Cycling route experiences and changed behavior?

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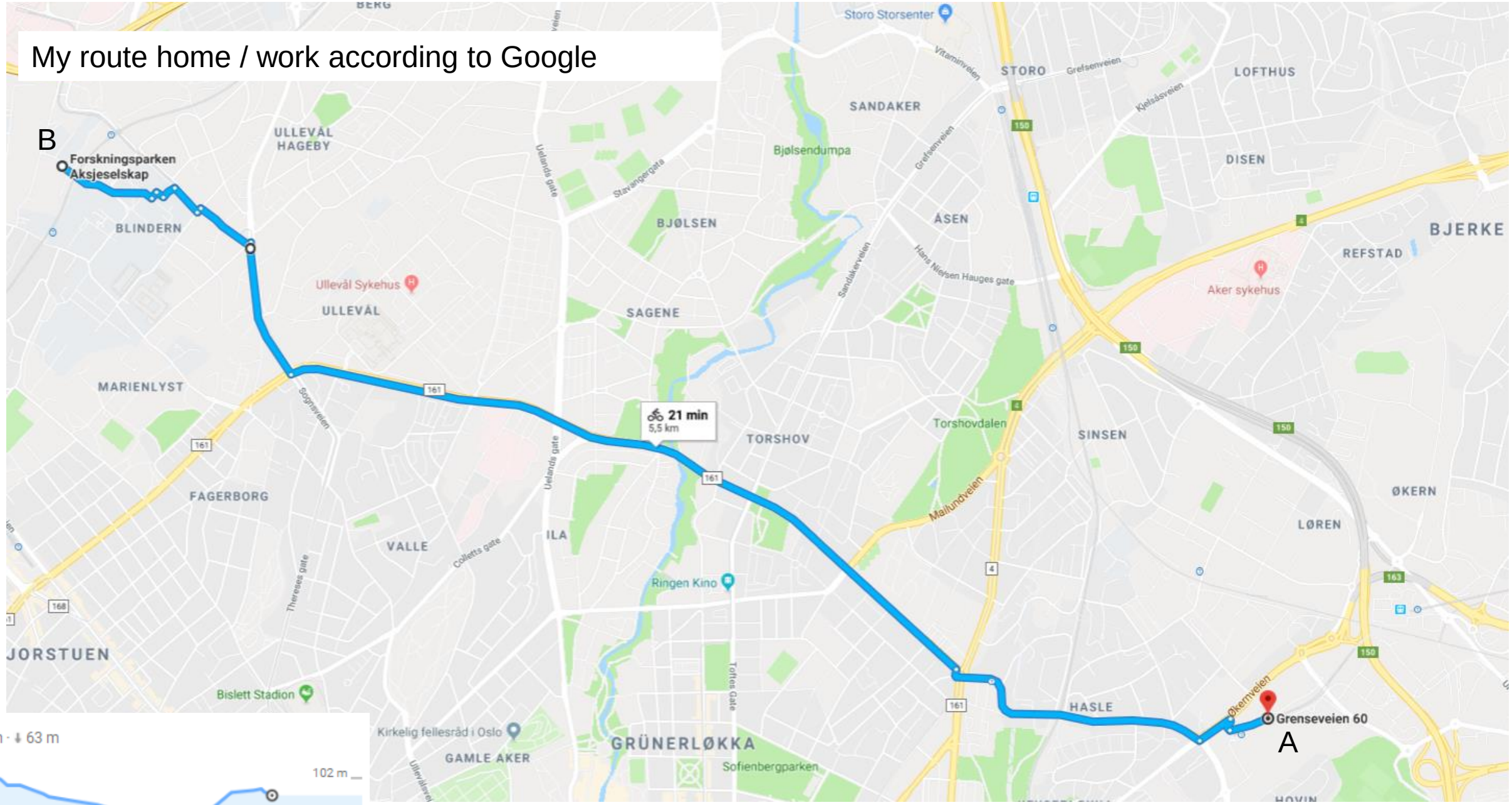
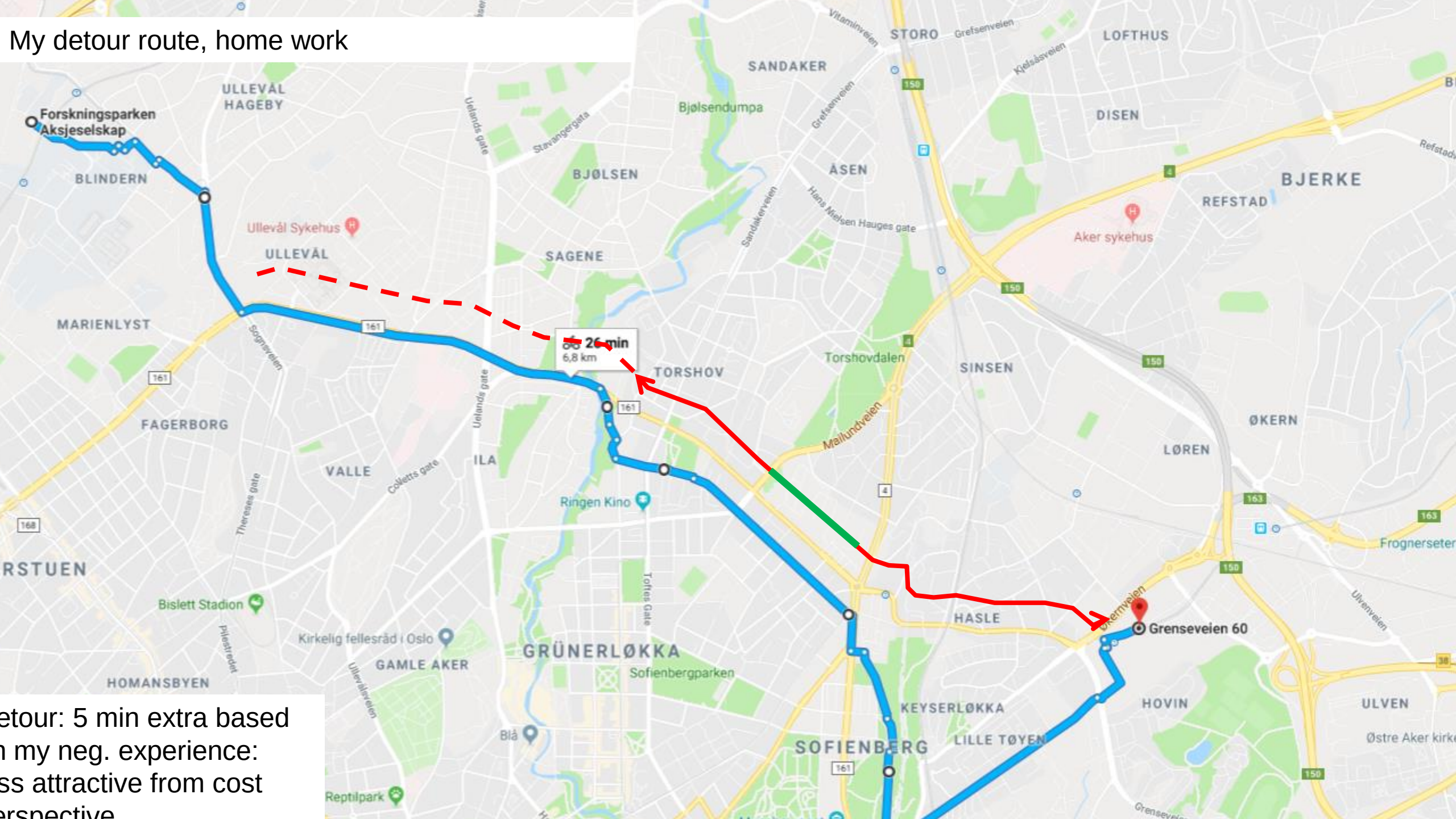
Cycling and the city;
All about infra, or is there more?

