

# THE INFLUENCE OF THE BUILT ENVIRONMENT ON WALKING EXPERIENCE AND INTENTIONS

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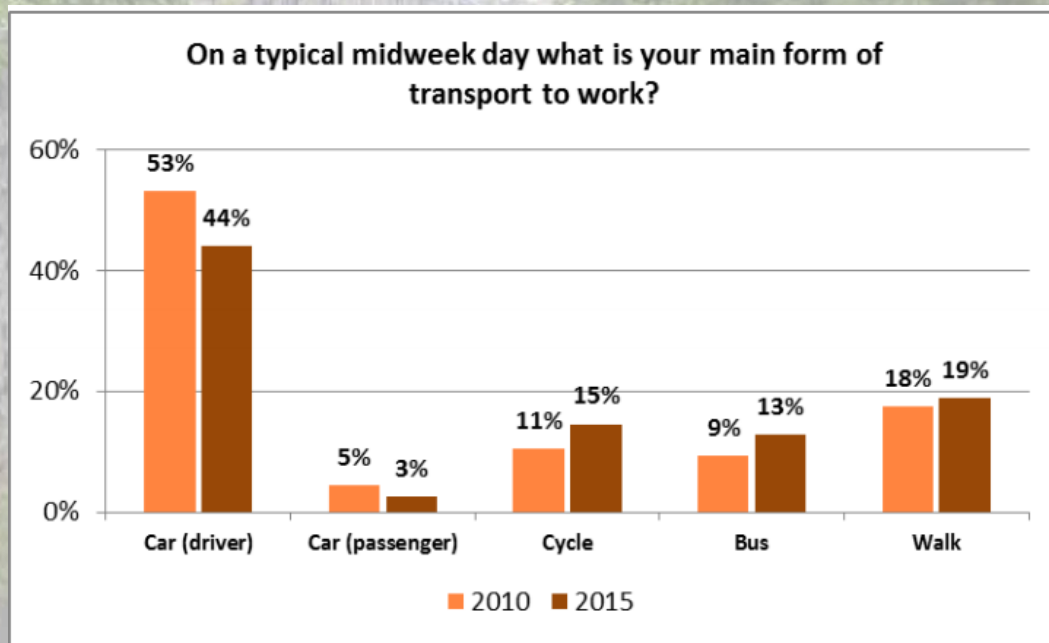
Centre for  
Transport &  
Society

Prof Graham Parkhurst, Centre for Transport & Society, UWE

Dr Phillip L. Morgan, Department Of Health And Social Sciences, UWE

# WALKING LEVELS ARE GOING DOWN

- England average walking trips per person fell 24% since 1995
- 19.3% of Bristol residents walk to work



2015 Bristol Quality of Life (QoL) survey

# HEALTH BENEFITS of WALKING



20

WALKING 20 MINUTES/DAY WILL BURN 7 POUNDS OF BODY FAT/ YEAR



45

WALKING 45 MINUTES/ DAY HALVES ODDS OF CATCHING A COLD



1

WALKING 1 MINUTE CAN EXTEND LIFE BY 1.5-2 MINUTES



20

WALKING 20-25 MINUTES/WEEK CAN EXTEND LIFE BY SEVERAL YEARS



## DEMENTIA

Seniors who walk 6-9 miles/week are less likely to suffer from mental decline as they age, including dementia.



## DIABETES

Walking 30 minutes/day, 5 days/week, along with moderate diet changes, can halve risk of Type 2 Diabetes.



## HEART DISEASE

Walking 30 minutes/day, 5 days/week can halve the risk of heart disease and reduce stress, cholesterol, and blood pressure.



## ARTHRITIS

Walking can reduce pain and improve function, mobility, mood, and quality of life, without worsening symptoms.



## DEPRESSION

Walking triggers endorphins, promotes relaxation, and prevents anxiety and depression.

WALKING 3-5 HOURS/ WEEK REDUCES MORTALITY BY 50% IN WOMEN WITH BREAST CANCER



WOMEN WHO WALK FOR 1 HOUR/ DAY, 5 DAYS/WEEK AND CONSUME 1,500 CALORIES/ DAY CAN LOSE AND KEEP OFF 25 LBS



WALKING 30 MIN/ DAY, 4 DAYS/WEEK CAN REDUCE THE RISK OF DIABETES BY NEARLY 60%



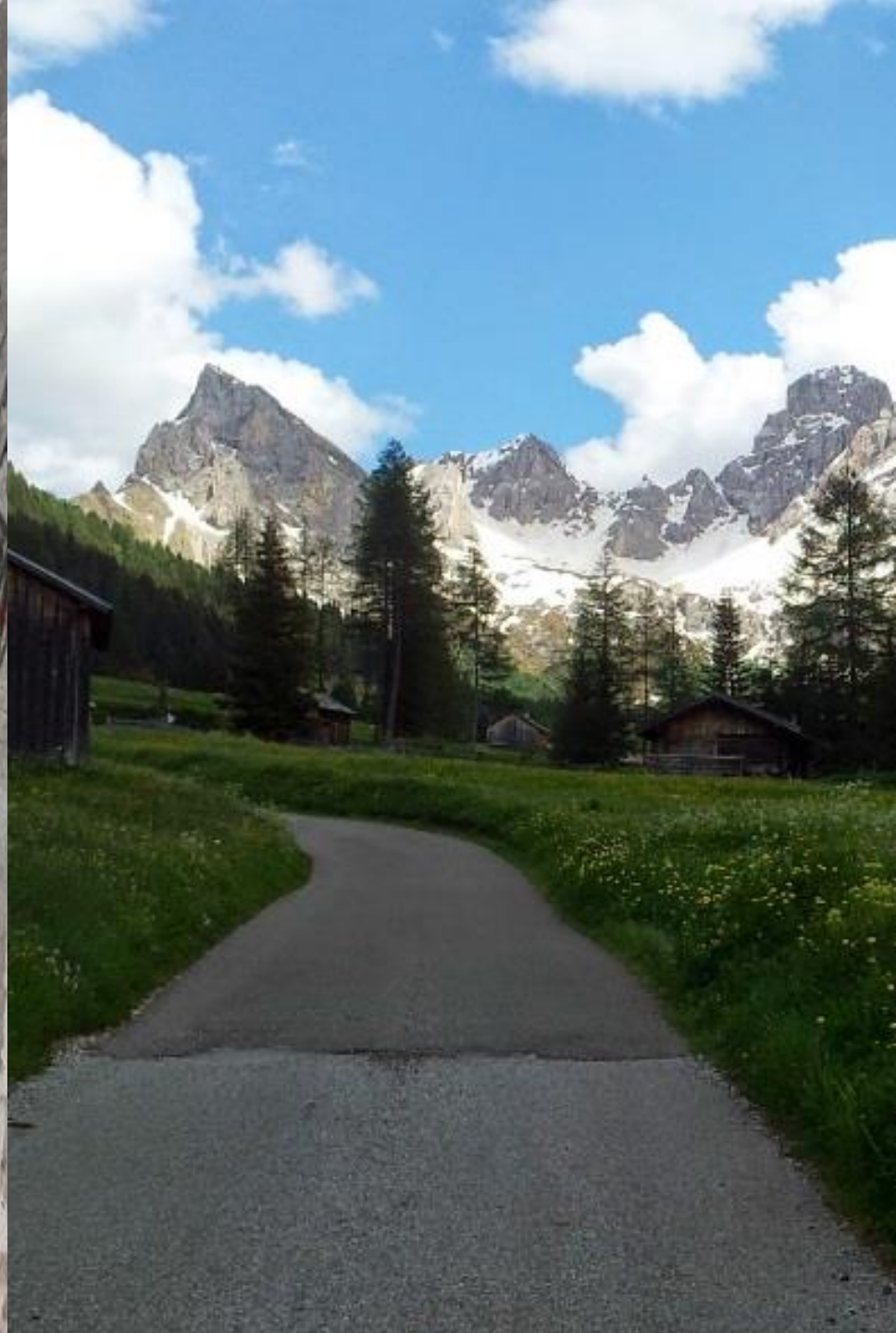
PROSTATE CANCER PATIENTS WHO WALK 90 MIN/WEEK HAVE NEARLY 50% LOWER MORTALITY RISK



