

# Contents of this slide pack

- The analysis presented in this slide pack is preliminary and has yet to be subjected to peer review.
- If you wish to use or cite any of the findings, please first contact [i.Philips@leeds.ac.uk](mailto:i.Philips@leeds.ac.uk) for the latest results and citation.
- Outputs will be regularly uploaded on to the project website <https://blogs.brighton.ac.uk/elevate/>



# What is an e-cargo bikeable trip?

Presentation for eceee Summer Study **10-15<sup>th</sup>** June 2024

*Panel 6. Energy-efficient and low-carbon mobility and transport*

Noel Cass,  
ITS, University of Leeds, UK

*“Would you recommend an eCargo bike to other people?”*

***Yeah, definitely, yeah.***

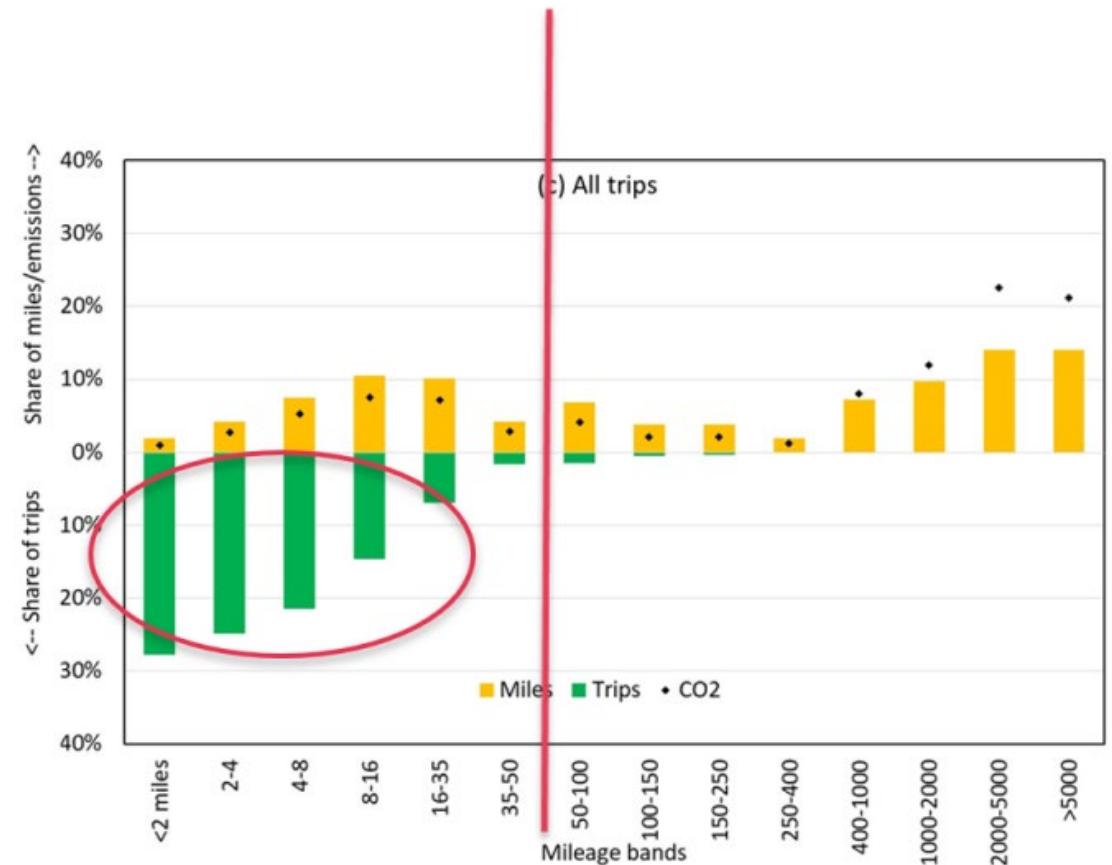
*For what kind of uses? What’s it good for?*

