Ratings with Heterogenous Preferences

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Ratings

What are ratings?

- Ability to convey messages about product quality

Influential

- Build trust between anonymous users (Cai Jin Liu Zhou IJIO 2014)
- Better ratings → higher prices/demand (Cabral Hortacsu JIE 2010; Dellarocas Zhang Awad JIM 2007; Li Tadelis Zhou RAND 2020; Luca Reshef MS 2021; Mayzlin Dover Chevalier AER 2014; etc...)

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What a rating represents?

- Some socially agreed upon notion (belief based)
- One-dimensional world: quality / value-for-money
- Multi-dimensional products?

This paper

Multi-dimensional products

- Objective vertical preference

This paper

Multi-dimensional products

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  - Shoes
    - Comfort – cushioning
    - Weight

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  - Hotels
    - Service – staff
    - Amenities – availability of gym/restaurants

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Heterogeneous Preferences

- Comfort over weight
- Service over amenities
- No longer obvious how to form beliefs

This paper

How do individuals interpret ratings?

Theory

- Equilibrium beliefs over ratings

Experiment

- Do raters and consumers interpret ratings similarly?

Information design

- Verifiable Attribute (weight/amenities)
- Rater's Preferences

Information design

verifiable weight

Information design

verifiable weight

Reviewed in Germany on July 16, 2023
Size: 44 EU | Color: White | **Verified Purchase**

The Nike Court Vision sneaker completely convinced me. I recently purchased the shoe and am more than happy with my choice. The retro design gives it a cool and timeless look that goes with many of my outfits. The build quality is excellent, and the leather upper gives the shoe a high-quality feel. The wearing comfort is outstanding. The sneaker offers comfortable cushioning and a comfortable fit that allows me to wear it for hours without my feet getting tired. The grippy outsole offers good traction on various surfaces, which is particularly advantageous during sporting activities. I am also impressed with the durability of the shoe as it still looks like new even after several weeks of heavy use. All in all, I can highly recommend the Nike Court Vision sneaker. It combines style, comfort and quality in an excellent way.

3 people found this helpful

Preference for comfort

Information design

Company equipment and services | Interior of the rooms | Room types

- Paid public parking on site
- Bar/Lounge
- Luggage storage
- Check-in 24/7
- Street parking
- restaurant
- umbrella
- Chemical cleaning
- Shoe shine service
- Free high-speed internet (WLAN)
- Business center with internet access
- Newspaper
- Reception manned around the clock
- WIRELESS INTERNET ACCESS
- breakfast buffet
- Express check-in/check-out
- Laundry service

verifiable amenities

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verifiable amenities

●●●●●

Not the first time and certainly not the last time

Very central, located, good value for money and very friendly staff. There is still potential in the transmission of data during online check-in. The public transport card and the vouchers for waiving room cleaning must still be picked up at the check-in desk. So I went straight there for the room card and not to the machine. However, the employee was not procedurally advised to issue me the public transport ticket or the vouchers. However, this was very kindly corrected upon request.

Ralf H wrote a review Jan 2024.
Nalbach, Germany • 9 posts • 4 "Helpful" ratings

●●●●○

Good and clean hotel with nice staff.

You can feel comfortable there and relax and sleep in thanks to the soundproof rooms. The cleaning service is also very friendly; the people at the reception anyway. Central location and shopping opportunities in the nearby main station,

Preferences revealed

Information design

Company equipment and services | Interior of the rooms | Room types

- Paid public parking on site
- Bar/Lounge
- Luggage storage
- Check-in 24/7
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verifiable amenities

Ralf H wrote a review
Jan 2024

●●●●○

Inviting for a quiet overnight stay.

"Nice, soundproof rooms, good for relaxing: unfortunately very "lonely". No restaurant nearby, just the train station service. The staff and the ..."

Date of stay: January 2024

IntercityHotel Darmstadt
●●●○○ 308 reviews
Darmstadt, Germany

Helpful Save Send

Ralf H wrote a review
Jan 2024

●●●●○

Good and clean hotel with nice staff.

"You can feel comfortable there and relax and sleep in thanks to the soundproof rooms. The cleaning service is also very friendly; the people at the reception ..."

Date of stay: January 2024

IntercityHotel Mannheim
●●●●○ 566 reviews
Mannheim, Germany

Helpful Save Send

Ralf H wrote a review
Oct. 2023

●●○○○

Restless house, sleep is hardly possible.

"The rooms are extremely noisy, there was unrest in the rooms and in the hallway until late at night. This price range lacks a refrigerator (e.g. insulin). The ..."

Date of stay: September 2023

Excelsior Hotel Ludwigshafen
●●○○○ 721 reviews
Ludwigshafen, Germany

Helpful Save Send

Ralf H wrote a review
Oct. 2023

●●●●○

Quiet and well-kept hotel in a central location

"Very nice and clean rooms, quiet, nice bathrooms. The location is ideal for reaching the main station and city center. Nice personel. I'm a regular customer there. ..."

