

The effect of feedback on performance of charity auctions

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Introduction

- ▶ Auctions are commonly used to raise money for charities.
 - ▶ in such auctions total or part of the selling price is donated by the auctioneer to a specific charity.
- ▶ When participants have charity preferences, bidding behavior changes compared to standard auctions where participation is for own profit only.
 - ▶ Previous studies have shown that depending on the type of preference, there can be a significant or small affect on the price.

Introduction

- ▶ Can introducing “competition” between charities or individual donors affect auction performance and resulting revenue?
 - ▶ In this study we introduce two modifications of charity auction design, with the goal of increasing auction revenue.
 - ▶ Feedback on donations currently raised by each charity (Charity Feedback)
 - ▶ Feedback on top individual donations levels (Subject Feedback)
- ▶ We conduct laboratory auctions where half of auction price is donated to an actual charity of subject’s choice.

Introduction

- ▶ We find that both types of feedback increase auction price
 - ▶ the effect is stronger for Charity Feedback
- ▶ Both types of feedback lead to more diverse choices of charities
 - ▶ the effect is stronger for Charity Feedback
- ▶ Charity Feedback treatment leads to more aggressive bidding
- ▶ Post auctions donations are largest in Charity Feedback and lowest in Subject Feedback treatment.

Design

- ▶ Auction: Independent value First Price sealed bid auction
 - ▶ subjects are divided in groups of four and a separate auction is conducted for each group in every round
 - ▶ groups are randomly rematched every round
 - ▶ each bidder independently draws a value from 0 to 700 cents, with any value in between being equally likely
- ▶ Each bidder learns their value, and observes feedback (if any, depending on the treatment), and submits a bid
- ▶ The item is sold to the highest bidder who pays the price equal to his/her bid.
- ▶ The profit to the winner is value minus bid. The winner also raises amount equal to half of auction price for the charity of his/her choice that round, independently from private profits. Other bidders earn zero that round.
- ▶ 25 rounds

Experimental Design

	No Feedback	Charity Feedback	Subject Feedback
Sessions	2	2	2
Subjects	24	32	28
Auctions	150	200	175

Summary of treatments.

Charities

List of charities:

- ▶ American Cancer Society [▶ Details](#)
- ▶ American Red Cross [▶ Details](#)
- ▶ Humane Society of the United States [▶ Details](#)
- ▶ Make-a-Wish America [▶ Details](#)
- ▶ Rape, Abuse & Incest National Network (RAINN) [▶ Details](#)

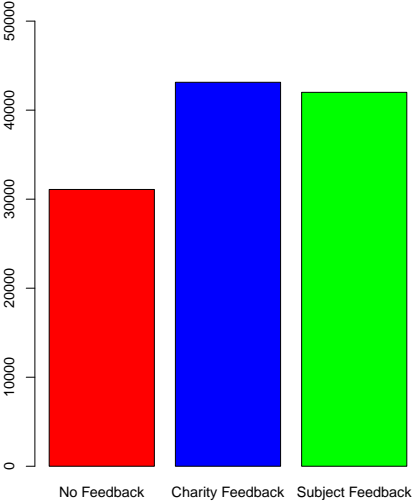
Design

Sequence of decisions:

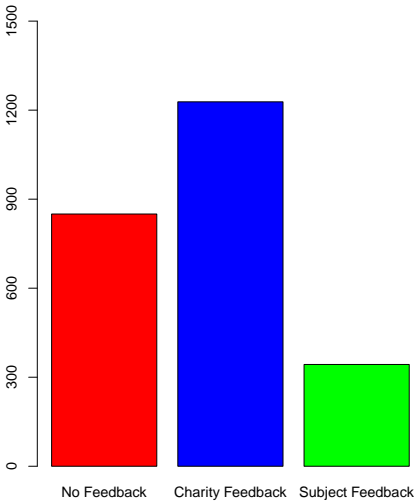
- ▶ In the beginning of every round, each subject chooses a charity from the list (or the “no charity” option)
- ▶ Charity Choice Screen ▶ Charity Choice Screen
- ▶ Auction Bid Screen
 - ▶ No Feedback Bid Screen
 - ▶ Charity Feedback Bid Screen
 - ▶ Subject Feedback Bid Screen
- ▶ Results Screen ▶ Results Screen
- ▶ Donations Stage
 - ▶ Charity Choice Screen
 - ▶ Donation Screen
 - ▶ Donation Confirm Screen

