

## Visual aspects of transport The last frontier for transport and health?

Paulo Rui Anciaes  
Centre for Transport Studies  
University College London

*International Conference on Transport and Health*  
In-person transit stop meeting, 21-22 June 2022, Cardiff

### Two views

- ➔ View (of car drivers) **from** the road
- ➔ View (of local residents and pedestrians) **to** the road



Possible impacts on Travel behaviour ?  
Safety ?  
Health ?  
Wellbeing ?

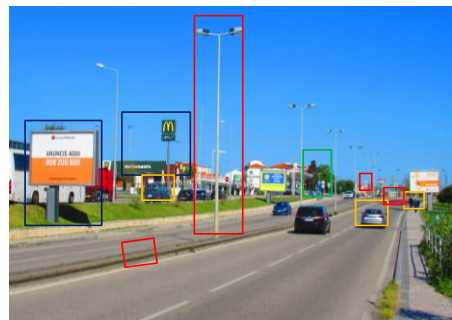
### View from the road



### View from the road

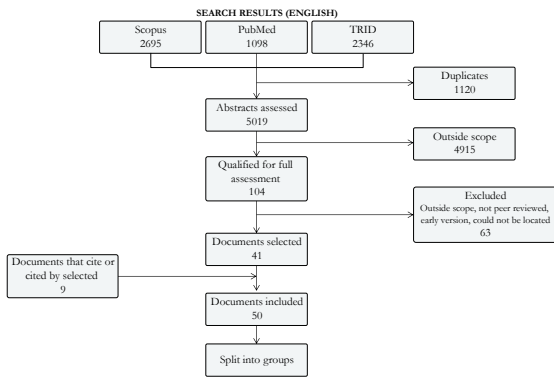


### Scope



- |   |   |
|---|---|
| <p><b>Included</b></p> <ul style="list-style-type: none"> <li><span style="border: 1px solid green; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Natural environment (e.g. trees)</li> <li><span style="border: 1px solid blue; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Built environment (e.g. buildings, advertising)</li> </ul> | <p><b>Excluded</b></p> <ul style="list-style-type: none"> <li><span style="border: 1px solid red; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Road design (e.g. barriers, lamp posts, traffic signs, road surface)</li> <li><span style="border: 1px solid yellow; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Road users (e.g. moving/parked vehicles, pedestrians)</li> </ul> |
|---|---|

## Methods – systematic review



## Results – Landscape types

Natural landscapes



➔ Stress recovery (*Parsons et al 1998*)  
But no later studies replicating the same experiment

Monotonous landscapes



➔ Fatigue

- Gaps/issues**
- 'Blue' landscapes, industrial, derelict areas
  - Long-term effects (e.g. in commuting trips)
  - Effect on distraction
  - Many studies used mainly young male samples

## Results – Roadside vegetation

Vegetation density



➔ General positive outcomes on stress but not reflected in all indicators

Near trees



➔ ↓ speed

Far trees



➔ ↑ speed

- Gaps/issues**
- Vegetation in urban settings
  - Long-term effects
  - No studies with older age groups

## Results - Advertisements



- ➔
- Distractions
  - Poorer driver performance (speed, lateral position, reaction time, vehicle headway)

Especially ads that have movable displays, are complex, have emotional or sexual content, or are located at junctions

- Gaps/issues**
- Possible positive effects
  - Results not triangulated with self-reported information on what drivers noticed
  - No before/after analyses in real-world contexts

## Results – Other roadside objects

Memorials



- ➔
- Distraction vs.
  - Safer driving behaviour due to message

Wind turbines



➔ Speed reduction

Drones



➔ Distraction

Utility poles



**Issues:** Many studies used mostly young male samples

## View to the road

## View to the road



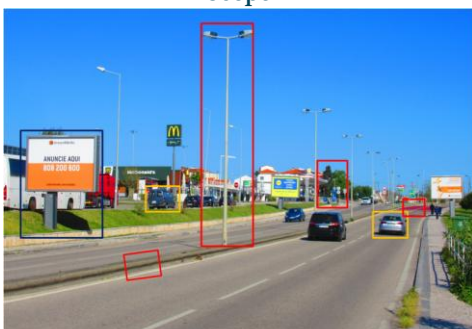
## View to the road



## View to the road



## Scope



- Included**
- ▭ Road infrastructure (carriageway, barriers, lamp posts, traffic signs, etc.)
  - ▭ Vehicles (moving or parked)
  - ▭ Structures aimed at car users (e.g. billboards)

## Effects on perceptions and use of places

Views of...

Roads



→ Linked to places people dislike in cities

Traffic



→ Reduced perceived quality of streets

Car parks

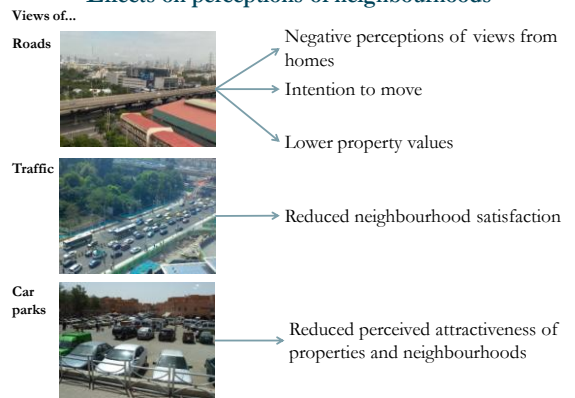


→ Reduced use of local public places

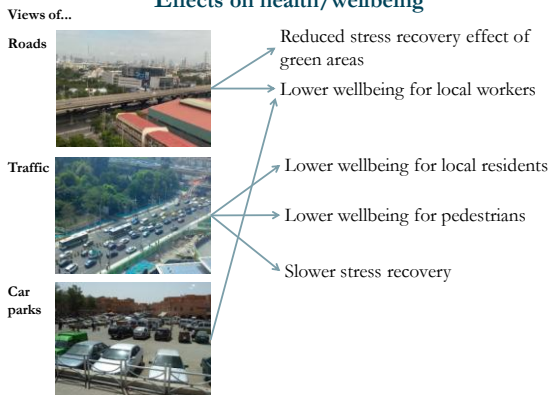
## Effects on pedestrian movement



## Effects on perceptions of neighbourhoods



## Effects on health/wellbeing



## Conclusions

### View from the road

- 1 Monotonous views consistently linked to **fatigue**, roadside advertisements linked to **distractions**. Mixed effects for roadside vegetation and other visual elements
- 2 Most evidence relates to the **driving task** (e.g., distraction, fatigue), not to wider **wellbeing** aspects (e.g., stress).

### View to the road

- 1 Some associations between views of roads/traffic/car parks and worse **neighbourhood perceptions** and lower **wellbeing**/lower **stress recovery**
- 2 Not much evidence on effects on **pedestrian** behaviour, use of **public places**, or **physical activity** in local area

Thank you!

p.anciaes@ucl.ac.uk

<https://iris.ucl.ac.uk/iris/browse/profile?upi=PRANC25>