***Well, it’s good for everything really.”*** (B10)



# E-cargo bikes' theoretical potential for substituting car trips: Trip distances

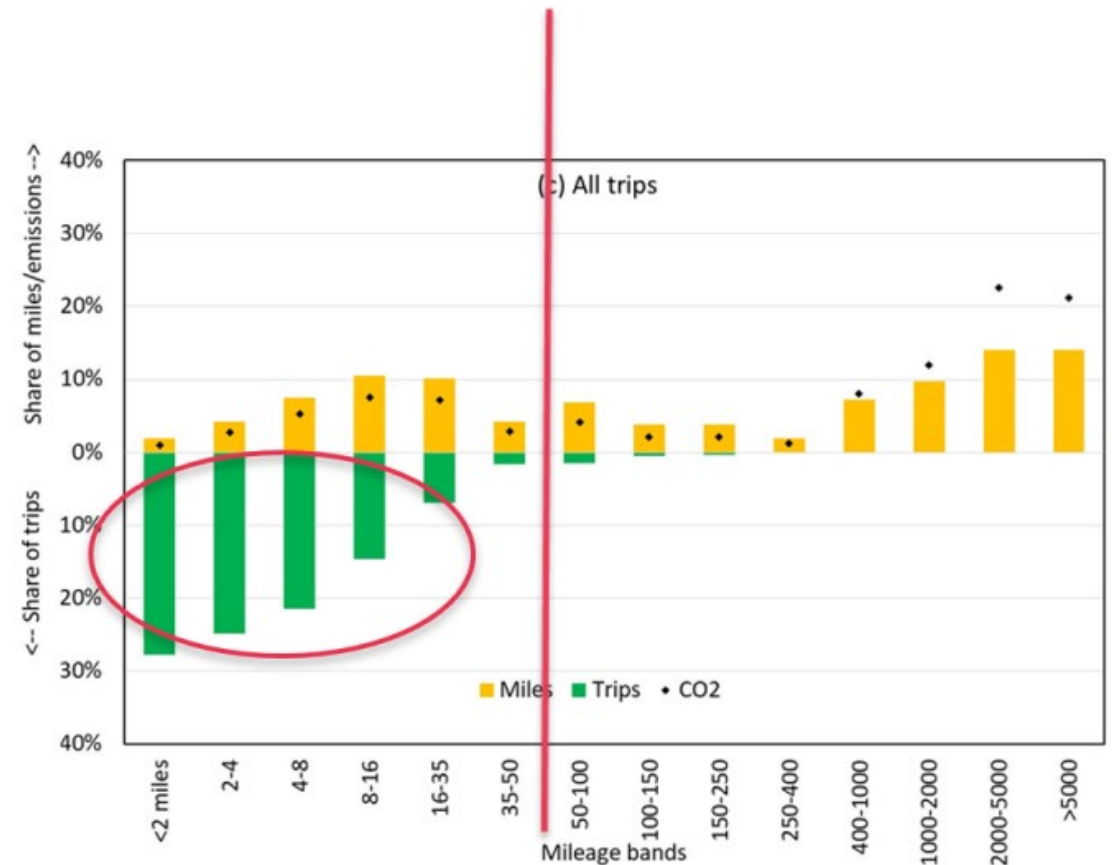
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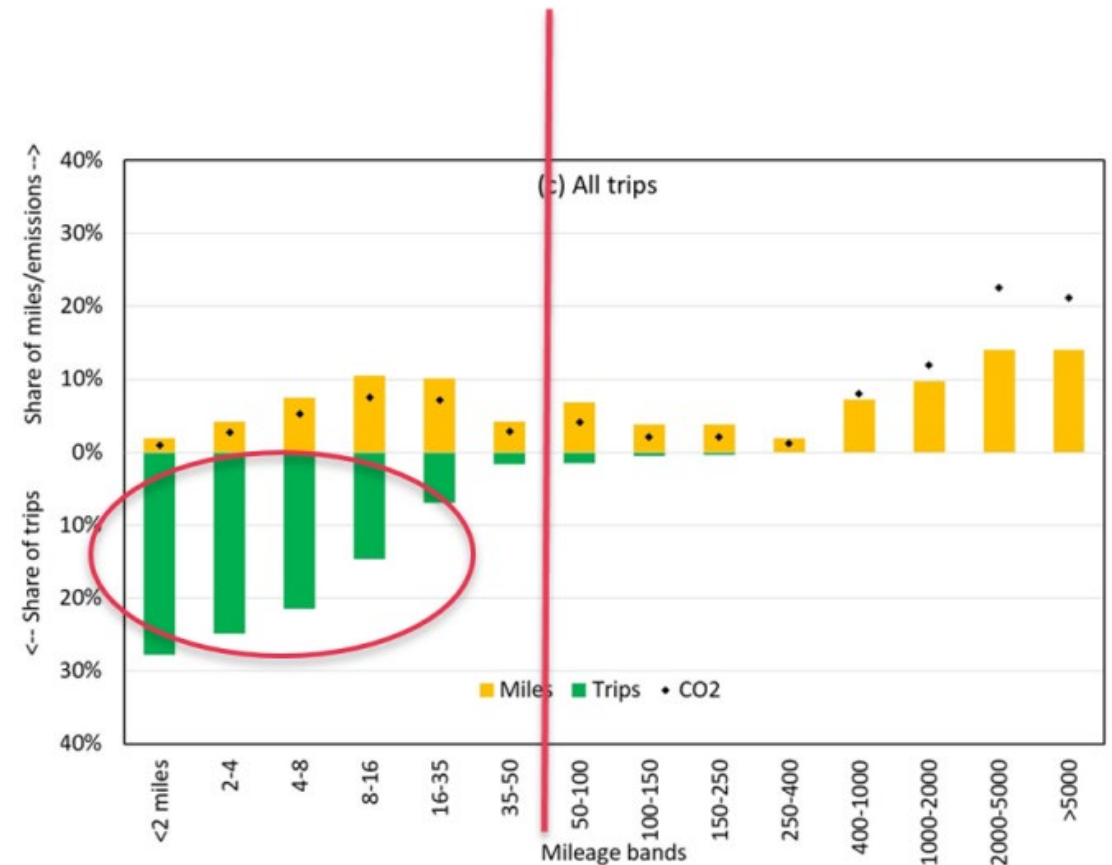


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~30% of all car trips are  $\leq 10$  miles/16km (DfT 2022)



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**Weather-proofing** – – because *“weather protection [was] identified as potential weakness of CBs (Dorner & Berger, 2020; Hess & Schubert, 2019) [...] more advanced (e.g., weather-protected) CBs could increase comfort”* (Bissel and Berger 2024: 221, 230)

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**Assistance** – multiple benefits – extend older use (Johnson and Rose 2015, Leger et al. 2019), especially in hilly areas (Behrendt et al. 2021), health/fitness?

