Airbnb's reputation system and gender differences among guests

Similar but different?

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airbnb

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Presenter: Eunseo Choi

VS

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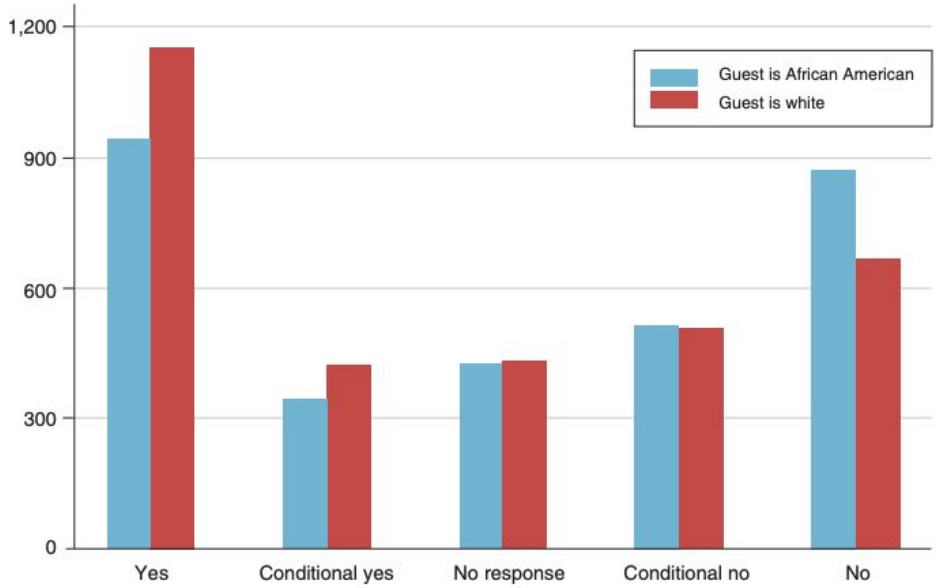
Host Response by Race



African-American guests were **16%** less likely to be accepted compared to white guests!

Edelman, B., Luca, M., Svirsky, D.: Racial discrimination in the sharing economy: Evidence from a field experiment. American Economic Journal: Applied Economics 9(2), 1–22 (April 2017). https://doi.org/10.1257/app.20160213

Where are you going?

Special Winter Pricing-Great Area!

Booking

Calendar

Pricing

Instant Book ON

Listing

Basics

Description

Location

Instant Book is On

Guests can book immediately. No need for you to approve every request.

Who Can Book

- (•) Anyone in the Airbnb Community
- ( ) Only guests recommended by other hosts

Angela

Francesca was a wonderful host. Her book of recommendations was super helpful and her apartment is in the perfect location near the Forum but tucked into perfectly cute and safe alleyways away from crowds. I stupidly left my passport wallet in the taxi on the way from the airport and Elisabetta helped me get in touch with the taxi driver! Great host. Highly recommend.

September 2015 Helpful

Mike & Diane

Francesca is very friendly and accomodating. She communicates well. Diane appreciated her apartment from the female perspective! The kitchen and bathroom appointments made it easy for her to get ready for Roma. Her apartment is perfectly situated in central Rome. We were surprised how quiet it was for being right in the heart of the historic district.

September 2015 Helpful 1

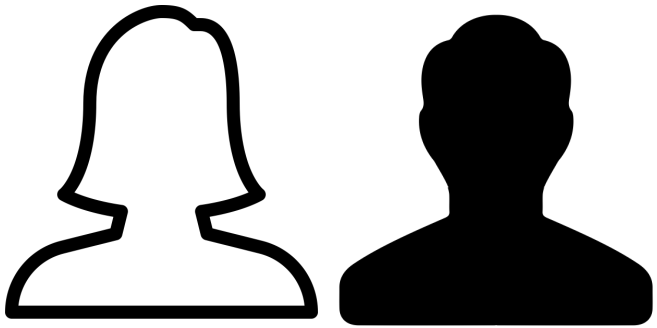
Research Questions

RQ 1 : Is there a gender imbalance in participation on Airbnb?

RQ 2: Is there a preference for hosts of either gender?

RQ 3: Do reviewers of a specific gender carry more weight?

RQ 4: Does sensitivity to review sentiments differ by gender?