WOMEN WHO WALK REGULARLY ARE 31% LESS LIKELY TO DEVELOP COLON CANCER THAN THOSE WHO EXERCISE LESS THAN ONE HOUR/ WEEK







# ROLE OF SETTING IN WALKING EXPERIENCE

## **Restorative environments (Kaplan, Ulrich):**

- Physical setting has impact on cognitive and affective state
- Walking in nature: affective and cognitive recovery
  - Growing urbanisation trends

## **This research:**

- Assessed moderating role of different built settings in Bristol during walking
- Tested if walking experience impacts walking intentions
  - Affect & cognition as measuring tools (Kaplan, Ulrich)



# **Methodology: quantitative phase**

## **Online survey (n = 385, mean age = 35)**

- Employees and students
- 68% females
- 31% UWE Psychology students

## **Measurements:**

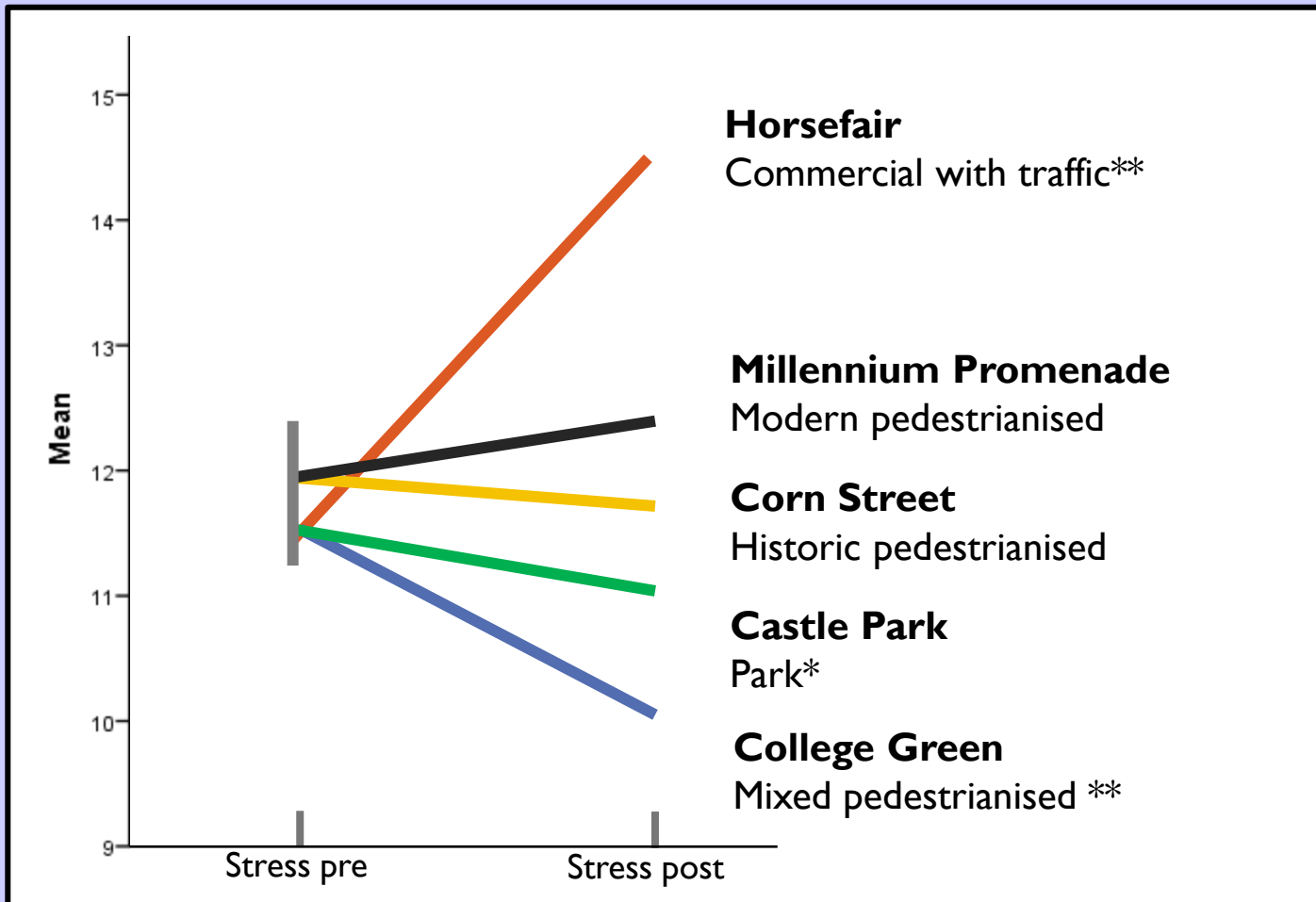
- Affect and cognitive recovery (Stress, Hedonic tone, Energy)
- Place perceptions
- Walking intentions
- Socio-demographics

## **Simulation: virtual walk**





# PHYSICAL SETTING HAS A MODERATING ROLE ON WALKING EXPERIENCE



Stress (pre and post)

