Bevorzugter Zitierstil für diesen Vortrag

Tan, T., V. Chua and K.W. Axhausen (2015) Ego networks and social geographies in Singapore, presentation at ‚Frontiers in Transportation' workshop, Windsor, July 2015.

Ego networks and social geographies in Singapore

T Tan, V. Chua, KW Axhausen

FCL & NUS
Singapore

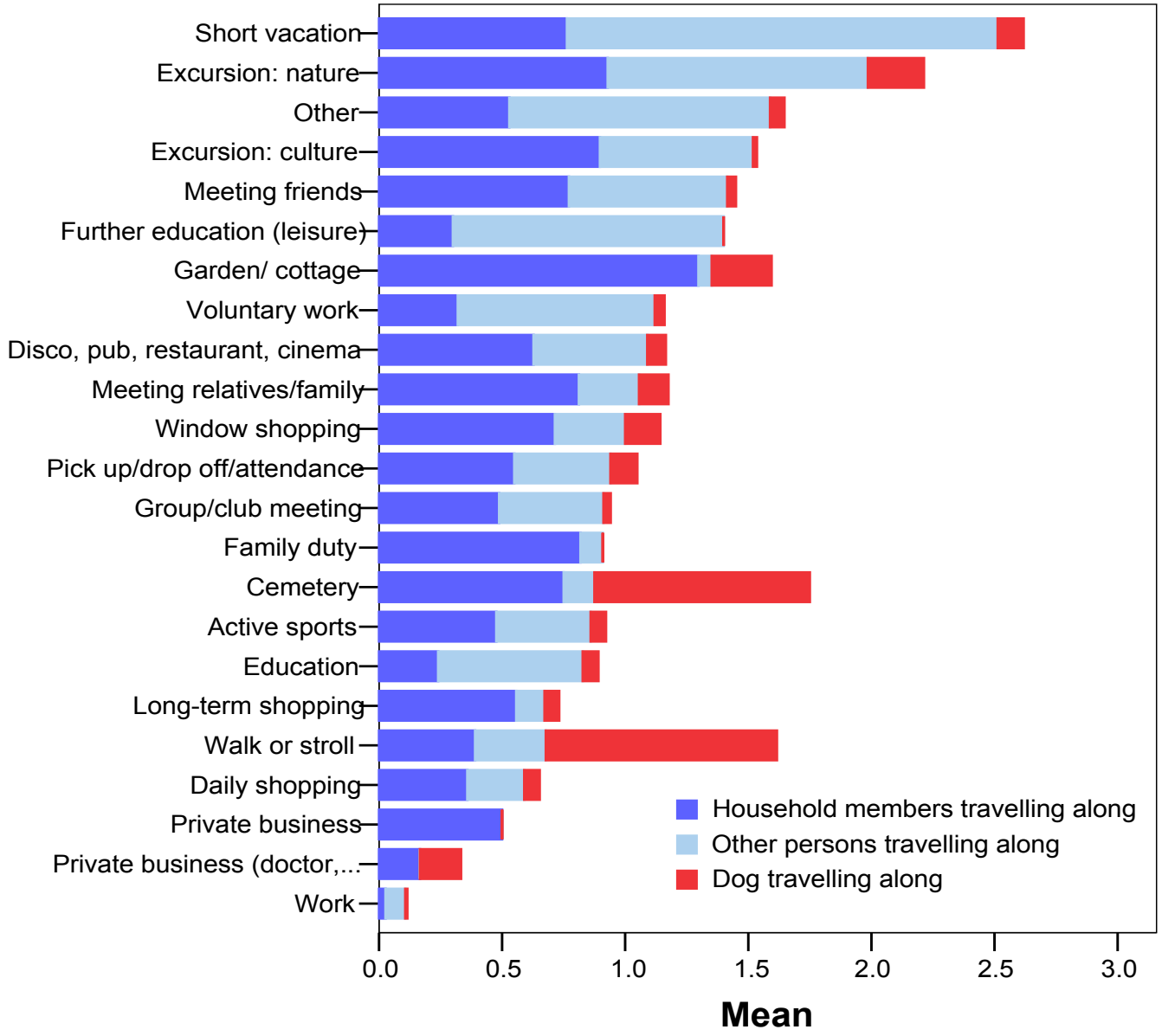
July 2015

Institut für Verkehrsplanung und Transportsysteme
Institute for Transport Planning and Systems

Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

Why social networks in transport/spatial planning ?

