

# So you live, so you cycle

An innovative mixed-method for analysing socio-spatial and gender inequalities in the daily experience of cycling in Bogotá

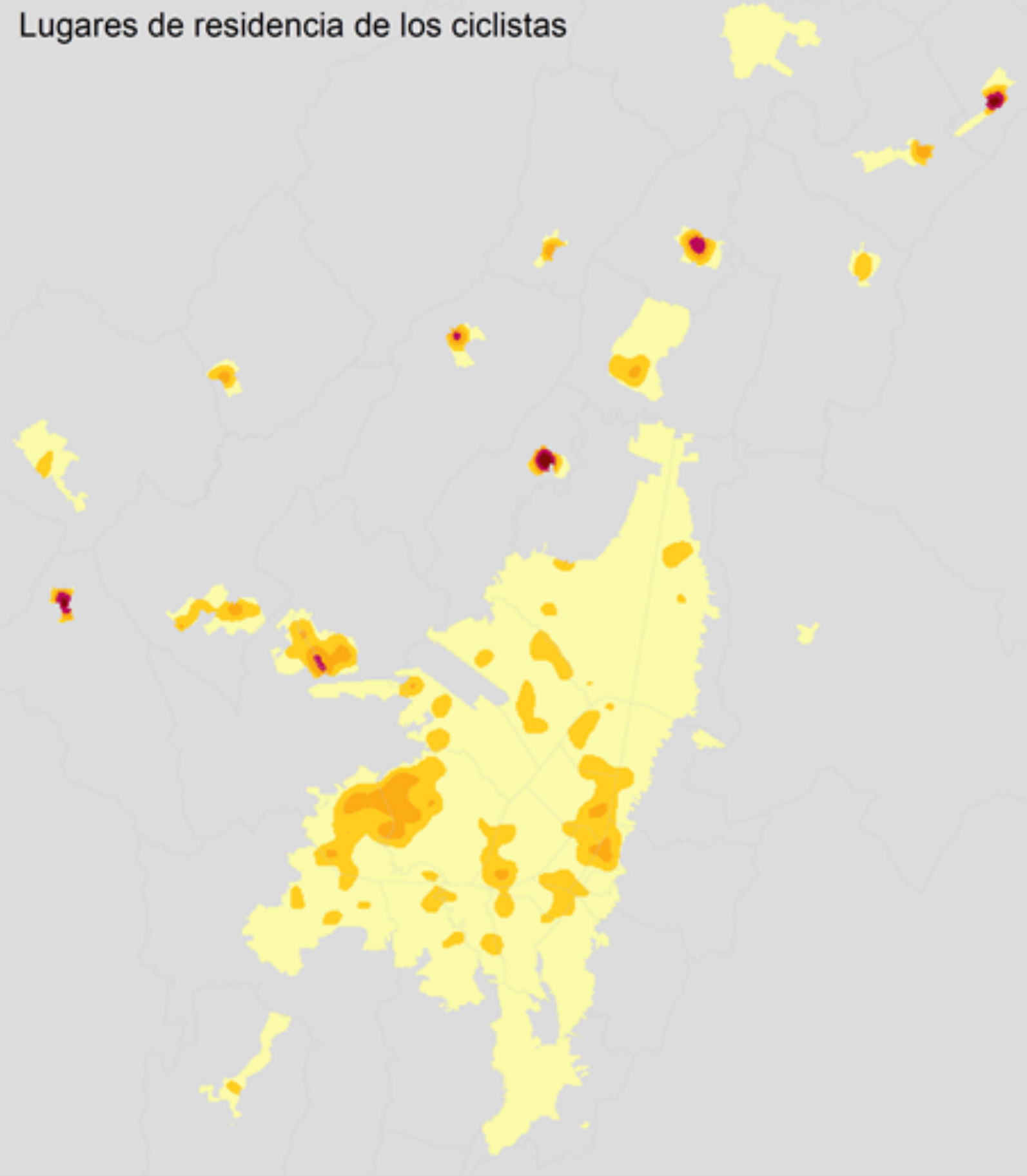
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Maëlle Lucas

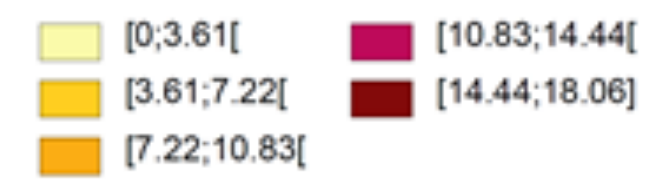
Florent Demoraes

UMR ESO - Université Rennes 2

**T2M Annual Conference, 25 September 2024, Leipzig**



Número de ciclistas por hectárea  
(con base en las manzanas de residencia)



# Introduction

- Bogotá: “world’s bicycle capital”?
- Understanding socio-economic inequalities through cycling mobilities

Source : Peñalosa, 2019; EMU 2019  
Realisation: Demoraes 2021

# Characteristics, scales and spatialities of cycling

Cycling as part of the daily practices of urban space



## Objectives

- Who are Bogotá's bike users? How do they travel by bike?
- How can we reach the most comprehensive understanding of cycling practices in Bogotá?
- To what extent is urban space influencing cycling practices?

# Context of the research

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## **A PhD in geography**

Cycling in Bogotá. A study of cyclists' practices and experiences of urban mobility.