Repeated measures  
n = 55

\*\* p = .000

\* P < .05

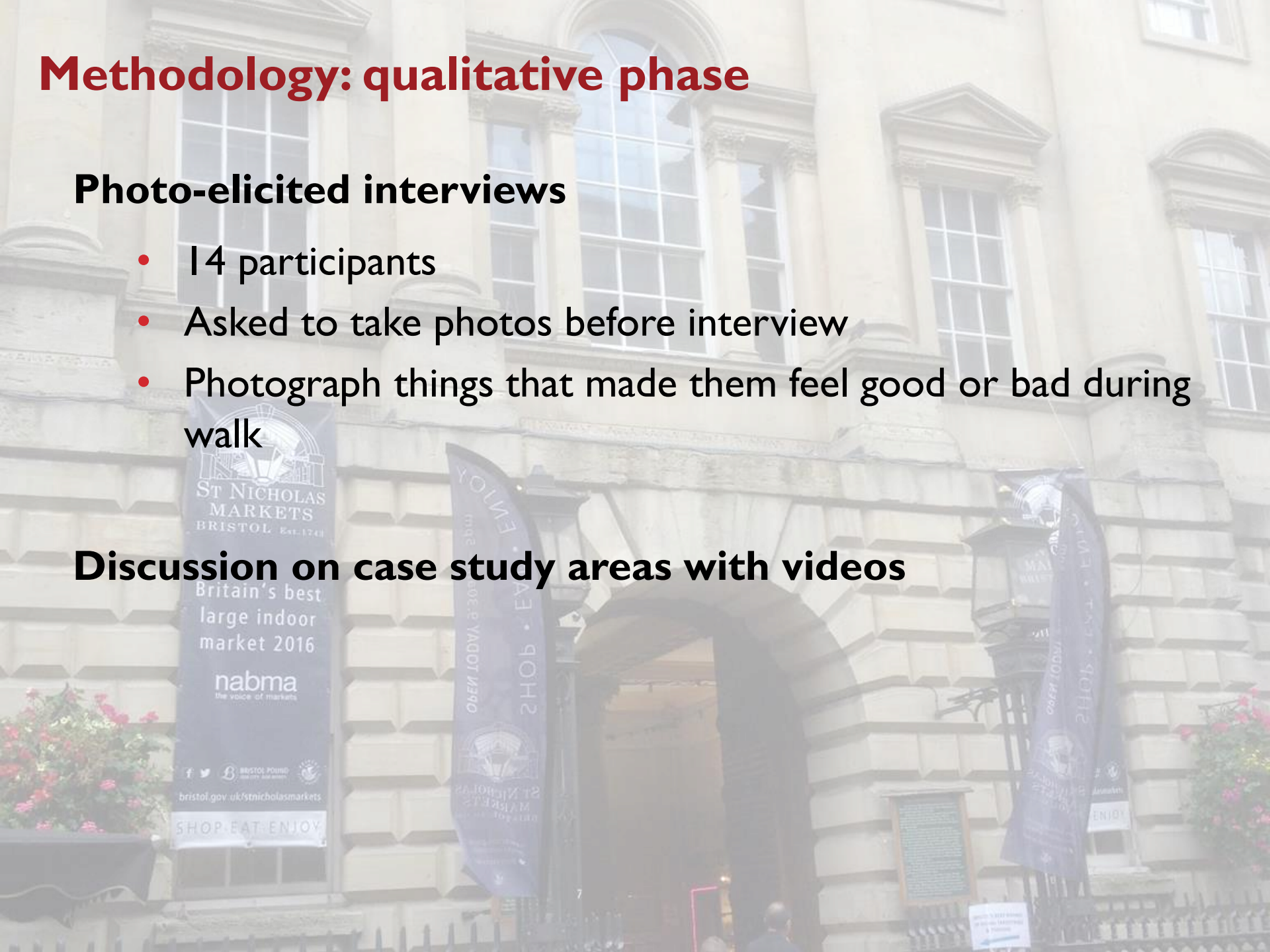


# Methodology: qualitative phase

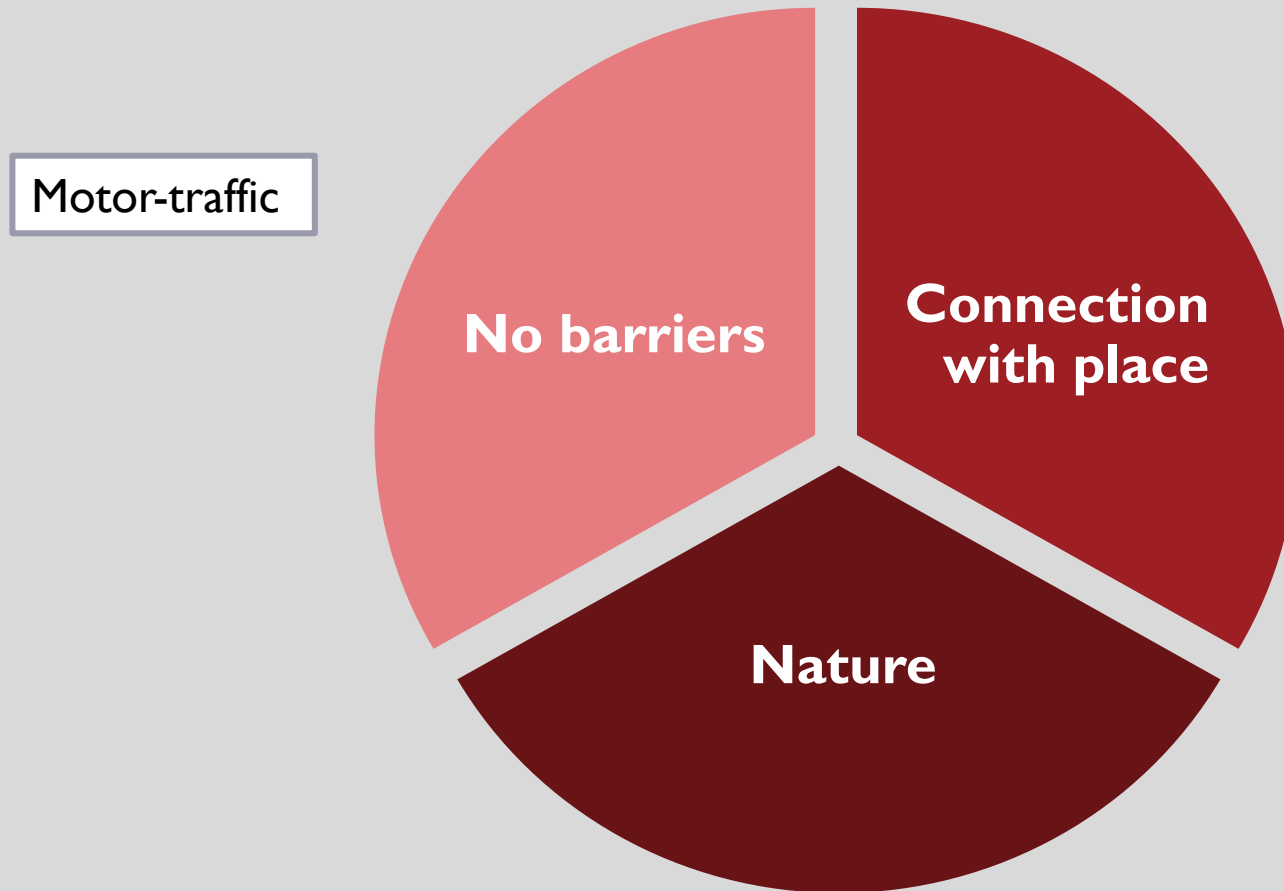
## Photo-elicited interviews

- 14 participants
- Asked to take photos before interview
- Photograph things that made them feel good or bad during walk