Example: Number of accompanying travellers



Axhausen et al., 2007

Example: Residential location choice in Kt. Zürich

Variable	Beta	t-Test
Rent/Income	-5.51	***
log(m2/head)	0.98	***
Frequency weighted mean distance to friends	**-8.16**	*
Exponent (friends)	**0.22**	**
Mean distance to work/school	-1.59	**
Exponent (distance to work)	0.37	**
Travel time to Bürkliplatz	0.02	**
log(transit accessibility) * "No car"	0.41	**
log(car accessibility) * “Car"	-0.30	**
Share of equally sized HH within 1 km	0.02	*
Population density within 1 km	0.01	**
Share of empty flats in municipality	-0.11	
N= 683, rho^2 = 0.2128; * > 0.1; ** > 0.05; *** > 0.01		

Travel and social networks

Benchmarking the current state

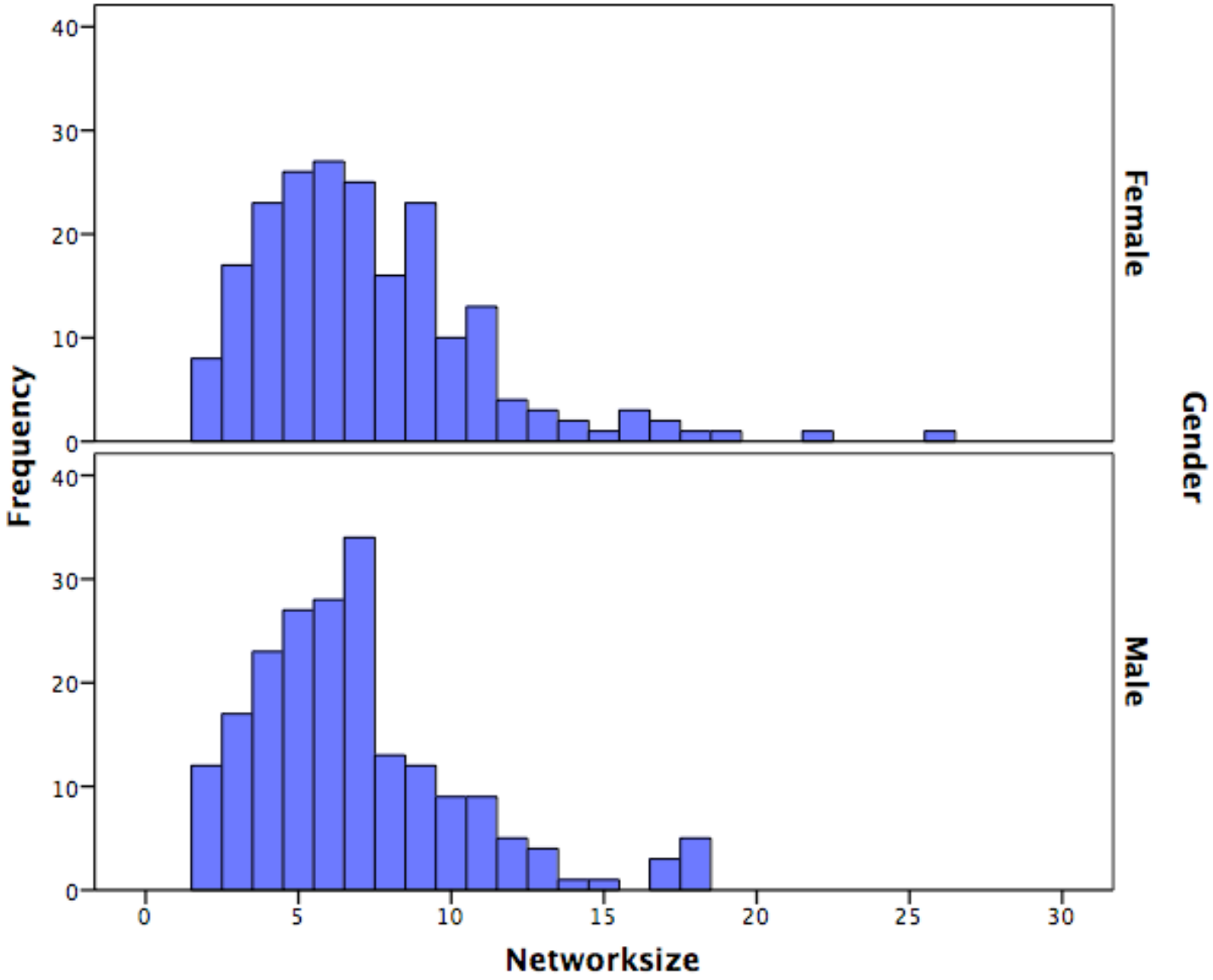
- Numbers of contacts
- Distance distributions
- Geographies
- Frequency and mode of contact

- “Productivity”
- Levels of local anomie
- Levels of local trust
- Level of place attachment