Results

Total Auction Contributions



Total Donations

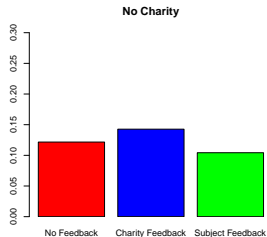
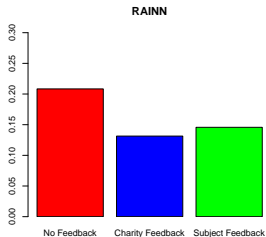
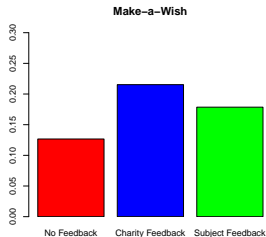
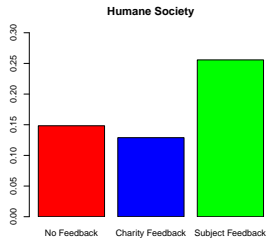
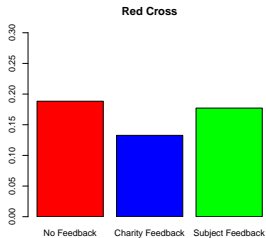
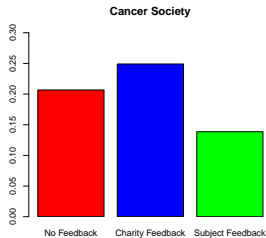


Results

	No Feedback	Charity Feedback	Subject Feedback
Auction Price	462.83	499.71	514.75
Subject's Cash Earnings	555.50	338.03	310.93
Total Donations	850.00	1228.00	343.00
Total Auction Contributions	31091.00	43129.00	42001.00

Summary

Charity choice frequency by treatment



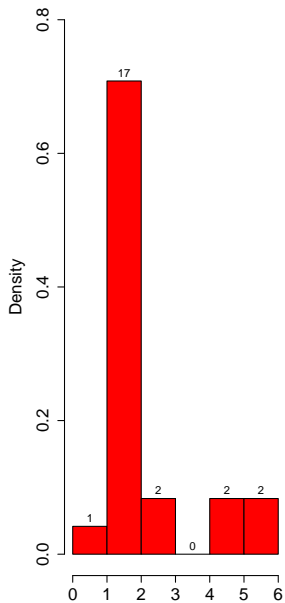
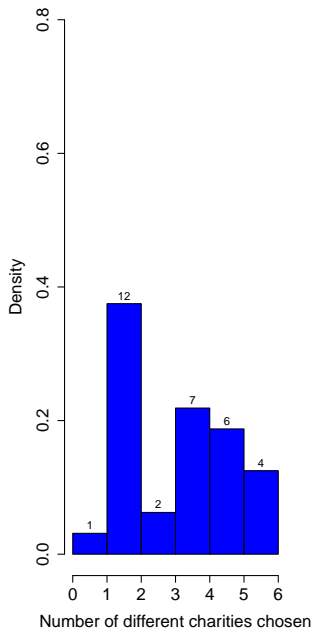
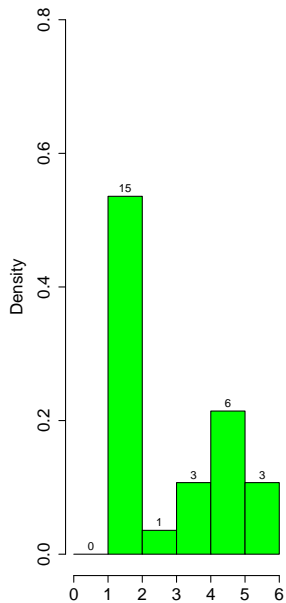
Charity Choice

	No Feedback	Charity Feedback	Subject Feedback
Avg. # charities chosen	1.62	2.53	2.32

Average number of different charities chosen during auctions.