## Discussion on case study areas with videos



# THREE ELEMENTS MAKE A POSITIVE WALKING EXPERIENCE





# MOTOR-TRAFFIC

## Attentional efforts and cognitive fatigue

- “When you are walking it is nice to keep the rhythm and not stop, keep the momentum” (Michael, 43)
- Need to “be constantly aware of the surroundings”

## Noise and fumes

## Crossing the road and interruptions

- “I have to negotiate, so I was thinking how to cross, watching out for cars...”



***“That was kinda the theme of my walk, really... stop here, stop there... when you walk you have to stop” (James, 37)***



# MOTOR-TRAFFIC

## Safety

## Lack of space (narrow pavements)

## Powerlessness

- “I feel like a lot of people watching me. And because they have got a car, and I’m just walking, it is kind of like they win” (Julia, 20)

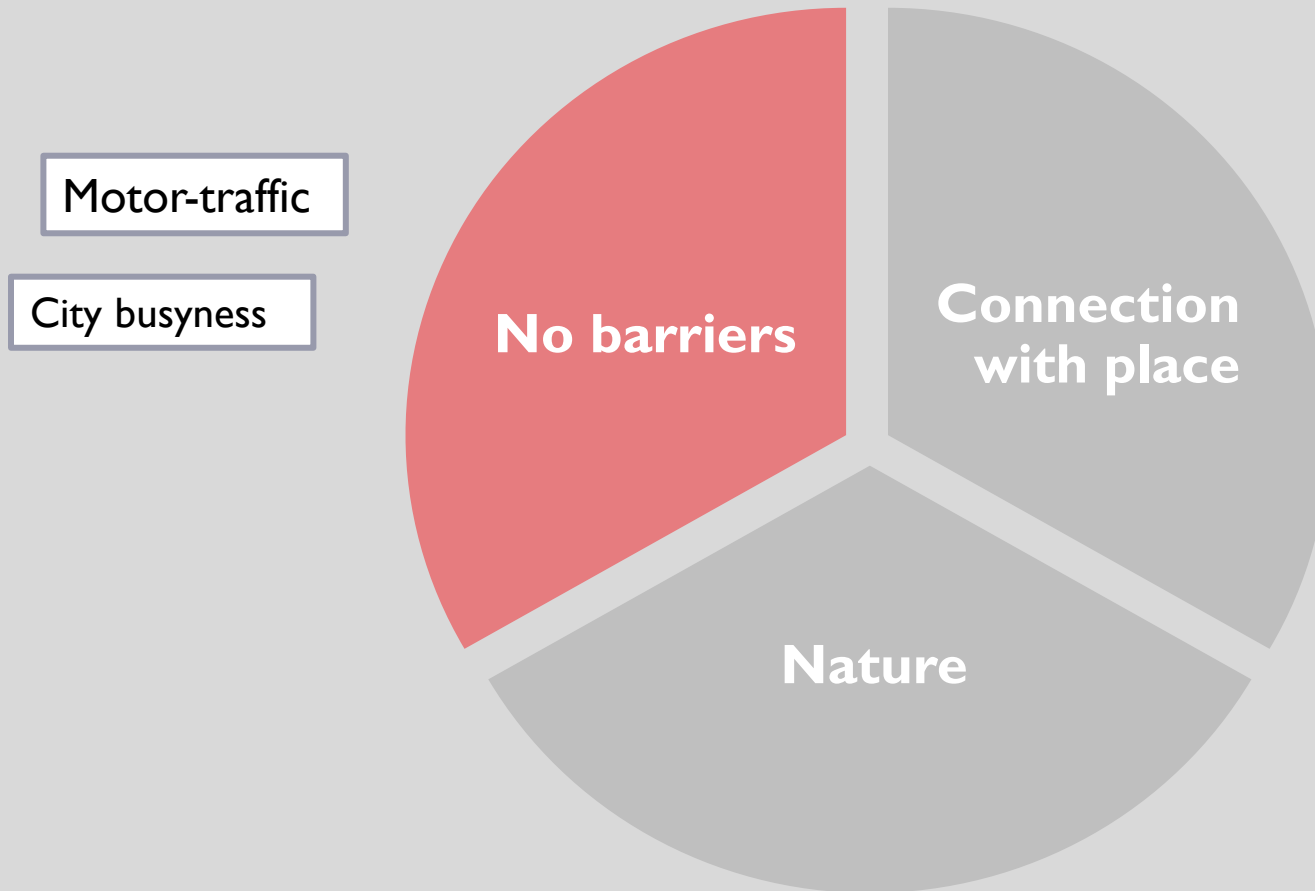




<http://www.geograph.org.uk/photo/3059162>



# THREE ELEMENTS MAKE A POSITIVE WALKING EXPERIENCE



# **CITY BUSYNESS**



**“The city never seems to rest”**

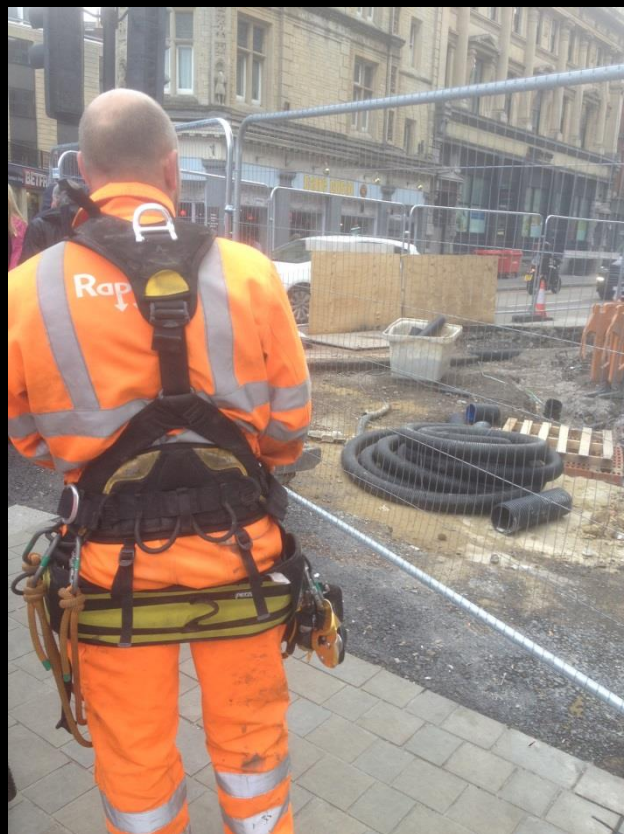
## **Crowds of people**

- Slow you down
- Lack of space
- Intimidating: “you against them”