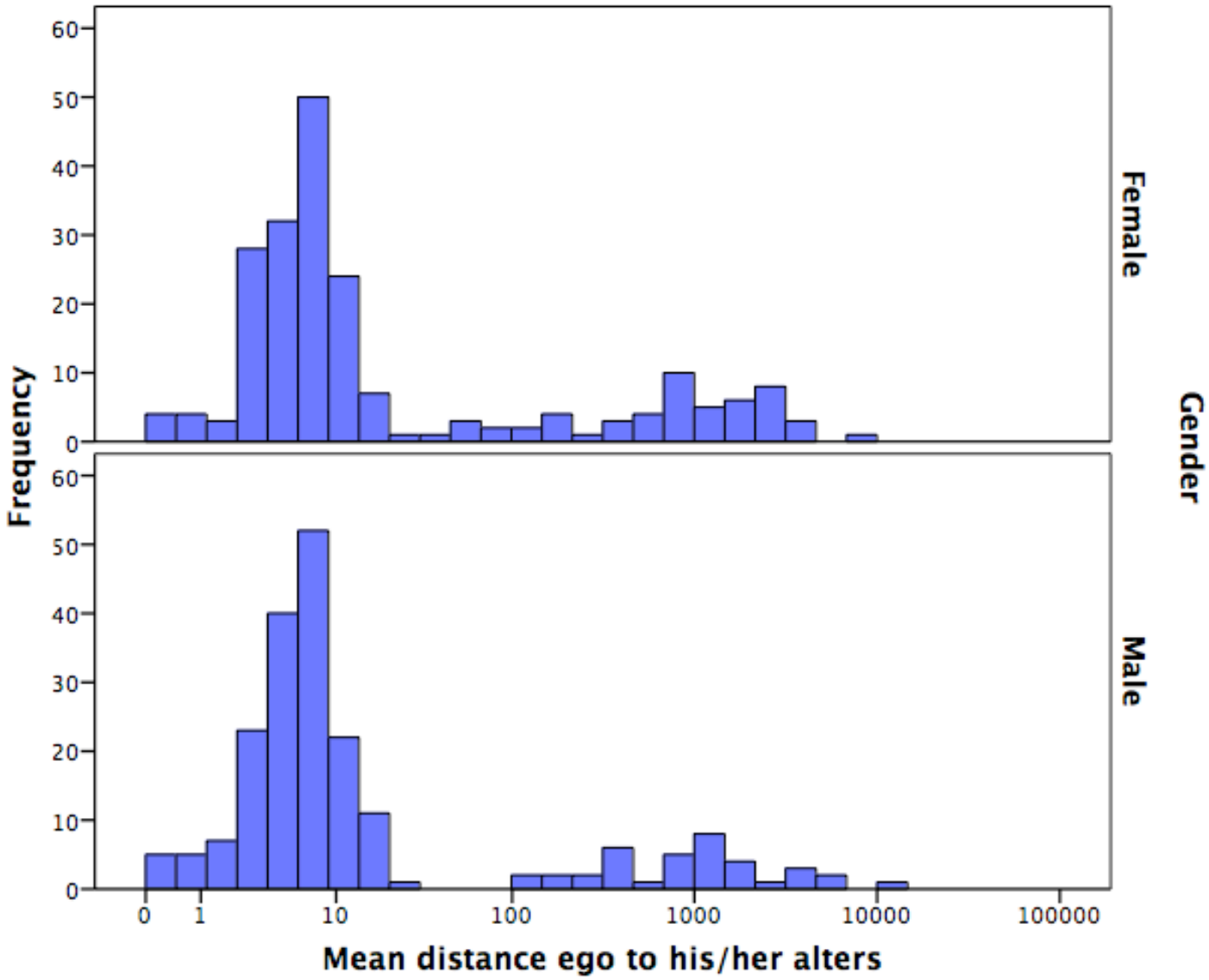
Social network survey: Singapore

- Tan, Chua: 410 egos (recruited by telephone, incentive offered)
- Hall-based supervised CASI on a tablet computer
- 11 different prompts for contacts
- Map-support address capture
- Residential and mobility biographies
- Emphasis on social capital questions

