

# Why don't they go by trike? Image of and attitudes towards tricycles for (older) adults

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# Outline

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Aim

Method

Results

- Image of tricycles

- Expectations and experiences

Discussion

# Aim of the study

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Older cyclists: overrepresented in severe accidents and casualties

Age => higher physical vulnerability

=> Accident prevention more important for older cyclists

Single bike accidents

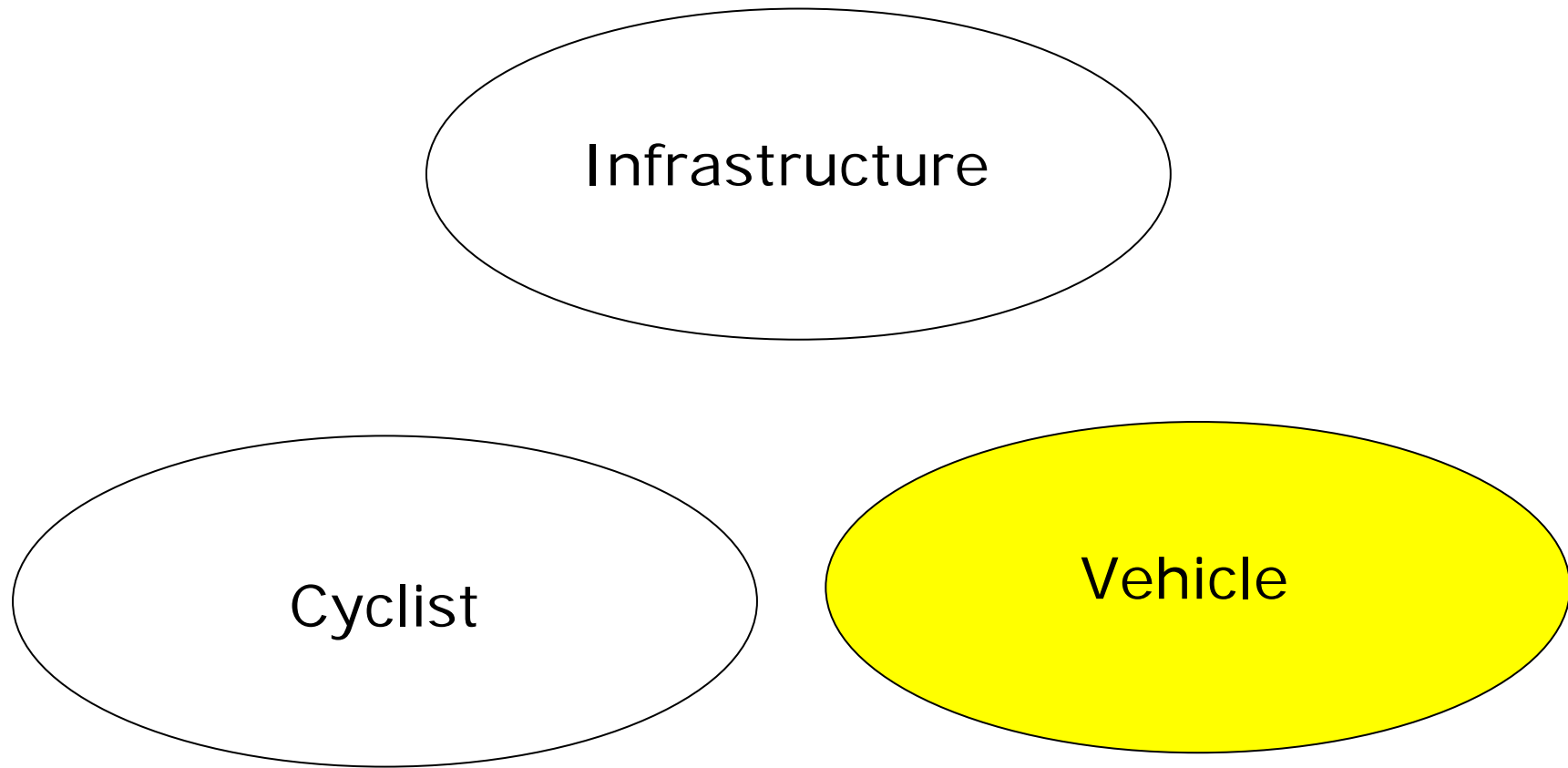
- Falling when getting on or off the bike
- Surface defects
- Edges
- ...

# Aim of the study

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Potential solutions to prevent single bike accidents



# Questions

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Why do older cyclists not go by trike?

What is the image of tricycles for (older) adults?