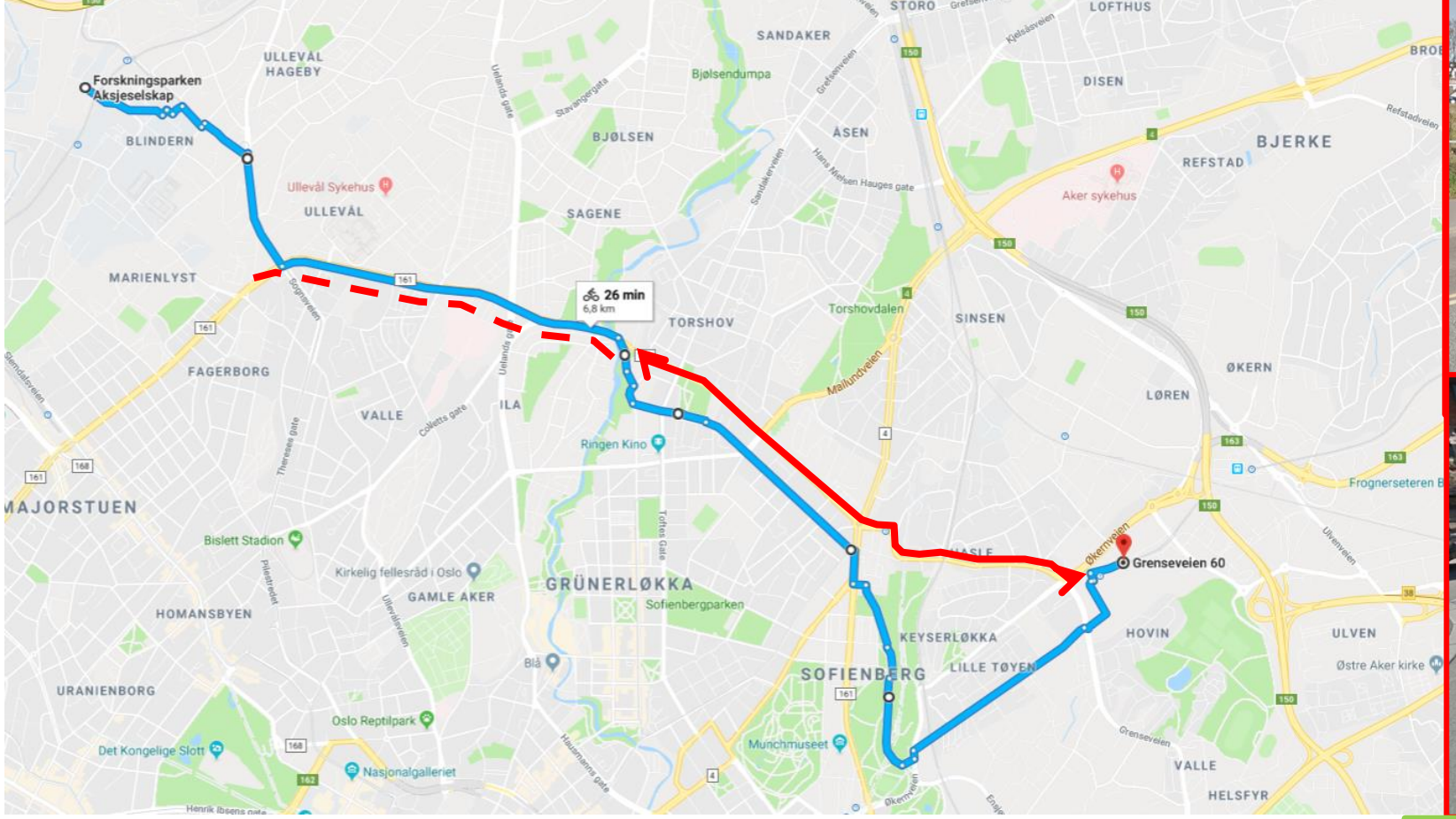
My route home / work according to Google