# Particular suitability

M. Bissel and S. Becker

Transportation Research Part F: Psychology and Behaviour 101 (2024) 218–235

## Cargo bikes vs cars...?

Environmental benefits taken for granted

Affective advantage predicted

Instrumental high comparisons

Weather the exception

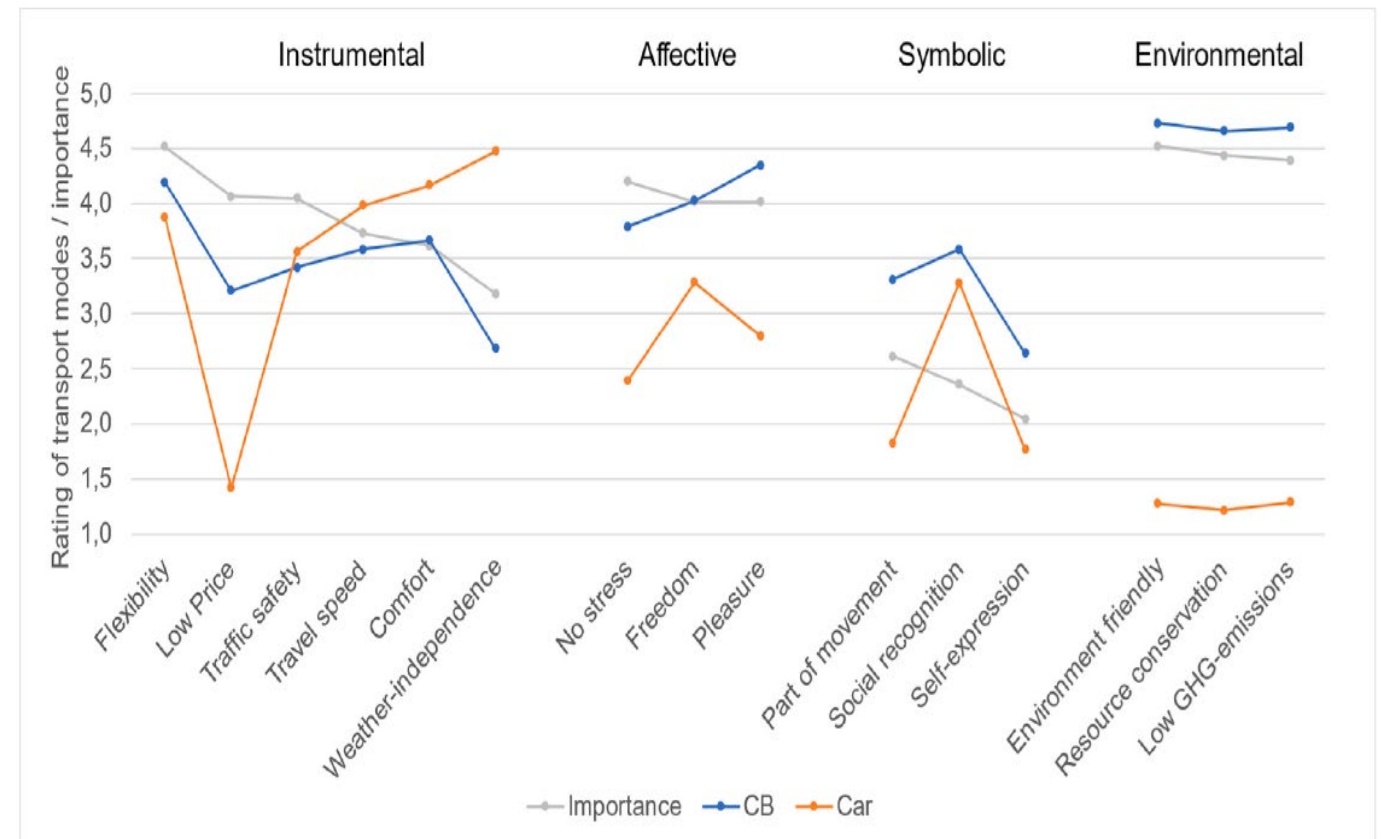


Fig. 4. Ratings of CBs and cars with regard to different motives.

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**Household** use - *“Although E-cargo cycles can be used for both private and commercial transport, the current literature concentrates more on the latter”* (Narayanan and Antoniou 2022: 279) *“More attention could be given to the emerging trend of e-cargo bikes which enhance the possibility to carry goods and children”* (Rérat et al. 2024: 10)

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**Longer** than e.g. daily hire **loans**: *“35% of the respondents [Becker and Rudolf 2018] conveyed that they are planning to buy a cargo cycle. Thus, cargo cycle sharing schemes can induce purchase of cargo cycles.”* (Narayanan and Antoniou 2022: 294)

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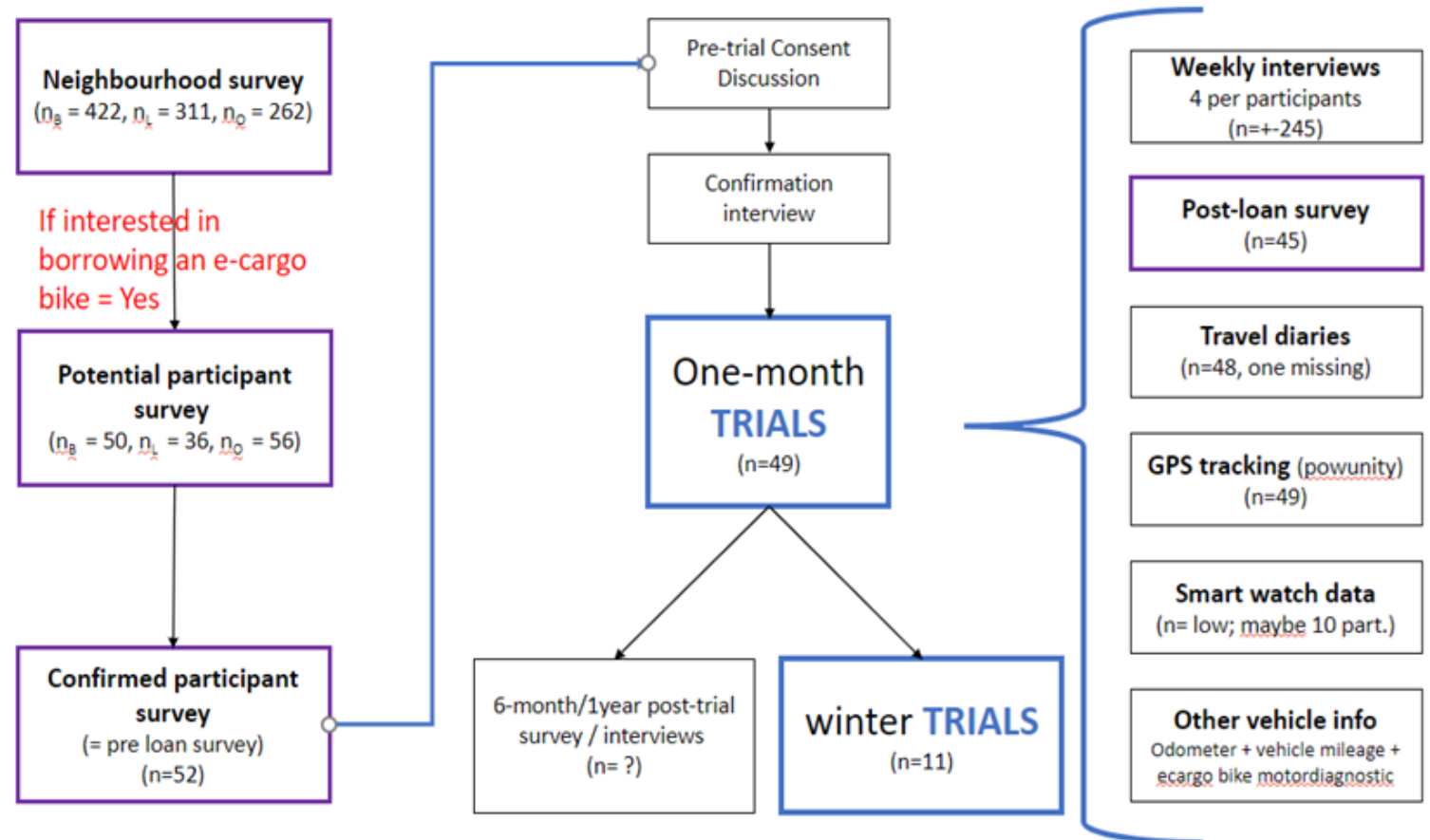
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**Empirical** trials – *“providing parents with children in kindergarten with access to e-bikes might result in increased and sustained cycling, also during the winter season”* (Bjørnara et al. 2019)