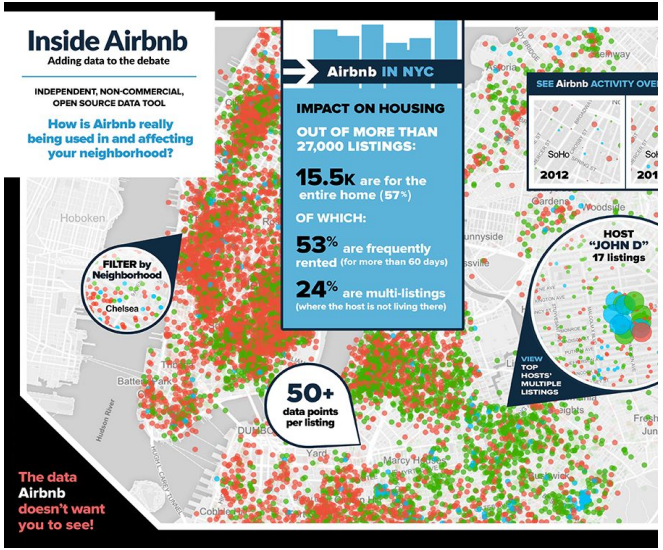
HOW

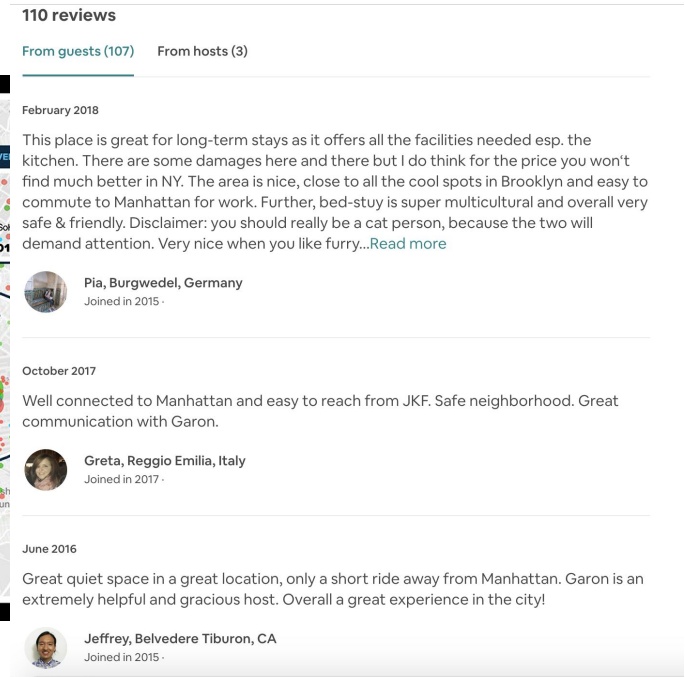
Large-scale Data analysis + Controlled Experiments → Uncover gendered attitudes on Airbnb

18,123 LISTINGS & 169,632 REVIEWS

Reviews from
2009-01-10 ~
2017-05-10

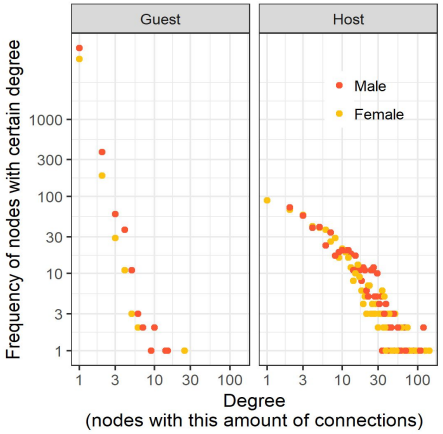
Data on Actual Bookings



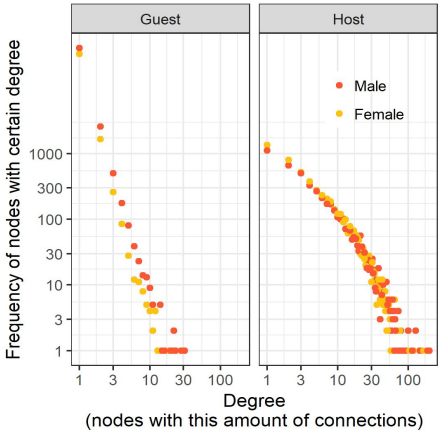


Presenter: Eunseo Choi

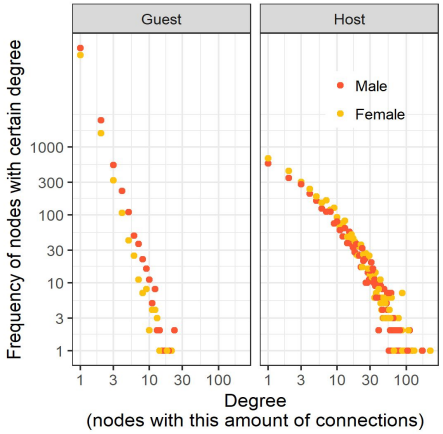
Users' Presence and Frequency of Activity



