Altruism, Selfishness, and Contribution on the Social Web

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GroupLens Research
University of Minnesota
Social loafing

From Wikipedia, the free encyclopedia

In the social psychology of groups, social loafing is the phenomenon that persons make less effort to achieve a goal when they work alone. This is one of the main reasons that groups sometimes perform less than the sum of their members working as individuals.

Causes

The main explanation for social loafing is that people feel unmotivated when working in a group, because they think that their work will not be evaluated. According to the results of a meta-analysis study (Karau & Williams, 1993), social loafing is a phenomenon, but it does not occur when the group members feel that the task or the group itself is important. If a person feels undervalued or underappreciated within their team or group.

Solutions

This article may require cleanup to meet Wikipedia's quality standards. Please improve this article if you can. (April 2009)

Messages

- Web 2.0 is The Social Web
- People Connecting to People
- Technology Enabling Community
1. Google

Search
Google PageRank

- Value of a page is the value of the pages that link to it
- Recursive!
- Fight for Attention: The Shoe Store
- The Rich get Richer
(Web Search)$^{\text{shared}}$

Maurice Coyle and Barry Smyth
AH’08
Want to be a Millionaire?

- Netflix $1M Challenge
Google Street View in UK

- **My B&B in London**
  - [http://maps.google.co.uk/maps?q=&source=s_q&hl=en&geocode=&q=high+street+kensington&ll=51.490643,-0.158633&sspn=0.010515,0.016243&ie=UTF8&ll=51.505203,-0.193301&spn=0.35991878&z=17&layer=c&cbll=51.505309,-0.192387&panoid=8ACFOo-EYapAmvgcuRoz_Q&cbp=12,79.63692756901483,0,-8.672391017173075](http://maps.google.co.uk/maps?q=&source=s_q&hl=en&geocode=&q=high+street+kensington&ll=51.490643,-0.158633&sspn=0.010515,0.016243&ie=UTF8&ll=51.505203,-0.193301&spn=0.35991878&z=17&layer=c&cbll=51.505309,-0.192387&panoid=8ACFOo-EYapAmvgcuRoz_Q&cbp=12,79.63692756901483,0,-8.672391017173075)

- **Link to BBC Video**
  - 0:00 – 2:00

- **Privacy Risks**
  - Photos of people leaving sex shops
  - Photos of naked toddler playing in park
Opportunity

- How can we mine *free activity*?
- What are the risks in these data?

2. Yahoo!

Everything
Tag Selection Algorithms

“The Quest for Quality Tags”
S. Sen, F. Harper, A. LaPitz, J. Riedl
GROUP 2007
RQ: How can a tagging system show users tags they want to see?

Users don’t agree

Most controversial tags (Bayesian expected entropy):

<table>
<thead>
<tr>
<th>tag</th>
<th>entropy</th>
<th># 🧸</th>
<th># 🦊</th>
</tr>
</thead>
<tbody>
<tr>
<td>comedy</td>
<td>0.987</td>
<td>28</td>
<td>30</td>
</tr>
<tr>
<td>classic</td>
<td>0.986</td>
<td>25</td>
<td>24</td>
</tr>
<tr>
<td>stylized</td>
<td>0.983</td>
<td>20</td>
<td>21</td>
</tr>
<tr>
<td>nudity (full frontal)</td>
<td>0.980</td>
<td>18</td>
<td>20</td>
</tr>
<tr>
<td>romance</td>
<td>0.980</td>
<td>18</td>
<td>17</td>
</tr>
<tr>
<td>quirky</td>
<td>0.977</td>
<td>25</td>
<td>20</td>
</tr>
<tr>
<td>magic</td>
<td>0.974</td>
<td>18</td>
<td>15</td>
</tr>
<tr>
<td>animation</td>
<td>0.974</td>
<td>26</td>
<td>20</td>
</tr>
<tr>
<td>Steven Spielberg</td>
<td>0.973</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>sci-fi</td>
<td>0.972</td>
<td>14</td>
<td>17</td>
</tr>
</tbody>
</table>
Tag Prediction