# The Elevate project and neighbourhood trials

Surveys tested awareness, use, attitudes and behaviour

Nationally representative, neighbourhoods, participants





# The Elevate project and neighbourhood trials

## Sample:

Keener than average cyclists

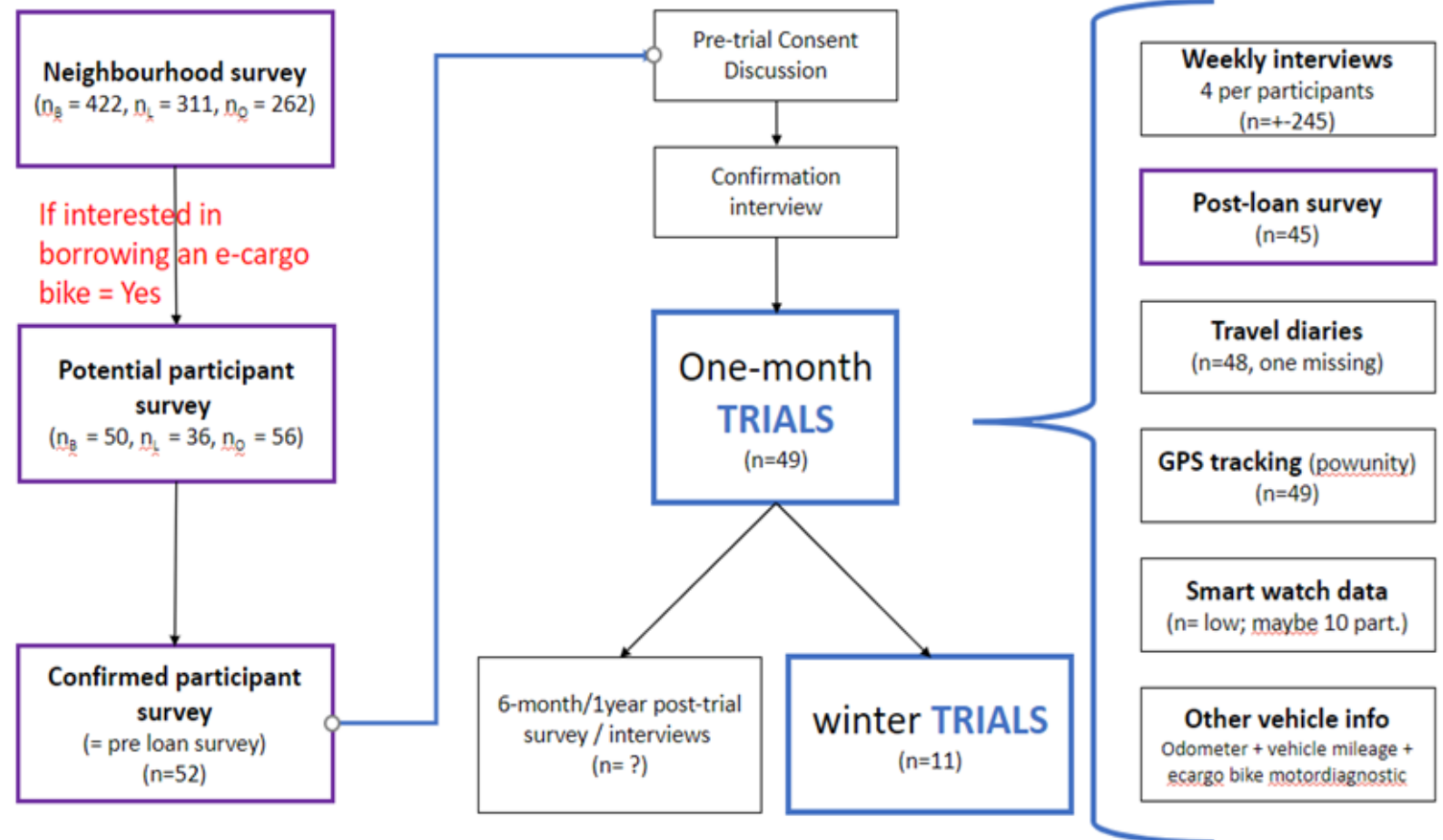
Who also drive more than average

More cycles AND cars than average

Wealthier than average - 64% sample (-44% neighbourhoods, ~30% nationally) HH income £50k+

