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Aalto University
School of Science

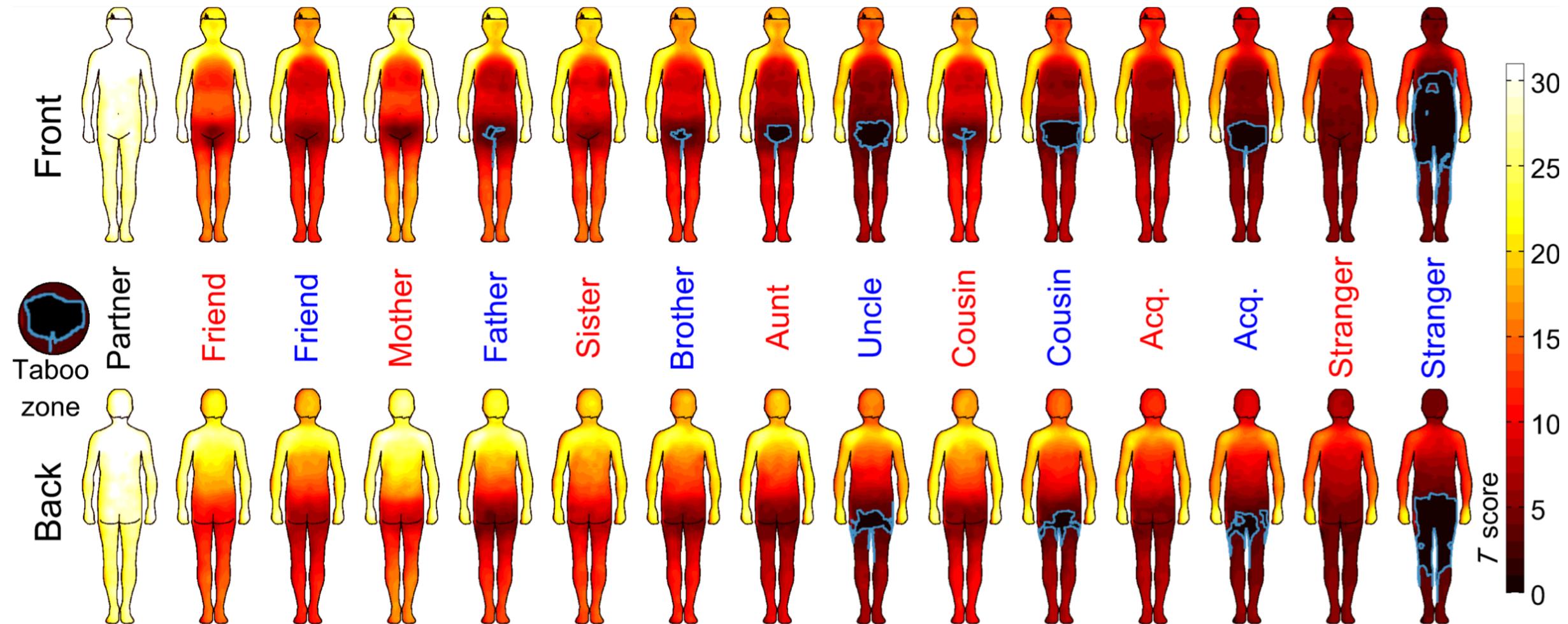
Social touch is relationship-specific for children and adults

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Aalto University and University of Turku



Picture from Richald Renaldi's Touching strangers project
Used with permission

Social touching is very relationship-specific



The colours in the labels indicate the sex of the toucher, e.g. **Female Cousin**, **Male Cousin**. Colouring of the bodies shows FDR-thresholded T-scores.

Suvilehto et al. (2015). Topography of social touching depends on emotional bonds between humans. *PNAS*



Picture from Richald Renaldi's
Touching strangers project
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Methods

On-line data collection with the emBODY tool

Total N = 1312 from four European cultures

- 545 British ,194 Finnish, 111 French, and 426 Italian

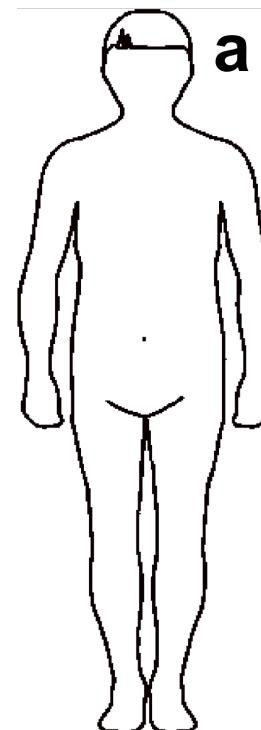
Three categories of children

- own child (N = 300)
- an under elementary school aged girl/boy you know but who is not your own child (Ns 820 and 793 respectively)
- under elementary school aged girl/boy who you do not know (N 1312 for both)

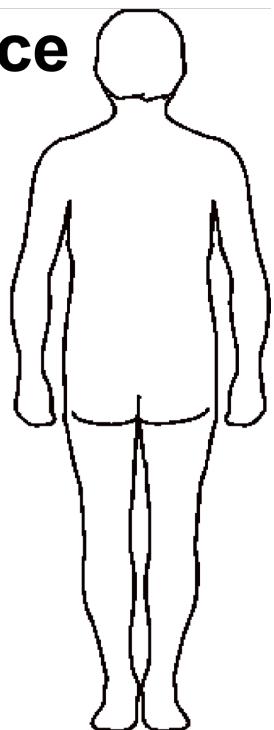
Three categories of adults

- Partner, m/f acquaintance, m/f stranger

Colour in the areas where
a female acquaintance
could touch you



[click here when ready](#)



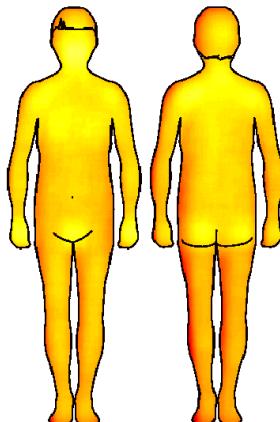
Topographies of acceptable touch

Adults and young children

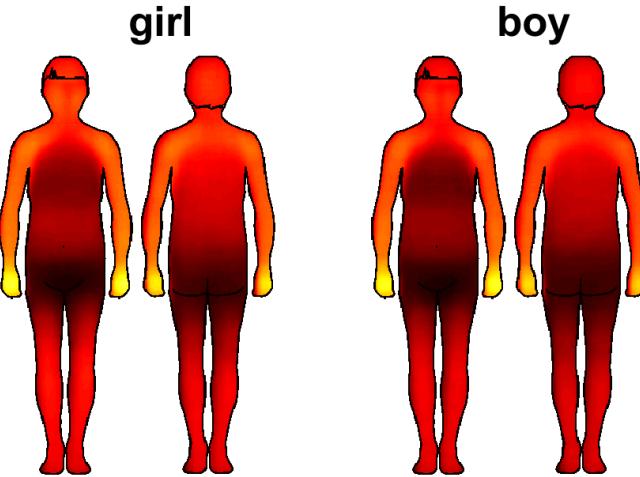
Under school-aged child
(age range approx. 0-6,
depending on country)