## **Modural & Vélotactique**

2 research projects about cycling during the pandemic & daily mobility in Latin-American metropolises



## **An investigation during the pandemic**

Limits and opportunities of fieldwork

# A mixed-method analysis

Mobile and visual  
methods

- Confronting quantitative data with discourse and practice
- Analysing an "embodied and situated experience of cycling"
- Illustrating statistical clusters through mobile ethnography

Cluster  
analysis

# Quantitative data: the Bogotá 2019 urban mobility survey

<b>Database</b>	<ul style="list-style-type: none"> <li>• Open data</li> </ul>
<b>Sample</b>	<ul style="list-style-type: none"> <li>• 22,000 households, 67,000 people. Surveyed cyclists: 3241</li> </ul>
<b>FAMD (Factorial Analysis of Mixed Data)</b>	<ul style="list-style-type: none"> <li>• Reduces the information and reveals structure within a large amount of data</li> </ul>
<b>HCA (Hierarchical Ascending Clustering)</b>	<ul style="list-style-type: none"> <li>• Classifies individuals into homogenous groups</li> </ul>
<b>Results</b>	<ul style="list-style-type: none"> <li>• 6 profiles, + maps of their home location, and maps of their first destination</li> </ul>

Variables	Active	Illustrative
Place of residence	x	
Zone of residence	x	
Duration of the journey (clusters)	x	
Distance of the journey (clusters)	x	
Socio-economic strata (cluster)	x	
Occasional or frequent use	x	
Motive of the kourney (cluster)	x	
Age	x	
Education level (cluster)	x	
Driving licence	x	
Gender	x	
Frequency of use during the week		x
Duration of the journey		x
Modal share UTAM		x
Number of cars% of ICS 1 & 2		x
Frequency of use during weekends		x
Number of people per household		x

# Analysing cycling mobilities *in situ* and in movement

Mobile ethnographies	<ul style="list-style-type: none"><li>• 14 journeys with cyclists chosen based on their profile</li></ul>
Visual	<ul style="list-style-type: none"><li>• GoPro camera filming cyclists from behind</li></ul>
Audio	<ul style="list-style-type: none"><li>• Recorded speech during the journey</li></ul>
Spatial	<ul style="list-style-type: none"><li>• GPS tracks</li></ul>
Results	<ul style="list-style-type: none"><li>• Narrative maps</li></ul>