Preferences revealed

Theory

Setting

- Two period
- Two Consumers
  - Rater: period 1 consumer
  - Consumer: period 2 consumer
- Product with two attributes X and Y
  - $x \sim X, y \sim Y$
  - Distribution of X and Y are IID

Theory

Setting

- Utility: weighted sum of x and y

$$U_i = a_i x + b_i y - p$$

  - a_i and $b_i \in [0,1]$ are preference of rater/consumer

- Rating (R): positive (p), negative (n), none (∅)
  - Rating is costly (e)

Theory

Setting

- Utility: weighted sum of x and y

$$U_i = a_i x + b_i y - p$$

  - a_i and $b_i \in [0,1]$ are preference of rater/consumer

- Rating (R): positive (p), negative (n), none (∅)
  - Rating is costly (e)

- Information (I): Verifiable Attribute (x), Rater's Preferences (a_r, b_r)

		Product Information: No	Product Information: Yes
Rater Preferences	No	(i) None	(iii) Attr
	Yes	(ii) Pref	(iv) Both

Theory

- **Rating utility**
  - Altruism – expected utility of future consumer

Theory

- **Rating utility**
  - Altruism − expected utility of future consumer

$$U_r = \underbrace{a_r x + b_r y - p}_{\text{Consumption}} + \underbrace{\mathbb{1}_{E[U_c|I_c,R]\geq 0}\{\kappa E[U_c|x,y]\} - \mathbb{1}_{R\neq\emptyset}\{e\}}_{\text{Rating/Altruism}}$$

Theory

- **Rating utility**
  - Altruism − expected utility of future consumer

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Rating/Altruism

Theory

- **Rating utility**
  - Altruism − expected utility of future consumer

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- Mitigate harm (bad rating)

- Generate benefit (good rating)

Theory

- **Rating utility**
  - Altruism – expected utility of future consumer

$$U_r = a_r x + b_r y - p + \underbrace{\mathbb{1}_{E[U_c|I_c,R]\geq 0}\{\kappa E[U_c|x,y]\} - \mathbb{1}_{R\neq\emptyset}\{e\}}_{\text{Rating/Altruism}}$$

- Mitigate harm (bad rating)
  - $E[U_c|I_c, R = R_\emptyset] \geq 0$
  - $\kappa E[U_c|X, Y] < -e < 0$
  - $E[U_c|I_c, R = R_n] < 0$

- Generate benefit (good rating)

Theory

- **Rating utility**
  - Altruism − expected utility of future consumer

$$U_r = a_r x + b_r y - p + \underbrace{\mathbb{1}_{E[U_c|I_c,R]\geq 0}\{\kappa E[U_c|x,y]\} - \mathbb{1}_{R\neq\emptyset}\{e\}}_{\text{Rating/Altruism}}$$

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- Generate benefit (good rating)
  - $E[U_c|I_c, R = R_\emptyset] < 0$
  - $\kappa E[U_c|X,Y] > e > 0$
  - $E[U_c|I_c, R = R_p] \geq 0$

Equilibrium

Lemma

Multiple Equilibria Exists

- Map exact product attributes into coarse signal
- Depends on ability to agree on belief over rating

- $R = R_p$ if $F(x, y) > \overline{w}$
  R_n if $F(x, y) < \underline{w}$
  $R_\emptyset$ otherwise
  $\overline{w} > \underline{w}$, $F'_x(x, y) > 0$, $F'_y(x, y) > 0$

- Socially agreed upon meaning for usefulness

Prediction: None

Prediction 1

Raters rate independent of their own preferences, incorporating both x and y into their rating.

- Change consumers decision – expectation conditional only on rating

Hypothesis 1

Ratings reflect the preferences of the average rater.

Prediction: Pref

Prediction 2

When raters preferences are common knowledge, raters rate according to their own preferences.

- Common information becomes a focal point for information transmission

Prediction: Pref

Prediction 2

When raters preferences are common knowledge, raters rate according to their own preferences.

- Common information becomes a focal point for information transmission

Hypothesis 2A

Ratings are more sensitive to rater's preference in Pref than in None treatment.

Prediction: Pref

Prediction 2

When raters preferences are common knowledge, raters rate according to their own preferences.

- Common information becomes a focal point for information transmission

Hypothesis 2A

Ratings are more sensitive to rater's preference in Pref than in None treatment.

Hypothesis 2B

WTP of consumers who share rater's preference are more sensitive to ratings.

Prediction: Attr

Prediction 3

When some attribute of a product is common knowledge, raters rate only for the unknown attributes.

- Altruistic raters want most informative ratings, which should shed light on unknown product attributes.

Prediction: Attr

Prediction 3

When some attribute of a product is common knowledge, raters rate only for the unknown attributes.

- Altruistic raters want most informative ratings, which should shed light on unknown product attributes.

Hypothesis 3A

Ratings are unaffected by revealed attribute.

Prediction: Attr

Prediction 3

When some attribute of a product is common knowledge, raters rate only for the unknown attributes.

- Altruistic raters want most informative ratings, which should shed light on unknown product attributes.

Hypothesis 3A

Ratings are unaffected by revealed attribute.

Hypothesis 3B

WTP of consumers who do not prefer the revealed attribute are more sensitive to ratings than those that prefer the revealed attribute.