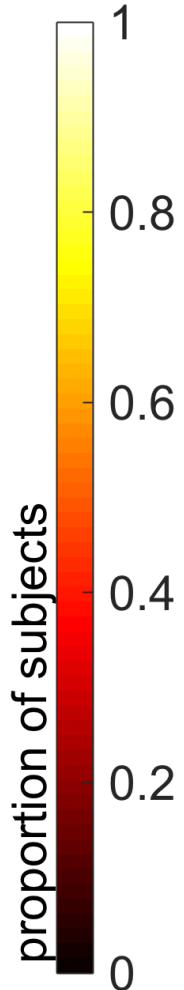
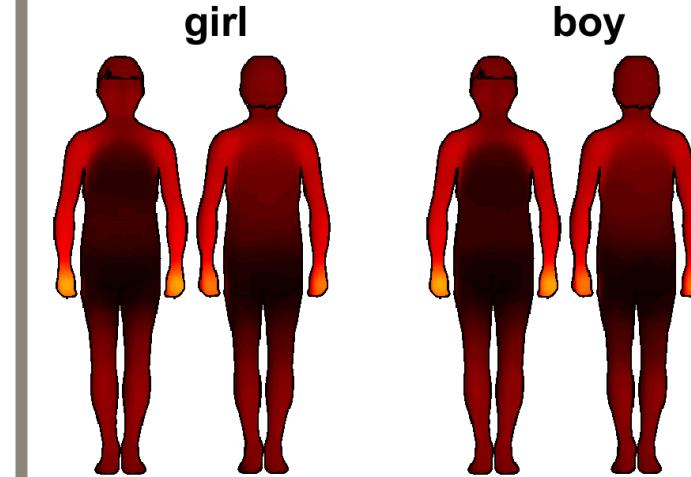
Adult,
approximately the
same age as the
subject



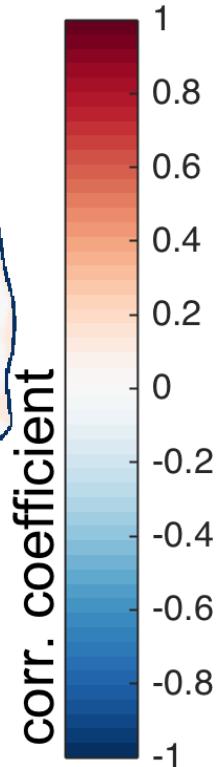
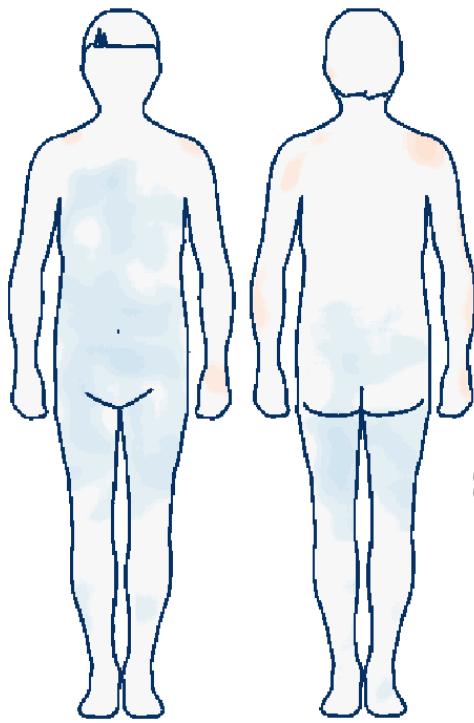
Acquaintance



