Reputation Mechanisms

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Learning objectives

- Describe what reputation systems are and why they are important
- List some challenges of reputation systems
- Describe some examples of reputation systems
- List things to consider when designing reputation systems

Before reputation systems

- No outside instrument of reputation

- Easy for sellers to misrepresent products

- Easy to ship slowly after receiving payment

- Buyers were forced to assume risk
  - Buyers were not willing to pay high prices

Reputation systems

- Reputation. Belief or opinions held about something or someone

- Reputation. Information used to make value judgement about something or someone

- Modern web based reputation systems are deeply rooted in physical world social systems.
  - Credit score – measure of credit worthiness
  - Supply industry – companies rate suppliers
  - Consumers digest – used to publish five-star ratings long before personal computers

- People have reputation, so do things
  - Schools, restaurants, companies

Reputation systems

- Reputation takes place (is earned) within a context
  - Best buy has a high reputation for electronics (maybe not so high for furniture?)
  - Reputations earned in one context can influence reputation in other contexts
- Reputation is used to make decisions. Can be
  - Assertions about something by 3rd party
  - Factual statistics
  - Prizes or awards someone/something has earned
- Reputation follows the structure
  - A *Source* makes a *claim* about a *target*

Online reputation systems

- Before web 2.0, it was almost impossible to gather enough information about a product's quality from friends, co-workers, family etc.

- Online Reputation systems. Programs or algorithms that let users rate others in online communities to develop trust through reputation

- Reputation systems allow members of a community to submit their opinions about others in the community

- Submitted feedback is analyzed, aggregated and made publicly available to the community

- Top websites use reputation to improve products and services

Why reputation systems

- Applications and algorithms use reputation to sort and filter content before presenting to users
  - Where to eat, what to watch, from whom to buy
- Reputation systems collect, aggregate and distributes feedback
- Reputation systems bring structure to chaos
  - There's a lot of information online; impossible to filter/sort all
  - Inform buyers whether potential trading partners are trustworthy
- Deters opportunistic behavior
  - Past actions affect future business
  - Open record of transaction history

Challenges of reputation systems

- Exploitation
  - New accounts, colluding
- No central history of reputable transactions or universal identity as you have in physical world
  - How do you identify people online; different identities on different platforms
- Scale
  - How can we manage and present the overwhelming inflow of users' contribution
- Engagement
  - How should contributions be rewarded to keep users engaged and willing to continue
- Moderation
  - How to identify and quickly remove spam, trolls or fake reviews/rankings

Potential solutions

- Limit Reputation by context
  - Reputation in one platform should not influence/affect reputation on another platform

- Focus on quality over quantity
  - When users are rewarded for contributing content to reputation, the users can be motivated to give feedback because of the rewards not experience
  - This can lead to abuse of the system e.x. Digg

- Mitigate Abuse through meta-moderation
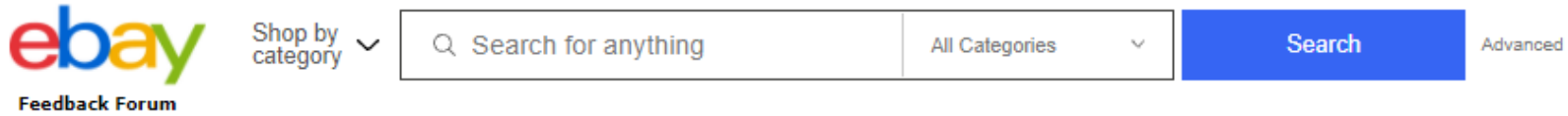 - Rate the raters; second level cross check of ratings & reviews

Example of RS

amazon

- Based on product reviews
  - Customers are ranked based on the quality and helpfulness of their reviews by other Amazon customers
  - Built in meta-moderation model, "*Was this review helpful*"
  - *Top Reviewers* program tracks reputable reviews and trusted reviewers; shows top reviewers at the moment
  - *Hall of Fame Reviewers* shows highly ranked reviewers from previous years

- https://www.amazon.com/hz/leaderboard/top-reviewers

- https://www.amazon.com/hz/leaderboard/hall-of-fame

- https://www.amazon.com/vine/about

Is this ethical in your opinion?

Example of RS

ebay Feedback Forum

Shop by category | Search for anything | All Categories | Search | Advanced

Feedback Forum

Find a member | Enter User ID or email address | Search

Each time you buy or sell something, you have an opportunity to leave Feedback about your experience. That Feedback is an essential part of what makes eBay a successful community.

Feedback consists of a positive, negative, or neutral rating, along with a short comment. Buyers and sellers build reputations that are based on all the Feedback ratings and comments left by their trading partners.

This information is available in each member's Feedback Profile, and helps prospective trading partners buy and sell with confidence.

More fast facts about Feedback:

- Along with an overall rating, buyers can also rate sellers on the details of the purchase. These detailed seller ratings are anonymous, and don't count toward the overall Feedback Score.