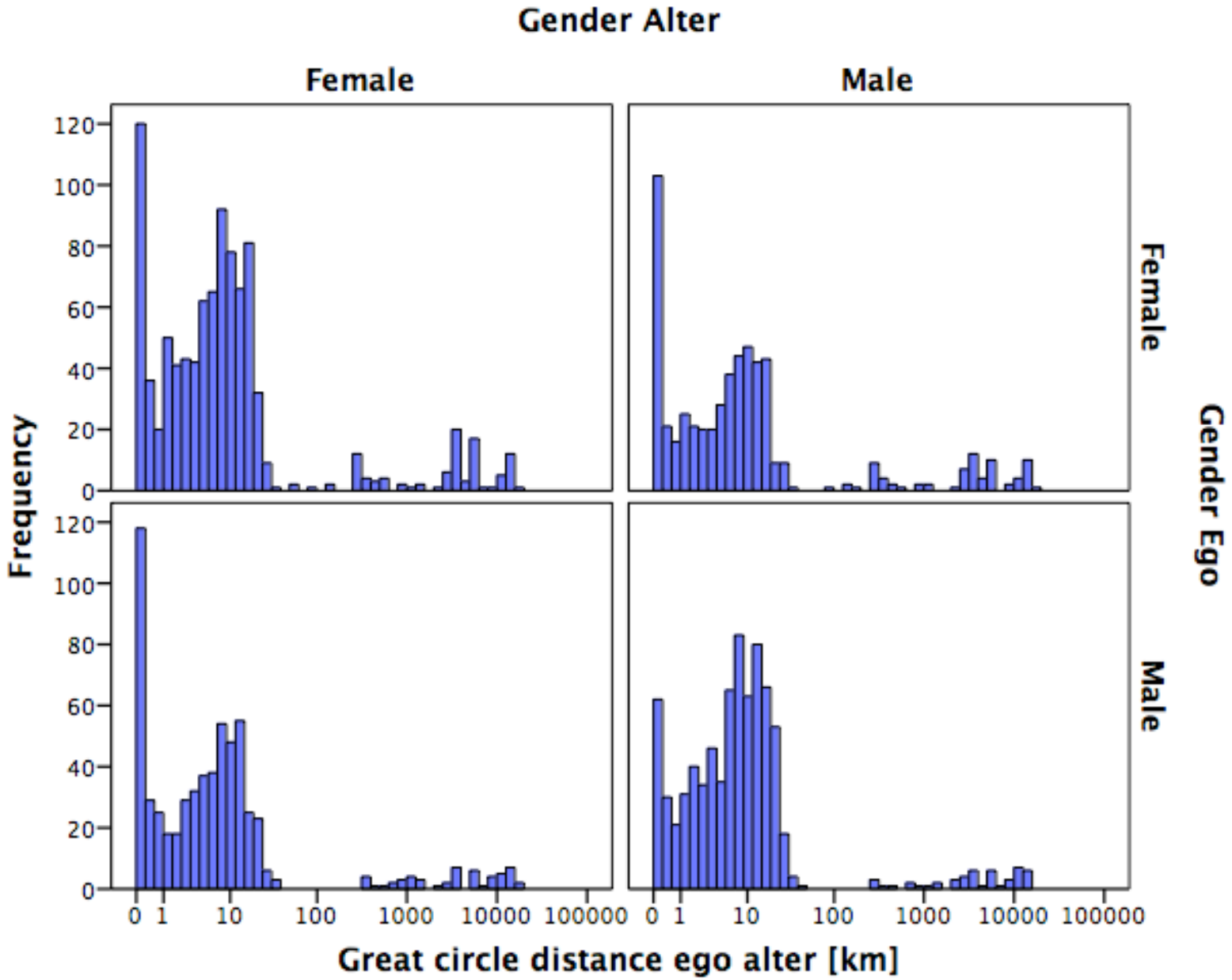
Number of contacts reported



Mean great circle distances between ego