How does cycling culture influence cycling in cities?

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Cycling culture? Or individual characteristics?







Does neighborhood culture actually drive individual cycling behavior, or is the decision largely dictated by personal attributes, among teenagers?

Quantitative two-step approach:

- SEM 1: Neighborhood cycling culture -> cycling frequency
- SEM 2: Neighborhood cycling culture and individual characteristics -> cycling frequency

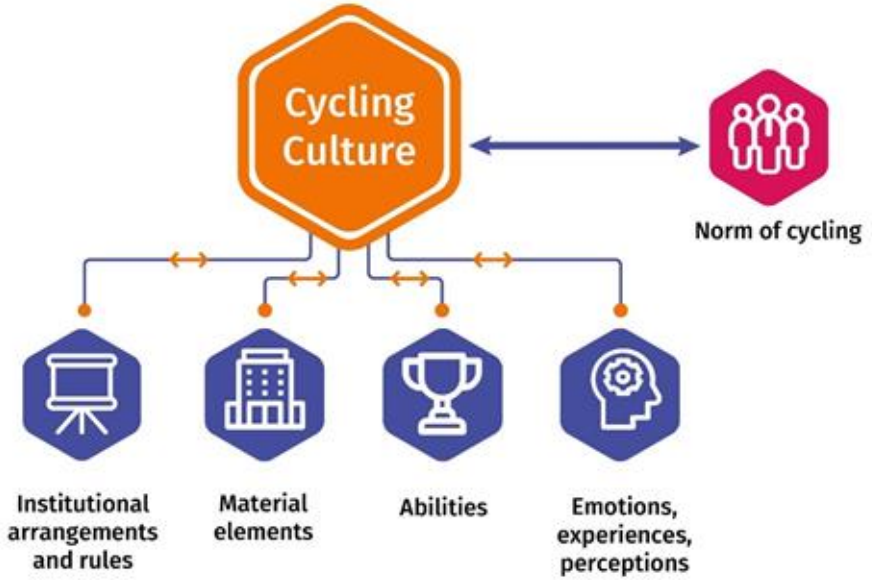
Problem: What is cycling/mobility culture?

- Stolze et al., 2025: no universal definition
- Own literature review with systematic search strategy

OUR DEFINITION OF CYCLING CULTURE

Published in Transport Reviews (2025)

The *dynamic interconnection* of material elements, institutional arrangements and rules, abilities, and emotions, experiences and perceptions related to cycling, which gives rise to a norm of cycling which *in turn* shapes cycling culture



TRANSPORT REVIEWS
https://doi.org/10.1080/01441647.2026.2720432
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Taylor & Francis Group
Check for updates

Cultural characteristics of high-cycling cities: A narrative review with a systematic search strategy

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ABSTRACT
Cycling is widely recognised for its positive health and environmental impacts. Its regular use is common in some cities,

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Questionnaire construction



Sur une piste cyclable séparée et lisse, à vélo je suis... *

Veuillez sélectionner une réponse ci-dessous.
Veuillez sélectionner une seule des propositions suivantes :

- Pas du tout compétent
- Peu compétent
- Assez compétent
- Compétent
- Très compétent



ABILITIES

CSI - 4 pictures
Ind: What's your cycling competence on a lane?»
Cult: Who can cycle in your neighborhood? »

EMOTIONS

Ind: « To which extent do are you happy when you cycle? »
Cult: « To which extent do other young people in your neighborhood are happy when they cycle? »

INFRASTRUCTURE

Ind: access to a cycle
Cult - NEWS-Y
« To which extent do you agree there are cycle lanes in nearly all the streets in your neighborhood?»