# Potential differences between bikes and trikes

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## Safety

- needs less balance => less prone to single bike crashes

## Disadvantages

- Width:
  - space in traffic
  - narrow paths, bollards, ...
- Weight:
  - parking at night
  - power to pedal it
- Rarely seen on roads:
  - attention
- Handling unknown
  - steer
  - get dirty clothes

# Method

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Online study, about 10 minutes

## Participants

- Adults
- Living in Germany

## Subsamples

- Persons with ordinary bicycles only (N = 754)
- Persons with an ordinary bicycle and a recumbent tricycle („experienced“) (N = 138) (45 velomobile owners excluded)

=> Allows to compare expectations and experiences

# Method

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	Ordinary bike only N = 754	Experienced: Ordinary bike plus recumbent trike N = 138
Proportion female	27%	7%
Driving licence	93%	96%
Car at disposal	68%	85%
Mean age	43 years	47 years
Maximum age	83 years	74 years
University degree	63%	64%
Cycles daily or almost daily	61%	62%



# Trikes compared with an „ordinary bike“

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# Method

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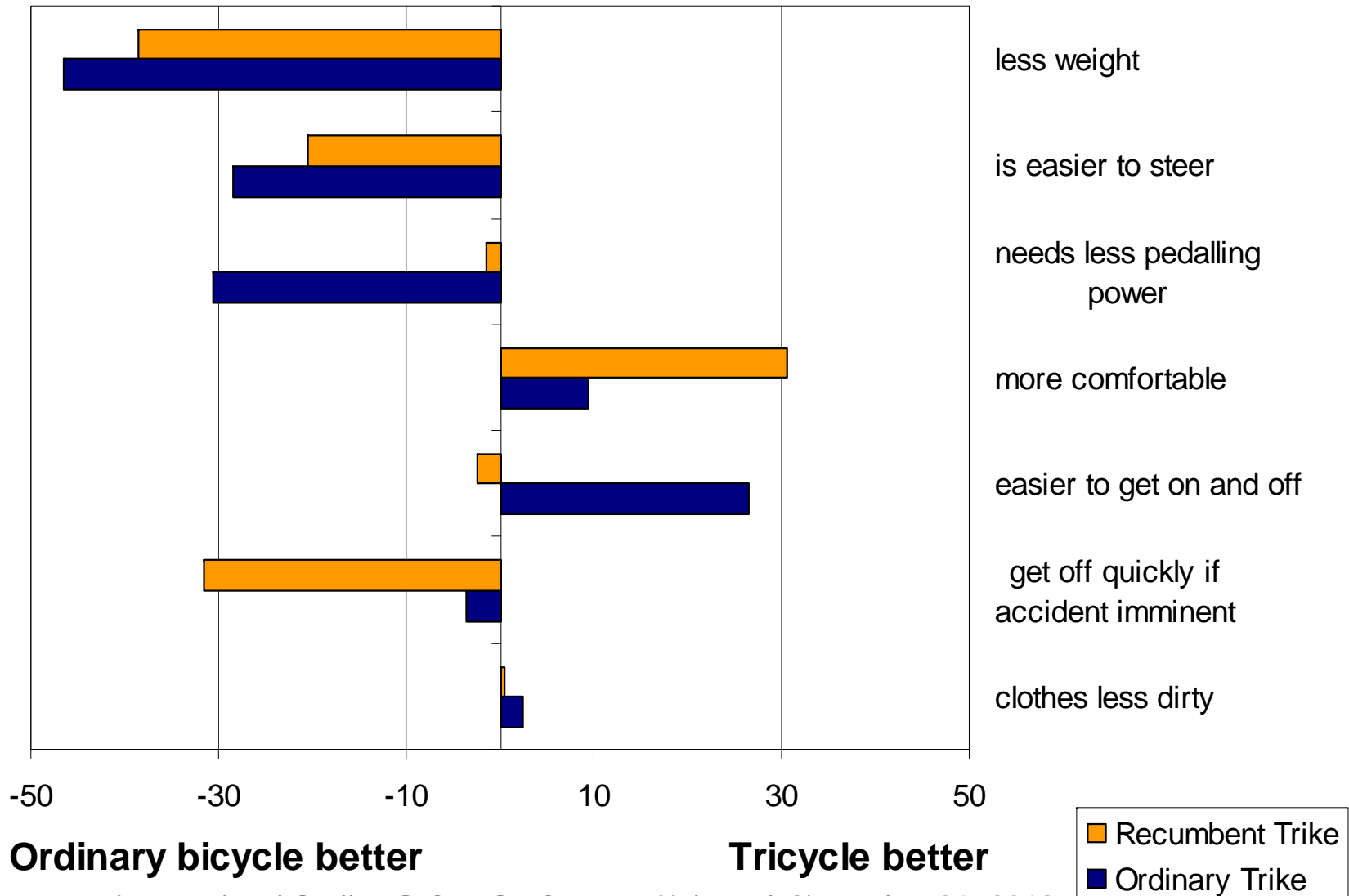
Comparison of bike and trike