My detour route, home work



etour: 5 min extra based
n my neg. experience:
ss attractive from cost
erspective


Forskningsparken Aksjeselskap
ULLEVÅL HAGEBY
BLINDERN
Ullevål Sykehus
ULLEVÅL
MARIENLYST
FAGERBORG
VALLE
ILA
MAJORSTUEN
Bislett Stadion
Kirkelig fellesråd i Oslo
GAMLE AKER
HOMANSBYEN
URANIENBORG
Oslo Reptilpark
Det Kongelige Slott
Nasjonalgalleriet
Blå
GRÜNERLØKKA
Sofienbergparken
SOFIENBERG
KEYSERLØKKA
LILLE TØYEN
Munchmuseet
HOVIN
ULVEN
Østre Aker kirke
VALLE
HELSFYR
Grenseveien 60
Ringen Kino
TORSHOV
SAGENE
BJØLSEN
ÅSEN
SANDAKER
Bjølsendumpa
STORO
LOFTHUS
DISEN
BJERKE
REFSTAD
Aker sykehus
SINSEN
Torshovdalen
ØKERN
LØREN
Frognerseteren
26 min
6,8 km


Google

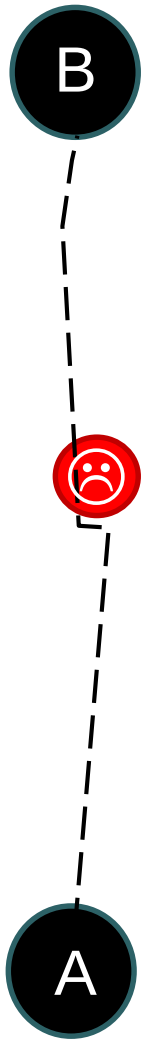

Ring2


Fv161

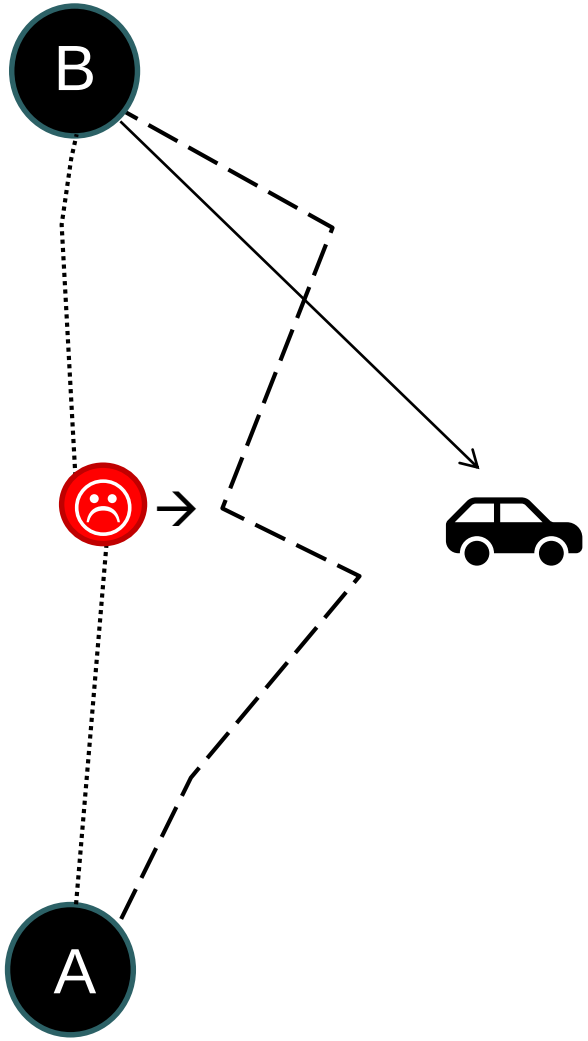

TAXI

What spatial characteristics of cycling routes, are experienced as problematic?