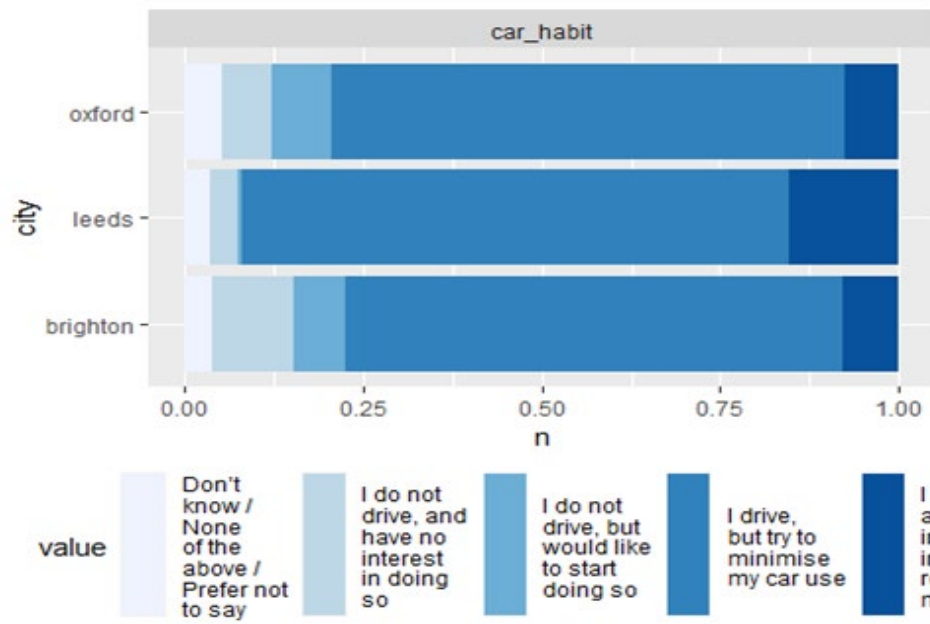
Middle aged with children

~2/3 with children under age 10

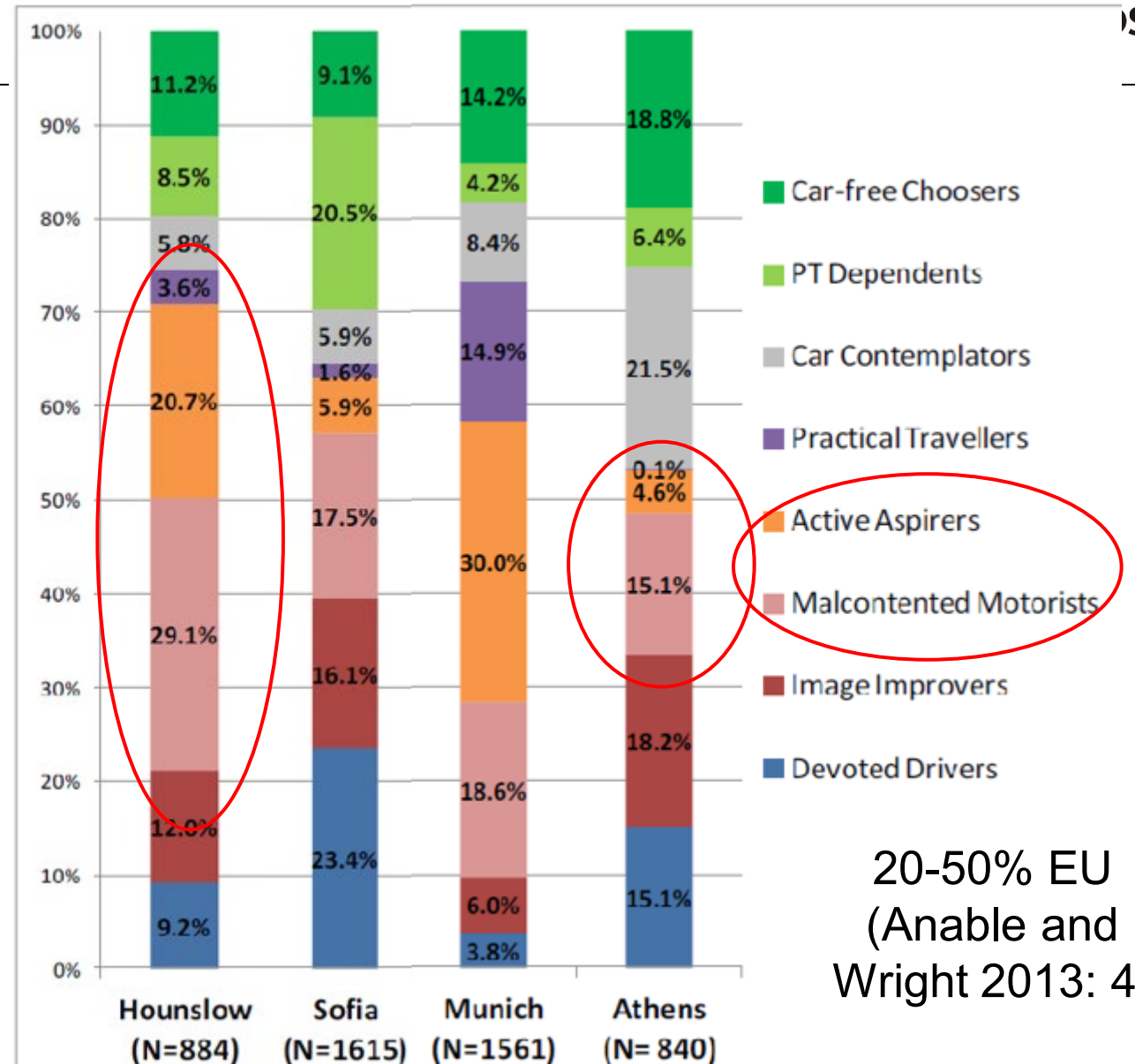


# The Elevate sample

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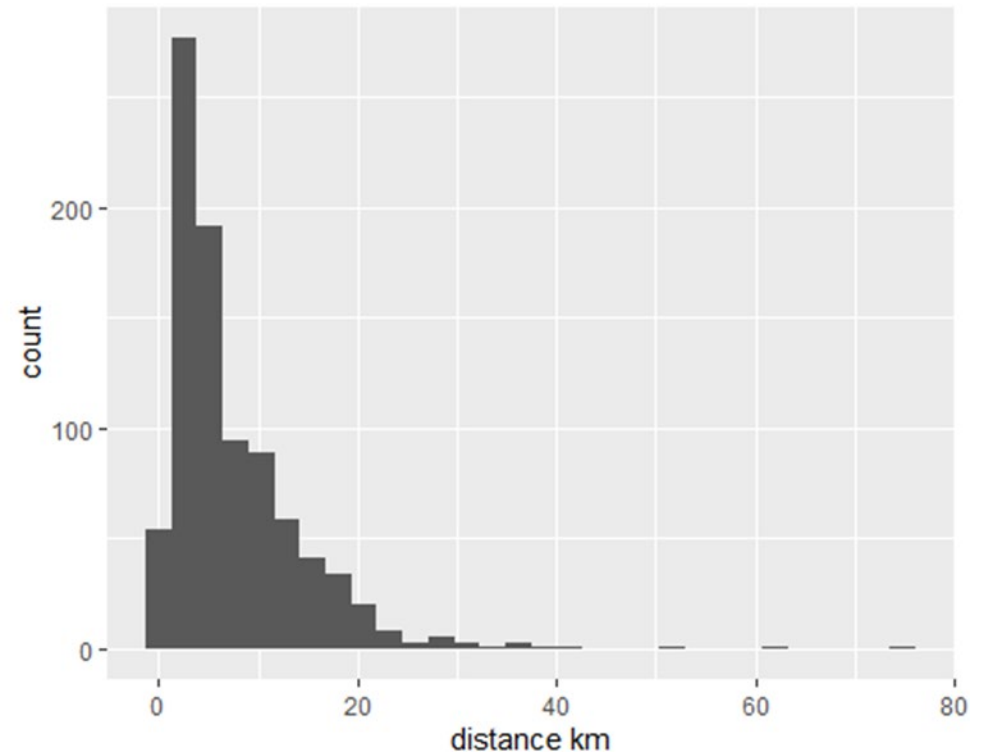
**“I drive but try to minimise my car use”  
70+%**