## **Interruptions, deviations, constructions**

- “Weary of all the road works”









# **CITY BUSYNESS**



**“The city never seems to rest”**

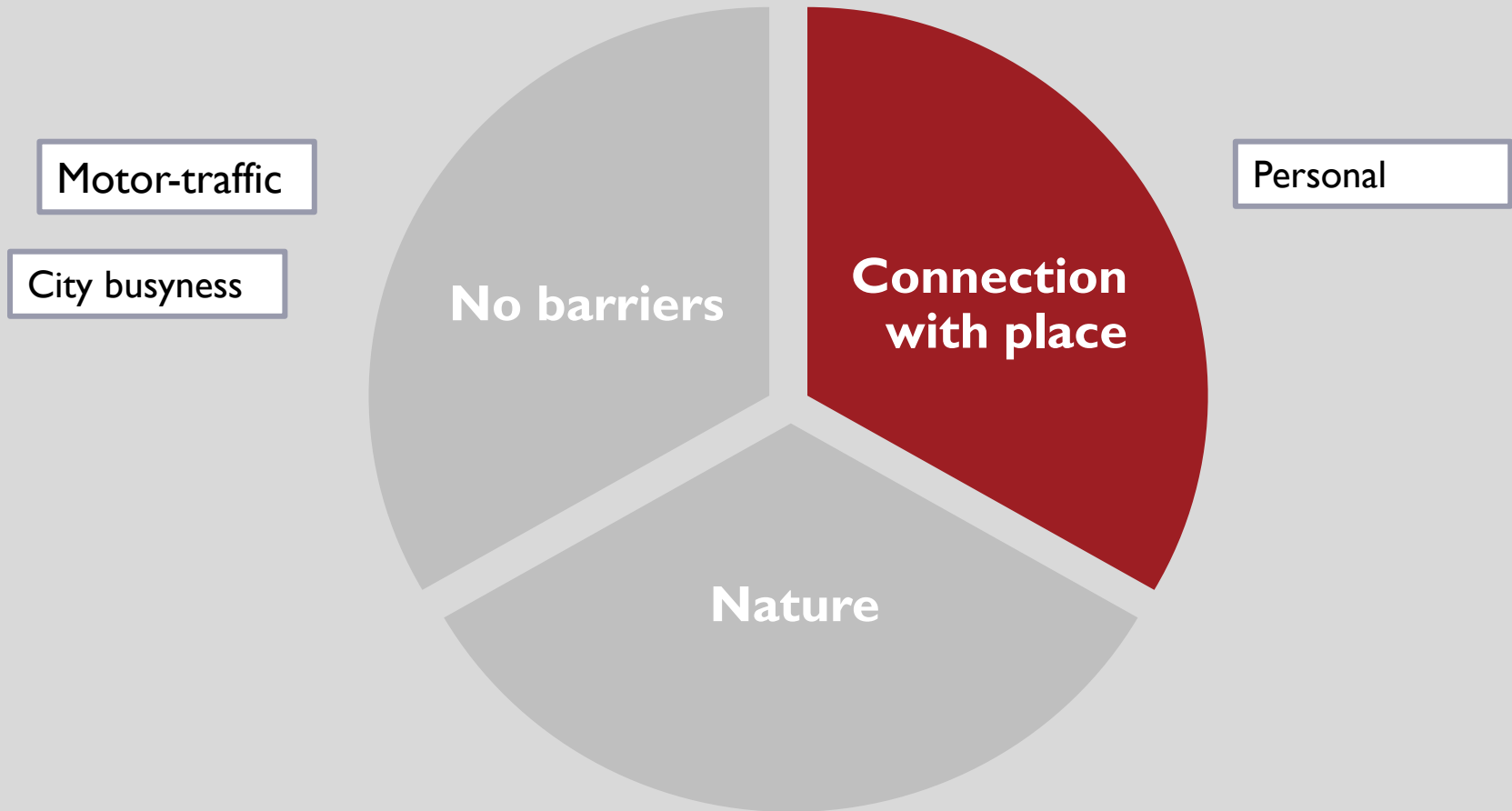
**Trash and carelessness**

- “Not nice”
- Wrong type of people hanging out





# THREE ELEMENTS MAKE A POSITIVE WALKING EXPERIENCE





# PERSONAL CONNECTION

## Memories and habits

- Familiarity
- Distraction and positive feelings

## What reminds of “home”

- Happiness and nostalgia

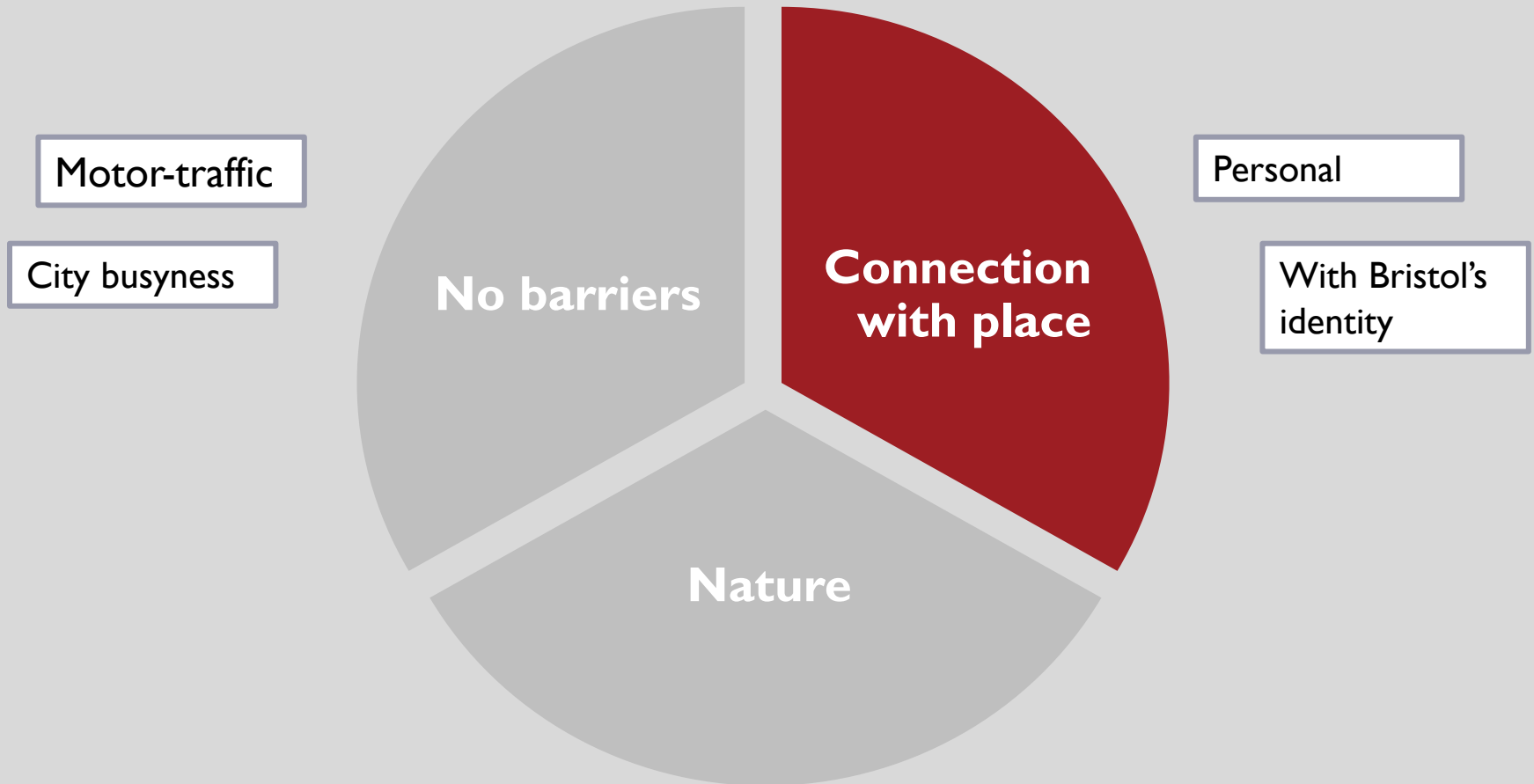






***“This falafel shops reminds me of home... it makes me happy!”  
(Layla, 18)***

# THREE ELEMENTS MAKE A POSITIVE WALKING EXPERIENCE



# CONNECTION WITH BRISTOL'S IDENTITY

## Sense of history

“When you’re in the ground, I always feel in this land there are other people who walked before me, it gives you more than just reading history books. You can really **feel the past**” (Erin, 41).

- **Distraction & imagination**