1. Route Experience



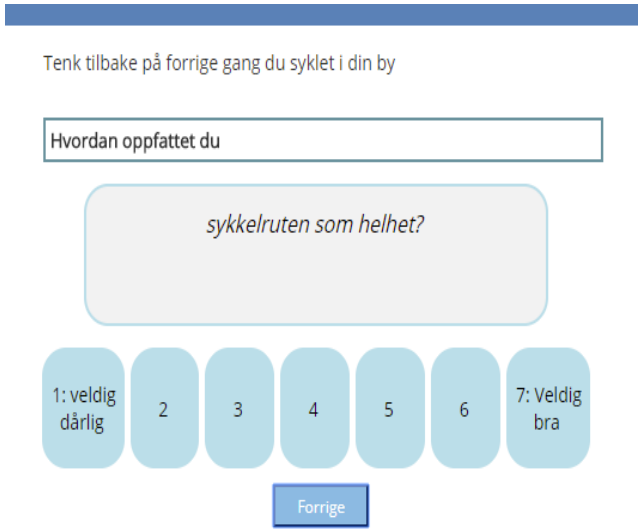
Experience → Choice



Datainnsamling

Web questionnaire

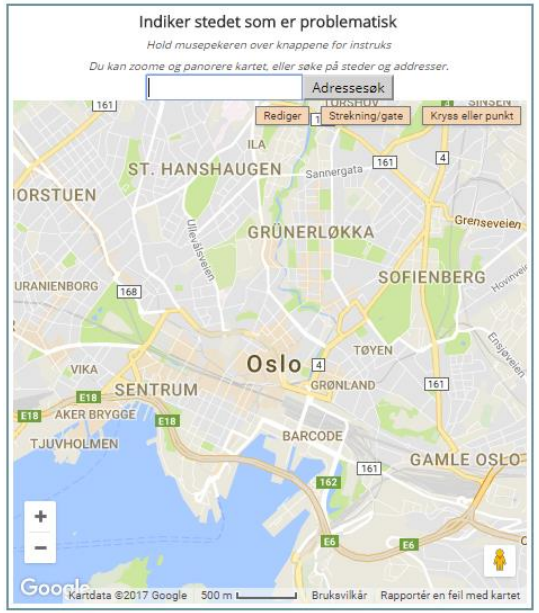
(n=ca. 3500)



Background data
Preferences
Recruitment to app

Mapping

(n= 2121)



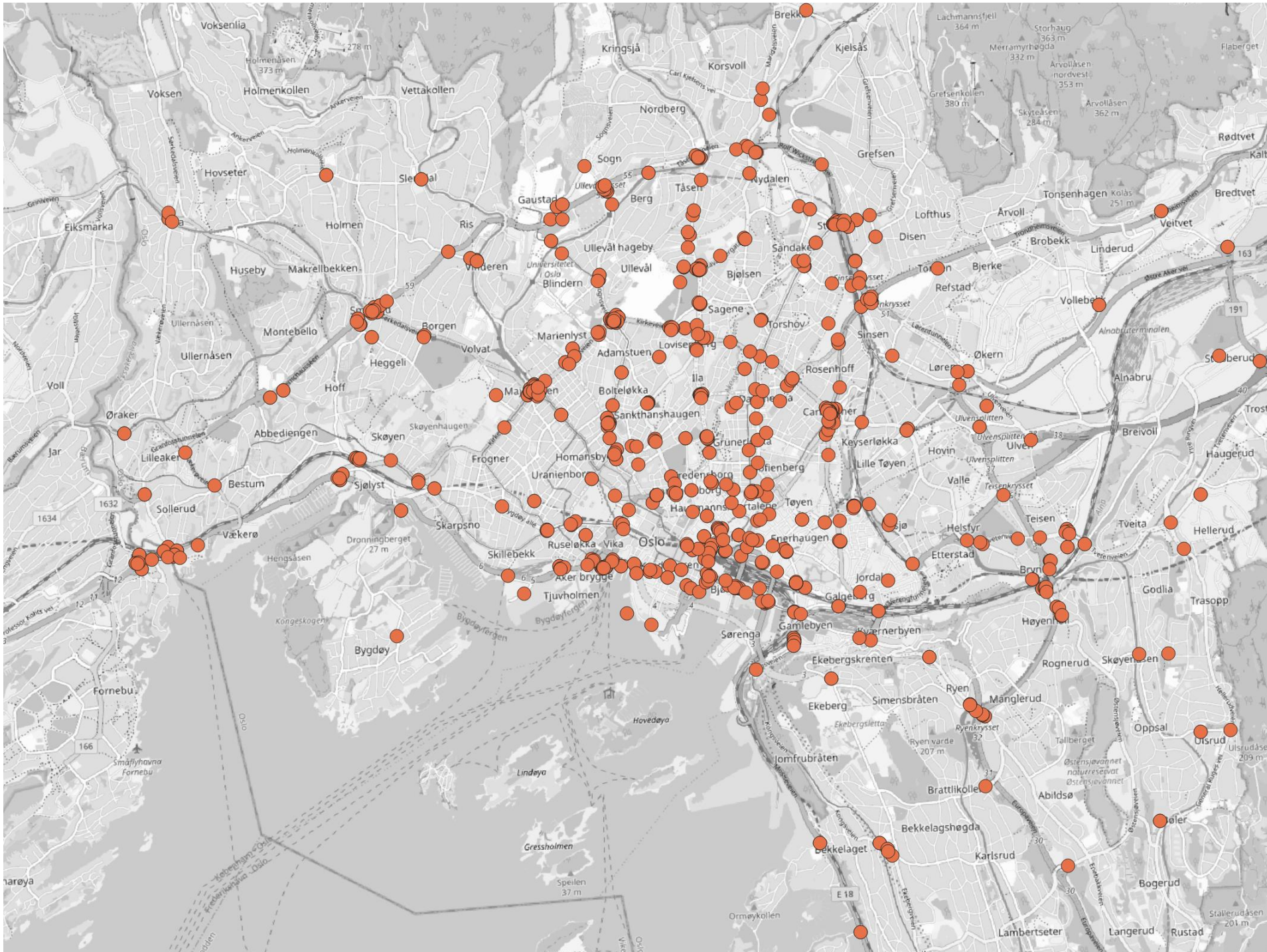
Location of bad experiences
Cause

GPS tracking

(n= 734(>25.000 trips)