	CF vs. SF	NF vs. CF	NF vs. SF
Mann-Whitney	0.61	0.02	0.09
t-test	0.60	0.02	0.09
Kolmogorov-Smirnov	0.96	0.05	0.34

Comparison of average number of different charities chosen. All p-values.

No Feedback**Charity Feedback****Subject Feedback**

Auction Behavior

	No Feedback	Charity Feedback	Subject Feedback
Price	462.83 (112.42)	499.71 (109.14)	514.75 (118.56)
Winning Bid / Highest Value	0.83 (0.14)	0.90 (0.14)	0.92 (0.15)

Averages by treatment. Standard deviations in parentheses.

	CF vs. SF	NF vs. CF	NF vs. SF
Mean Price	0.20	0.00	0.00
Mean Winning Bid / Highest Value	0.25	0.00	0.00

p-values for difference in mean (t-test) by treatment.

Bidding Behavior

	Bid
Constant	-5.427 (5.862)
Value	.810 (.025)***
Subject Feedback	2.046 (14.590)
Charity Feedback	10.436 (9.544)
Subject Feedback \times Value	.085 (.047)*
Charity Feedback \times Value	.098 (.029)***

Overall R^2	.758
# Obs.	1583
# Subjects	84

Random effects with standard errors clustered by subject in parentheses.

Donations

	No Feedback		Charity Feedback		Subject Feedback	
	Auctions	Donations	Auctions	Donations	Auctions	Donations
Cancer Society	10527	67	13206	239	4555	70
Red Cross	5386	150	4964	0	5037	124
Humane Society	7669	500	7382	495	13249	105
Make-a-Wish	3846	90	10265	494	11302	5
RAINN	3663	43	7312	0	7858	39
Total	31091	850	43129	1228	42001	343

Total charity revenues from donations and auctions.

	No Feedback	Charity Feedback	Subject Feedback
Mean donation	35.42 (105.32)	38.38 (114.29)	12.25 (27.04)
Proportion of subjects with non-zero donations	0.29	0.19	0.25
Mean non-zero donation	121.43 (174.17)	204.67 (200.35)	49.00 (34.48)

Average subject donation by treatment. Standard deviation in parentheses.

Donations

	No Feedback	Charity Feedback	Subject Feedback
Auction Contributions	0.42**	-0.02	-0.36*
# different charities chosen	-0.06	0.13	-0.13
Auction Contribution Rank	-0.21	-0.03	0.35*

Correlation with a subject's total donation. * $p < .1$, ** $p < .05$

Donations

	Chose a charity	
Number of times chosen charity was chosen during auctions	-0.00293 (0.00697)	0.00827** (0.00299)
Rank of chosen charity before donations	-0.235*** (0.0251)	
Number of times charity was chosen \times Rank of chosen charity	0.00246 (0.00135)	
Chosen charity was rank 1 before donations		0.812*** (0.0904)
Chosen charity was rank 2 before donations		0.821*** (0.0888)
Chosen charity was rank 3 before donations		0.769*** (0.123)
Chosen charity was rank 4 before donations		0.765*** (0.162)
Constant	1.413*** (0.146)	0.0281 (0.0296)
Observations	84	84

OLS. Standard errors in parentheses.

Conclusions

- ▶ We designed and implemented two feedback schemes in a charity auction:
 - ▶ Charity Feedback - every round subjects are reported current contribution levels raised for each charity
 - ▶ Subject Feedback - every round subjects are reported top individual contribution levels to charities
- ▶ Both types of feedback lead to more aggressive bidding and increase auction price
 - ▶ the effect is stronger for Charity Feedback
- ▶ Both types of feedback lead to more diverse choices of charities
 - ▶ the effect is stronger for Charity Feedback
- ▶ Post auctions donations are largest in Charity Feedback and lowest in Subject Feedback treatment.
- ▶ in No Feedback control treatment, subjects who raised more through auctions tend to donate more. In Subject Feedback treatment the effect is reverse.

