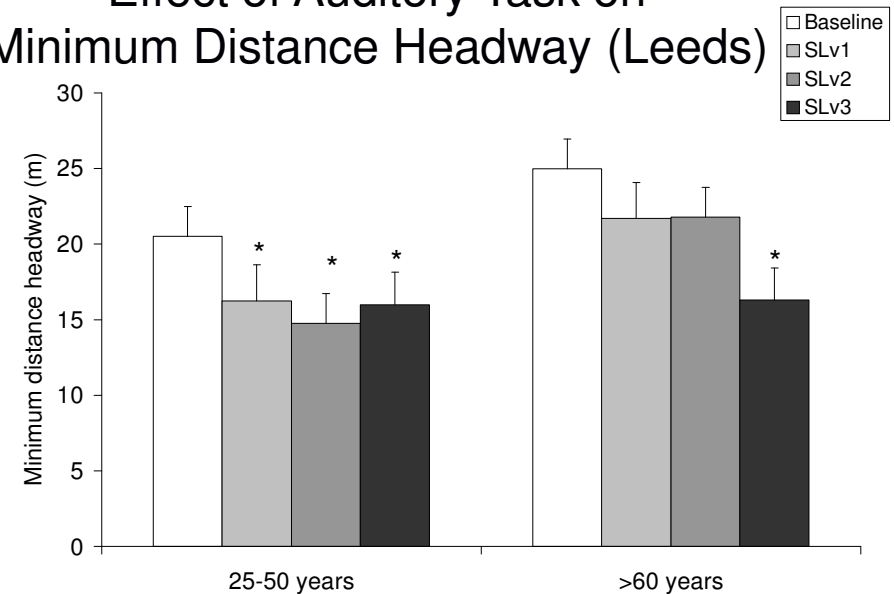
## Auditory/cognitive

- “Improves” steering behaviour
- Affects longitudinal control

Effect of Arrows on 3° Steering Reversal Rate (Leeds)



Effect of Auditory Task on Minimum Distance Headway (Leeds)



# VTTI Studies of truck and bus driving (Olson et al., 2009; Hickman et al., 2010)



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Activity	Odds Ratio of a Safety Critical Event	
	2009 Study	2010 Study
Text message on a mobile phone	23.24*	—
Interact with/use a dispatching device	9.93*	—
Dial mobile phone	5.93*	3.51*
Use/reach for other electronic device	6.72*	4.43*
Talk or listen to handheld phone	1.04	0.89
Talk or listen to hands-free phone	0.44*	0.65*



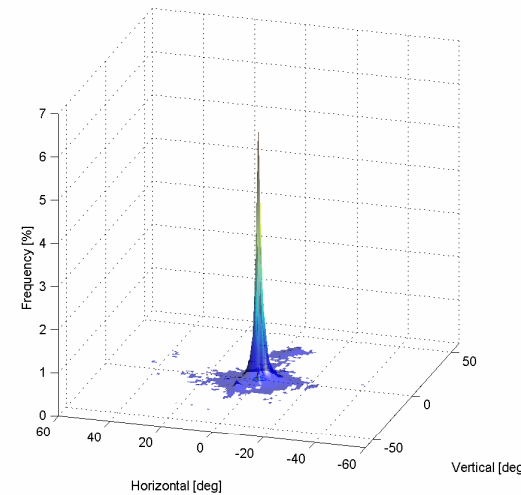
- How could talking on a hands-free phone be “protective”?
  - VTTI claim that conversation may have an alerting effect
  - They have also cast doubt on the validity of simulator studies
- But the problem could be with the methodology used to calculate the odd ratios in the real-world studies
  - What if the critical events and the “randomly selected” baseline epochs have different distributions in terms of:
    - Road type
    - Traffic flow
    - Link or intersection

# Explanation for curious effect of auditory/cognitive task

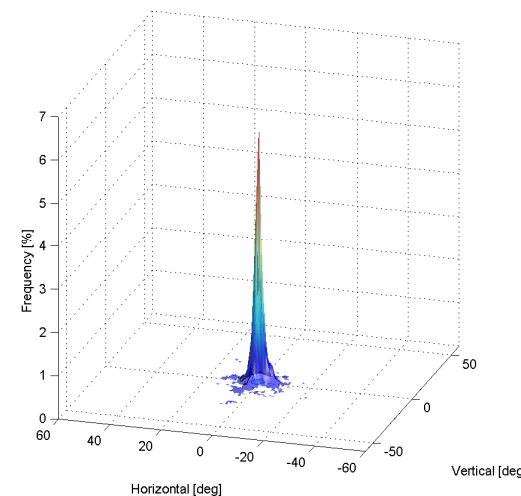


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- Increased eye focus on road straight ahead
- Probably = gazing ahead without processing
- We know that drivers tend to track in the direction of their gaze angle