Stranger

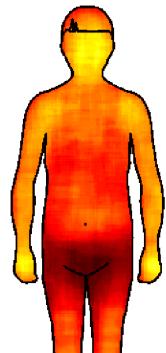


The age of one's own
child has little impact
on touch allowances

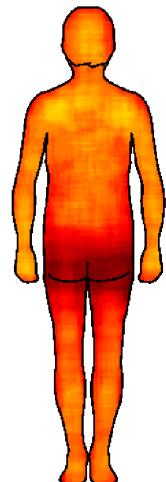


Front

Back



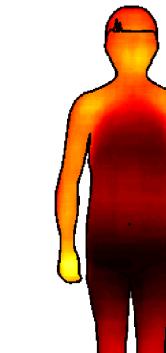
[0, 6)
years



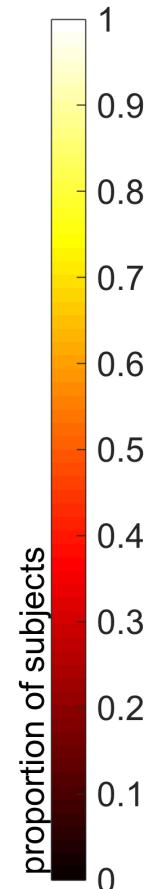
[6, 12)
years



[12, 18)
years



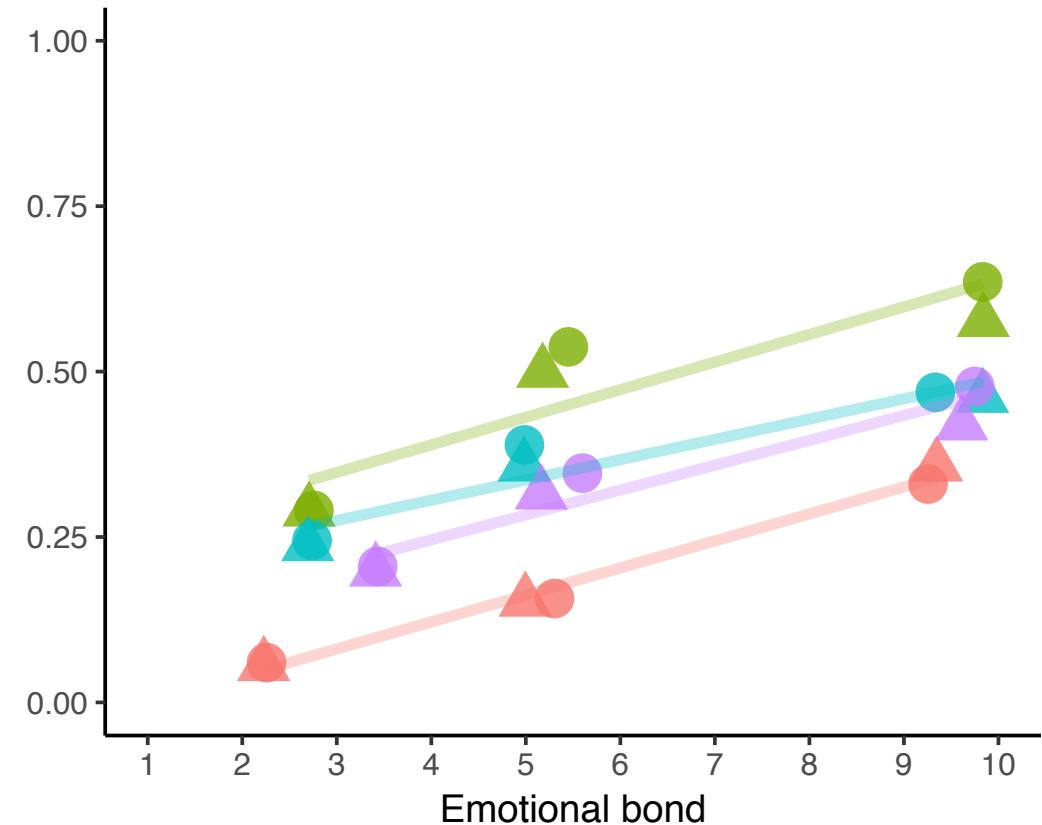
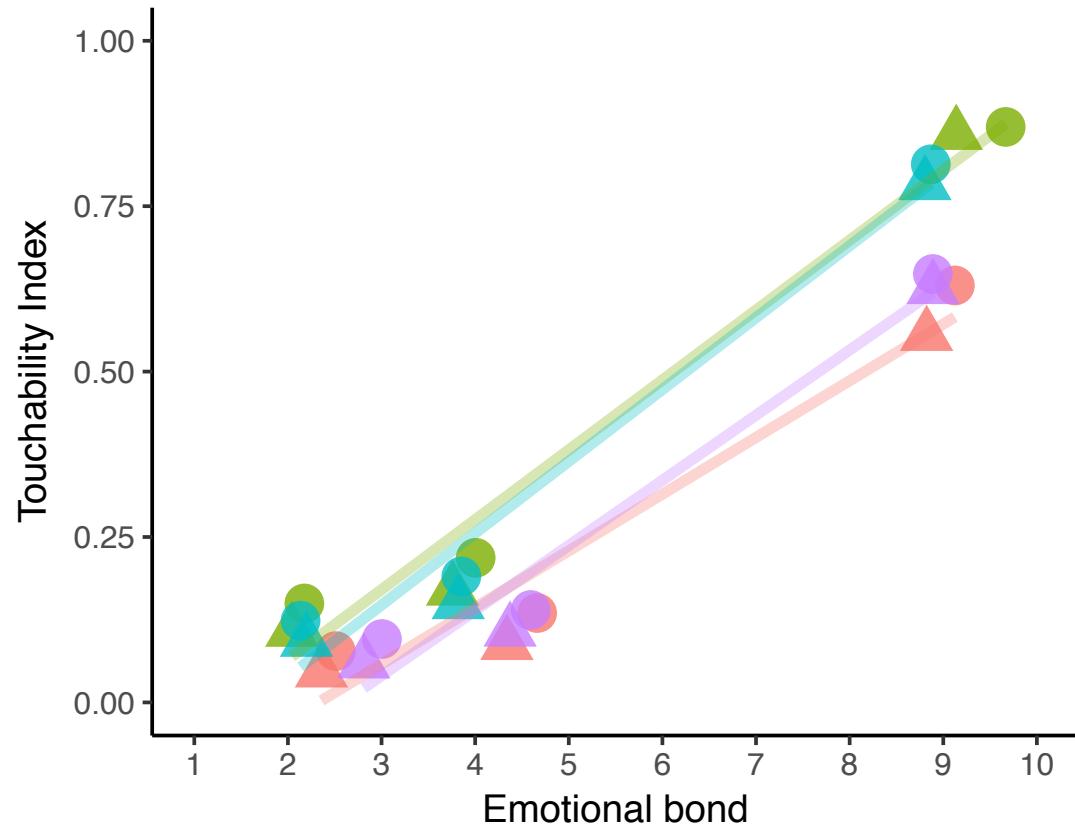
18->
years



r within range [-0.2, 0.16]