Ordinary bike – Ordinary trike

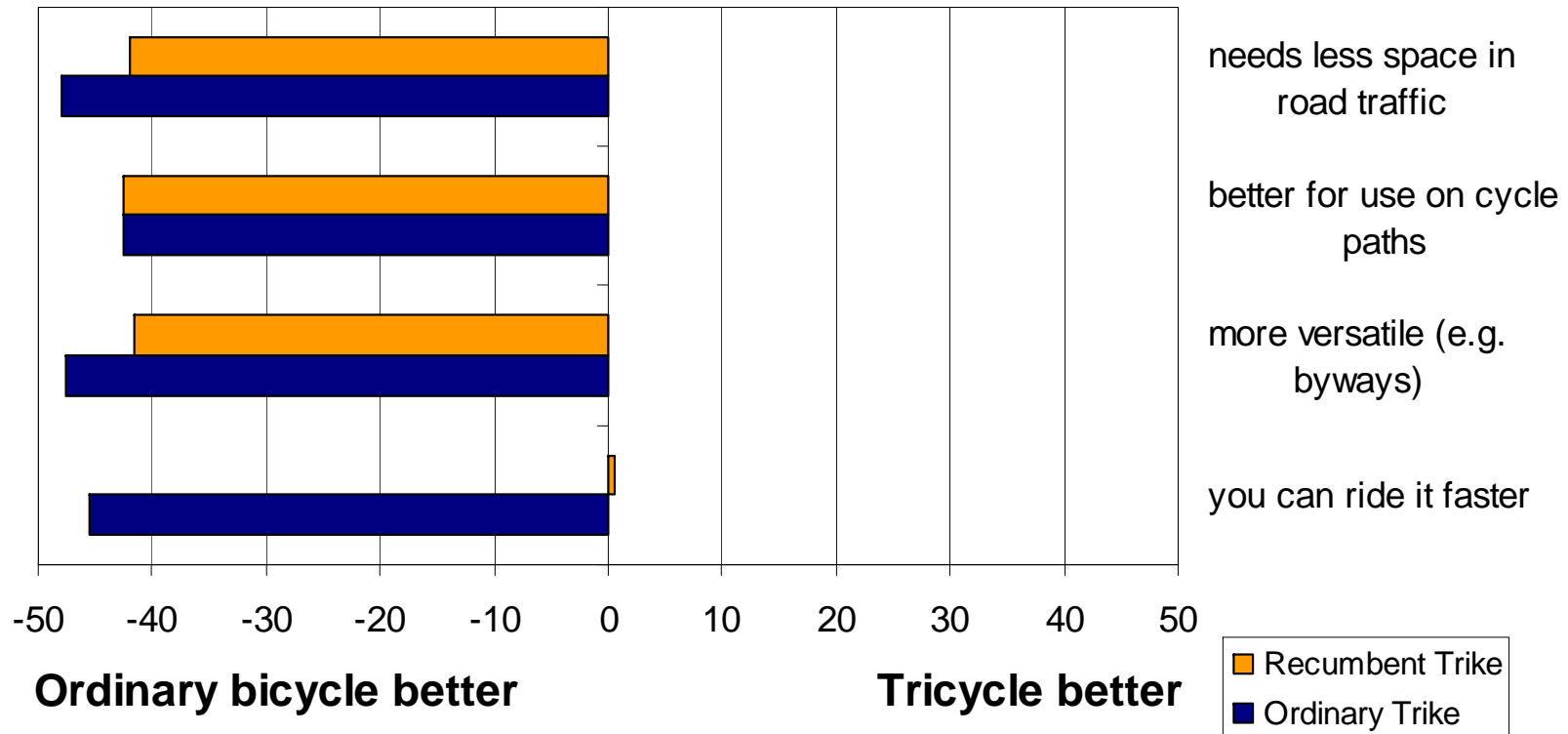
Ordinary bike – Recumbent trike

Sequence and sides in different order  
(4 versions of questionnaire)