American Cancer Society

Description from www.charitynavigator.org:

Founded in 1913 by 15 well-known doctors and business leaders in New York City, the American Cancer Society (ACS) is the nationwide community-based voluntary health organization dedicated to eliminating cancer as a major health problem by preventing cancer, saving lives, and diminishing suffering from cancer, through research, education, advocacy, and service. The American Cancer Society consists of a National Home Office with 13 chartered Divisions throughout the United States and a presence in most communities. More than two million volunteers carry out the Society's mission of eliminating cancer and improving quality of life for those individuals facing the disease. [▶ Back to Charities](#)

American Red Cross

Description from www.charitynavigator.org:

Since its founding in 1881 by visionary leader Clara Barton, the American Red Cross has been the nation's premier emergency response organization. As part of a worldwide movement that offers neutral humanitarian care to the victims of war, the American Red Cross distinguishes itself by also aiding victims of devastating natural disasters. Over the years, the organization has expanded its services, always with the aim of preventing and relieving suffering. Today, in addition to domestic disaster relief, the American Red Cross offers compassionate services in five other areas: community services that help the needy; support and comfort for military members and their families; the collection, processing and distribution of lifesaving blood and blood products; educational programs that promote health and safety; and international relief and development programs. [▶ Back to Charities](#)

Humane Society of the United States

Description from www.charitynavigator.org:

The Humane Society of the United States (HSUS) is the nation's largest and most effective animal protection organization. Established in 1954, The HSUS seeks a humane and sustainable world for all animals - a world that will also benefit people. We work to reduce suffering and to create meaningful social change for animals by advocating for sensible public policies, investigating cruelty and working to enforce existing laws, educating the public about animal issues, joining with corporations on behalf of animal-friendly policies, and conducting hands-on programs that make ours a more humane world. We are the lead disaster relief agency for animals, and we provide direct care for thousands of animals at our sanctuaries and rescue facilities, wildlife rehabilitation centers, and mobile veterinary clinics. [▶ Back to Charities](#)

Make-a-Wish America

Description from www.charitynavigator.org:

Make-A-Wish America helps to grant the wishes of children with life-threatening medical conditions to enrich the human experience with hope, strength and joy. Based in Phoenix, the organization is one of the nation's leading children's charities, serving children in every community in the United States, Puerto Rico and Guam. With the help of generous donors and more than 25,000 volunteers, Make-A-Wish grants a wish every 38 minutes, on average. It has granted more than 225,000 wishes since its inception in 1980. Visit Make-A-Wish at www.wish.org and discover how you can share the power of a wish. [▶ Back to Charities](#)

Rape, Abuse & Incest National Network (RAINN)

Description from www.charitynavigator.org:

The Rape, Abuse & Incest National Network (RAINN) is the nation's largest antisexual assault organization. RAINN operates the National Sexual Assault Hotline at 1.800.656.HOPE and rainn.org and publicizes the hotlines' free, confidential services; educates the public about sexual assault; and leads national efforts to prevent sexual assault, improve services to victims and ensure that rapists are brought to justice. RAINN is a frequent resource for television, radio and print news outlets - as well as local, state and national policymakers, law enforcement and rape treatment professionals - on the issues related to rape and sexual assault. [▶ Back to Charities](#)

Charity Choice Screen

Choice of Charity	
American Cancer Society (Cancer Society)	<input type="checkbox"/>
American Red Cross (Red Cross)	<input type="checkbox"/>
Humane Society of the United States (Humane Society)	<input type="checkbox"/>
Make-a-Wish America (Make-a-Wish)	<input type="checkbox"/>
Rape, Abuse & Incest National Network (RAINN)	<input type="checkbox"/>
No Charity	<input type="checkbox"/>
Continue	

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No Feedback Bid Screen

Your balance: 100
Your total charity contribution: 0

There are 4 bidders in the auction.
Each bidder's value is independently and randomly drawn from 0 to 700.