Touchability and emotional bond

Connection between bond & TI exists in both adults and children

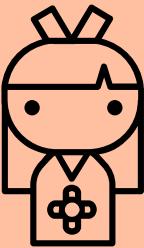


Sex of toucher ● female ▲ male

Country ● EN ● FI ● FR ● IT

Sex effects

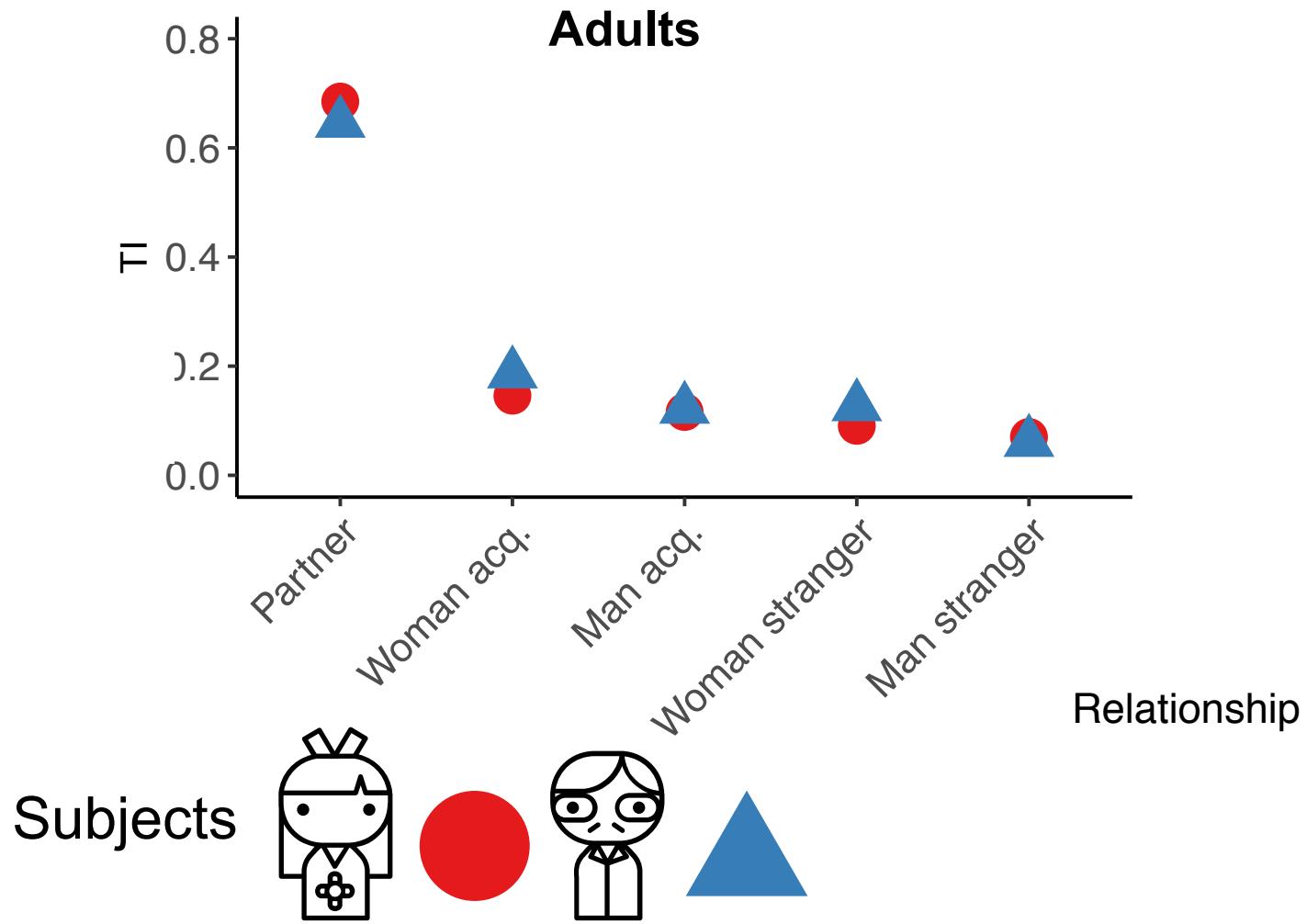
Subjects



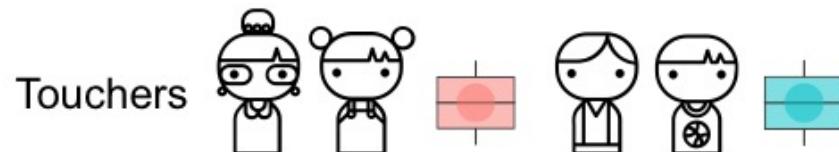
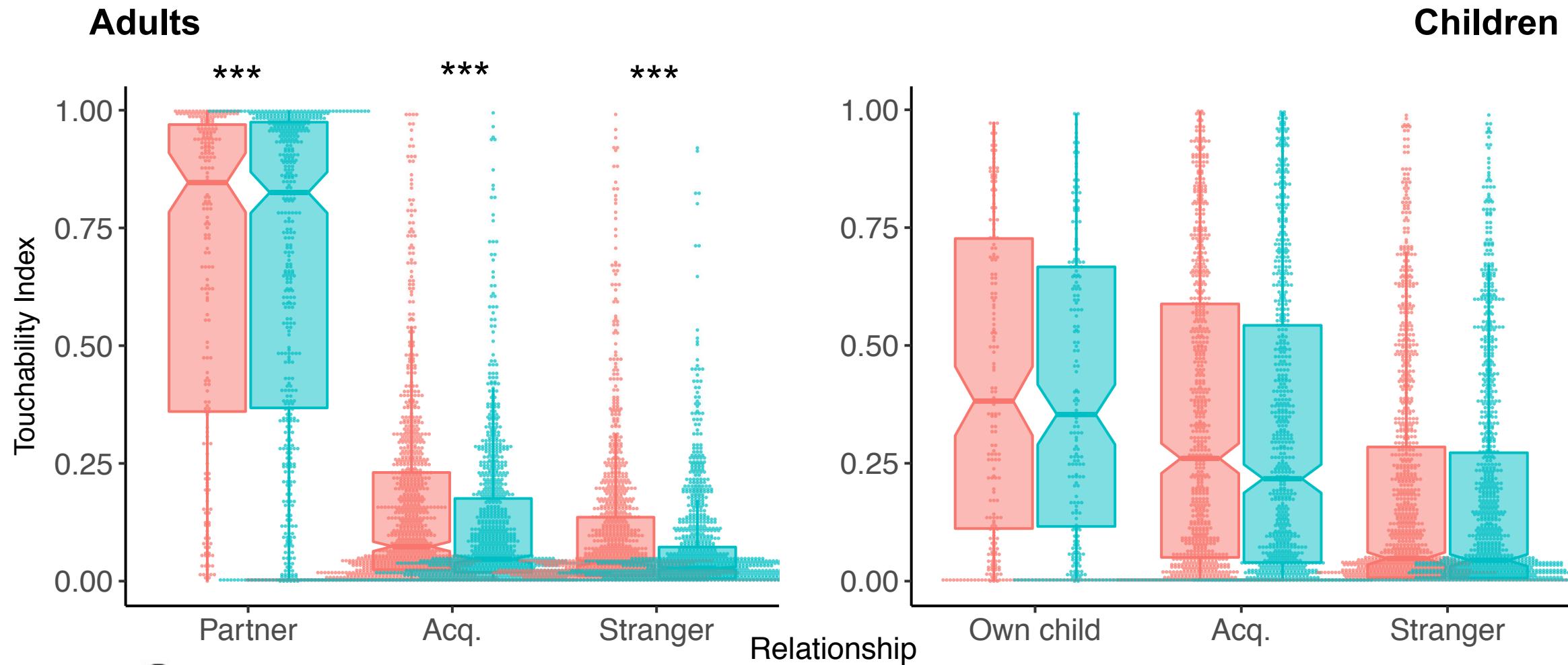
Touchers