  - “Something to think about”
  - Interesting, intriguing
  - “Escapism” to another dimension





***“I think where it comes from, and the history behind it, I find it interesting. It’s good, sort of intriguing” (James, 37).***

# CONNECTION WITH BRISTOL'S IDENTITY

## Sense of history

- **Safety and comfort**

“(Cobbled floors) make me feel **relaxed** and **safe**. Which is silly because it is just the pavement!” (Julia, 20)

- **Pride and sense of belonging**



**When I'm walking around the Harbourside I feel *proud* actually. You know I'm a Bristol person (...) and to me the Harbourside to me represents part of the pride of *being Bristolian*, it is a *symbol* of Bristol, so I feel proud, when I walk around here” (Rachel, 34)**



# CONNECTION WITH BRISTOL'S IDENTITY

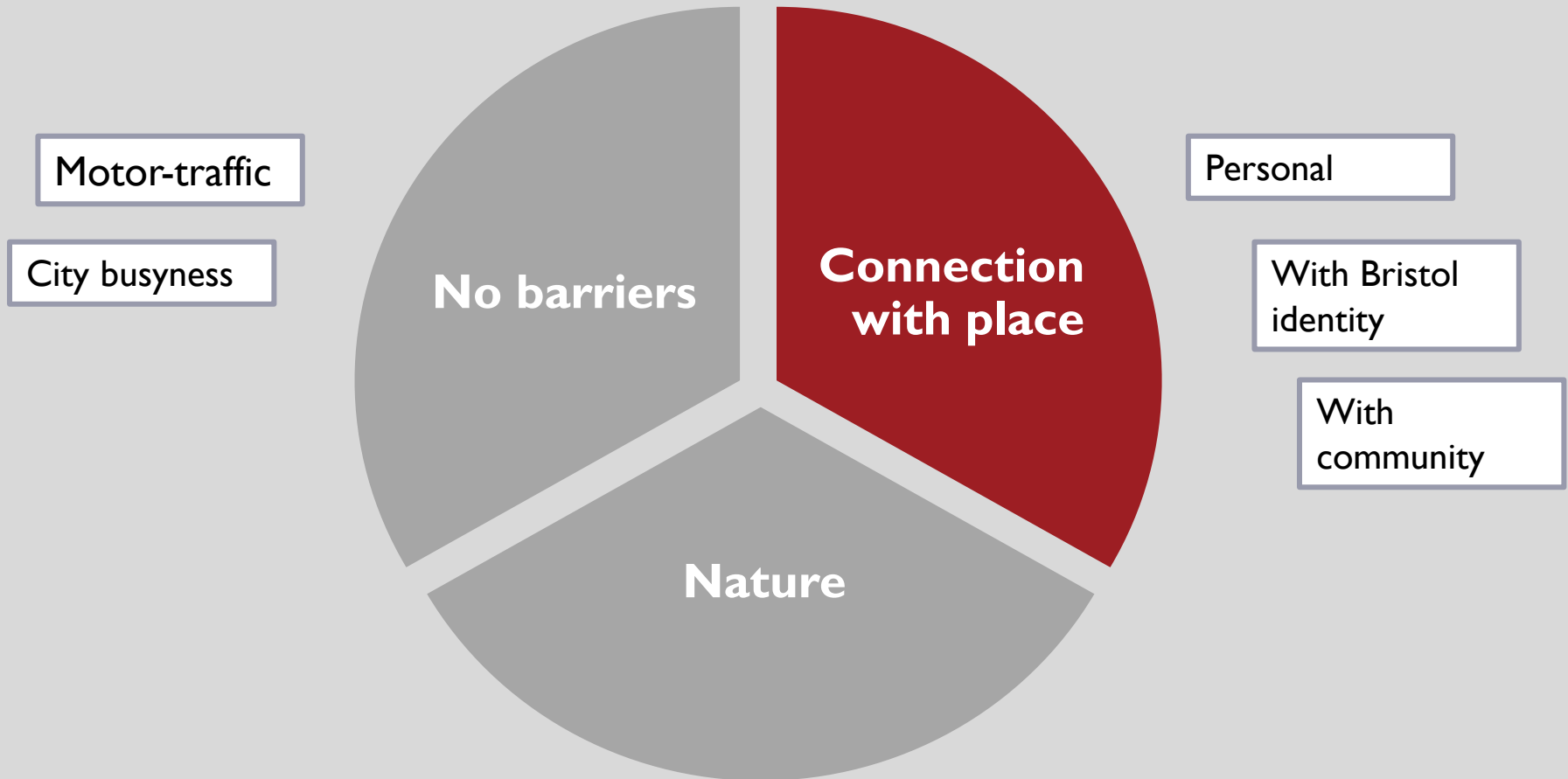
## Street art

- **Distraction**
- **Pride and sense of belonging**
  - Taking visitors to see graffiti
  - Effort and creativity