NYC



LA



CHICAGO

	NYC	LA	Chicago
Female hosts	5,445	3,483	627
Male hosts	4,898	2,908	690
Female reviewers	35,167	24,584	6,336
Male reviewers	43,706	31,749	8,884
Total reviews	87,241	65,339	16,271

Degree distributions of networks built for each city.
Bipartite networks connect each host having a listing to those guests who left a review

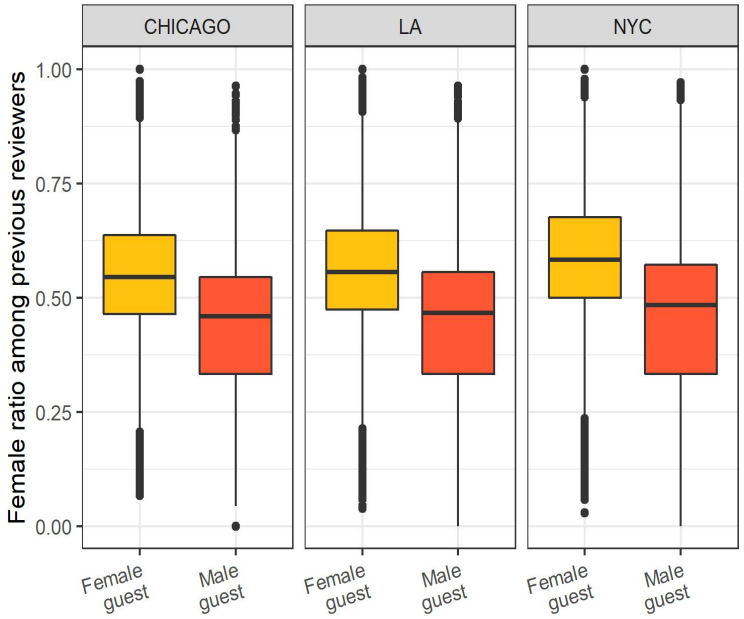
(Mann-Whitney U tests: $p < 0.001$)

Basic statistics of host-reviewer networks built for each city

Homophily Index

Female guests choose listings reviewed by more females

Male guests choose listings reviewed by more males

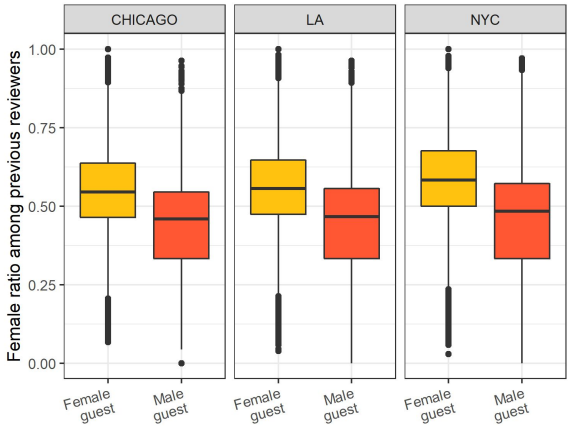


# of prior female reviewers on a listing

Total # of prior reviewers on a listing

(Chi-squared tests: $p < 0.001$)