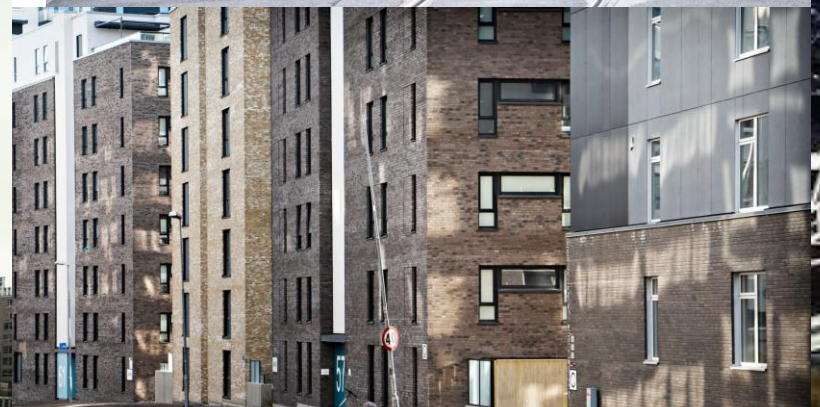
All travel, all day
Tracking and mode

Resultater


Voksenlia
Holmenåsen
373 m
Holmenkollen
Vettakollen
Voksen
Kringsjå
Korsvoll
Nordberg
Kjelsås
Grefsen
Lofthus
Disen
Sandaker
Ullevål hageby
Ullevål
Bjølsen
Sagene
Torshov
Sinsen
Økern
Rosenhoff
Adamstuen
Marienlyst
Borgen
Volvat
Heggeli
Montebello
Ullernåsen
Hoff
Voll
Øraker
Abbediengen
Skøyen
Lilleaker
Bestum
Sollerud
Vækerø
Sjølyst
Frogner
Homansbyen
Uranienborg
Bolteløkka
Sankthanshaugen
Keyserløkka
Lille Tøyen
Tøyen
Valle
Helsfyr
Etterstad
Teisen
Tveita
Hellerud
Brevoll
Alnabru
Haugerud
Oslo
Ruseløkka
Vika
Skillebekk
Aker brygge
Tjuvholmen
Skarpsno
Dronningberget
27 m
Hengsåsen
Kongeskogen
Bygdøy
Fornebu
Sørenga
Gamlebyen
Grünerløkka
Jordal
Galgeberg
Enerhaugen
Høyenhall
Godlia
Trasopp
Ekebergskrenten
Ekeberg
Simensbråten
Ryen
Manglerud
Rognerud
Skøyenåsen
Oppsal
Ulsrud
Tallberget
Jomfrubråten
Brattlikollen
Abildsø
Bekkelagshøgda
Bekkelaget
Karlsrud
Løper
Bogerud
Lambertseter
Langerud
Rustad
Hovedøya
Lindøya
Gressholmen
Ormøykollen
E 18


PELOTON


30 Nydalen
54 Tjuvholmen
MAN




BRATT
TURVEI

Spatial

Som kjent; mange biler,

Men, enda mer effekt;

Kollektiv stop; Bus, tram, metro, tramlines

Ingen infra & gang og sykkelvei,

Gangfelt, sykkelfelt også

Bratte bakke og by tetthet: ikke significant

Table 5 Multinomial logistic regression model explaining the probability of a negative experience point against potential experience points derived from the respondents' cycle routes. Based on 1000 bootstrap samples.