Sex effects are different when being touched by adult vs child

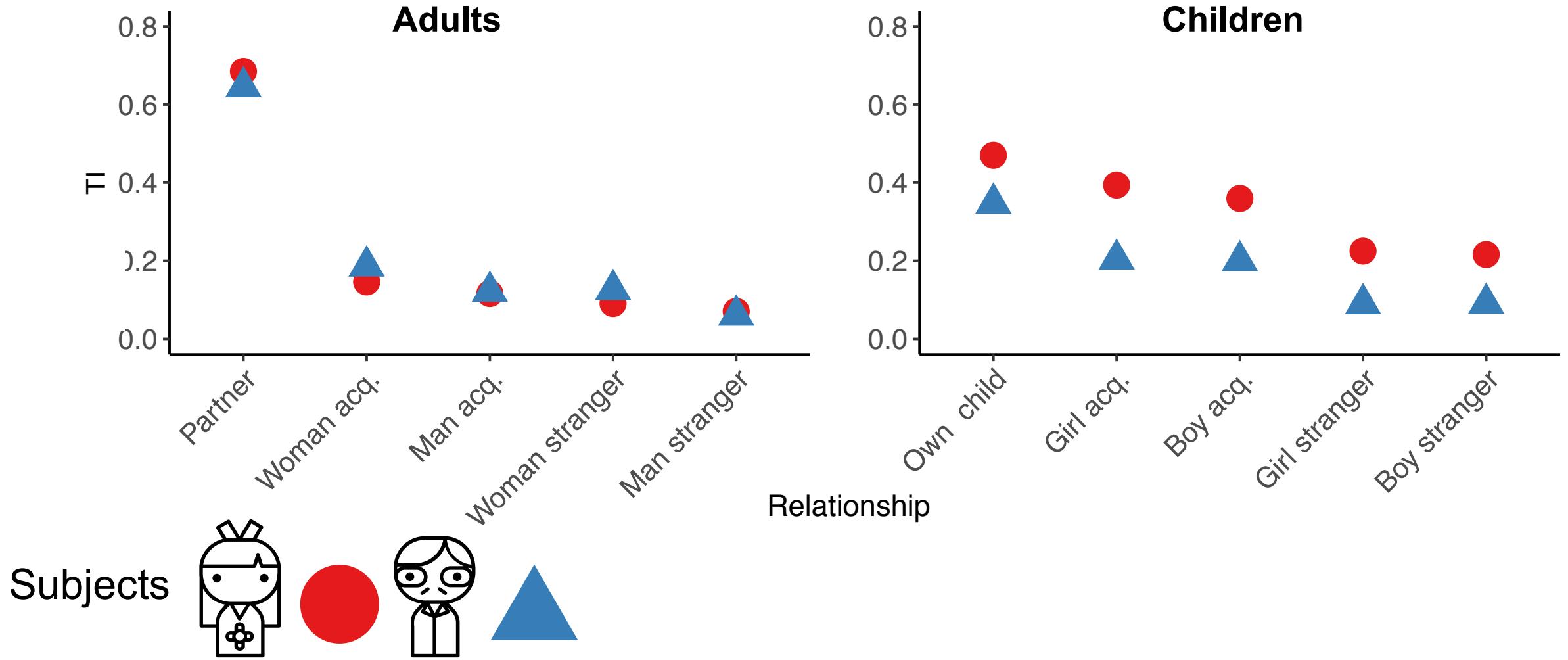


The sex of the toucher modulates TI for adults

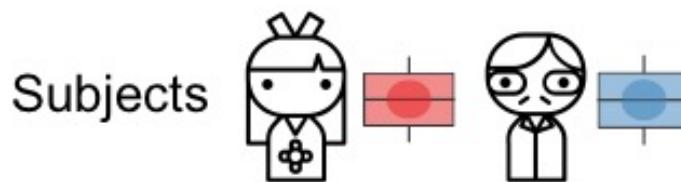
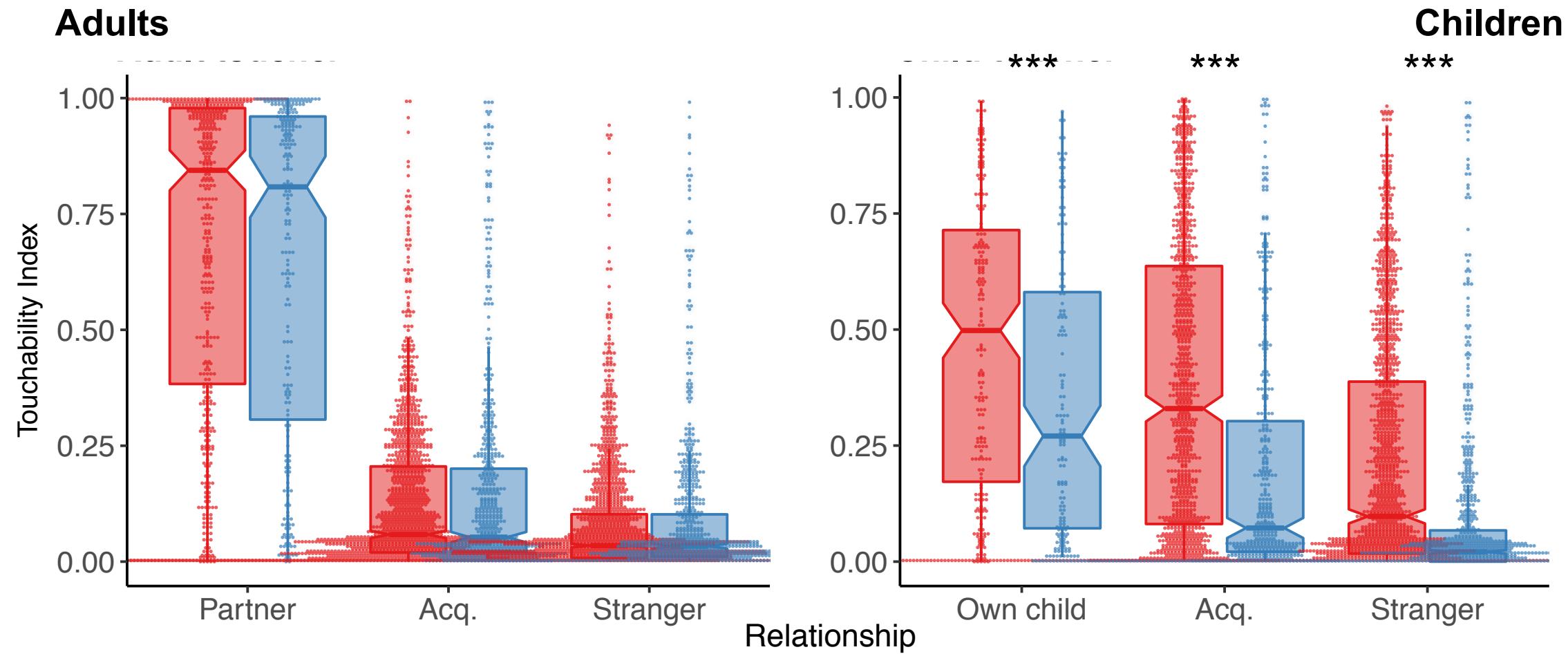