and its alters



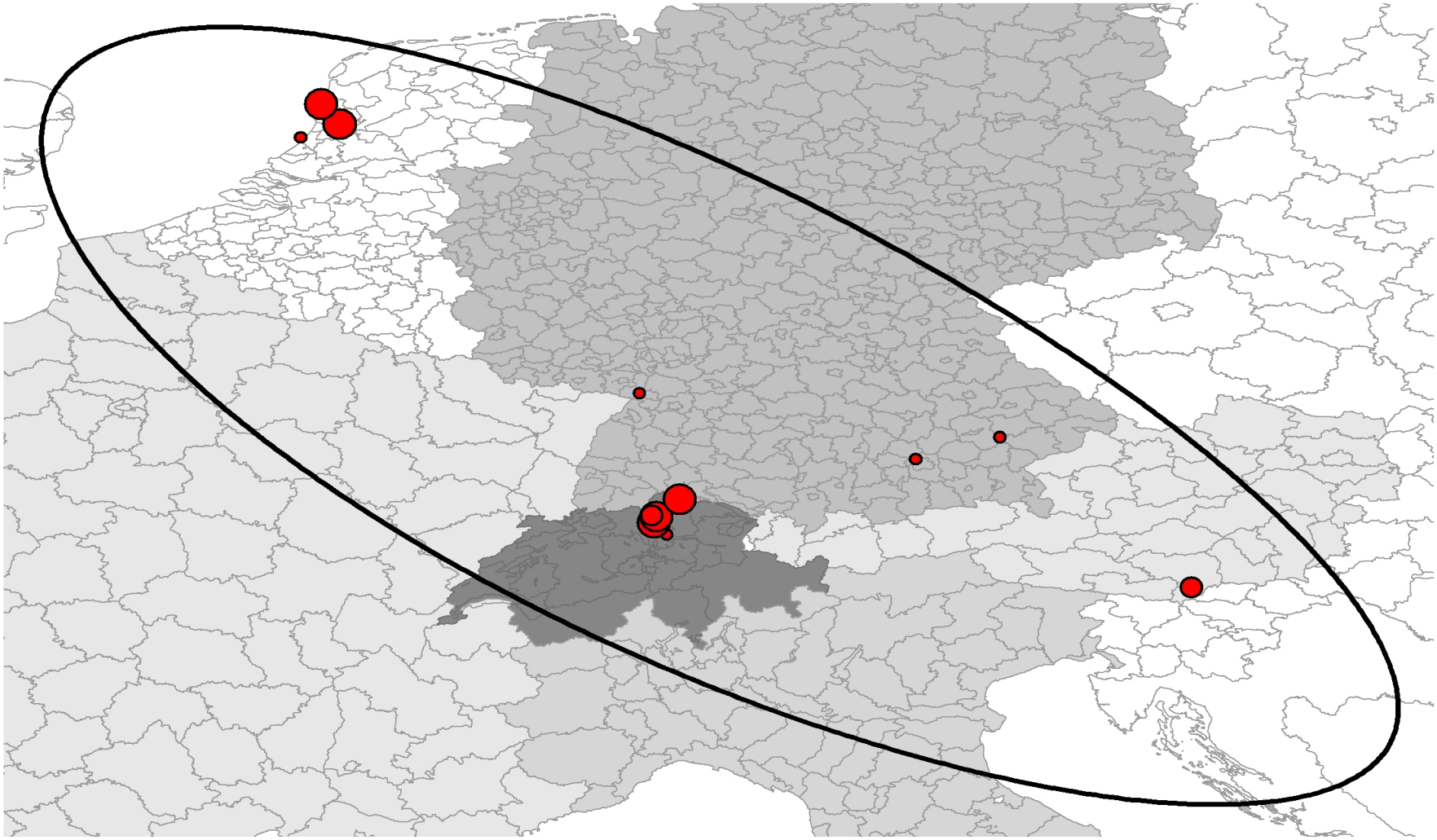
Great circle distances between ego and alter diads



