

A Network Approach to Examine Gender Differences in Word Associations for Singlish Words



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Introduction

What is Singlish?

Singapore Colloquial English (SCE); the low variety of the English spoken in Singapore, in contrast to the high variety of Singapore Standard English (Cavallaro et al., 2020)

Different *grammar* and *vocabulary* from more "standard" varieties of English (e.g. British, American, or Australian English)

- "Why are you like that?" → "Why you so like that one?"
- wayang*: pretend to be hard at work, to put up a front (from Malay, "a stage-show using puppets")

Motivation

Gender differences exist in the perception of word meanings of standard English words (De Deyne et al., 2023) → does the difference carry over Singlish, which is mainly used in an informal and conversational context?

Different shared experiences in Singapore: National Service

Men in Singapore are required to serve a compulsory term in either the military or civil defense for two years (24 months).

Does the presence of a milestone event for men but not women asymmetrically affect their exposure to and perception of Singlish words and phrases?

Method

Participants were presented with a cue and provide up to three associations via typing; paradigm from De Deyne et al.'s *Small World of Words* (2019)

boleh

Enter a word that comes to your mind

Enter a word that comes to your mind

Enter a word that comes to your mind

☐ I do not know this word

Progress

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Figure 1. Word Association Task as seen by participants

Stimuli: 228 Singlish words and short phrases curated from [Wikipedia](#)

Participants: 2,646 total

- 1,287 (48.6%) male, 1,359 (51.4%) female
- Ethnicity: 2,139 (80.8%) Chinese, 326 (12.3%) Malay, 134 (5.06%) Indian, 47 (1.78%) other

Results

Two **networks** of words were constructed from the original stimuli and participant responses; one network constructed from responses by men, other network constructed from responses by women
The differences in various *network measures* were calculated; statistical significance was evaluated by comparison against a baseline distribution of networks generated via bootstrapping.