*** indicates $p < 0.001$ in two-sample t-test, Holm-Bonferroni corrected

Sex effects are different when being touched by adult vs child



The sex of the subject impacts TI for children

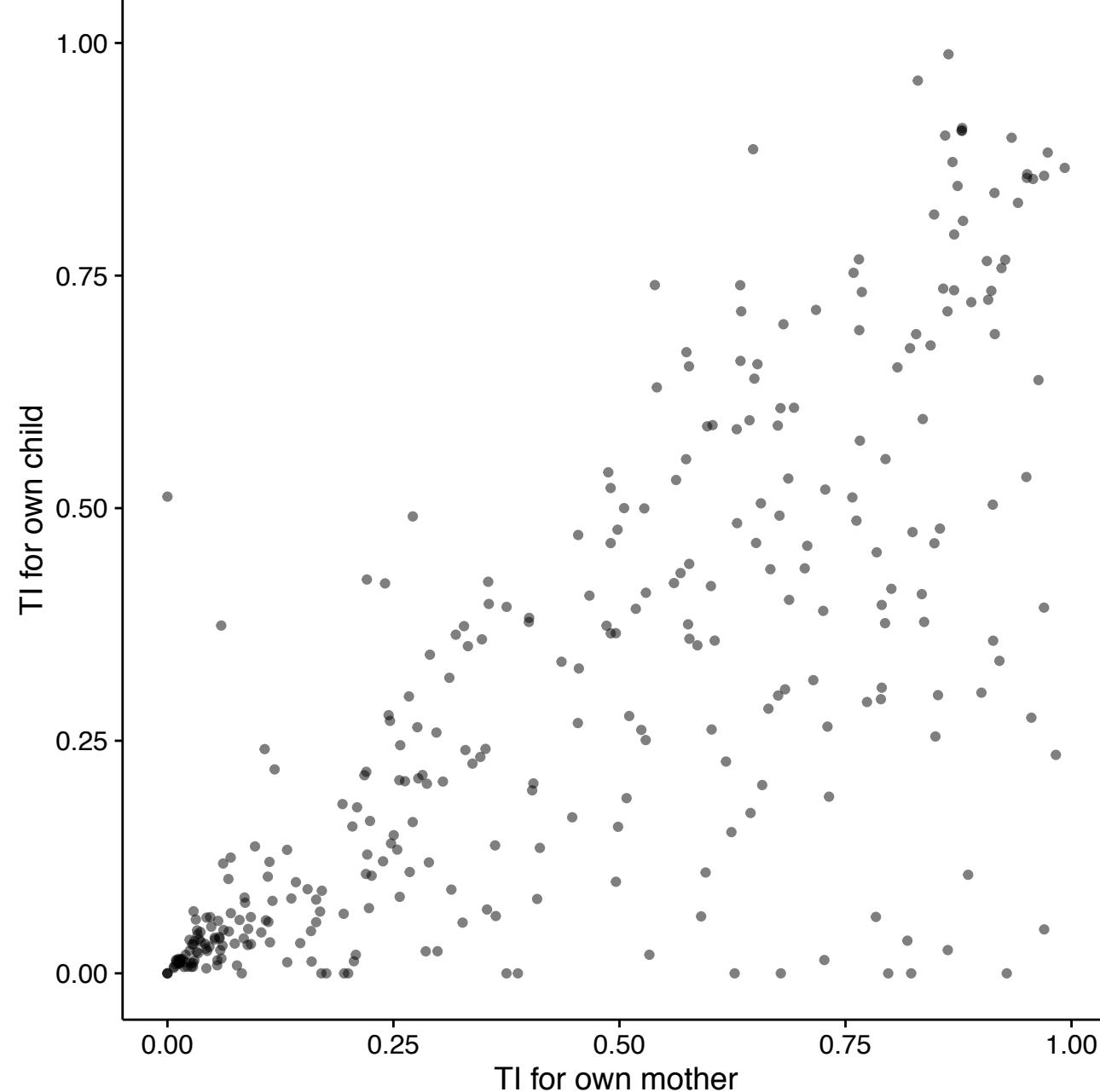


*** indicates $p < 0.001$ in two-sample t-test, Holm-Bonferroni corrected

Bonus: heritability

TI for mother
explains TI for
child

$F(1, 323) = 450.2$, p-value: < 2.2e-16
Adjusted R-squared: 0.581



Conclusion

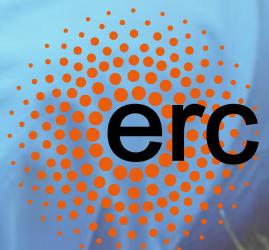
- Touch allowances for children are relationship-specific
- The baseline touchability is higher in children than in adults, but slope is more gradual
- The sex effects are different when being touched by adult or child
 - We modulate touch allowances based on the sex of the adult toucher
 - Males and females have different touch allowances for children

Acknowledgements

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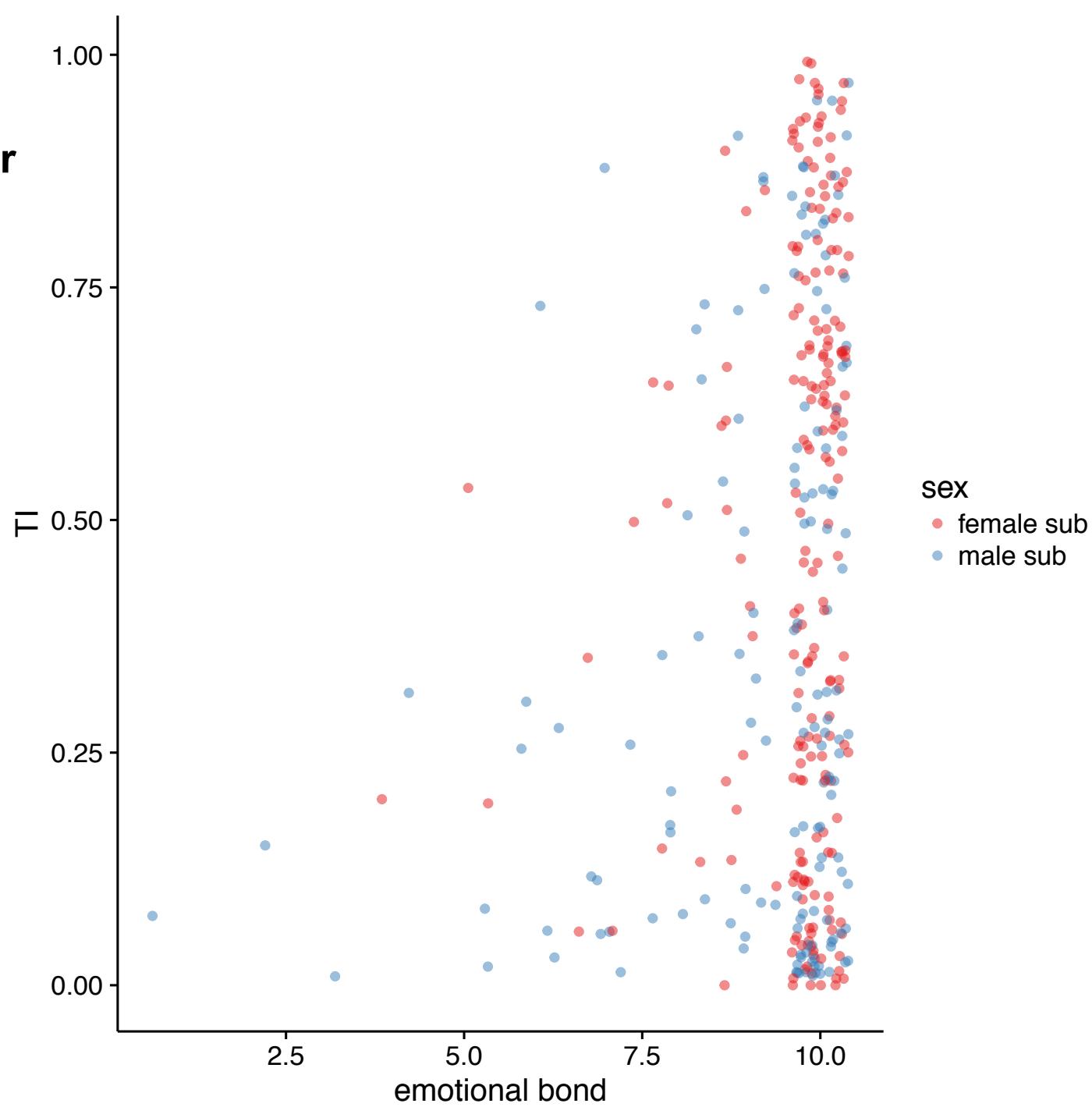
Slides will be available at <http://users.aalto.fi/~jtsuvile>