Homophily Index



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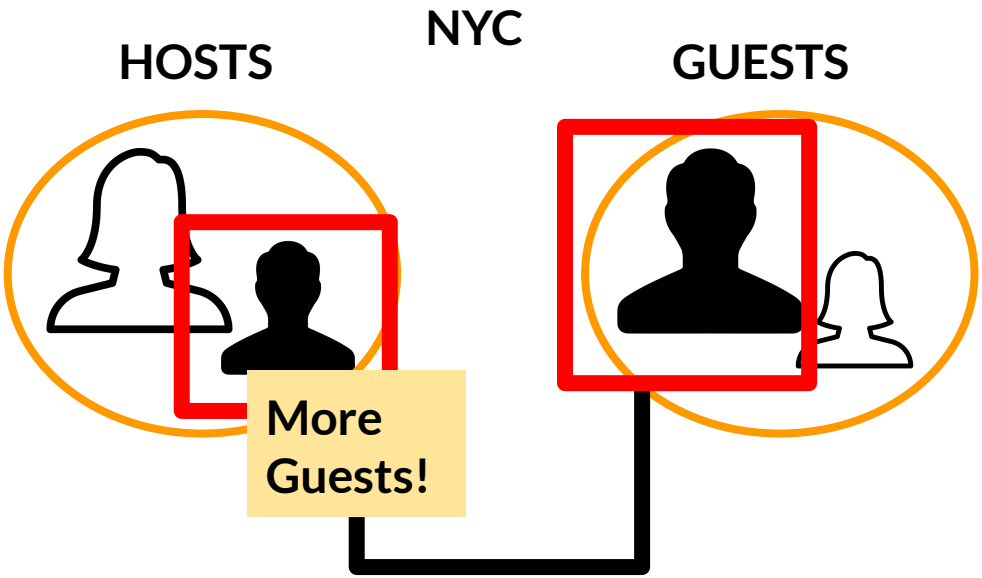
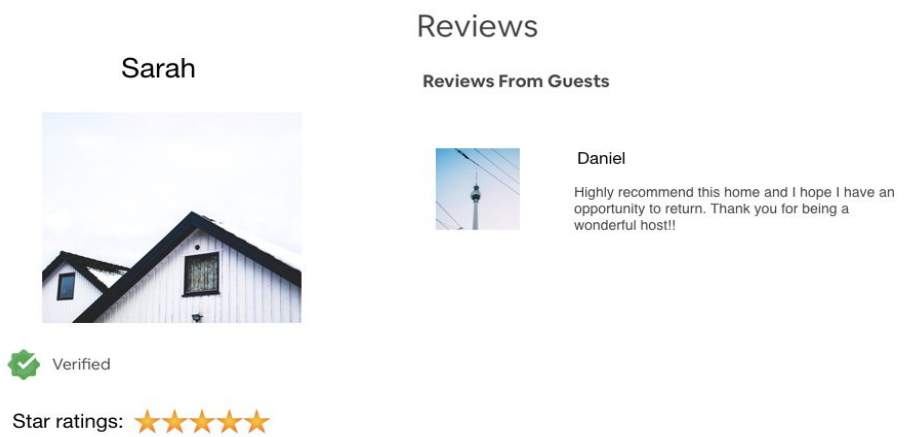
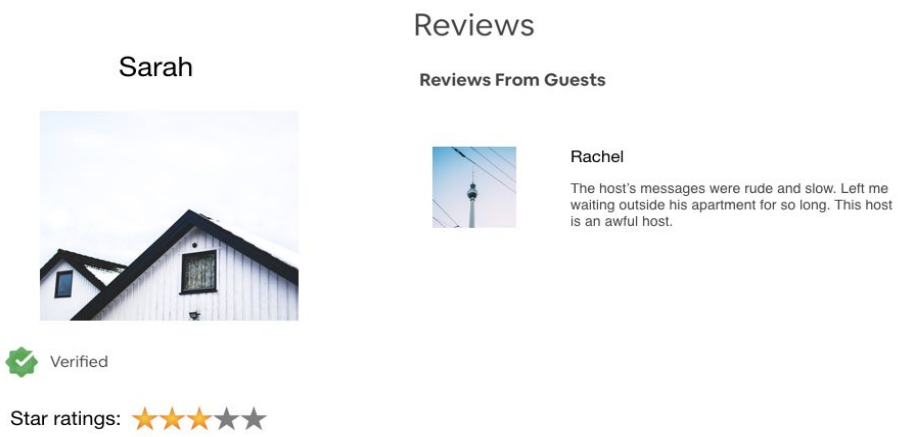


N = 1041

Mechanical Turk Experiment





Paolacci, Gabriele and Chandler, Jesse and Ipeirotis, Panagiotis G., Running Experiments on Amazon Mechanical Turk (June 24, 2010). Judgment and Decision Making, Vol. 5, No. 5, 411-419. Available at SSRN: https://ssrn.com/abstract=1626226

RQ 1 : Is there a gender imbalance in participation on Airbnb?

Modeling Booking Rate

Variable	Coeff	SD
Female host	-0.28	0.24
Positive review	3.07***	0.31
Female guest	-2.12***	0.64
Female guest x Female host	1.03**	0.34
Female reviewer	0.10	0.24
Female guest x Female reviewer	-0.18	0.34
Female guest x Positive review	1.67**	0.61
Stars	0.40*	0.17
Constant	0.14	1.45
Deviance = 809.95		
Penalized Deviance = 781.76		
McFadden's pseudo R^2 = 0.36		

RQ 2: Is there a preference for hosts of either gender?

Modeling Booking Rate

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RQ 3: Do reviewers of a specific gender carry more weight?