Experiment

Prolific / oTree

502 subjects from US population

- split as ″raters″ and ″consumers″ across
- 4 treatments:
  - None
  - Pref – rater preference
  - Attr – X
  - Both

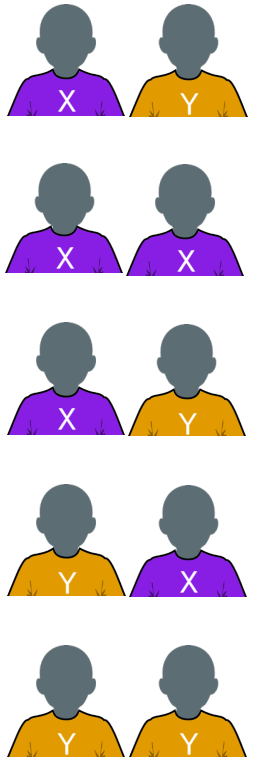
13 minutes / 6.37 USD

20 rounds

Raters

Randomly assigned a preference of X or Y

- Prefer X: $1 \times x + 0.1 \times y$
- Prefer Y: $1 \times y + 0.1 \times x$



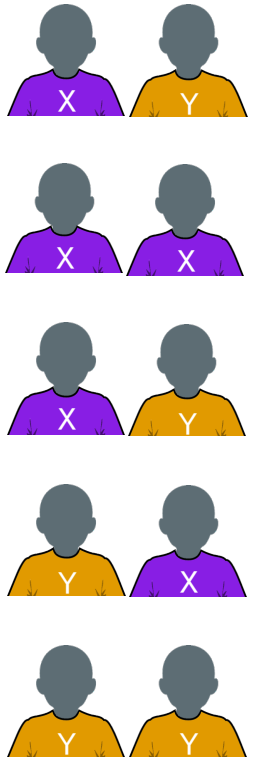
Raters

Randomly assigned a preference of X or Y

- Prefer X: $1 \times x + 0.1 \times y$
- Prefer Y: $1 \times y + 0.1 \times x$

Draw product values

- $X \sim U\{1,10\}$
- $Y \sim U\{1,10\}$



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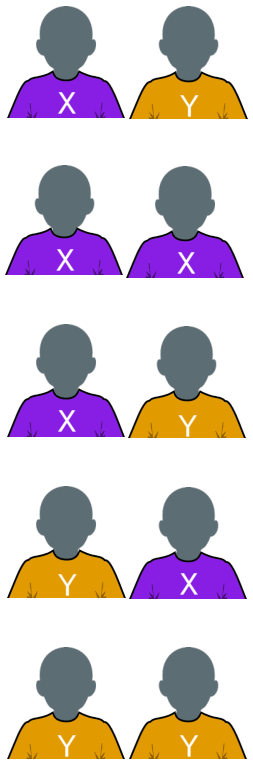
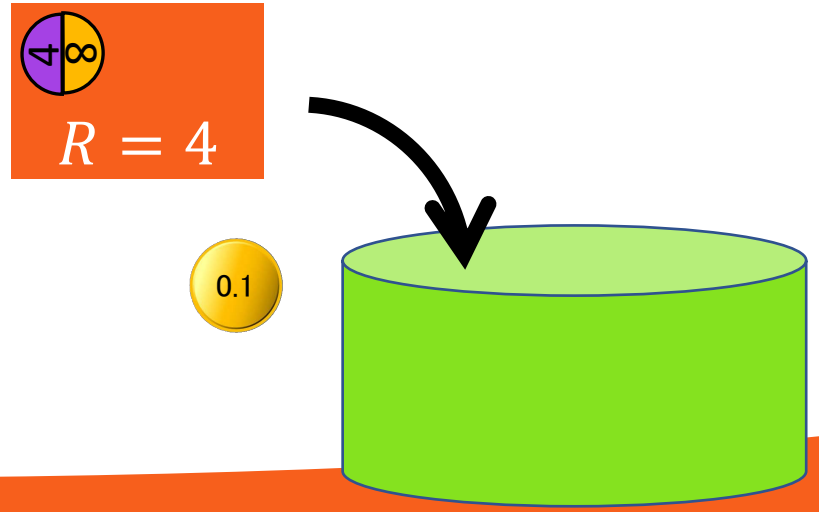
Draw product values
- $X \sim U\{1,10\}$
- $Y \sim U\{1,10\}$

Rating decision
- On a scale of 1 to 5 (5 best, 1 worst)
- Choice to send rating
  - Small cost of 0.1





Raters

You are **type 2**. Your weights are:

w_1	0.1
w_2	1

In this round, the prize is made up of:

X_1	6
X_2	7

The value of this prize for a **type 1** participant is 6.7 tokens.
The value of this prize for a **type 2** participant is 7.6 tokens.

How do you rate this prize?

○ 1 ○ 2 ○ 3 ○ 4 ○ 5

Raters

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X_1	6
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The value of this prize for a **type 1** participant is 6.7 tokens.
The value of this prize for a **type 2** participant is 7.6 tokens.

Do you wish to pay 0.10 tokens to share your rating with future participants?

- ○ Yes
- ○ No

Consumers

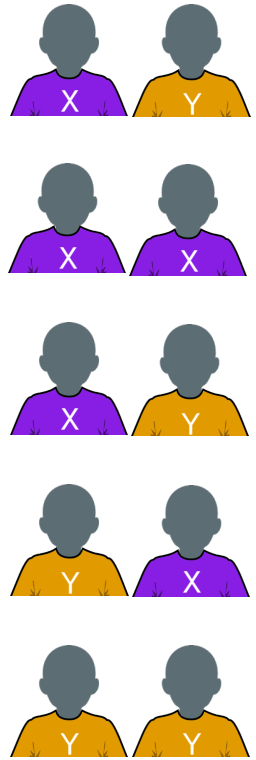
Randomly assigned a preference of X or Y