20-50% EU  
(Anable and Wright 2013: 4)

## Findings: Trip characteristics - averages

“With respect to the average distance travelled, Şengül and Mostofi [7] reported between 3 and 4.5 km for e-bikes.” (Teodoraşcu et al. 2024: 2)

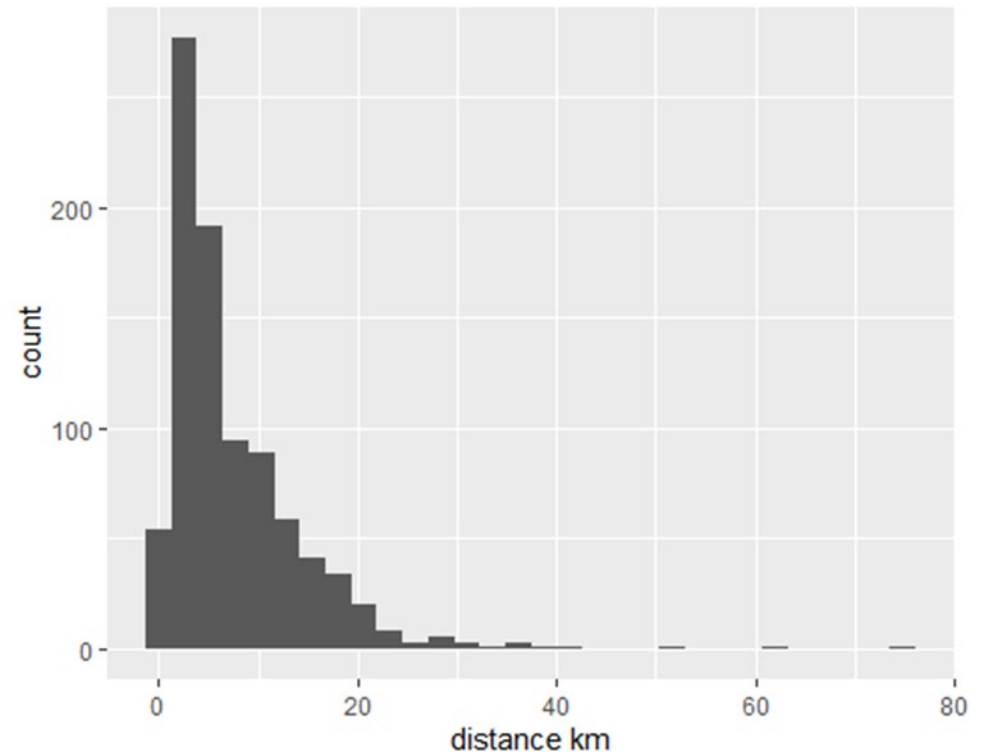


4-5km mode, 6km median, 8km mean

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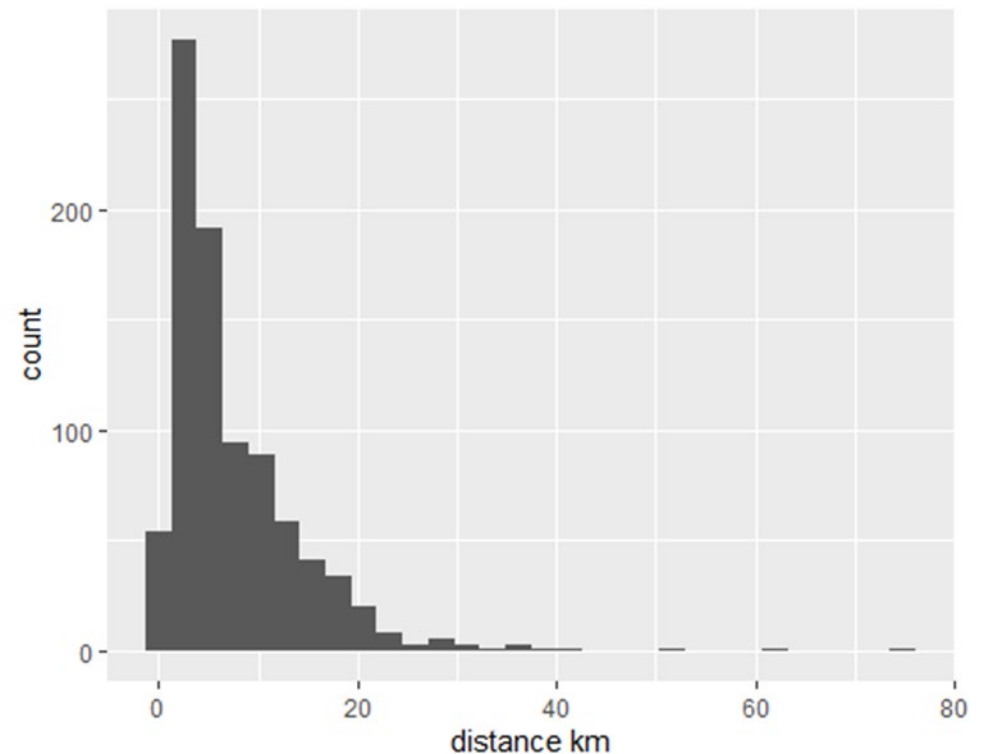