INSTITUTIONS RULES

Not asked (teenagers)

NORM OF CYCLING

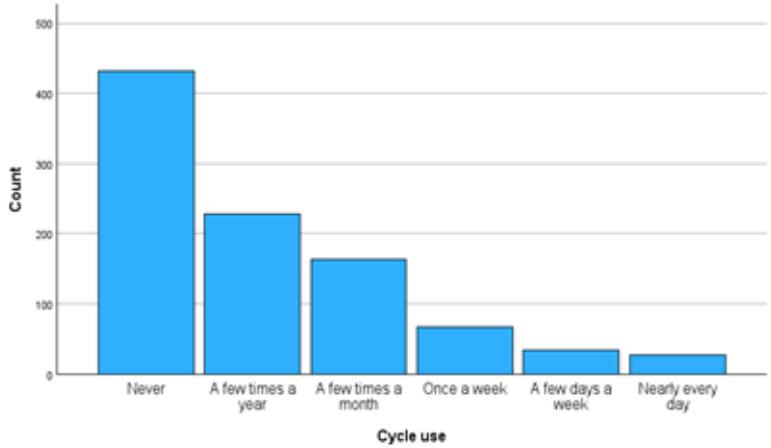
Who can cycle in your neighborhood? » (almost no young people -> almost all young people)

CFA to confirm factors

Sample

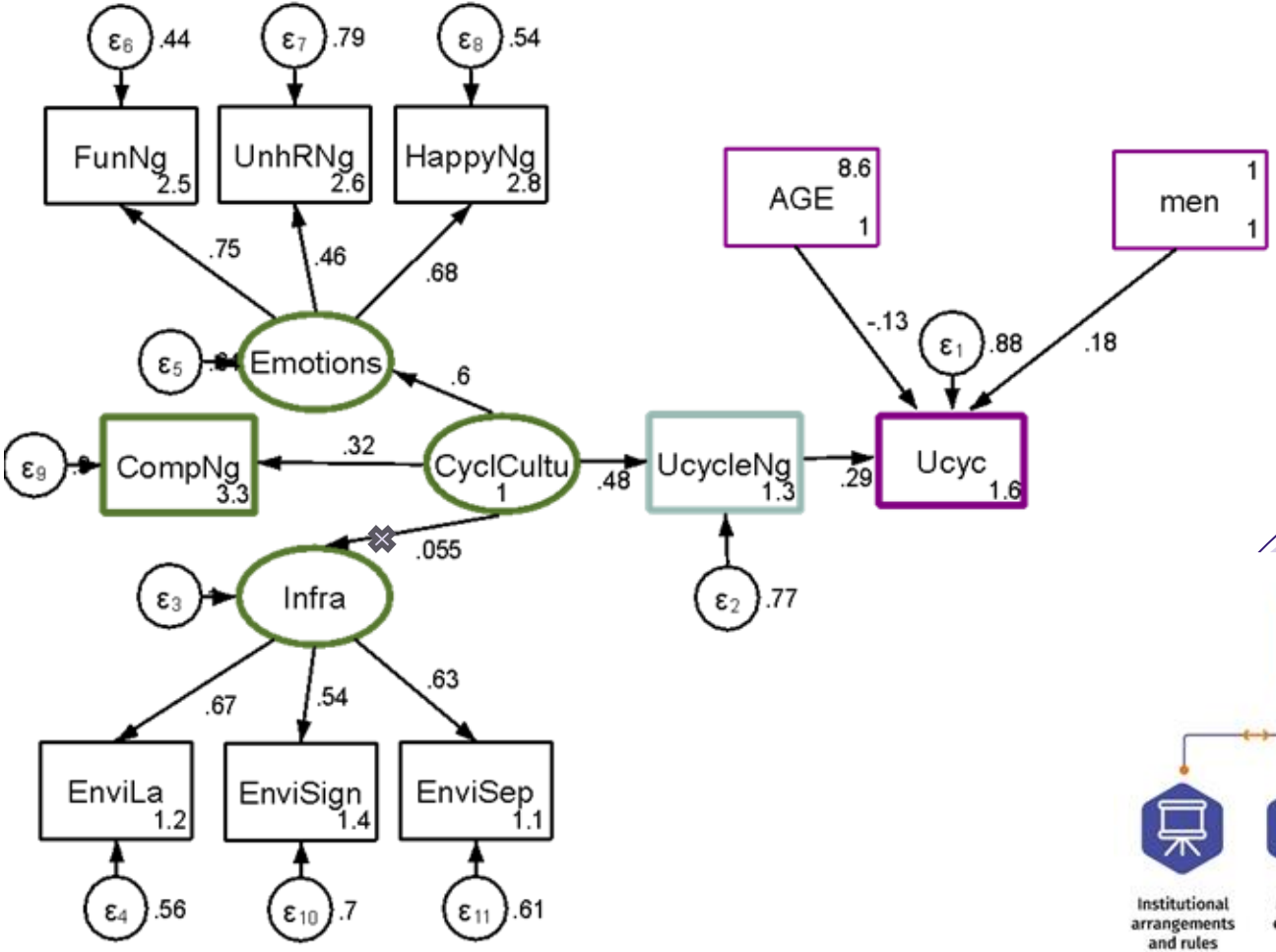
- 952 Respondents (54%F, 46%M)
  - March – June 2025
- Pupils in secondary school (≈ 12-18 y.o.)
  - Brussels and Wallonia
- 31% uses a cycle a few times a month or more
  - only 14 % once a week or more (car use once a week: 65%)