- Since Feedback becomes a permanent part of your record, buyers are encouraged to contact sellers to try to resolve any issues before leaving neutral or negative Feedback.

- Buyers can revise Feedback they've left for sellers in the case of a mistake.

- Sellers can leave only positive ratings for buyers. That means buyers should feel free to leave honest Feedback without fear of retaliation. We also have safeguards in place to protect sellers against unfair negative or neutral Feedback.

Feedback basics

All about Feedback
Frequently asked questions
Feedback policies
Detailed seller rating tips for sellers
Protecting the seller's reputation
Take a tutorial on Feedback

Feedback tools

Leave Feedback
View a Feedback Profile
Reply to Feedback received
Follow up to Feedback left
Request Feedback revision
Make Feedback public or private
Report buyer problems

Read a note from eBay's founder, Pierre Omidyar, outlining the philosophy, values, and benefits of the Feedback Forum.

https://www.ebay.com/fdbk/feedback_profile/buyspry?q=334133291704&_trksid=p2047675.l2560

"Since Feedback becomes a permanent part of your record, buyers are encouraged to contact sellers to try to resolve any issues before leaving neutral or negative Feedback."

- What is your opinion of this? Is it ethical?

"Sellers can leave only positive ratings for buyers."
- https://pages.ebay.com/services/forum/feedback.html

Source: https://pages.ebay.com/services/forum/feedback.html

Example of RS

- Ranking is carried out by service provider and customer

- Are there any benefits?

- What are the disadvantages?

Example of RS

During a recent stay at an Airbnb in Brazil, my host invited me to eat a traditional local snack of pão de queijo and have tea. It was a lovely gesture, but it was 10 p.m. and I had arrived from an 18-hour bus ride through the countryside earlier that day.

I just wanted to sleep.

But when gauging whether to go to bed or be friendly, I had to consider another factor: My Airbnb rating. The app lets hosts and guests rate each other on cleanliness, friendliness and "overall experience." If I rejected her invite, would the host think I was rude? Or, if I did eat with her, would she think I was freeloading and look upon me less favorably?

Example of RS

- *"Reputation is a rough measurement of how much the community trusts you; it is earned by convincing your peers that you know what you're talking about. The more reputation you earn, the more privileges you gain and the more tools you'll have access to on the site - at the highest privilege levels, you'll have access to many of the same tools available to the site moderators."*

- Some ways to gain reputation include:
  - question is voted up: +10
  - answer is voted up: +10
  - answer is marked "accepted": +15 (+2 to acceptor)
  - suggested edit is accepted: +2 (up to +1000 total per user)

- Some ways to lose reputation include:
  - your question is voted down: −2
  - your answer is voted down: −2
  - you vote down an answer: −1

- https://stackoverflow.com/help/whats-reputation

Designing reputation systems

- Online reputation has real world implications so methods matter
- Know your users
  - Not everyone is a creator, most people are users of the system
  - Not everyone has good intentions; spammers, trolls exist
- Positive and negative reputations count
  - Don't exclude negative reputations
- Reward high-quality content – incentive mechanisms (badges in Amazon and Stack Overflow)
- Motivate quality contributors – think persuasive strategies
- Increase visitor value and contributions – think persuasive strategies

Designing reputation systems

2 questions to ask:

- What is the content control pattern?
  - Who is going to create, review and moderate content
- What types of incentives will likely work based on content control?
  - Money, badges, points, freebies etc.

What is the content control pattern?

- What content will be generated?
  - Reviews on a 5/7 point scale or positive-negative-neutral, ratings etc.
- Who will create the content?
  - Users, verified users/customers, anyone etc.
- How will it be managed?
  - Can it be edited after posting? What issues will that raise?
  - How does it get posted to the site? Will it be reviewed before it is posted? Can users post directly or will it be moderated by humans first?
  - Will content be evaluated (for helpfulness) by other users or by a moderator?
  - Will an evaluation promote or demote content?

What types of incentives will likely work?

- Incentives motivate people to carry out a target behaviour
- Incentives are a form of payment to stimulate one to carry out a desired behaviour
- Incentives should be appropriate for the tasks users will carry out

What types of incentives will likely work?

3 main groups of incentives

- Altruistic incentives. For the good of others –people who like to share
  - Incentive is internal
  - Examples – **inviting** people to contribute to a site to improve it
- Commercial incentives. To generate money. Can be directly, as soon as possible or indirectly by a promotion
  - Examples – compensation (money, freebies, exposure)
- Egocentric incentives. For self-gratification. Common in online shopping sites, computer games
  - Influenced by the desire to complete a task assigned by a system, oneself, a friend, family etc.
  - Influenced by the desire to be praised by others
  - Influenced by the need to improve oneself
  - Examples – recognition, ranking

Summary

- Describe what reputation systems are and why they are important

- Describe some examples of reputation systems

- List some challenges of reputation systems

References

- Building web reputation systems. By Randy Farmer and Bryce Glass. O'Reilly. 2014
- http://buildingreputation.com/