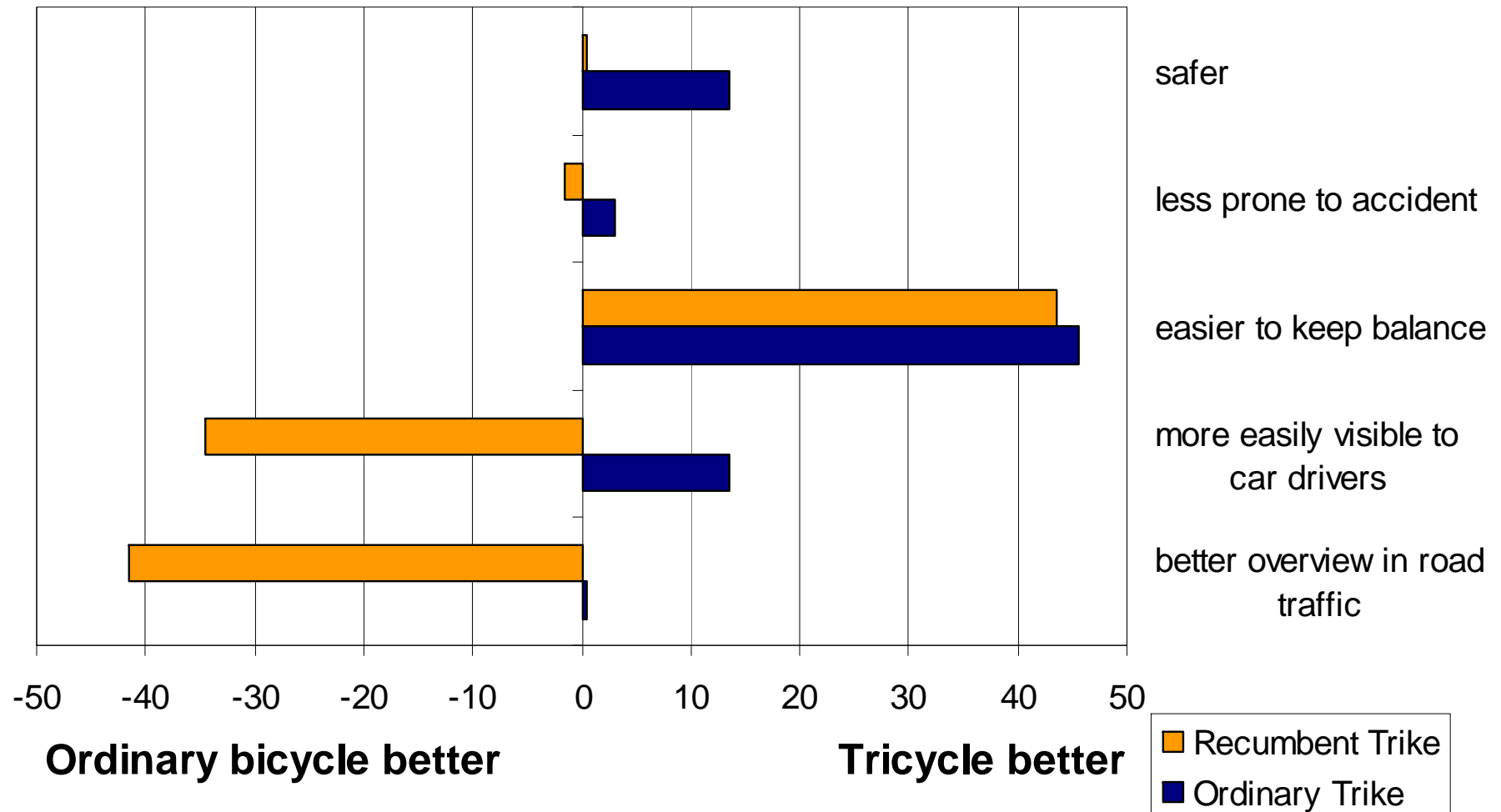
# Results: Comfort of bike and trikes



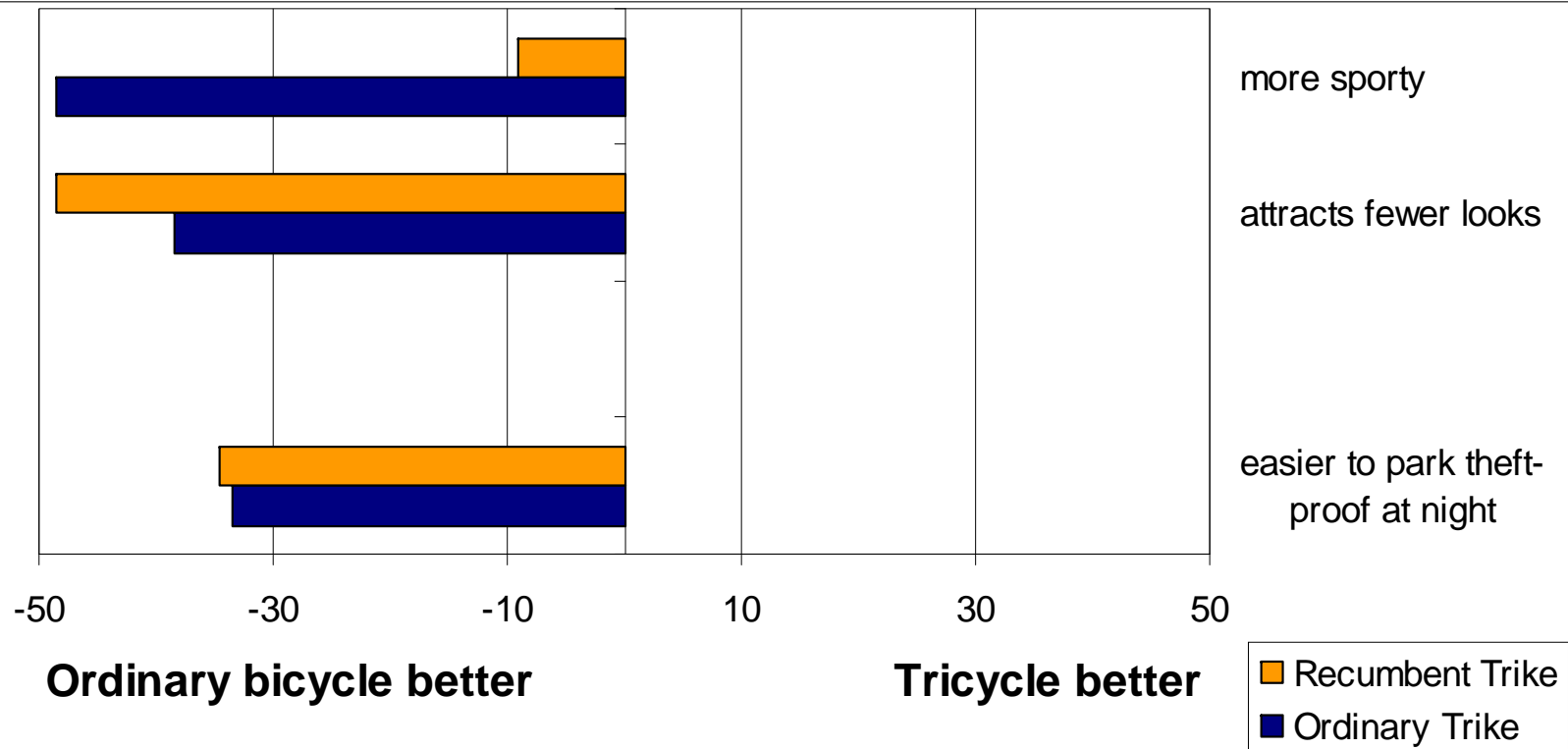