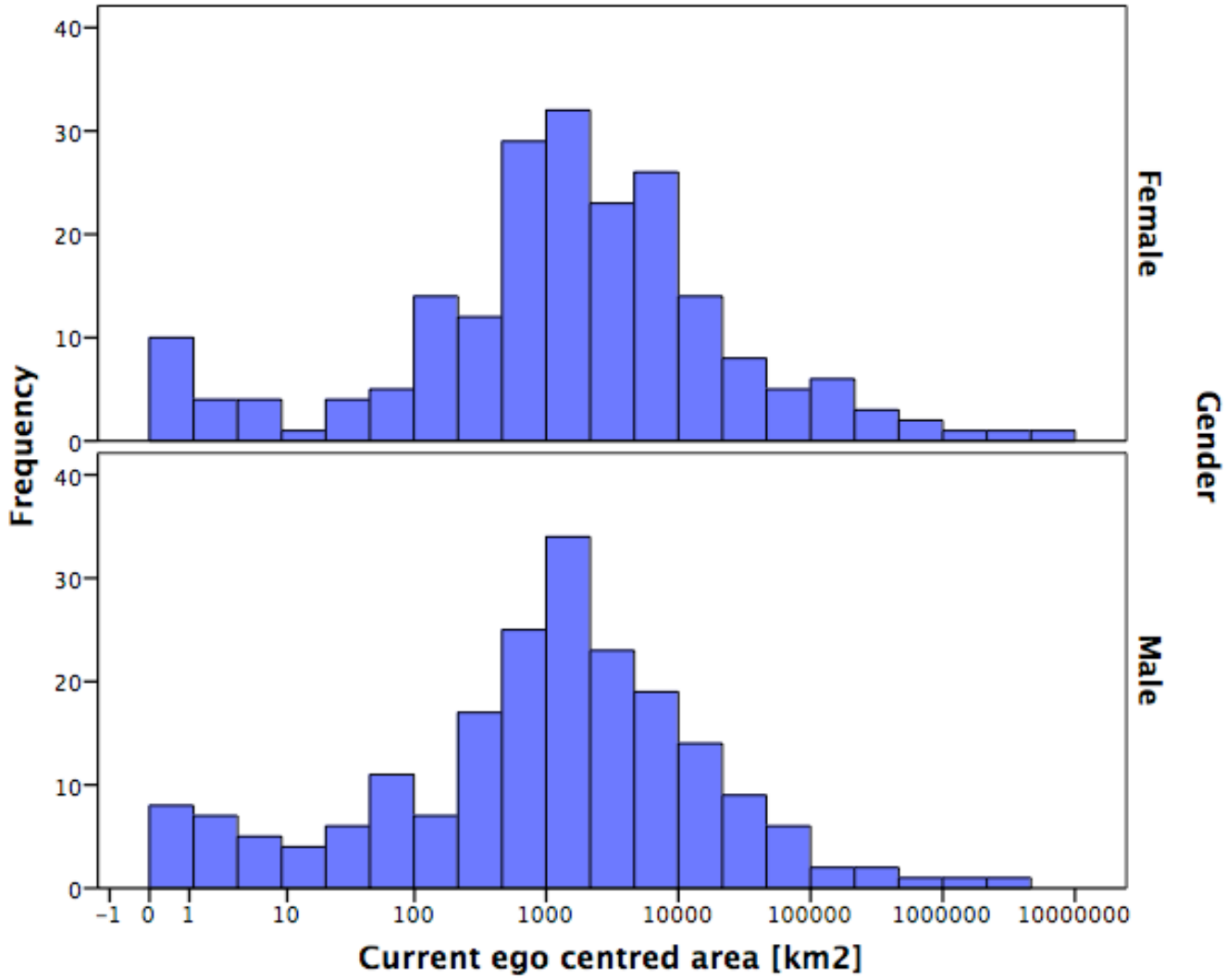
Great circle distances between ego and alter diads

	Median	Mean
Singapore	**6.5 km**	510 km
Switzerland (Snowball)	**8.9 km**	106 km.
Zurich	**9 km**	287 km.
Toronto	**11.2 km**	1036 km.
Eindhoven	**10 km**	153 km.
Concepcion	**4.9 km**	223 km.