# **6 cyclists' profile with spatial anchorage**

## **Profile 1**

- Short-distance mobility in the south-western outskirts

## **Profile 2**

- Long-distance mobility in the south-western low-income neighbourhoods

## **Profile 3**

- Western and south-western students' mobility

## **Profile 4**

- Mobility of the well-off, mainly masculine journeys

## **Profile 5**

- Middle-class cyclists' occasional mobility

## **Profile 6**

- Young workers' mobility living in the pericentre

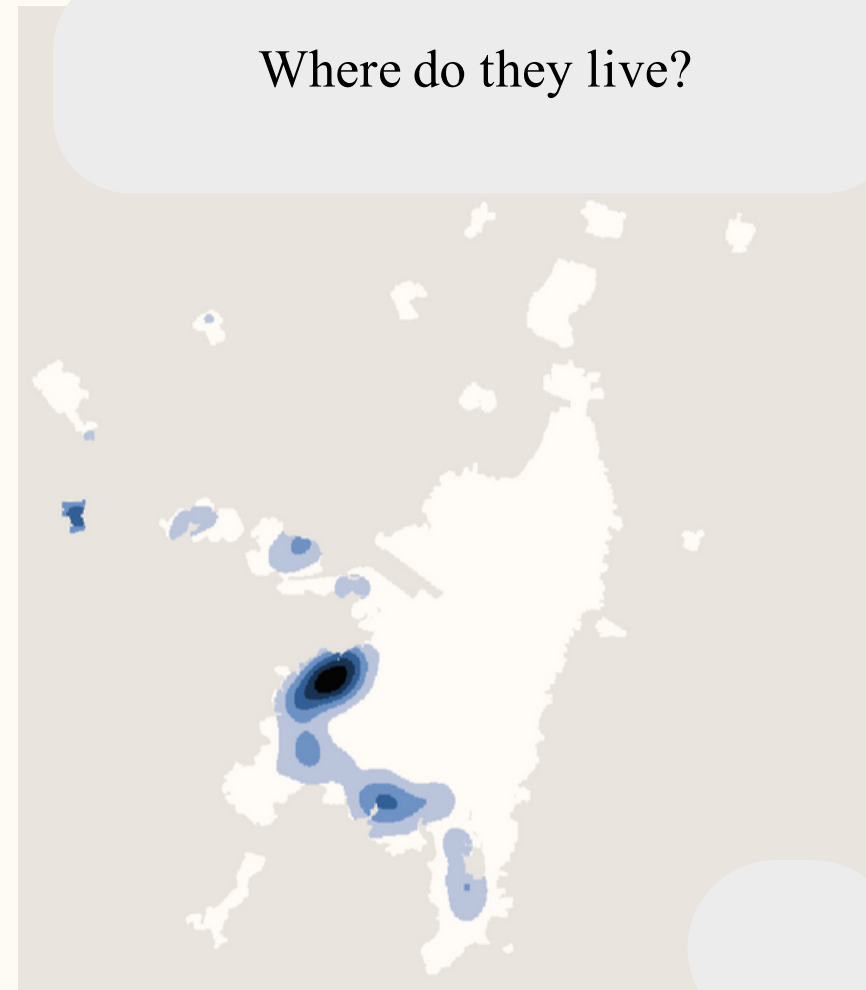


# Profile 2

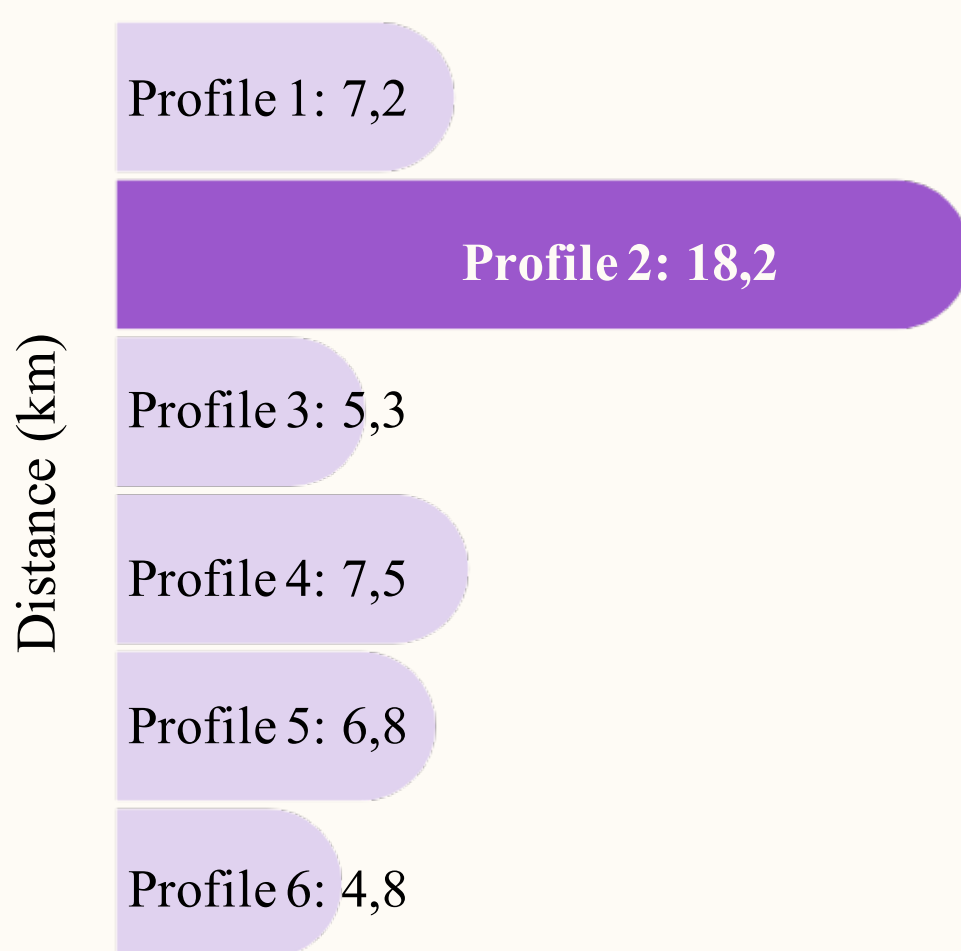