Value: 294
Bid:

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Subject Feedback Bid Screen

Feedback

Highest 5 contribution levels to charity by participants in this session.	
1	375
You	225
3	225
4	225
5	150

Your balance: 213

Your total charity contribution: 225

There are 4 bidders in the auction.
Each bidder's value is independently and randomly drawn from 0 to 700.

Value: 683

Bid:

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Charity Feedback Bid Screen

Feedback

Contribution to charity levels by participants in this session.

RAINN	500
Red Cross	280
Make-a-Wish	0
Cancer Society	0
Humane Society	0

Your balance: 525

Your total charity contribution: 125

There are 4 bidders in the auction.
Each bidder's value is independently and randomly drawn from 0 to 700.

Value: 5

Bid:

Results Screen

You obtained the item.

Your value: 563
Your bid: 450
Highest bid / Price: 450

Earnings this Round: 113

Balance: 213

Your contribution to charity this round: 225
Your total charity contribution: 225

[Continue](#)

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Donation Screen

Choice of Charity	
American Cancer Society (Cancer Society)	0
American Red Cross (Red Cross)	0
Humane Society of the United States (Humane Society)	0
Make-a-Wish America (Make-a-Wish)	0
Rape, Abuse & Incest National Network (RAINN)	<input type="text"/>
Your payoff (including showup-fee):	1100

Donation Confirm Screen

Choice of Charity	
American Cancer Society (Cancer Society)	0
American Red Cross (Red Cross)	0
Humane Society of the United States (Humane Society)	0
Make-a-Wish America (Make-a-Wish)	0
Rape, Abuse & Incest National Network (RAINN)	100
Your payoff (including showup-fee):	1000
Your donations:	100

[Confirm](#) [Go Back](#)

Use the list below to answer the following question: In general, how happy or unhappy do you usually feel? Check one (and only one) statement that best describes your average happiness.

- Extremely happy (feeling ecstatic, joyous, fantastic).
- Very happy (feeling really good, elated).
- Pretty happy (spirits high, feeling good).
- Mildly happy (feeling fairly good and somewhat cheerful).
- Slightly happy (just a bit above neutral).
- Neutral (not particularly happy or unhappy).
- Slightly unhappy (just a bit below neutral).
- Mildly unhappy (just a little low).
- Pretty unhappy (somewhat "blue", spirits down).
- Very unhappy (depressed, spirits very low).
- Extremely unhappy (utterly depressed, completely down).

Continue

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Happiness Measure

1. Use the list below to answer the following question: In *general*, how happy or unhappy do you usually feel? (100) Extremely happy (feeling ecstatic, joyous, fantastic!), (90) Very happy (feeling really good, elated!), . . . , (0) Extremely unhappy (utterly depressed, completely down).
 2. Consider your emotions a bit further. On the average, what percent of time do you feel happy? What percent of time do you feel neutral (neither happy nor unhappy)? What percent of time do you feel unhappy? (% happy)
 3. What do you think about the happiness of an average person? Use the list below to answer the following question: in *general*, how happy or unhappy does an average person feel? (100) Extremely happy (feeling ecstatic, joyous, fantastic!), (90) Very happy (feeling really good, elated!), . . . , (0) Extremely unhappy (utterly depressed, completely down).
 4. Compared to an average person, how would you describe yourself in terms of your average happiness? (100) Much more happy than the average person, (75) Slightly more happy than the average person, . . . , (0) Much less happy than the average person.
 5. Did anything make you happy today (think of friends, relatives, money, university performance, presents, news, etc.)? (90) Yes, (10) No.
 6. Did anything make you unhappy today (think of friends, relatives, money, university performance, presents, news, etc.)? (10) Yes, (90) No.
 7. How do you feel right now? (100) Extremely happy (feeling ecstatic, joyous, fantastic!), (90) Very happy (feeling really good, elated!), . . . , (0) Extremely unhappy (utterly depressed, completely down).
-

Responses averaged to form composite score.