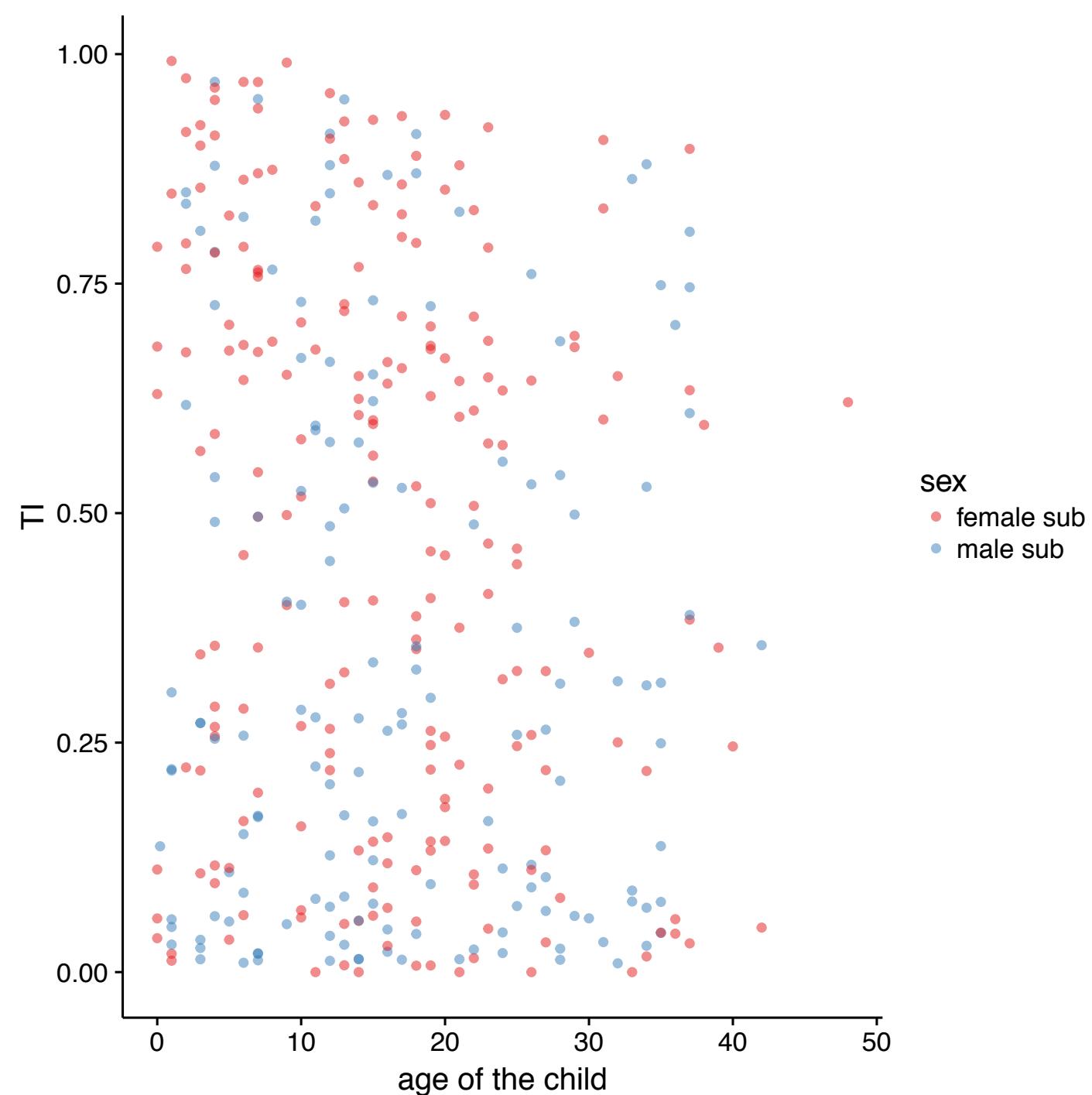
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Extra figures