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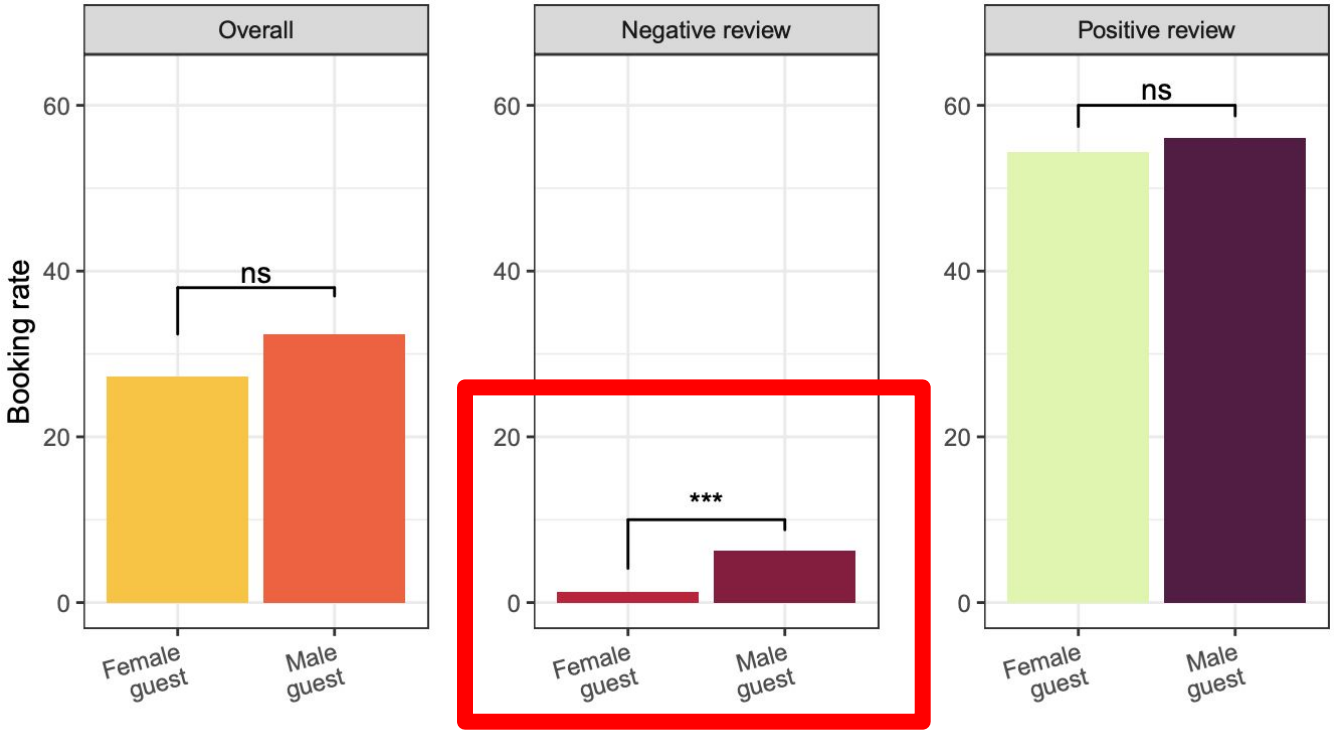
...For Future Research

RQ 4: Does sensitivity to review sentiments differ by gender?

The Effect of Review Sentiments



(Chi-squared tests: p = 0.006)

HOTEL

>

airbnb

Contributions

- **Gender imbalance in participation on Airbnb**
  - Females are more risk-averse → effectively opted out of using the platform.
- **Effect of host's gender on guests' booking decisions**
  - Gender homophily among guests of both gender when choosing hosts as a strategy to deal with uncertainty
- **Gender-differential effect of review sentiments**
  - One positive review leads to a sizeable increase in booking rates for both male and female guests
  - Female guests were more sensitive to negative reviews than male participants

Thank you

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We are grateful to all the anonymous Mechanical Turk workers who participated in our studies. We also thank Joshua Becker and Johannes Wachs for their feedback

This work was supported in part by:

- Northwestern Undergraduate Summer Research grant
- the U.S. National Science Foundation (IIS-1755873)
- WCAS Conference Travel Grant from URG program administered by Northwestern University's Weinberg College of Arts and Sciences
- Conference Travel Grant from the Office of Undergraduate Research which is administered by Northwestern University's Office of the Provost.
- Conference Travel Grant from the Communication Studies Digital Module program administered by Northwestern University's School of Communication