# Results: Road use of bike and trikes



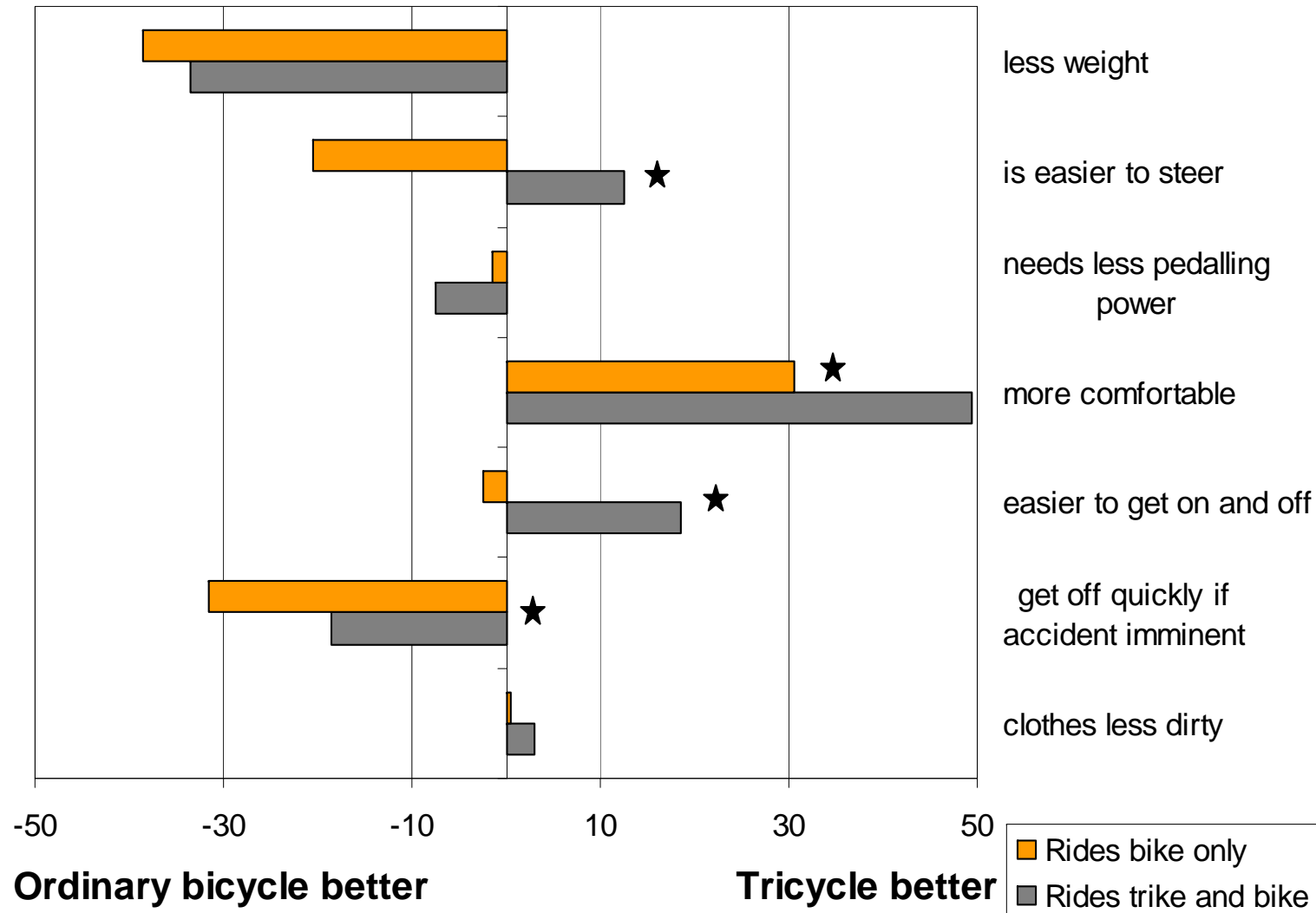
# Results: Safety