# THREE ELEMENTS MAKE A POSITIVE WALKING EXPERIENCE





# CONNECTION WITH COMMUNITY

## Sense of community and care

- Sense of care in windows, shops
- Cleanliness





“This is what makes me **smile** every time I walk past it, because they grow sunflowers, and it makes me think that someone takes a little bit of **pride** in their house... ok it’s **not to my taste** sometimes, but they have **made an effort**, so that’s what matters” (Rachel, 34)

# CONNECTION WITH COMMUNITY

## People are contagious

- “Looking at people enjoying themselves, it is like... wow!”
- Mix of people socialising, drinking coffee
- Safety and ease

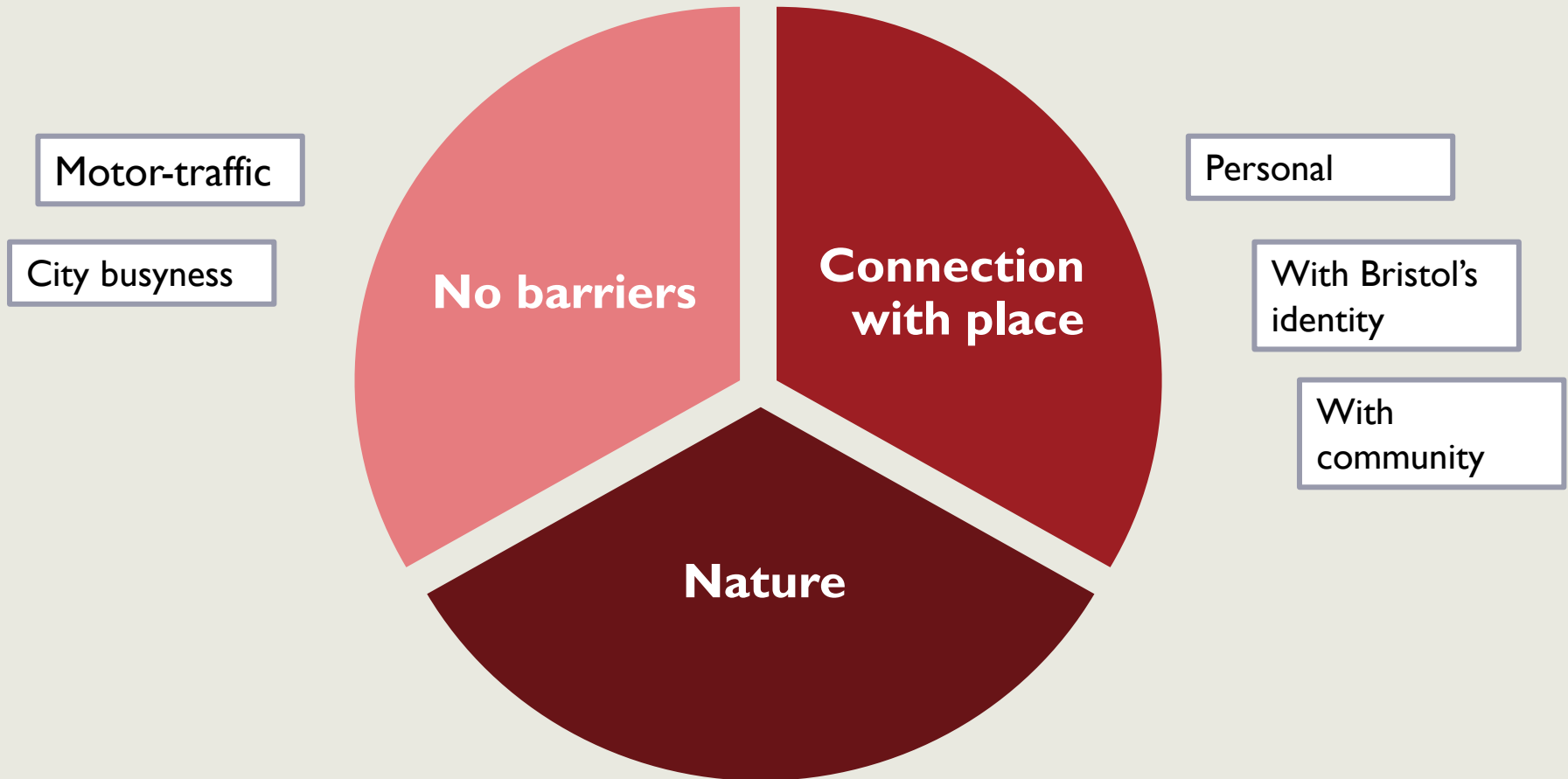
## Place-making and community events

- Busking, neighbourhood events:

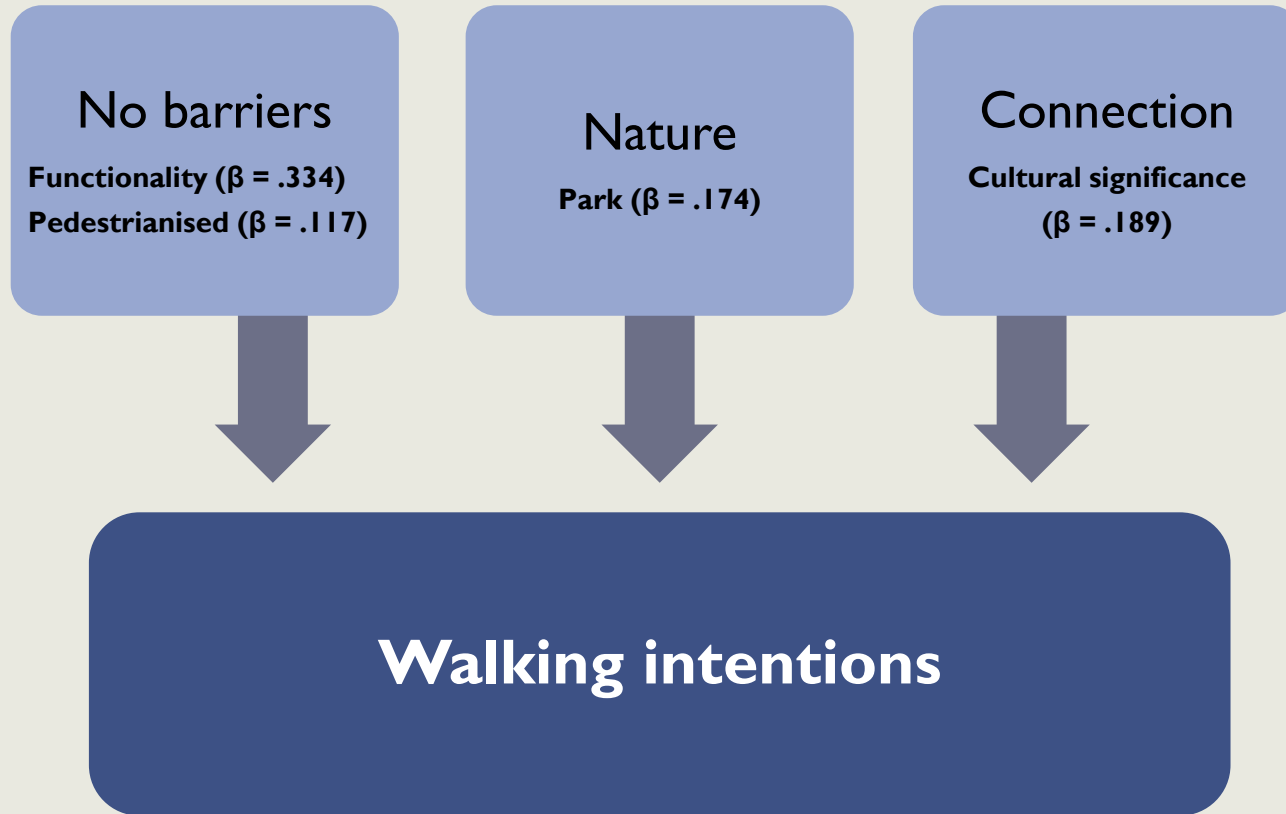
“The place itself is just a place to shop, it’s got no.. colour, it’s just shops, it’s like Milton Keynes... But people have started to do **busking**, or when the Grommits or Shaun the Sheep were there... god **it keeps the spirit!**” (Sarah, 34)



# THREE ELEMENTS MAKE A POSITIVE WALKING EXPERIENCE

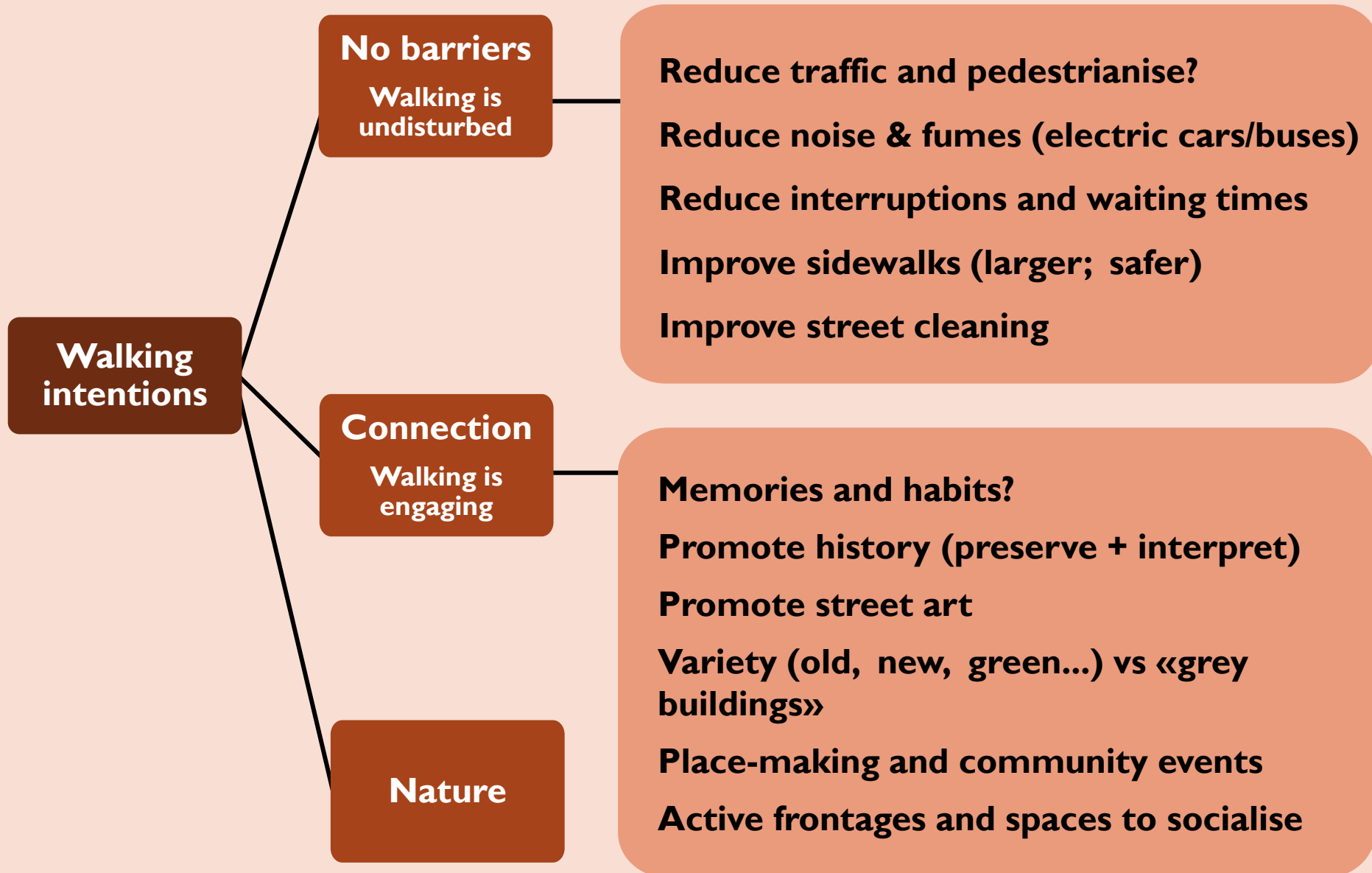


# WALKING EXPERIENCE PREDICTS WALKING INTENTIONS



**$N = 385, R^2 = .389$**

# POLICY IMPLICATIONS







**Thank you**



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