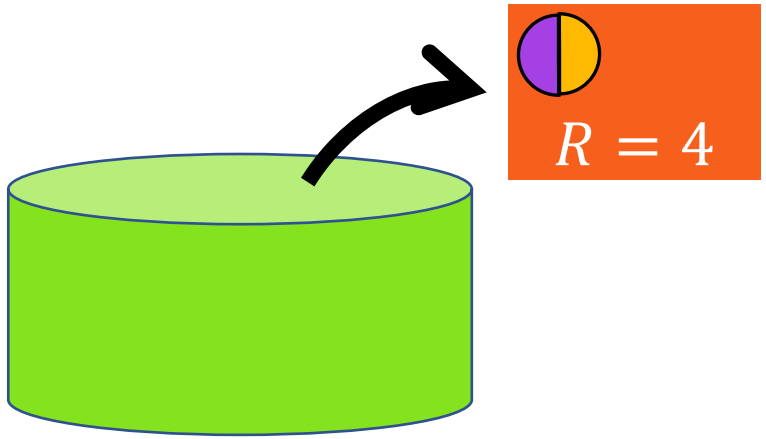
- Prefer X: $1 \times x + 0.1 \times y$
- Prefer Y: $1 \times y + 0.1 \times x$

Draw a product with sent ratings

- Also small session for "unsent ratings"

Report WTP through BDM





Consumers

You are **type 1**. Your weights are:

w_1	1
w_2	0.1

In this round:

Rating sent by previous participant:	5

As a reminder, the list of questions and an explanation of how your payment will be determined are included below.

At which question will you switch?

Treatments

You are **type 1**. Your weights are:

w_1	1
w_2	0.1

A previous participant evaluated the prize for this round and sent a rating of **5**.

The previous participant was **type 2**.

For this prize, X_1 took the number **5**. You will learn the number X_2 took at the end of the round.

As a reminder, ratings are on a scale of 1 to 5, where 1 is the worst rating and 5 is the best.
The list of questions is included below for your reference.

At which question will you switch to Option B?

Be sure to enter a number between 1 and 110 inclusive.

Summary Stats

	None	Pref	Attr	Both
Raters				
Mean rating	3.25	3.16	3.26	3.27
	(1.38)	(1.35)	(1.30)	(1.33)
Ratings sent (%)	23	28	20	35
Mean sent rating	3.87	3.57	3.59	3.84
	(1.21)	(1.41)	(1.45)	(1.27)
Subjects	51	51	50	50
Consumers (with ratings)				
Mean WTP	54.65	54.39	60.40	61.00
	(29.54)	(31.77)	(32.54)	(27.96)
Mean x	5.09	6.84	6.80	6.54
	(3.18)	(2.92)	(2.36)	(2.90)
Mean y	6.73	5.76	5.71	6.06
	(2.68)	(2.75)	(2.71)	(2.47)
Subjects	50	50	50	50
Consumers (without ratings)				
Mean WTP	52.46	54.05	52.49	49.42
	(28.33)	(27.90)	(32.41)	(30.50)
Mean x	5.60	6.77	5.81	5.16
	(2.90)	(2.88)	(2.91)	(2.62)
Mean y	5.65	5.84	5.50	5.33
	(2.78)	(2.83)	(2.76)	(2.51)
Subjects	25	25	25	25

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Subjects	25	25	25	25

- Sent rating consistent with other experiments
- Similar mean rating across treatment
- Variation across sent ratings

- Mean WTP only increase in Attr

Dirty results

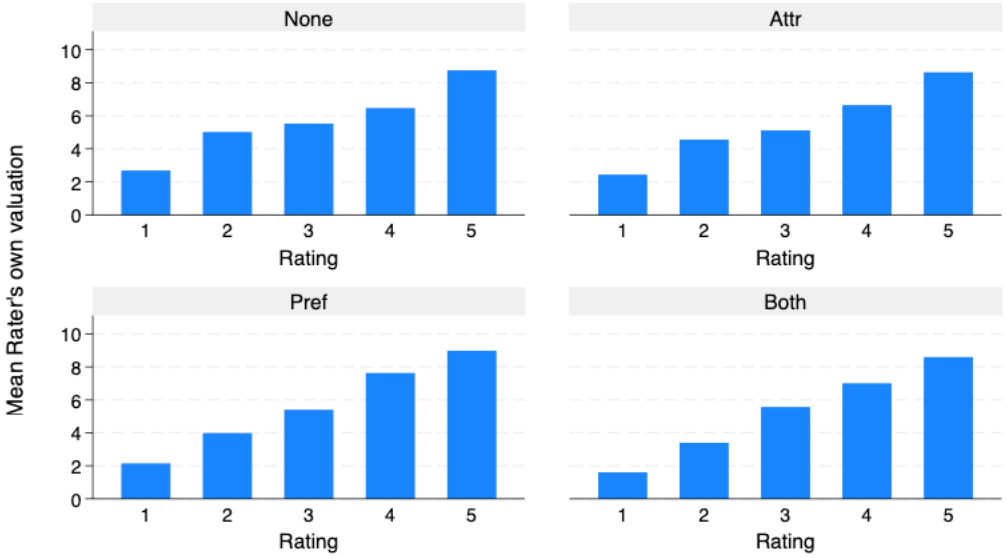
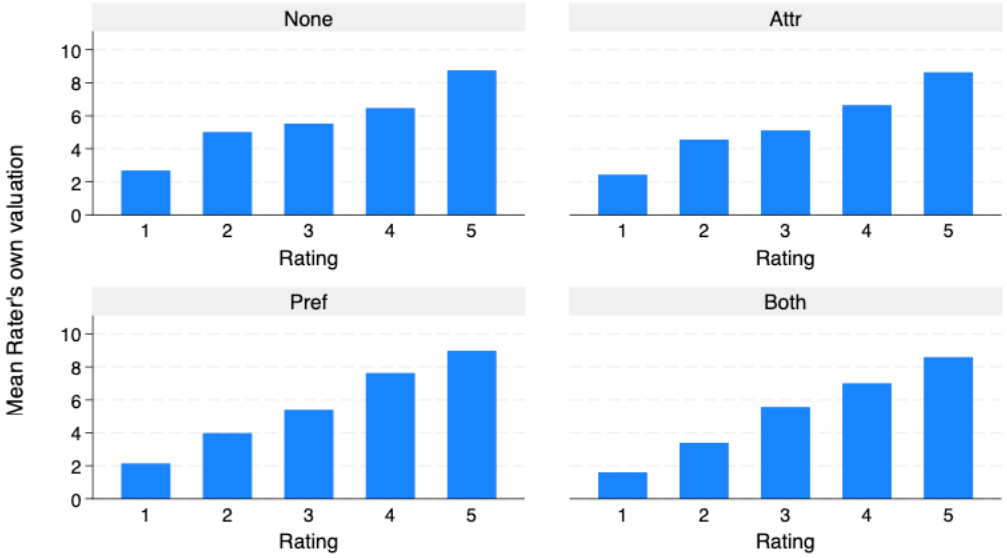