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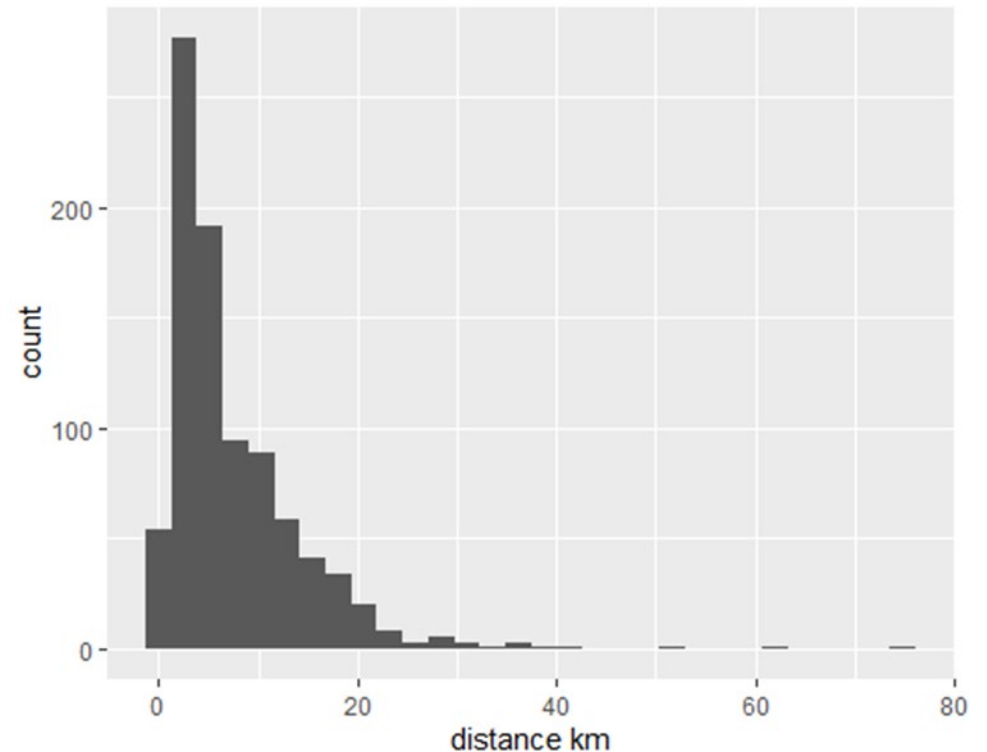
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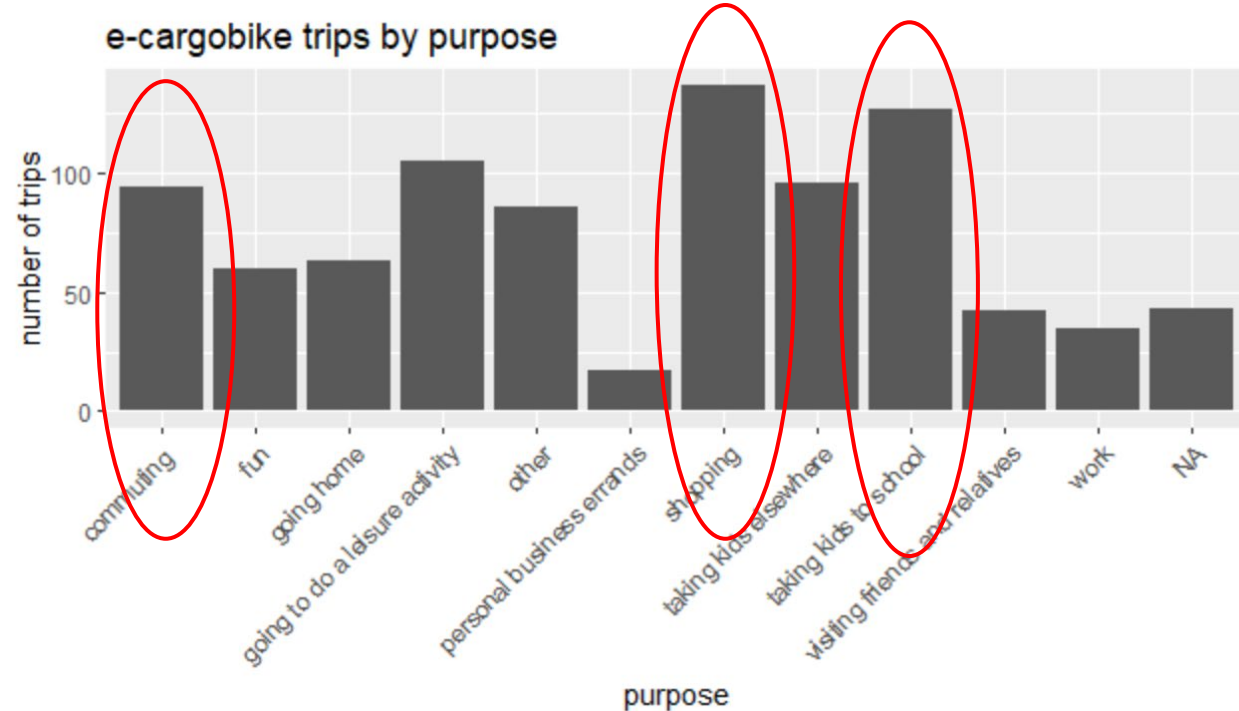
Max/ideal? “maybe 8 mile from Leeds because I go on the canal. That’s probably about the maximum” (L208)



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# Findings: Expectations and 'results'