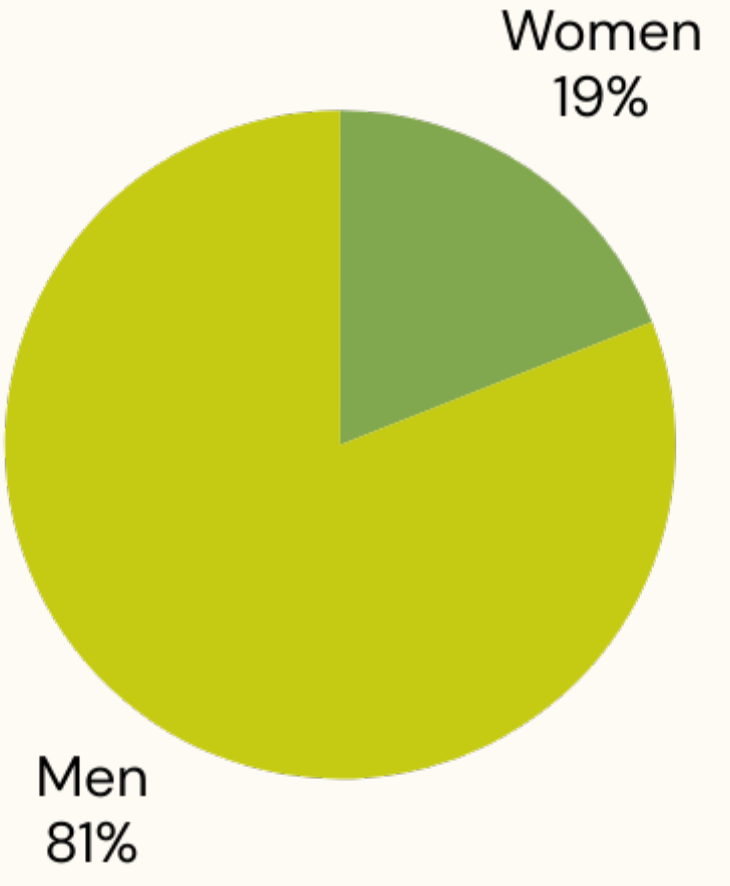
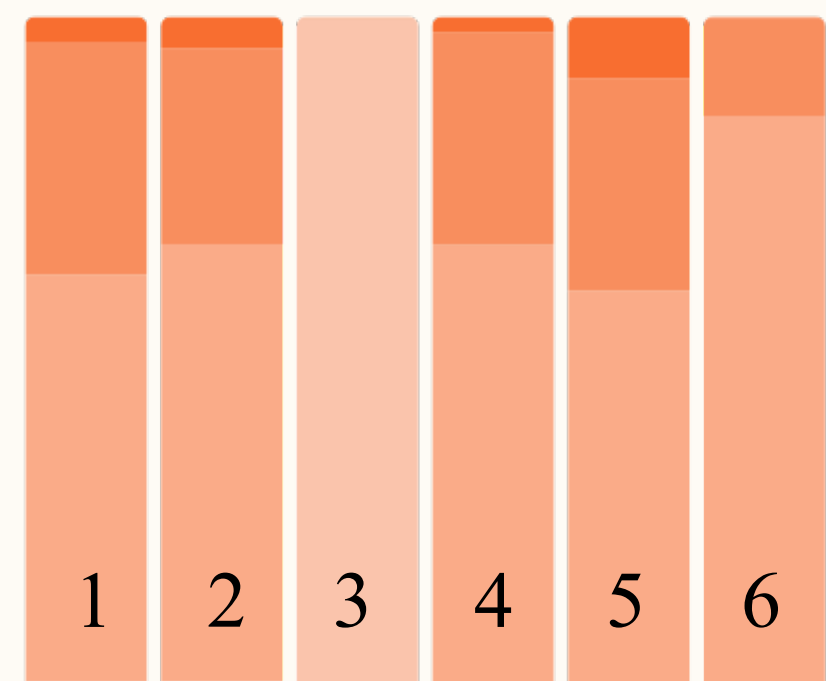
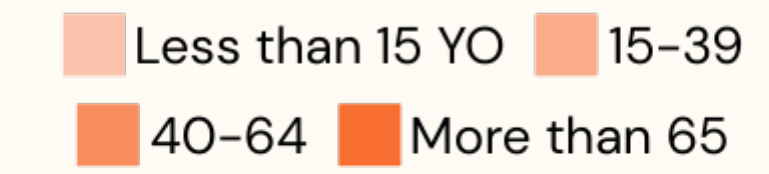
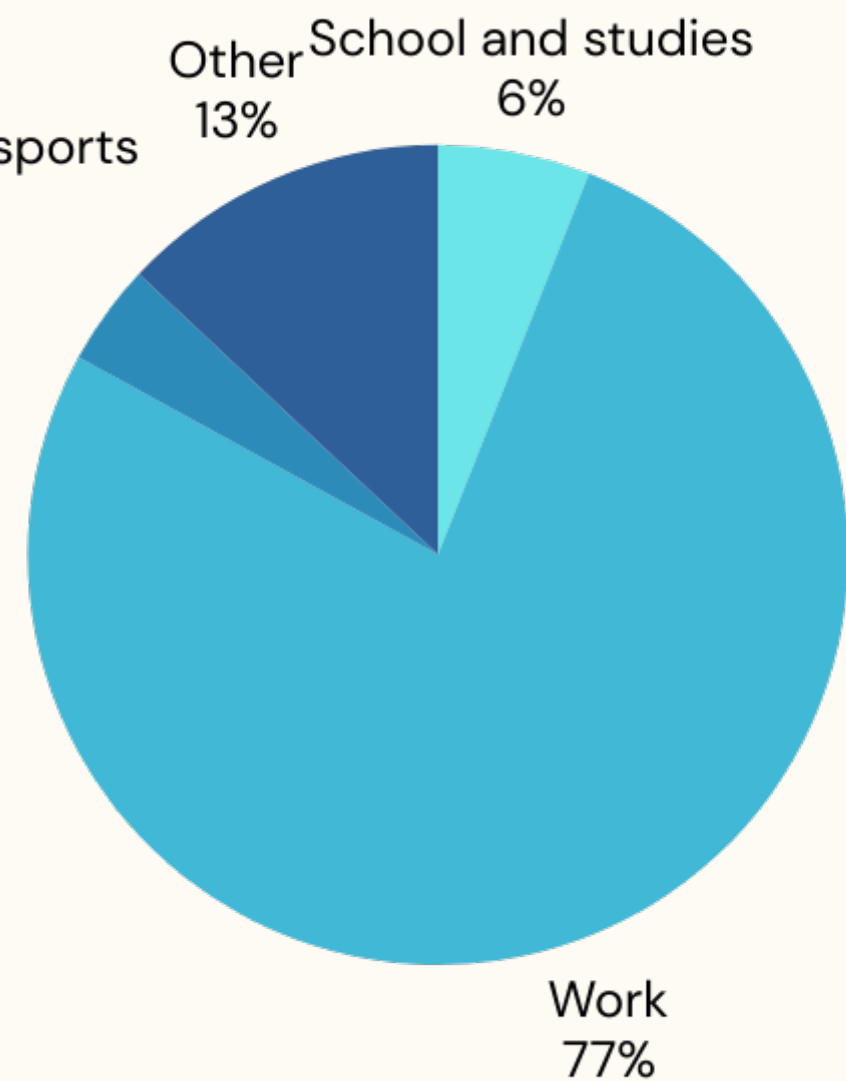
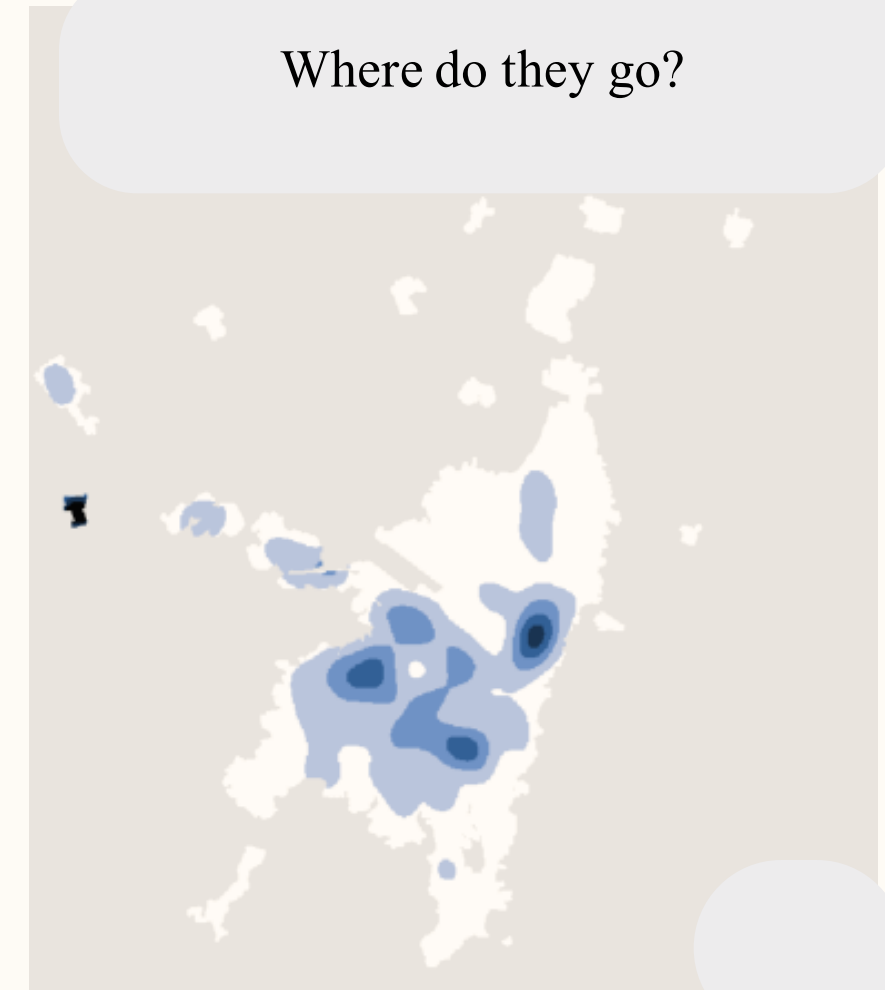
## Long-distance mobility in south-western low-income neighbourhoods