	Wald	Sig.	Exp(B)	Lower	Upper
Slope	0,28	0,60	4,07	-4,27	8,49
pop_tot*	0,12	0,73	1,06	-0,34	0,52
emp_tot*	1,30	0,25	0,84	-0,49	0,14
est_tot*	0,18	0,67	0,89	-0,77	0,48
AADT*	**14,44**	**0,00**	**0,94**	**-0,10**	**-0,03**
speed_lim (30)	**19,22**	**0,00**			
40	**6,70**	**0,01**	**0,55**	**-1,10**	**-0,11**
50	**13,57**	**0,00**	**0,48**	**-1,17**	**-0,31**
60 +	1,47	0,23	2,23	-0,34	2,24
PT_stop_type (none)	**30,03**	**0,00**			
Bus	**19,87**	**0,00**	**2,82**	**0,59**	**1,53**
Metro	**9,26**	**0,00**	**3,65**	**0,55**	**2,26**
Railway	0,88	0,35	2,02	-0,38	2,48
Tram	**23,09**	**0,00**	**5,56**	**1,05**	**2,52**
tram_dist*	**20,61**	**0,00**	**1,67**	**0,26**	**0,80**
BikeInfra. (none)	**16,90**	**0,00**			
Ped. /cycle road	**15,63**	**0,00**	**0,43**	**-1,28**	**-0,45**
Cycle lane	**4,57**	**0,03**	**0,64**	**-0,89**	**-0,03**
intersec_d*	0,17	0,68	1,02	-0,08	0,13
stop_50m	2,73	0,10	1,16	-0,05	0,33
userfreq*	**160,94**	**0,00**	**0,12**	**-2,55**	**-1,85**
Highway	1,62	0,20	1,38	-0,18	0,84
PedXing	**7,73**	**0,01**	**0,09**	**-21,33**	**-0,76**

* log transformed values

Unsafety

Mest relatert til opplevd antall biler og hastighet,
Også bratte bakker,
dårlige infrastruktur løsninger
fotgjengere på kollektiv holdeplasser

Table 6 Linear regression model explaining the degree of unsafety on problematic spots.

	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	Beta		
Reason_ManyCars	**0,07**	**0,15**	**4,07**	**0,00**
Reason_SpeedCars	**0,07**	**0,11**	**3,07**	**0,00**
Reason_Hilly	**-0,19**	**-0,08**	**-2,25**	**0,03**
Reason_BadSolution	**0,03**	**0,07**	**2,09**	**0,04**
Reason_PedPubTrans	**-0,09**	**-0,06**	**-1,79**	**0,07**
stop_50m	0,03	0,04	1,10	0,27
pop_tot*	0,07	0,03	0,82	0,42
BusStop	-0,10	-0,03	-0,47	0,64
TramStop	-0,15	-0,05	-0,66	0,51
BikeLane	-0,11	-0,04	-1,05	0,29
CyclingFreq	**-0,19**	**-0,19**	**-5,26**	**0,00**

* log-transformed values

avoidance

- Opplevd antal biler og hastighet

Dårlig infraløsninger og antal bedrifter I et område

Table 7 Linear regression model explaining the degree of avoiding problematic spots.

	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	Beta		
Reason_ManyCars	**0,15**	**0,21**	**5,45**	**0,00**
Reason_SpeedCars	**0,08**	**0,09**	**2,33**	**0,02**
Reason_Hilly	0,05	0,06	1,63	0,10
Reason_BadSolution	**0,05**	**0,07**	**1,92**	**0,06**
Reasons_PedPubTrans	-0,11	-0,05	-1,28	0,20
AADT1000	-0,02	-0,06	-1,55	0,12
userfreq*	0,15	0,03	0,84	0,40
stop_50m	0,03	0,03	0,75	0,46
est_tot*	**0,44**	**0,12**	**2,72**	**0,01**
slope	-3,27	-0,04	-1,10	0,27
pop_tot*	0,04	0,01	0,28	0,78
speed_lim	0,00	0,01	0,33	0,74
BusStop	-0,08	-0,02	-0,23	0,82
TramStop	0,21	0,04	0,56	0,58
BikeLane	-0,17	-0,04	-0,98	0,33
CyclingFreq	**-0,20**	**-0,13**	**-3,49**	**0,00**

* log transformed values

Conclusions

- Bad cycling experiences are common; 62% reported a place

- Even if some of the negative characteristics of the selected places are related to private car use (AADT, speed limits), it is quite striking how much public transport infrastructure plays a negative role for cyclists. Both presence of PT stops as well as tramlines were strong factors in predicting negative experiences.

Takk