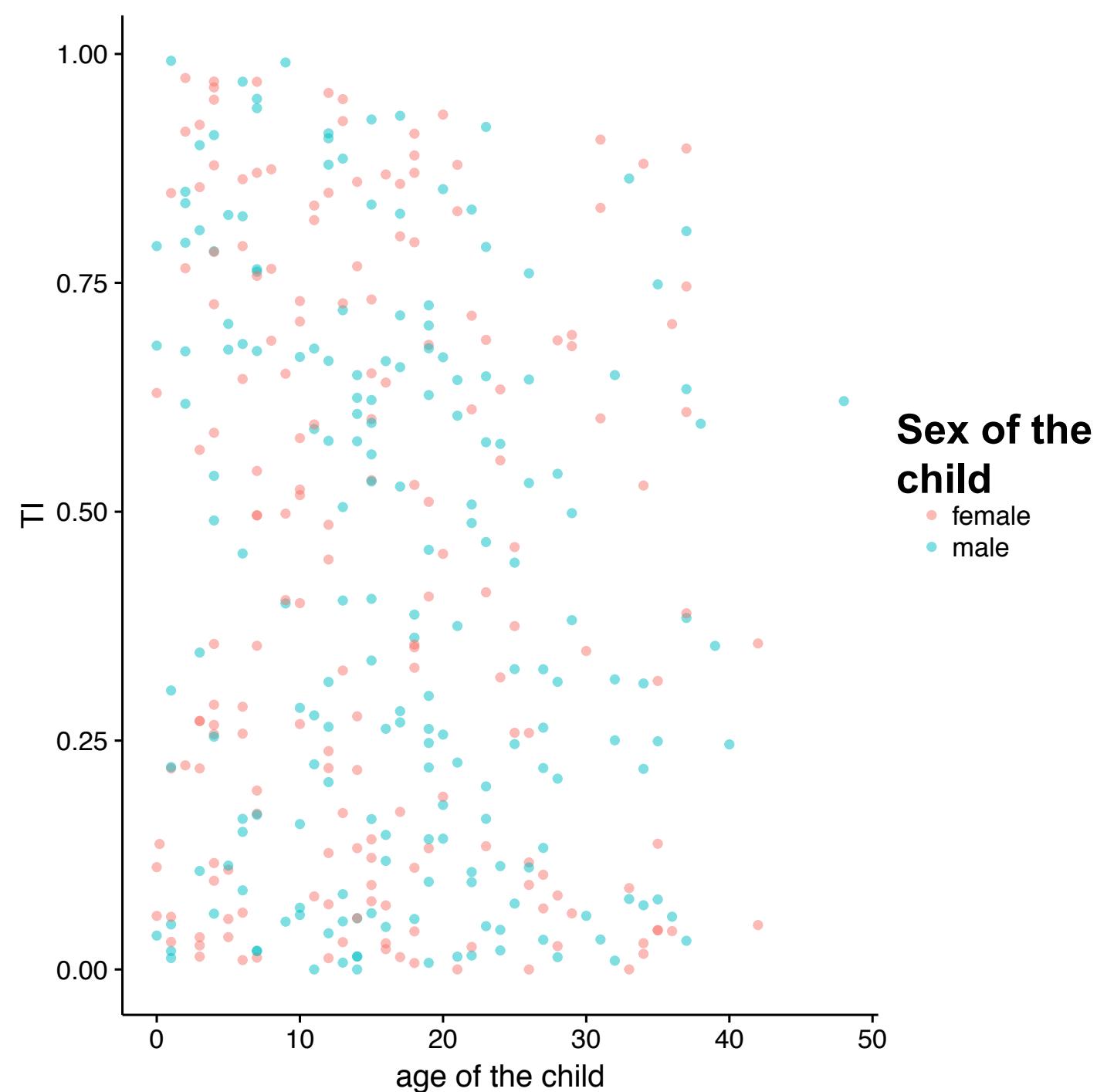
Touchability Index and emotional bond for own child (unaveraged data)



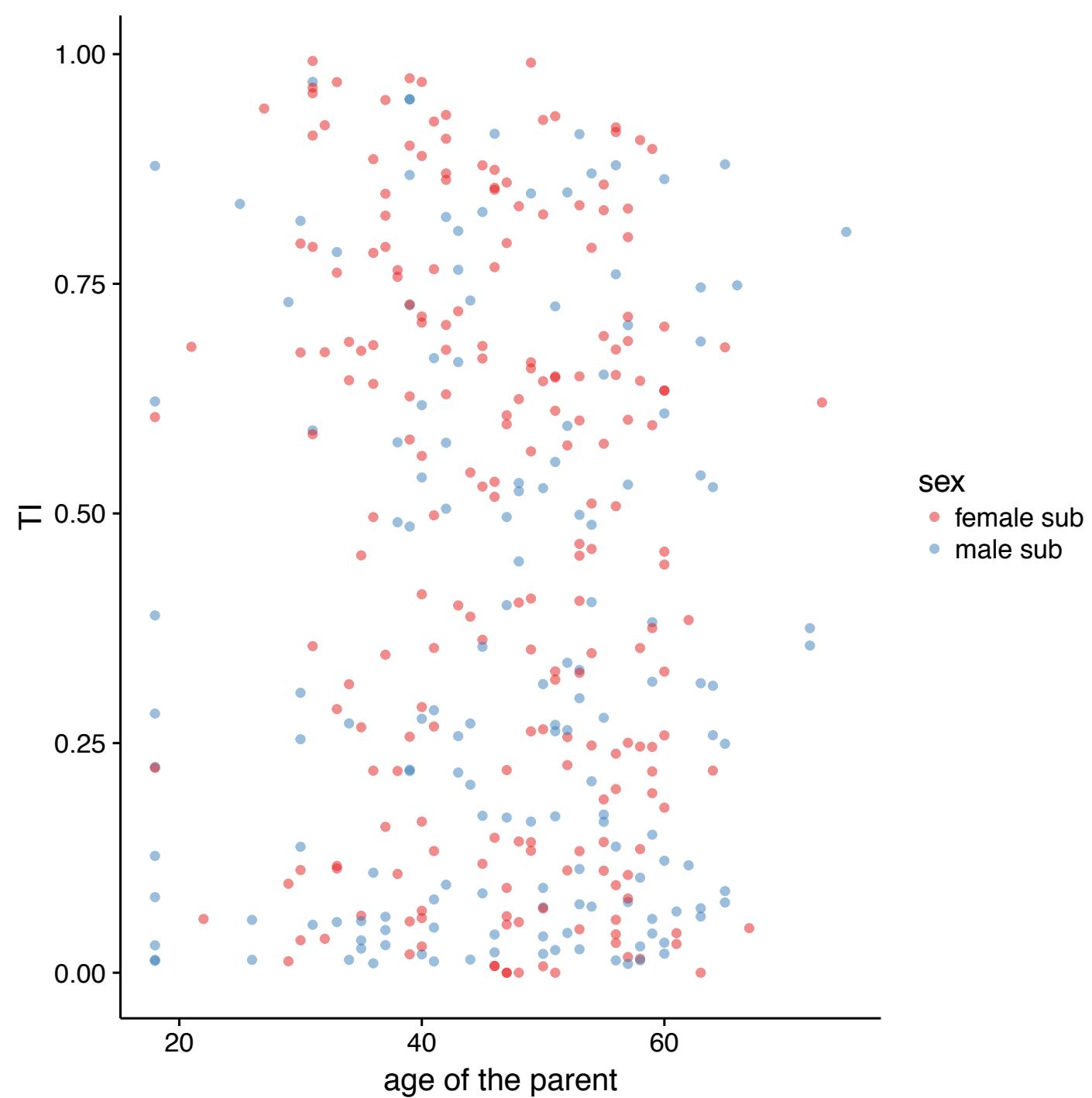
Touchability Index and age of child for own child (unaveraged data)



Touchability Index and age of child for own child (unaveraged data)



Touchability Index and age of parent for own child (unaveraged data)



Touchability towards father and child

F(1,232) = 269.7, p-value: < 2.2e-16

Adjusted R-squared: 0.5356

Correlation between touchability
for mom and touchability for dad
 $r = 0.8243247$

for comparison, correlation
between touchability for own
child and a female acquaintance
 $r = 0.4948146$,
Adjusted R-squared: 0.2431