- Low-income cyclists
- Regular journeys

Where do they live?



Where do they go?



Distance (km)

# Profile 2

## Long-distance mobility in south-western low-income neighbourhoods

- Nilson
- 25 years old, lives in San Mateo - Soacha, with his mother and siblings
- Works in the warehouse of a mall in Santa Barbara - Usaquén
- Works 6 days a week
- Travels 25,6 km to go to work



Nilson's journey from work to home  
120 min, April 21st 2021

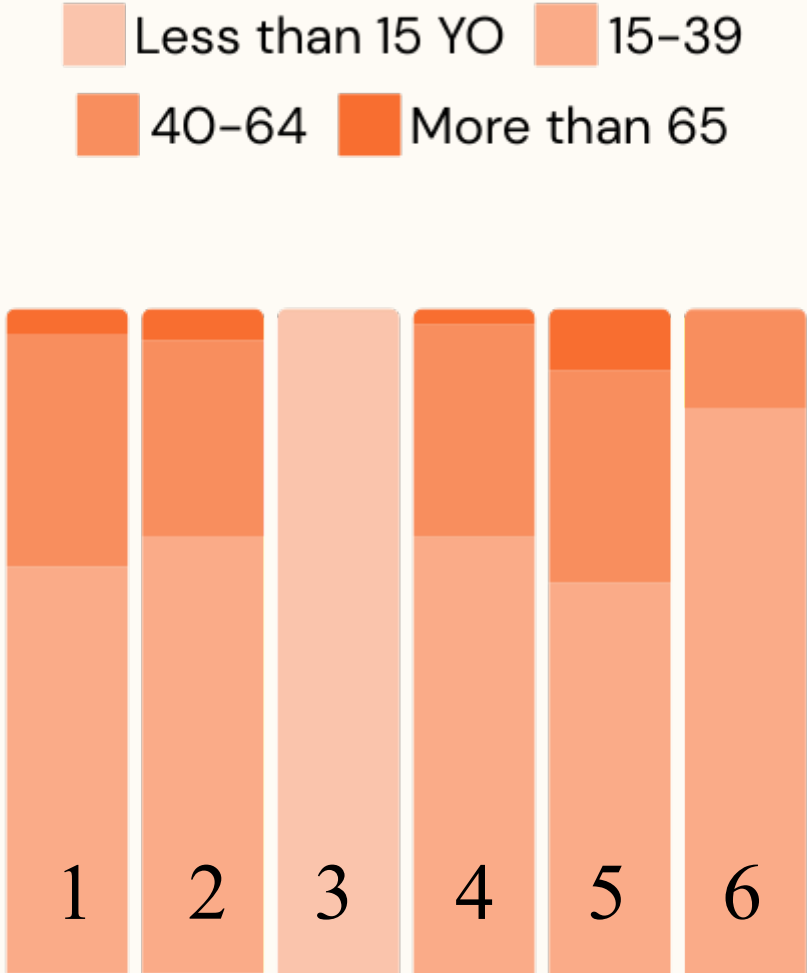
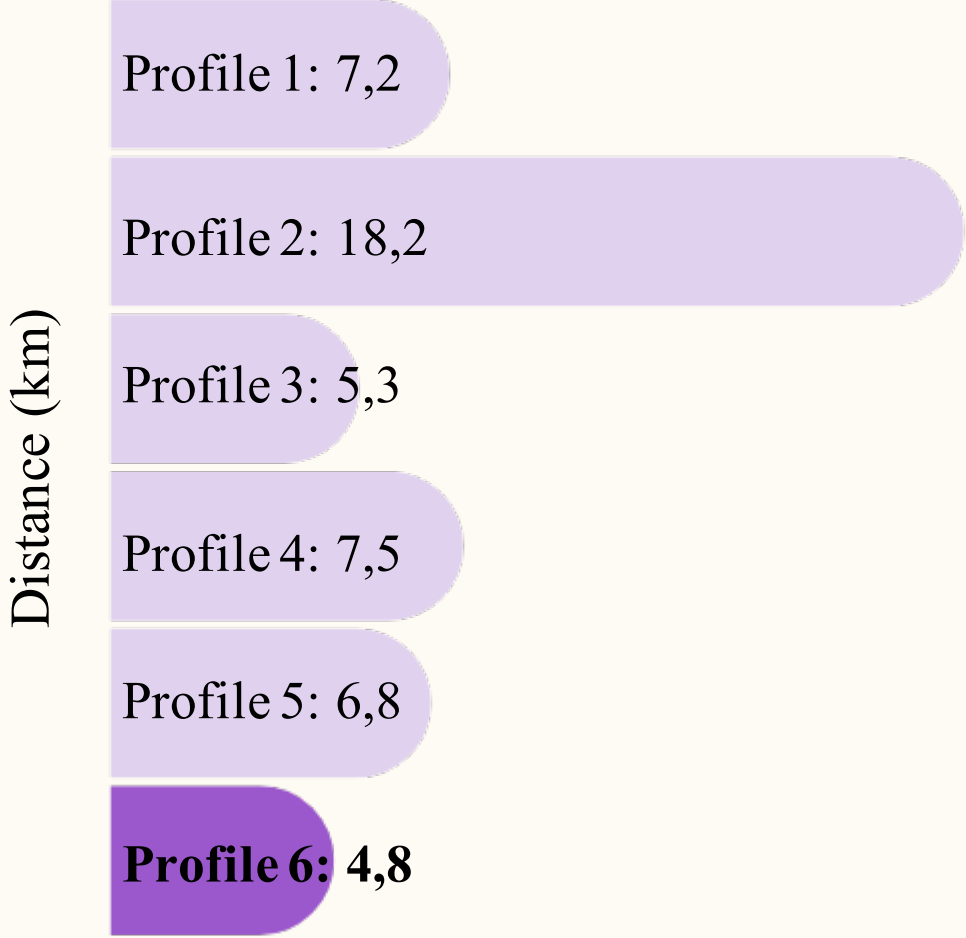
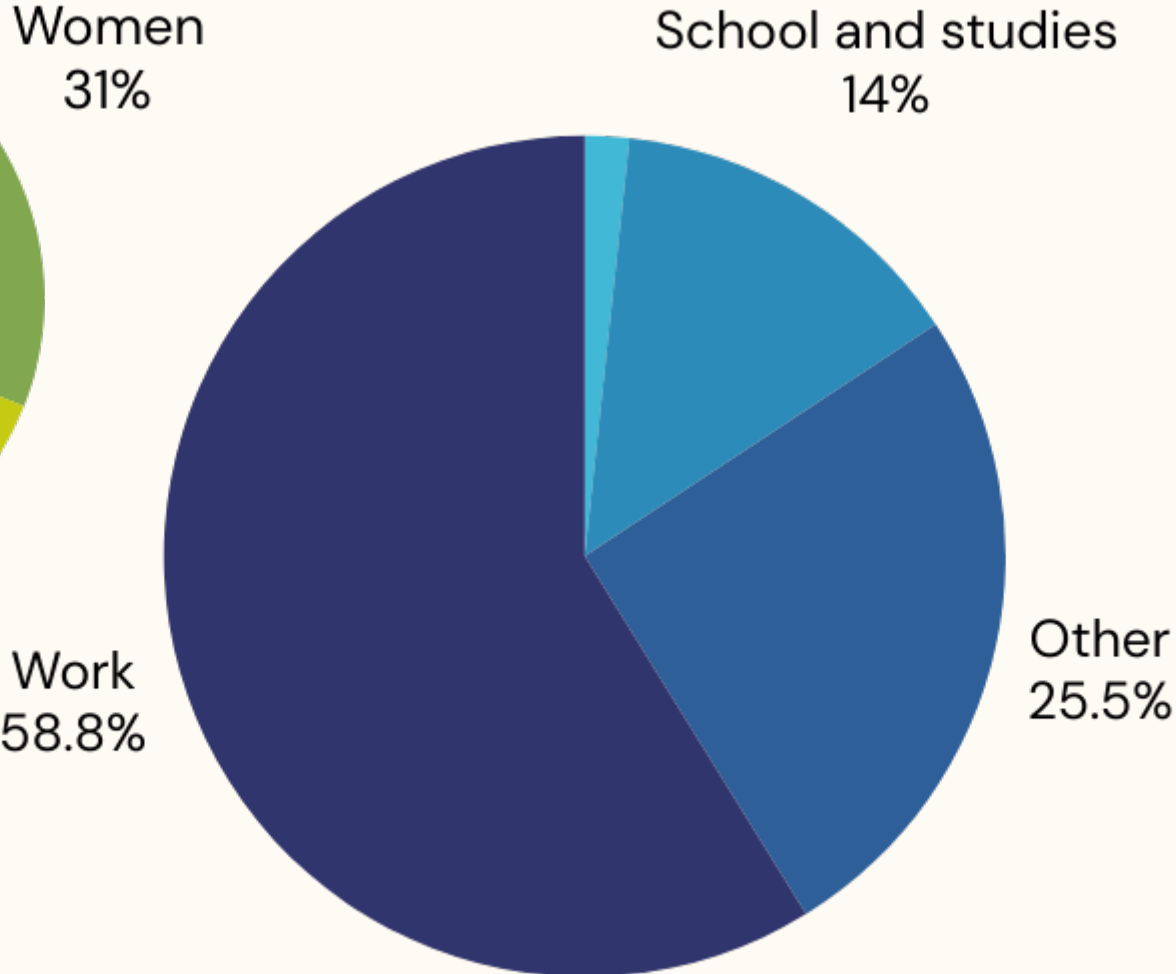
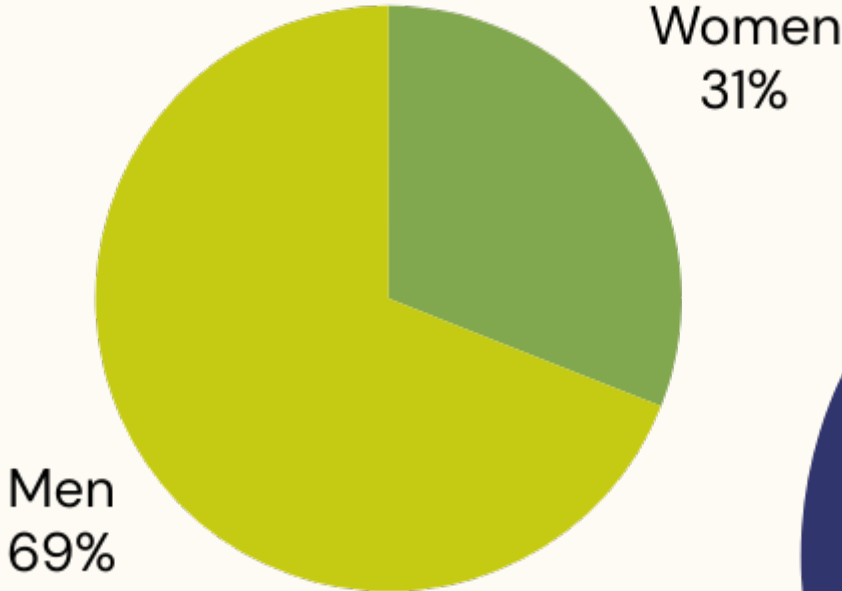
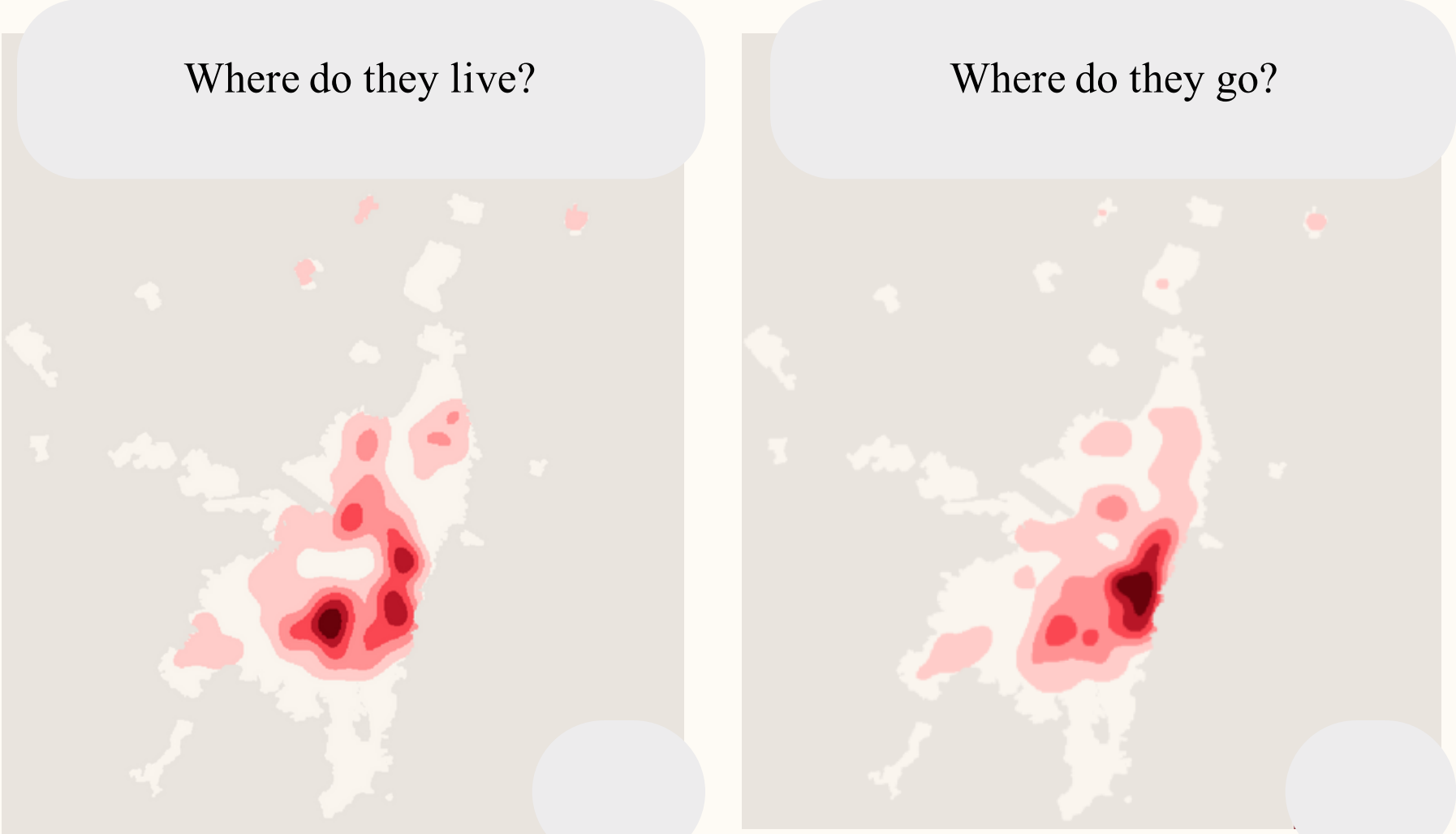
# From Bogotá to Soacha