Figure 1: The average value of the prize to the rater, for each sent rating.

Dirty results



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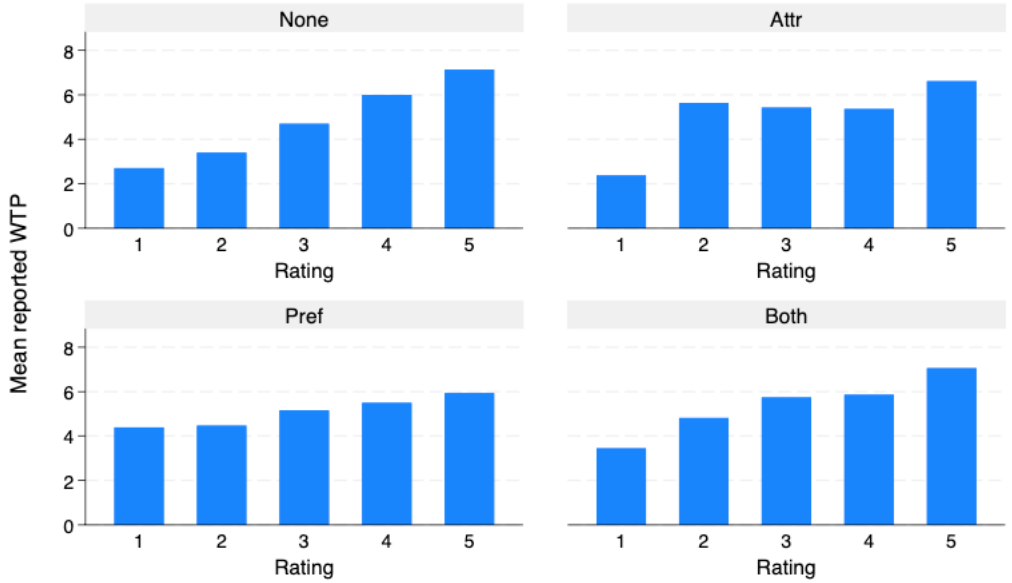

Figure 2: Mean WTP for consumers observing each rating, across treatments.

Results: Rater

- Send decision:
  - Mostly driven by own value
  - Explain differences seen in sum stats

	(1)	(2)	(3)	(4)
	Choice of Rating (Tobit)			Choice to Send (LPM)
	All Ratings	Sent Ratings	Sent Ratings	All Ratings
Ownvalue	0.47***	0.44***		0.022***
	(0.030)	(0.067)		(0.0055)
Othervalue	0.069**	0.061		0.0071*
	(0.028)	(0.050)		(0.0040)
x			0.37***	
			(0.065)	
y			0.28***	
			(0.063)	
Pref	0.12	-1.01*		0.053
	(0.23)	(0.52)		(0.055)
Attr	0.24	0.56	0.90	0.028
	(0.23)	(0.52)	(0.66)	(0.053)
Pref × ownvalue	0.048	0.18**		0.016**
	(0.034)	(0.070)		(0.0078)
Pref × othervalue	-0.074**	-0.012		-0.0073
	(0.031)	(0.053)		(0.0052)
Attr × ownvalue	-0.021	0.0010		0.0063
	(0.034)	(0.072)		(0.0074)
Attr × othervalue	-0.0052	-0.076		-0.0066
	(0.031)	(0.052)		(0.0053)
Attr × x			-0.12	
			(0.087)	
Attr × y			-0.014	
			(0.095)	
Round	-0.014***	-0.024**	-0.019*	-0.0018*
	(0.0041)	(0.0010)	(0.011)	(0.0011)
Constant	0.46**	1.13**	0.53	0.058
	(0.22)	(0.52)	(0.54)	(0.039)
Observations	4040	1071	1071	4040

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 3: Rater decisions. Column 1 reports choice of rating for all ratings, Column 2 reports choice of rating for only sent ratings. Column 3 looks closely at the Attr treatments (x being common knowledge). Column 4 looks at the choice to send ratings. Column 1 - 3 use Tobit specifications. Column 4 uses a linear probability model. Bootstrapped standard errors based on 2000 replications.