of bike and trikes



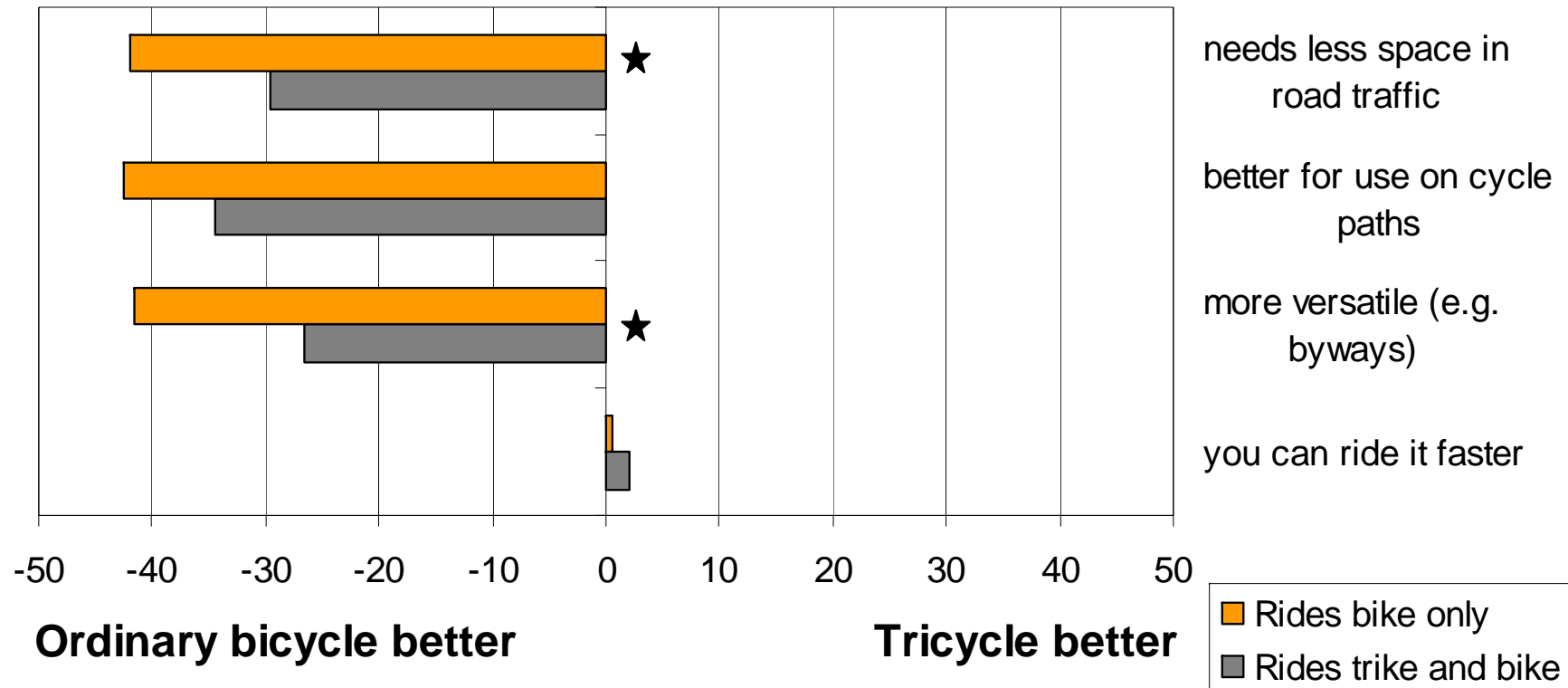
# Results: Image and parking of bike and trikes