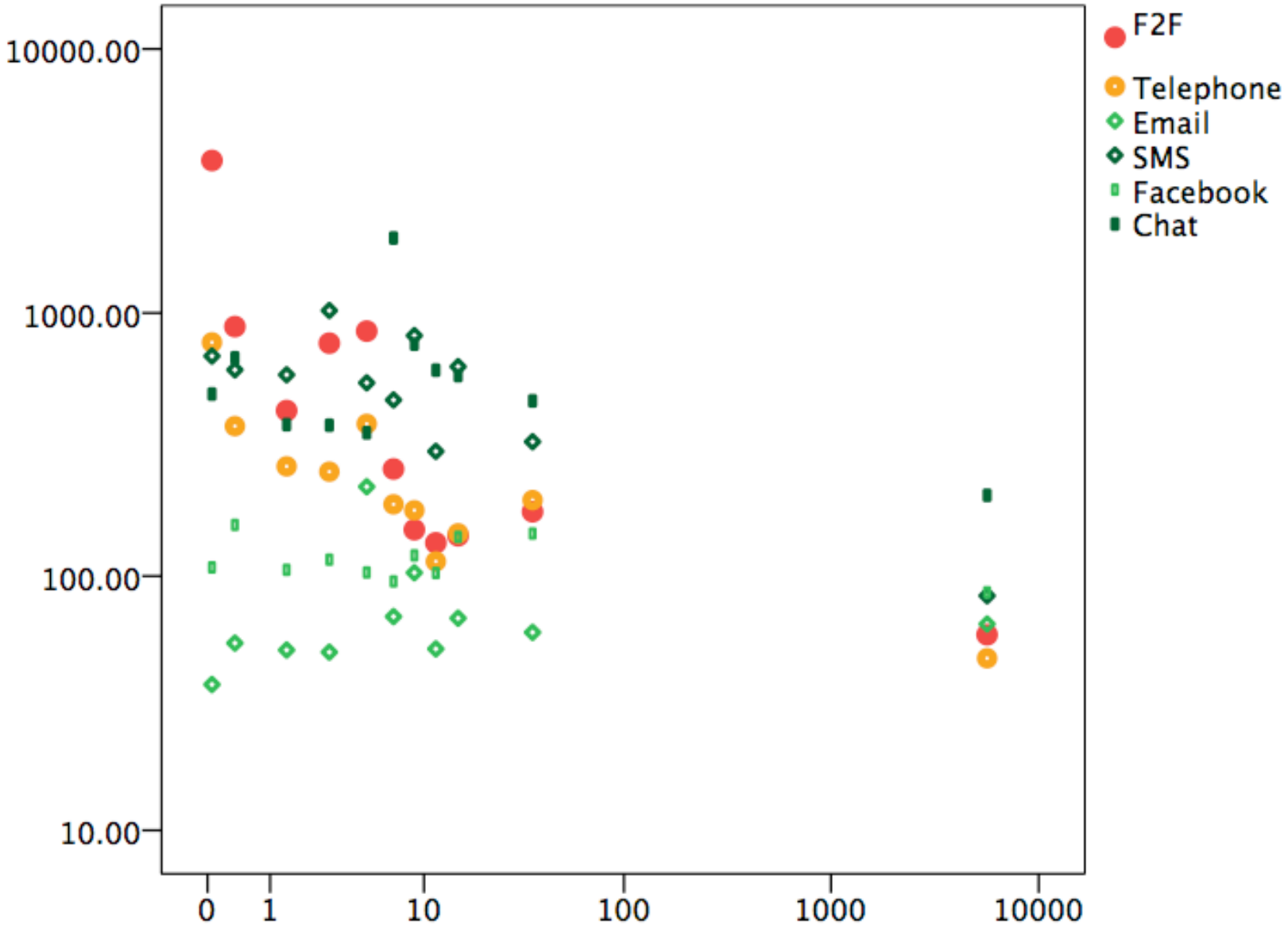
Example of a social network geography



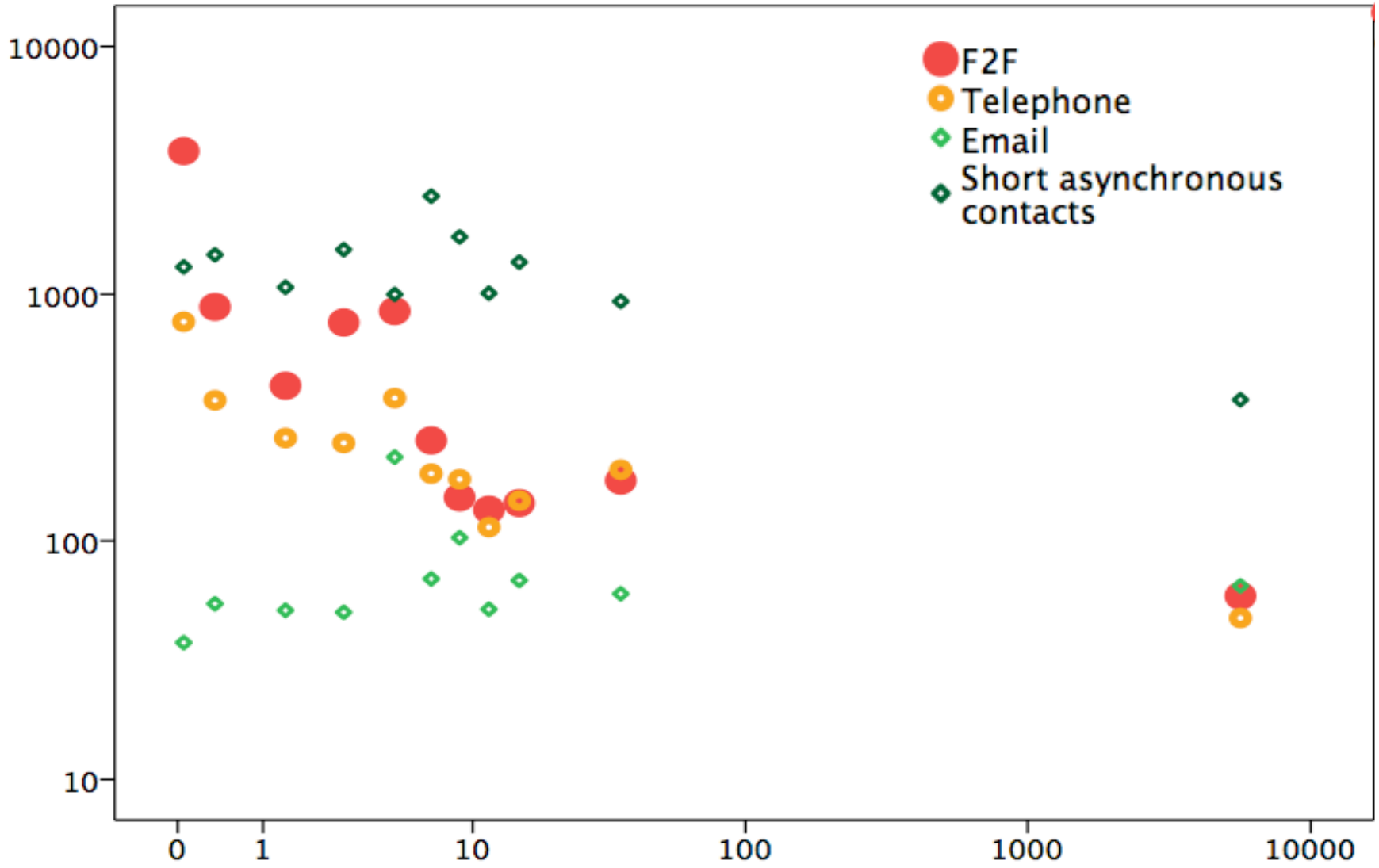
Size of network geometries centered ego's address