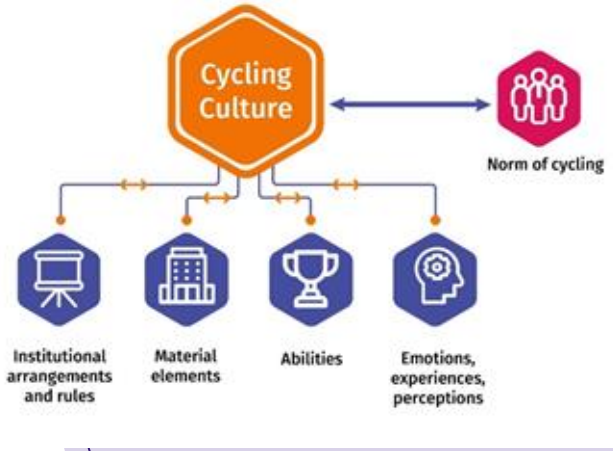


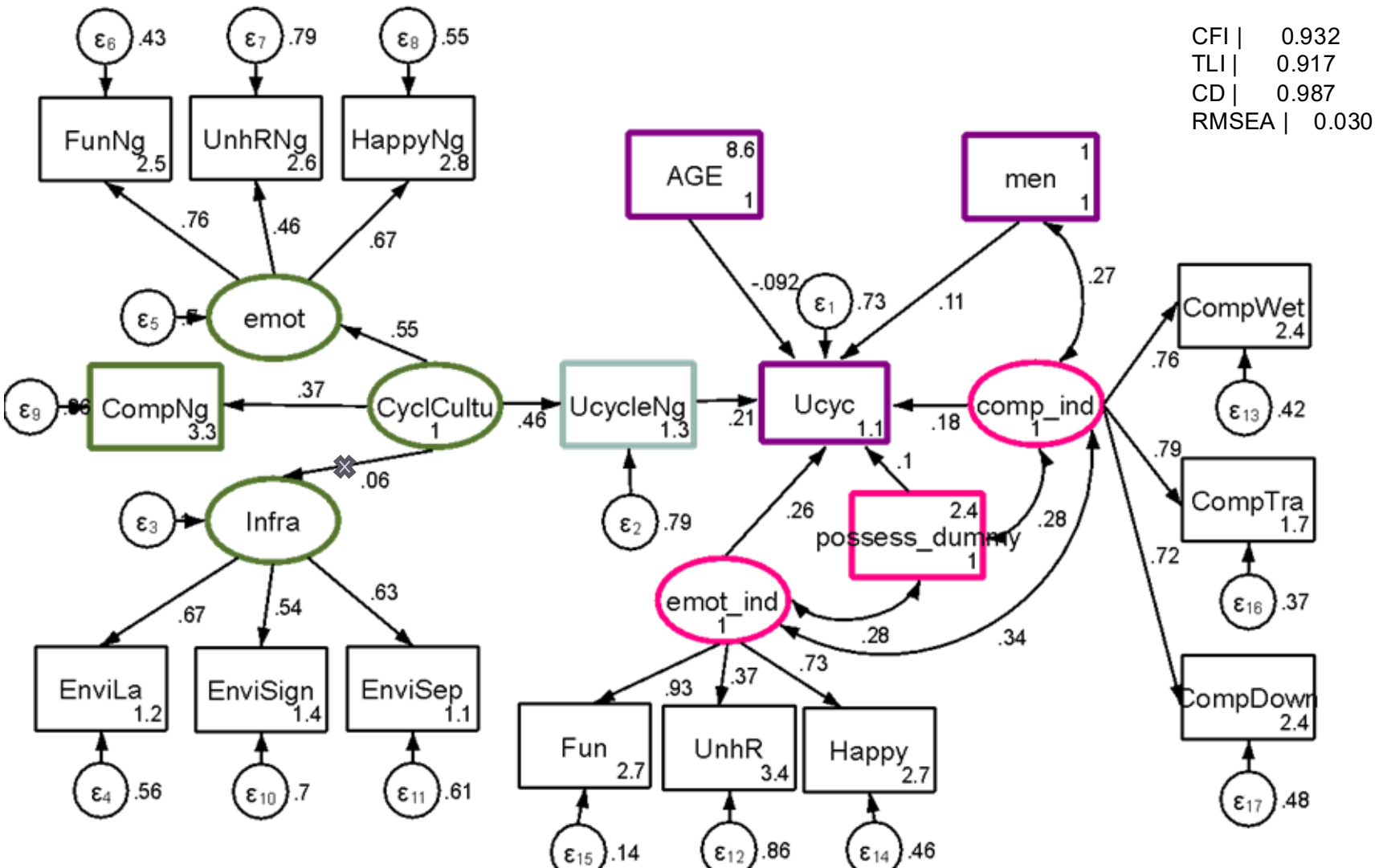
Cycle use

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	433	23,0	45,4	45,4
	A few times a year	228	12,1	23,9	69,4
	A few times a month	163	8,7	17,1	86,5
	Once a week	68	3,6	7,1	93,6
	A few days a week	34	1,8	3,6	97,2
	Nearly every day	27	1,4	2,8	100,0
	Total	952	50,6	100,0	
Missing	System	932	49,4		
Total		1884	100,0		



CFI | 0.952
TLI | 0.937
RMSEA | 0.026
CD | 0.515




CFI | 0.932
TLI | 0.917
CD | 0.987
RMSEA | 0.030
ε6 .43
ε7 .79
ε8 .55
FunNg 2.5
UnhRNg 2.6
HappyNg 2.8
.76
.46
.67
ε5
emot
.55
ε9
CompNg 3.3
.37
CyclCultu 1
.46
.06
ε3
Infra
.67
.54
.63
EnviLa 1.2
EnviSign 1.4
EnviSep 1.1
ε4 .56
ε10 .7
ε11 .61
AGE 8.6 1
men 1 1
-.092
ε1 .73
.11
.27
UcycleNg 1.3
Ucyc 1.1
.21
.18
comp_ind 1
ε2 .79
.1
.26
possess_dummy 2.4 1
.28
emot_ind 1
.28
.34
.73
.93
.37
Fun 2.7
UnhR 3.4
Happy 2.7
ε15 .14
ε12 .86
ε14 .46
CompWet 2.4
.76
ε13 .42
.79
CompTra 1.7
.72
ε16 .37
CompDown 2.4
ε17 .48

CONCLUSION

High cycling frequency **is a combination of both individual-level factors and cultural factors**

Infrastructure is not the central trigger, **social elements (emotions, abilities) are**



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