# Results: Comfort of recumbent trikes: Expectations and Experiences

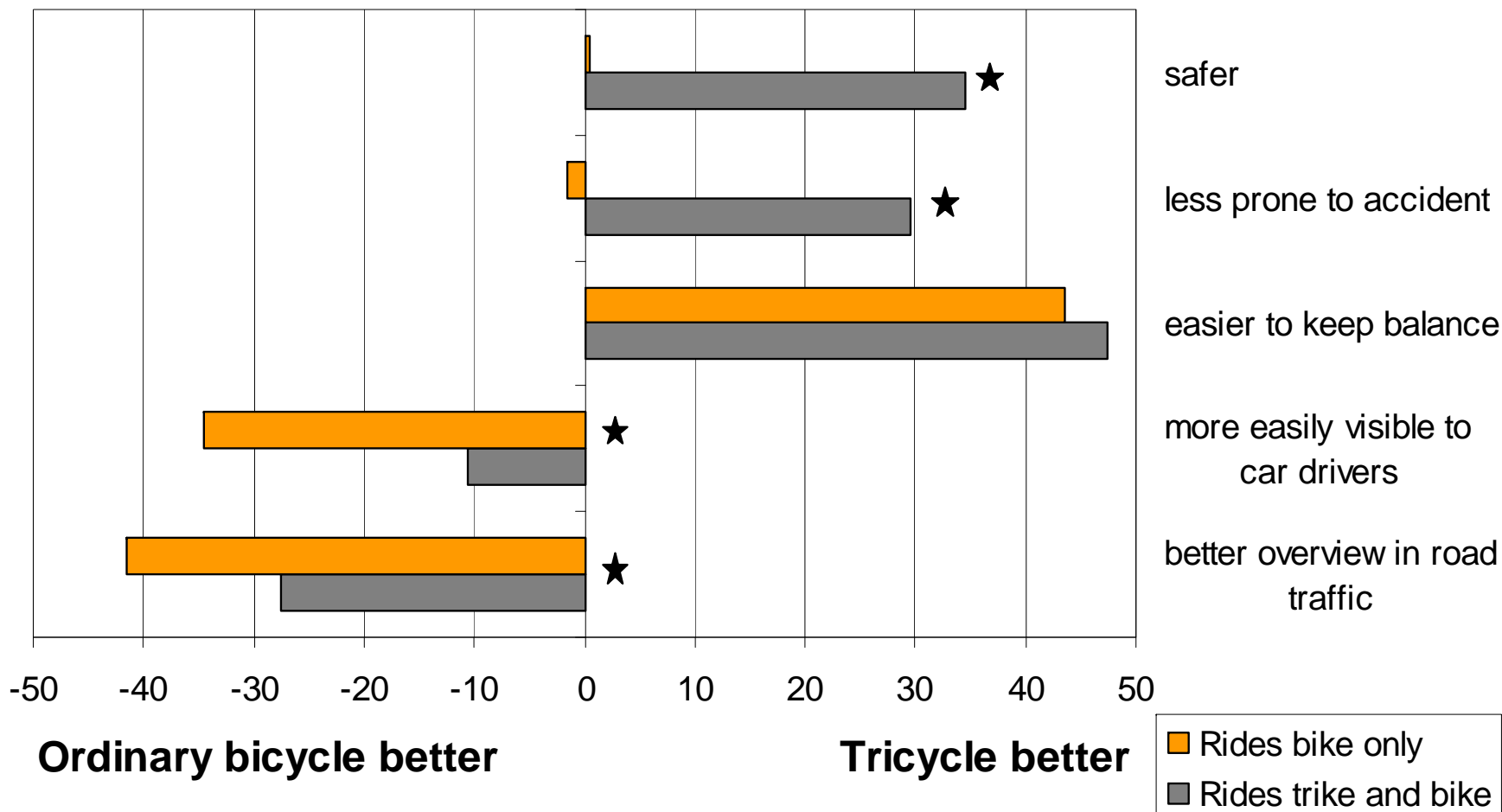


# Results: Road use of recumbent trikes: Expectations and Experiences

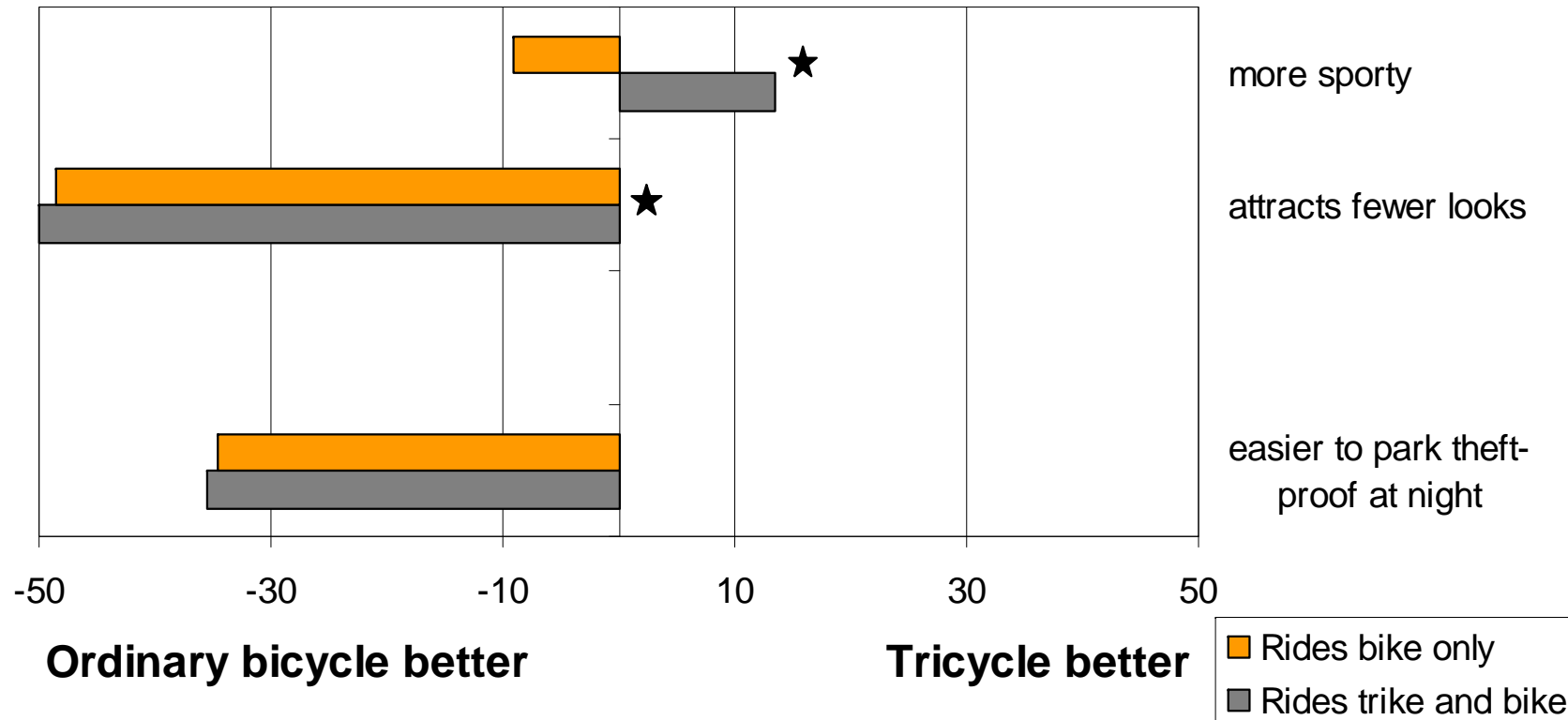




# Results: Safety of recumbent trikes: Expectations and Experiences



# Results: Image and night parking of recumbent trikes: Expectations and Experiences



## Results: Rank correlations with perceived safety

	Ordinary bike only		Experienced	
	safer	less prone to accident	safer	less prone to accident
age (years)	<b>.21*</b>	.11*	<b>.30*</b>	.11
gender (male=1, female=2)	-.05	.04	-.09	-.09
safer		<b>.55*</b>		<b>.68*</b>
less prone to accident	<b>.55*</b>		<b>.68*</b>	
easier to steer	<b>.29*</b>	<b>.29*</b>	<b>.48*</b>	<b>.41*</b>
more comfortable	<b>.21*</b>	<b>.14*</b>	<b>.46*</b>	.27
easier to get on and off	<b>.23*</b>	<b>.26*</b>	<b>.32*</b>	.18
get off quickly if accident imminent	<b>.26*</b>	<b>.21*</b>	.28	.12
clothes less dirty	<b>.14*</b>	<b>.17*</b>	<b>.46*</b>	<b>.36*</b>
less space in road traffic	.09	.11	-.06	-.13
better for use on cycle paths	.08	.09*	-.02	-.01
more versatile (e.g. bypaths)	<b>.14*</b>	<b>.14*</b>	.19	.17
easier to keep balance	.06	.02	.26	.08
more easily visible to car drivers	<b>.29*</b>	<b>.31*</b>	<b>.40*</b>	<b>.34*</b>
better overview in road traffic	<b>.23*</b>	<b>.27*</b>	.18	.12

Significance level:  $p \leq .001$

# Discussion

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Persons who ride a recumbent trike

- more positive attitude towards recumbent trikes
- except „attracts looks“

Image of trikes for bicycle riders:

- many disadvantages
  - no safety advantage
- = > No reason to ride a trike

Necessary:

Infrastructure for tricycles

Parking facilities

More information

Options to try a trike

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Why do older cyclists not go by trike?

Why should they?

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Thank you for your attention

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