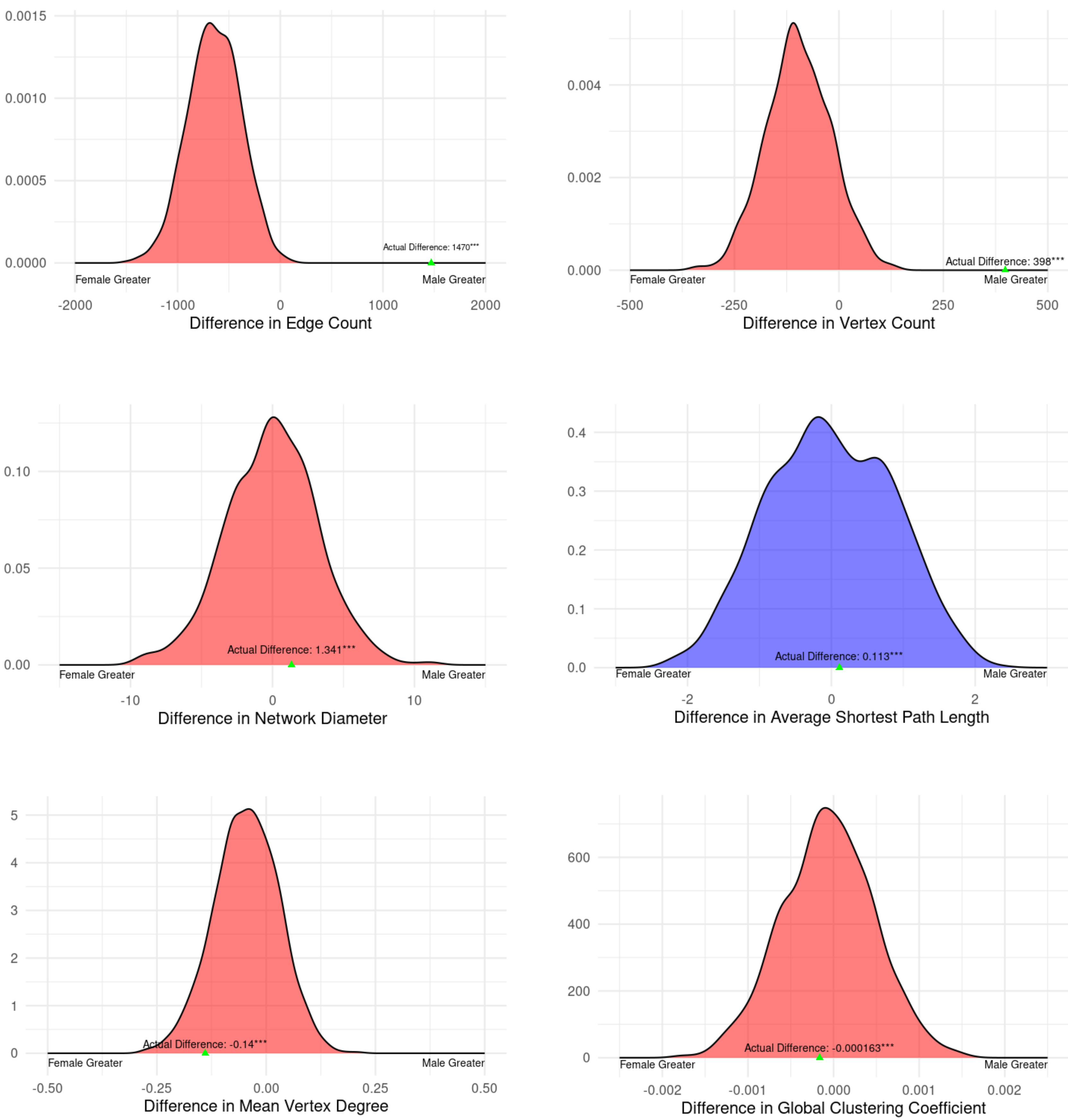


Figure 2. Actual differences compared to the distribution of differences found from generated networks. The probability density plots show the likelihood of each value of difference; the area under the curve sums to 1. All differences were found to be significant ($p < 0.001^{***}$) on one-sample Wilcoxon signed-rank tests.

Singlish concept	Brief definition	Top associates (male)	Top associates (female)
white horse	son of an VIP	person, rich, privileged, son, someone	son, person, rich, privileged, prince
ORD	"operationally ready date"; day where one finishes full-time conscription	NS, date, ready, army, service	ready, date, NS, army, finish
11B	identity card of conscripts	card, army, IC, NS, identity	army, IC, card, NS, ID
chao geng	malingering; feigning illness	pretend, sick, act, sickness, malingering	pretend, sick, act, fake, lazy
occifer	misspelling of "officer"	officer, army, police, singlish, NS	officer, army, police, official, fun
tekan	punishment, hazing	punish, bully, torture, pressure, press	bully, punish, torture, pressure, press

Table 3. Singlish concepts pertaining to Singapore's National Service, along with their definitions and top five associates for men and women.

Discussion

Significant differences between men and women were found in the structure of their mental lexicons as pertains to Singlish words.

- Evidence for the idea that differing shared experiences affect each gender's perception of Singlish

Further analysis can be done on the perception of standard English words within the Singaporean population to investigate if differences in experience persist on words that are less culturally pervasive

Cavallaro, F., Ng, B. C., & Tan, Y. Y. (2020). Singapore English. In K. Bolton, W. Botha, & A. Kirkpatrick (Eds.), *The Handbook of Asian Englishes*. John Wiley & Sons.

De Deyne, S., Navarro, D. J., Perfors, A., Brysbaert, M., & Storms, G. (2019). The "Small World of Words" English word association norms for over 12,000 cue words. *Behavior research methods*, 51, 987-1006.

De Deyne, S., Warner, S., & Perfors, A. (2023). Common words, uncommon meanings: Evidence for widespread gender differences in word meaning. In *Proceedings of the Annual Meeting of the Cognitive Science Society* (Vol. 45, No. 45).



singlishwords.nus.edu.sg
Check out the study!