Results: Rater

All ratings:

- large focus on ownvalue
- small focus on othervalue

Sent ratings:

- Only focus on ownvalue

Hypothesis 1 (Rejected)

Ratings reflect the preferences of the average rater.

	(1)	(2)	(3)	(4)
	Choice of Rating (Tobit)			Choice to Send (LPM)
	All Ratings	Sent Ratings	Sent Ratings	All Ratings
Ownvalue	0.47***	0.44***		0.022***
	(0.030)	(0.067)		(0.0055)
Othervalue	0.069**	0.061		0.0071*
	(0.028)	(0.050)		(0.0040)
x			0.37***	
			(0.065)	
y			0.28***	
			(0.063)	
Pref	0.12	-1.01*		0.053
	(0.23)	(0.52)		(0.055)
Attr	0.24	0.56	0.90	0.028
	(0.23)	(0.52)	(0.66)	(0.053)
Pref × ownvalue	0.048	0.18**		0.016**
	(0.034)	(0.070)		(0.0078)
Pref × othervalue	-0.074**	-0.012		-0.0073
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Attr × othervalue	-0.0052	-0.076		-0.0066
	(0.031)	(0.052)		(0.0053)
Attr × x			-0.12	
			(0.087)	
Attr × y			-0.014	
			(0.095)	
Round	-0.014***	-0.024**	-0.019*	-0.0018*
	(0.0041)	(0.0010)	(0.011)	(0.0011)
Constant	0.46**	1.13**	0.53	0.058
	(0.22)	(0.52)	(0.54)	(0.039)
Observations	4040	1071	1071	4040

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 3: Rater decisions. Column 1 reports choice of rating for all ratings, Column 2 reports choice of rating for only sent ratings. Column 3 looks closely at the Attr treatments (x being common knowledge). Column 4 looks at the choice to send ratings. Column 1 - 3 use Tobit specifications. Column 4 uses a linear probability model. Bootstrapped standard errors based on 2000 replications.

Results: Rater

Pref treatments

- Pref X ownvalue
  - Rating more sensitive to ownvalue

Hypothesis 2A

Ratings are more sensitive to rater's preference in Pref than in None treatment.

	(1)	(2)	(3)	(4)
	Choice of Rating (Tobit)			Choice to Send (LPM)
	All Ratings	Sent Ratings	Sent Ratings	All Ratings
Ownvalue	0.47***	0.44***		0.022***
	(0.030)	(0.067)		(0.0055)
Othervalue	0.069**	0.061		0.0071*
	(0.028)	(0.050)		(0.0040)
x			0.37***	
			(0.065)	
y			0.28***	
			(0.063)	
Pref	0.12	-1.01*		0.053
	(0.23)	(0.52)		(0.055)
Attr	0.24	0.56	0.90	0.028
	(0.23)	(0.52)	(0.66)	(0.053)
Pref × ownvalue	0.048	0.18**		0.016**
	(0.034)	(0.070)		(0.0078)
Pref × othervalue	-0.074**	-0.012		-0.0073
	(0.031)	(0.053)		(0.0052)
Attr × ownvalue	-0.021	0.0010		0.0063
	(0.034)	(0.072)		(0.0074)
Attr × othervalue	-0.0052	-0.076		-0.0066
	(0.031)	(0.052)		(0.0053)
Attr × x			-0.12	
			(0.087)	
Attr × y			-0.014	
			(0.095)	
Round	-0.014***	-0.024**	-0.019*	-0.0018*
	(0.0041)	(0.0010)	(0.011)	(0.0011)
Constant	0.46**	1.13**	0.53	0.058
	(0.22)	(0.52)	(0.54)	(0.039)
Observations	4040	1071	1071	4040

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 3: Rater decisions. Column 1 reports choice of rating for all ratings, Column 2 reports choice of rating for only sent ratings. Column 3 looks closely at the Attr treatments (x being common knowledge). Column 4 looks at the choice to send ratings. Column 1 - 3 use Tobit specifications. Column 4 uses a linear probability model. Bootstrapped standard errors based on 2000 replications.

Results: Rater

Attr treatments

- Attr X X-value
  - No effect

Hypothesis 3A (Rejected)

Ratings are unaffected by revealed attribute.

	(1)	(2)	(3)	(4)
	Choice of Rating (Tobit)			Choice to Send (LPM)
	All Ratings	Sent Ratings	Sent Ratings	All Ratings
Ownvalue	0.47***	0.44***		0.022***
	(0.030)	(0.067)		(0.0055)
Othervalue	0.069**	0.061		0.0071*
	(0.028)	(0.050)		(0.0040)
x			0.37***	
			(0.065)	
y			0.28***	
			(0.063)	
Pref	0.12	-1.01*		0.053
	(0.23)	(0.52)		(0.055)
Attr	0.24	0.56	0.90	0.028
	(0.23)	(0.52)	(0.66)	(0.053)
Pref × ownvalue	0.048	0.18**		0.016**
	(0.034)	(0.070)		(0.0078)
Pref × othervalue	-0.074**	-0.012		-0.0073
	(0.031)	(0.053)		(0.0052)
Attr × ownvalue	-0.021	0.0010		0.0063
	(0.034)	(0.072)		(0.0074)
Attr × othervalue	-0.0052	-0.076		-0.0066
	(0.031)	(0.052)		(0.0053)
Attr × x			-0.12	
			(0.087)	
Attr × y			-0.014	
			(0.095)	
Round	-0.014***	-0.024**	-0.019*	-0.0018*
	(0.0041)	(0.0010)	(0.011)	(0.0011)
Constant	0.46**	1.13**	0.53	0.058
	(0.22)	(0.52)	(0.54)	(0.039)
Observations	4040	1071	1071	4040

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 3: Rater decisions. Column 1 reports choice of rating for all ratings, Column 2 reports choice of rating for only sent ratings. Column 3 looks closely at the Attr treatments (x being common knowledge). Column 4 looks at the choice to send ratings. Column 1 - 3 use Tobit specifications. Column 4 uses a linear probability model. Bootstrapped standard errors based on 2000 replications.