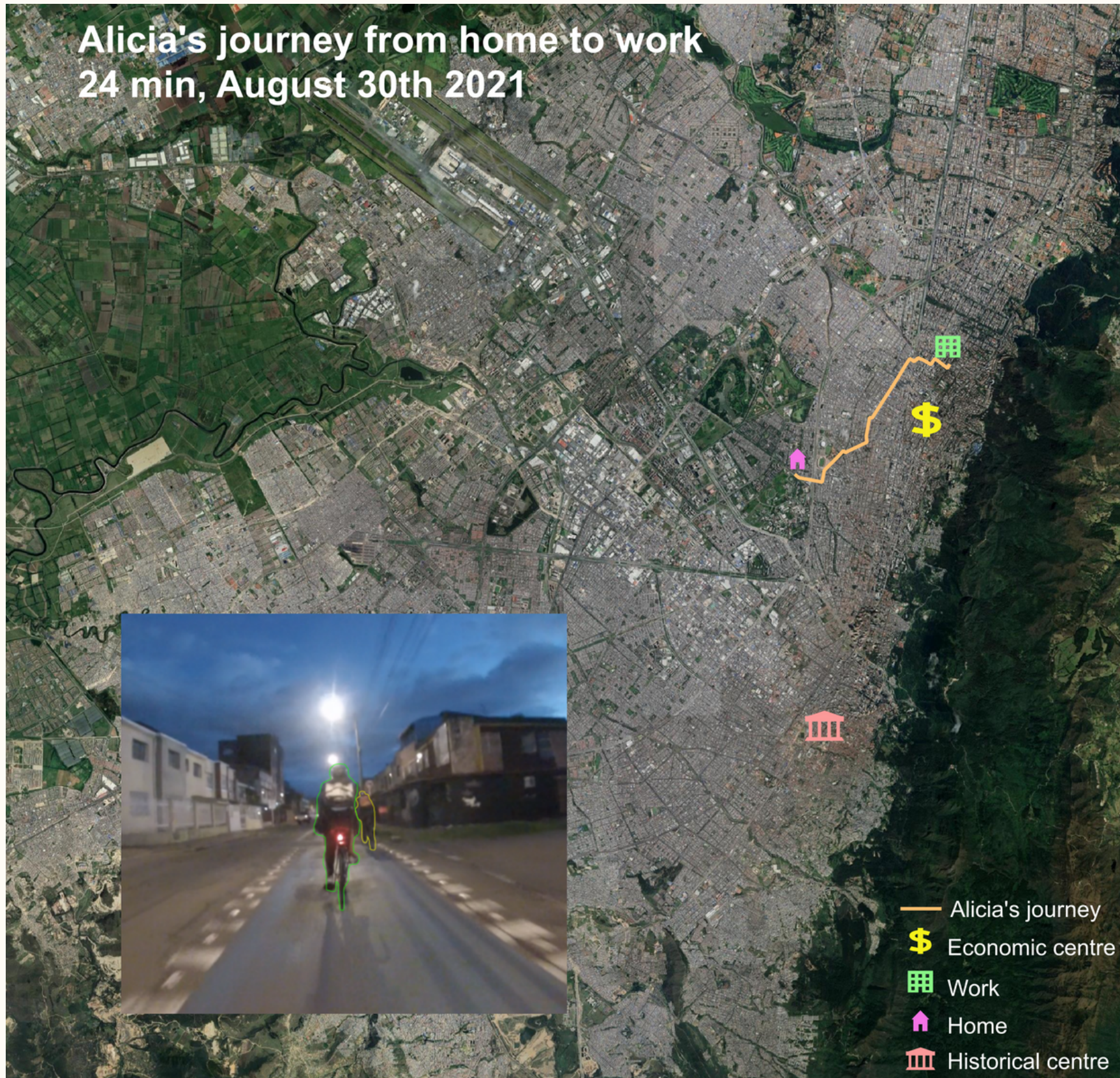
# Profile 6

## Young workers' mobility living in the pericentre

- Middle-class cyclists
- 99,8% of journeys are regular



Alicia's journey from home to work  
24 min, August 30th 2021



# Profile 6

## Young workers' mobility living in the pericentre

- Alicia
- 24 years old, lives close to Bogotá's centre with her sisters and boyfriend.
- Works at a university in the northern part of the centre
- Travels 4,8 km to and from work
- Her boyfriend often travels with her

# Weaving through Bogotá's traffic



# Conclusion



**The place of residence  
influences how people cycle**



**Cycling reveals and influences  
socio-economic and gender  
inequalities**



**Story mapping as a means to  
translate data into a narrative  
of cycling practices**

# Thank you for your attention !

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Maëlle Lucas – [lucas.maellef@outlook.fr](mailto:lucas.maellef@outlook.fr)

Florent Demoraes – [florent.demoraes@univ-rennes2.fr](mailto:florent.demoraes@univ-rennes2.fr)

UMR ESO - Université Rennes 2