Baseline

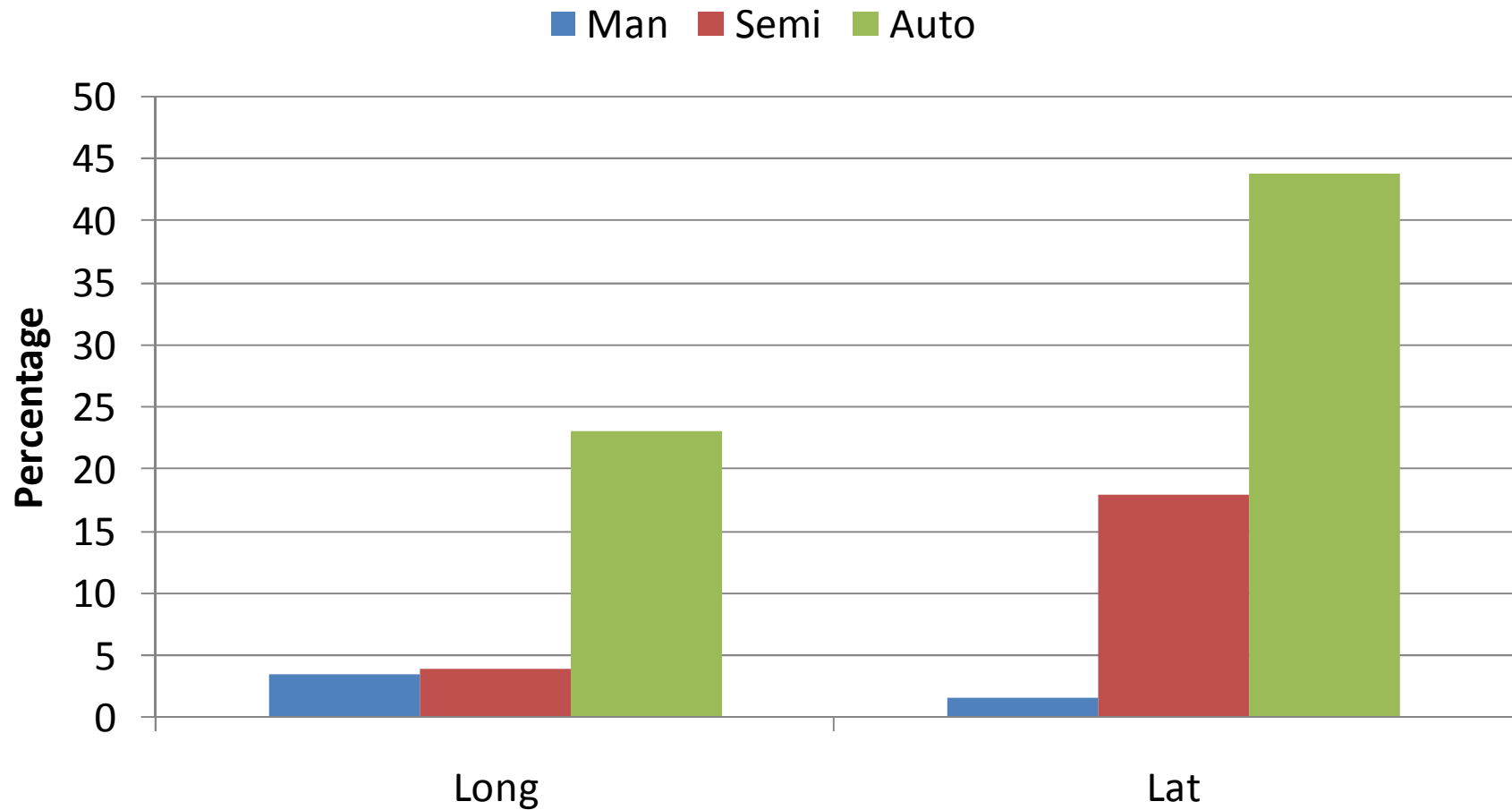


High Level of cognitive distraction

# EASY project: uptake of DVD task (proportion of journey time)



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Thank you!

Ευχαριστώ!

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