Results: Rater

Raters really only rate along their own preferences.
But may choose to send more often if they think the rating can be more useful to consumers – Pref treatments.

	(1)	(2)	(3)	(4)
	Choice of Rating (Tobit)			Choice to Send (LPM)
	All Ratings	Sent Ratings	Sent Ratings	All Ratings
Ownvalue	0.47***	0.44***		0.022***
	(0.030)	(0.067)		(0.0055)
Othervalue	0.069**	0.061		0.0071*
	(0.028)	(0.050)		(0.0040)
x			0.37***	
			(0.065)	
y			0.28***	
			(0.063)	
Pref	0.12	-1.01*		0.053
	(0.23)	(0.52)		(0.055)
Attr	0.24	0.56	0.90	0.028
	(0.23)	(0.52)	(0.66)	(0.053)
Pref × ownvalue	0.048	0.18**		0.016**
	(0.034)	(0.070)		(0.0078)
Pref × othervalue	-0.074**	-0.012		-0.0073
	(0.031)	(0.053)		(0.0052)
Attr × ownvalue	-0.021	0.0010		0.0063
	(0.034)	(0.072)		(0.0074)
Attr × othervalue	-0.0052	-0.076		-0.0066
	(0.031)	(0.052)		(0.0053)
Attr × x			-0.12	
			(0.087)	
Attr × y			-0.014	
			(0.095)	
Round	-0.014***	-0.024**	-0.019*	-0.0018*
	(0.0041)	(0.0010)	(0.011)	(0.0011)
Constant	0.46**	1.13**	0.53	0.058
	(0.22)	(0.52)	(0.54)	(0.039)
Observations	4040	1071	1071	4040

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 3: Rater decisions. Column 1 reports choice of rating for all ratings, Column 2 reports choice of rating for only sent ratings. Column 3 looks closely at the Attr treatments (x being common knowledge). Column 4 looks at the choice to send ratings. Column 1 - 3 use Tobit specifications. Column 4 uses a linear probability model. Bootstrapped standard errors based on 2000 replications.

Results: Consumer

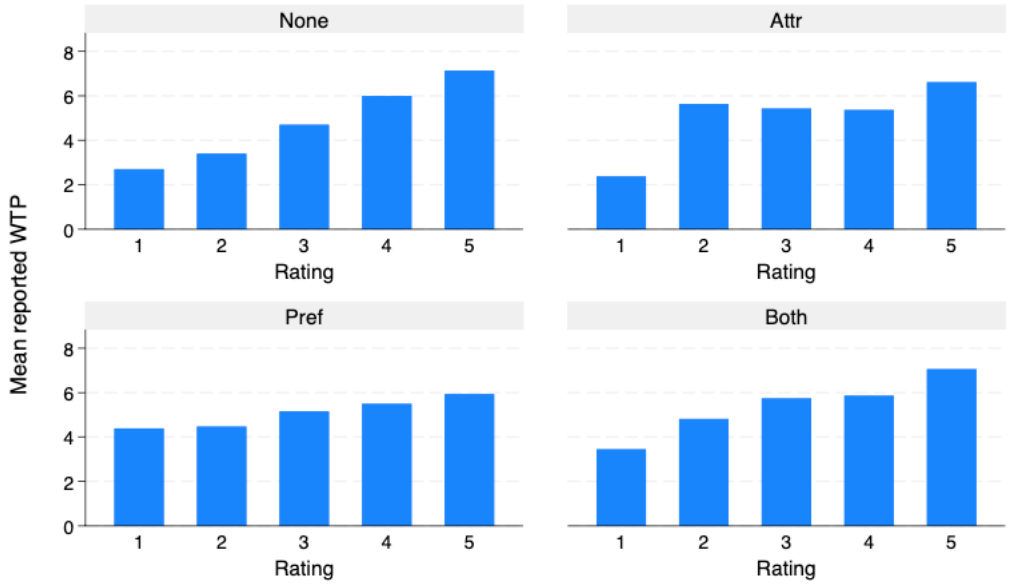

Figure 2: Mean WTP for consumers observing each rating, across treatments.