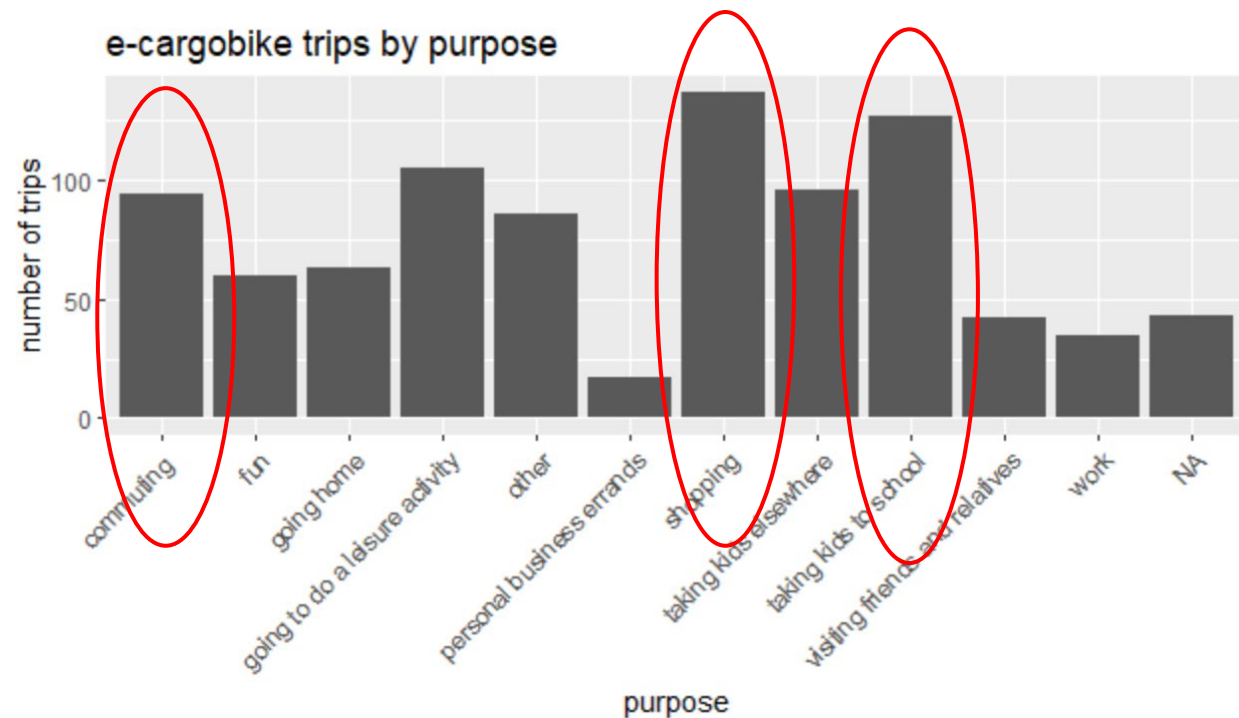
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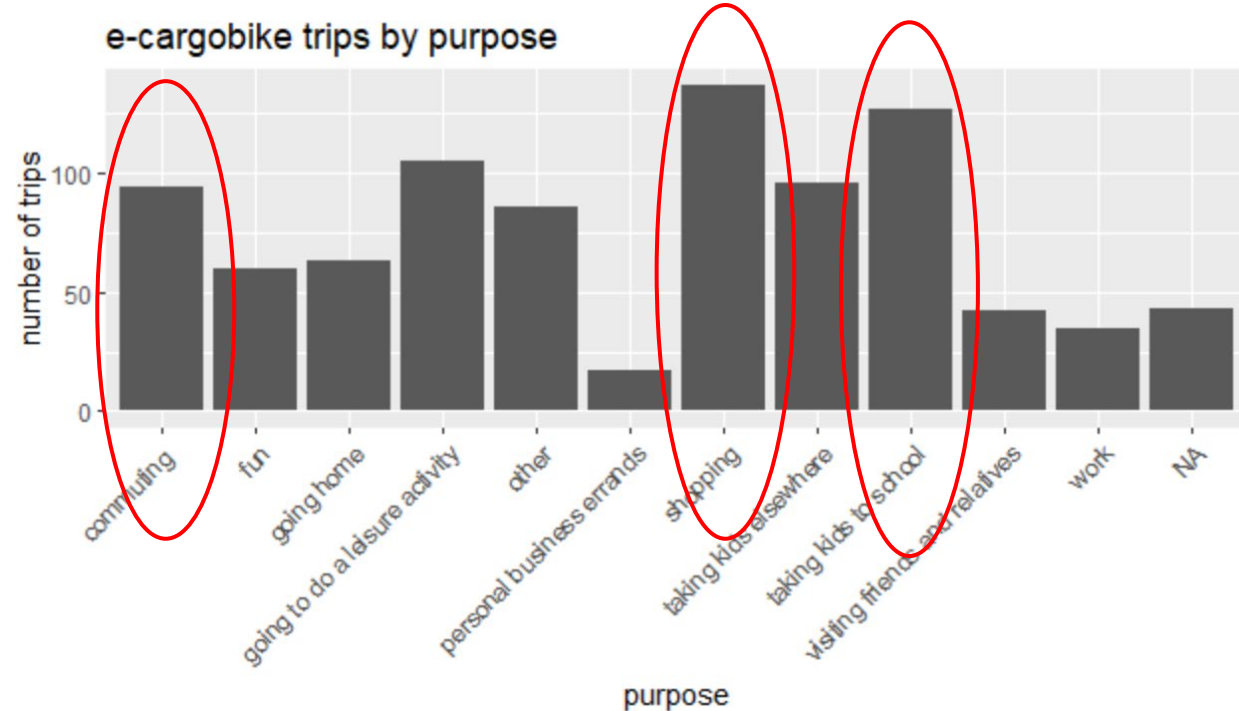


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Used less than expected for transporting smaller children (objected), too close destinations (faff – minimum!), large food shops (not enough space – but many did)



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**Range, or time?:** “I think a 20-minute ride with a child. 20 to 30 minutes. Which is most rides. Three or four miles, isn’t it?” (B172)

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**Second ‘car’:** “if for example my wife needs to go somewhere else, she can do it, with the car, and I can just rely on the Cargo [...] I can do everything with it, as if I had a second car basically. So playground, shopping, swimming, whatever, picking something up” (L329B)

## “Conclusions” - thoughts

**City-specific differences?** Usage varied as much within as between.

Typologies of **super-users**: second, non-car partner, especially with young (cycle-accustomed?) children, both types of ECB; women keeping up with partners; keen cyclists; newly car-free

**Lifestyle/Household-specific?** Yes, with clusters of e-cargo bikeable trips, i.e. routines of household practice coordination and scheduling.

**Practice** theory: Key competences of cycling, overlaps with positive/valued elements of cycling (health, fitness, eco, fun, transition time), and also driving (‘normal’ clothes for work, speed, hills, cargo, passengers)

**Policy**: Don’t look at averages, look at practices of potential user groups. Also – identifies the car-dependent practices (even for keen adopters and changers) – need to be targeted with policy sticks, or solutions found (especially e.g. car clubs)



# Thank you!

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Elevate blog:

<https://blogs.brighton.ac.uk/elevate/blog/>