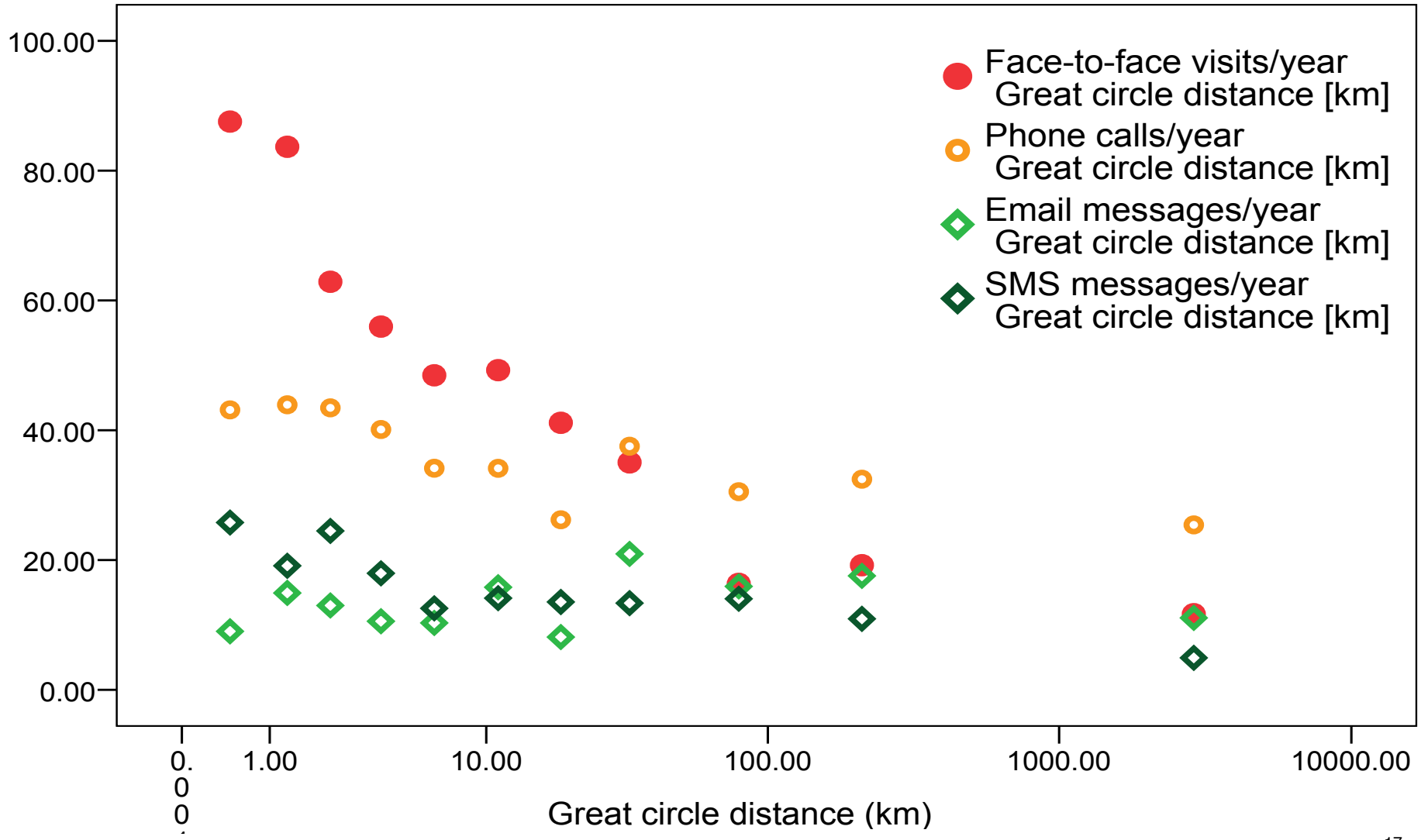
Interactions by mode and distance between homes (SG) (1)



Interactions by mode and distance between homes (SG) (2)



Interactions by mode and distance between homes (CH)



A first model: Size of social geography

A first model: Size of social geography (1)

Personal attributes	Current ego area (logged)	Historical ego area (logged)	Alter area (logged)
Female	0.5*	0.21	0.3
Malay	0.32	0.04	0.92*
Indian	0.44	-0.22	0.81*
Others	0.76	0.14	1.31
Singapore PR (versus citizen)	1.03*	1.34***	1.3*
Education (in years)	-0.02	0.02	-0.08
Private housing (versus public housing)	-0.33	0.1	0.5
Monthly household earnings	0.00	0.00	0.00
Number of overseas trips in the past year	0.01	0.01	0.01
Access to a car	0.17	-0.08	0.64*

A first model: Size of social geography (2)

Biography	Current ego area (logged)	Historical ego area (logged)	Alter area (logged)
Age (in years)	0.16*	0.12*	0.16*
Age squared	-0.00*	-0.00*	-0.00*
Number of addresses	0.08	0.17**	-0.11
Number of schools	0.02	-0.1	0.14
Number of companies	-0.01	0.02	0.02
Number of organizations	0.11	0.1	0.23*

A first model: Size of social geography (3)

Network attributes	Current ego area (logged)	Historical ego area (logged)	Alter area (logged)
Size of the network	0.12***	.05*	0.24***
Proportion of non-kin in the network	1.91***	1.83***	2.62***
Mean education level of the network	0.21***	0	0.15*
Sex diversity in the network	-0.21	0.26	0.66
Nationality diversity in the network	-0.24	.54*	0.2
Ethnic diversity in the network	-0.21	-0.08	0.52
Constant	-5.02	-1.47	-6.79
R-squared	0.27	0.29	0.31
N	370	379	362

Outlook

What needs to be done?

- The comparison of the name generators between studies
- Placement of name generators (i.e. comparison between name interpreters during the survey and at the end of the survey)
- Factors influencing social network geographies (i.e. the influence of age, gender, nationality, residential mobility and voluntary association participation rather than network capital)
- Spatially spread social network geography rich in social capital (i.e. strong positive association between spatial distance and well-educated network members/ rich diversity of different nationality groups/ non-kin)
- Spatial Inequalities as Social Inequalities (i.e. if reaching out entails reaching resources, it follows that spatial inequality entails social inequality

Questions ?

www.ivt.ethz.ch

www.matsim.org

www.futurecities.ethz.ch