Results: Consumer

Pref

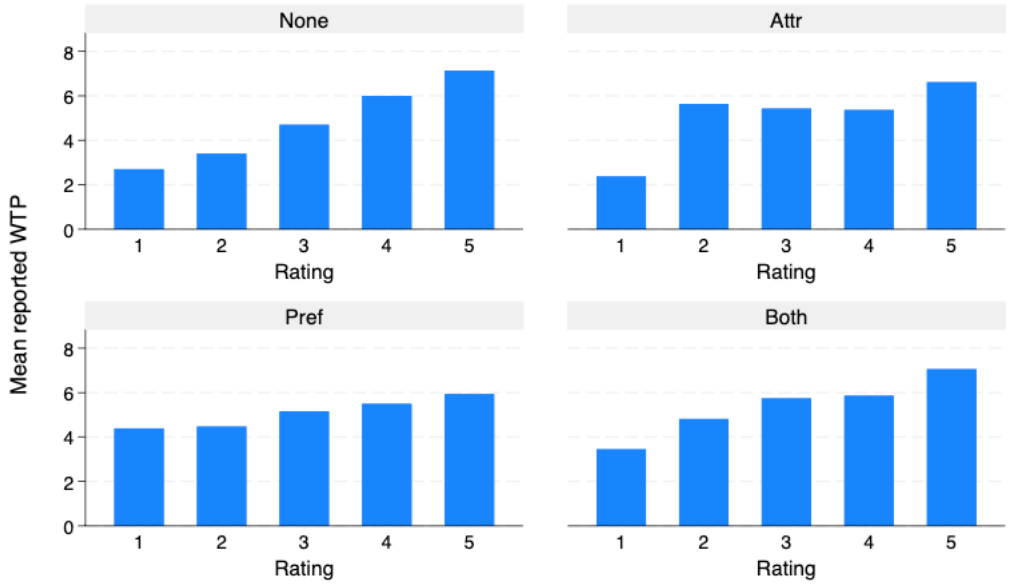

Figure 2: Mean WTP for consumers observing each rating, across treatments.

Hypothesis 2B

WTP of consumers who share rater's preference are more sensitive to ratings.

Results: Consumer

Attr

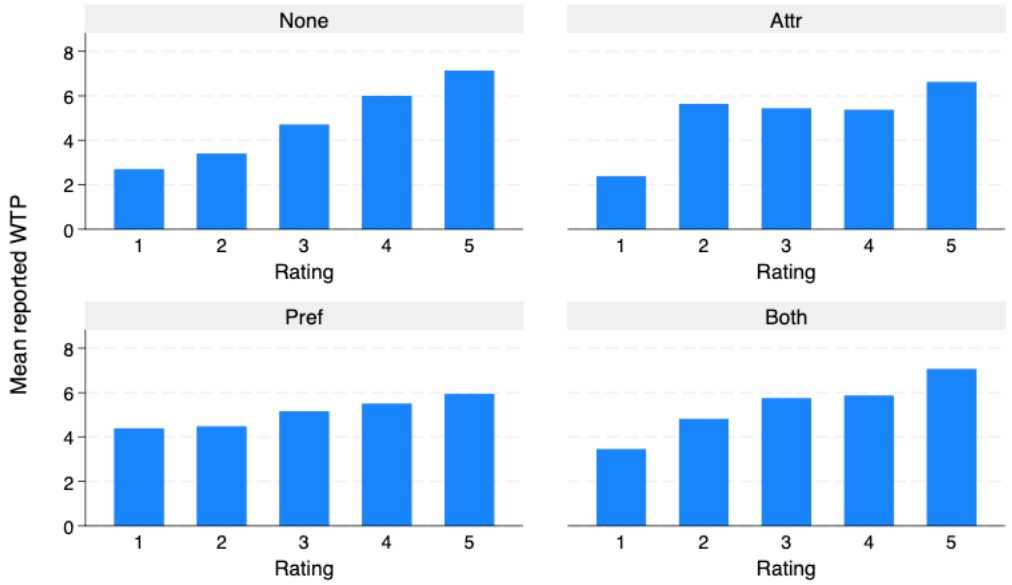

Figure 2: Mean WTP for consumers observing each rating, across treatments.

Hypothesis 3B

WTP of consumers who do not prefer the revealed attribute are more sensitive to ratings than those that prefer the revealed attribute.

Results: Consumer

Pref
- Sametype X rating

Attr
- Effect is insignificant
- H3B rejected

	(1) All Ratings	(2) Pref	(3) Attr
Rating	0.93***	0.25***	0.59***
	(0.10)	(0.089)	(0.13)
Pref	0.95**		
	(0.43)		
Attr	0.75*		
	(0.44)		
Pref × rating	-0.26**		
	(0.12)		
Attr × rating	-0.13		
	(0.11)		
Sametype		-2.37***	
		(0.48)	
Sametype × rating		0.73***	
		(0.13)	
Ctypex			1.66***
			(0.57)
Ctypex × rating			-0.19
			(0.15)
X-value			0.39***
			(0.082)
X-value × rating			-0.012
			(0.016)
Round	0.032***	0.039***	0.029**
	(0.0077)	(0.011)	(0.011)
Constant	1.80***	4.20***	0.63
	(0.34)	(0.38)	(0.56)
Observations	4000	2000	2000

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 4: OLS results for consumer WTP, for consumers who observe ratings, and treating ratings as a continuous variable. Bootstrapped standard errors based on 2000 replications.

Literature

Why rate?

- Social preference (Bolton Greiner Ockenfels MS 2013; Chakraborty Kim Sudhir JMR 2022; Chen Harper Konstan Li AER 2010; Fradkin Grewal Holtz MktS 2021; Halliday Lafky JBEE 2019; Qiao Lee Whinston Wei ISR 2020)
  - Kindness to firm (Johnen and Ng WP 2024)
  - Kindness to future consumers (Hoyer vanStraaten JBEE 2022; Lafky GEB 2014)

How rate?

- Quality – how to measure?
- Rating environment
  - Detailed Seller Ratings AirBnB/Amazon/eBay/Google
  - Vetting ratings (Zervas Proserpio Byers MktL 2021)
  - Buyer self-selection (Chevalier Mayzlin JMR 2006)
  - Culture (Zhang Luo Li EM 2012)

Is useful?

- Form consistent beliefs (especially important for pref/none)

Contact Me

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