Random baseline: 21%

Implicit features:
- number of applications (39%)
- number of users (51%)
- number of searches for a tag (44%)
- number of users who searched for a tag (48%)
- length of tag (42%)

Moderation-based features:
- global average rating for a tag (59%)
- user-normalized global average rating for a tag (62%)
- tag reputation (57%)

Hybrid combinations: logistic regression, decision trees (67%)

RealAge
Opportunities

- How can a system distinguish between “good” tags and “bad” tags?
- Can folksonomy be encouraged?
  - Showing users more tags leads to more vocabulary reuse
  - How much convergence is valuable?

3. Facebook

Social Networking for College Students … and everyone else
**The Predictive Power of Online Chatter**

- Gruhl, Guha, Kumar, Novak, Tomkins
- Yahoo
- ACM KDD 2005

- Volume of blog postings predict sales rank of books
- Queries can be automatically generated in many cases.
- Can sometimes predict spikes in sales rank.

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**Anti-aliasing on the Web**

Jasmine Novak, Prabhakar Raghavan, Andrew Tomkins.

WWW 2004
Story: Finding Medical Records
(Sweeney 2002)

 Former Governor of Massachusetts!

- Medical Data
- Ethnicity
- Visit Date
- Diagnosis
- Procedure
- Medication
- Total Charge

Voter List
- Name
- Address
- Date registered
- Party affiliation
- Date last voted

Cat Torturer Video

- [YouTube Link](#)
- 1:10 – 2:15
Discussion

- Social Implications
- Opportunities
- Threats

4. YouTube

Video by Amateurs?
Copyright issues
- Music videos
- CBS agreement
**Why did Google Buy YouTube?**

- $1,650 / 65 = $25 million / employee
- $1,650 / 100 million views per day = $16
- $16 / 365 = $.04½ / view / year
- … but Google already had videos!

- The technology?
- The community!

**Second Life**

- Virtual World
- People “live”, buy, and sell there
- $60M (US $) worth of “manufactured goods” sold this year
Making a Guitar in Second Life

0:45 – 1:45

World of Warcraft

- A different virtual world
- More focus on combat
- 6 million subscribers
Fayejin Funeral

- On Tuesday of February 28th Illidan lost not only a good mage, but a good person. For those who knew her, Fayejin was one of the nicest people you could ever meet. On Tuesday she suffered from a stroke and passed away later that night.
- 5:30 March 4th, Frostfire Hot Springs

World of Warcraft Video
“I hope azshira’s dad dies of a heart attack, then at the funeral some guy runs in naked and pushes the coffin over and runs around slapping people screaming LOL OWNED, then releases a video of it”
Who's Playing? A By-the-Numbers Look at EverQuest II Players Picture

Gender:
- Male: 80.80%
- Female: 19.20%

Age:
- Teens, 12–17: 3.23%
- College Age, 18–22: 12.40%
- Young Adult, 23–29: 26.27%
- Thirties, 30–39: 38.69%
- Forties, 40–49: 12.40%
- Fifty or Older, 50–65: 4.89%
- Sixties and Older: 0.00%
Offshore to a Virtual World?

- Nick Yee @ PARC
- Some radiology offshored to India
- Skill in a game: RADAR expert?
  - Learn to detect patterns
  - Rewards for correctness
- Wisdom of Crowds to combine results

Sample Imagery

Example of the size of object to look for. The red rectangle (10px by 4px)

Example of ocean water.
Chocolate Rain
by Tay Zonday

- Adam Bahner, a Ph.D. student in American Studies at the University of Minnesota
- Number 2 hottest viral video in history
  - Hottest viral video of Summer 2007
  - Over 26 million views
Fig. 8. Probability of buying a book (DVD) given a number of incoming recommendations.
Maximizing the Spread of Influence through a Social Network, David Kempe, Jon Kleinberg, Éva Tardos, KDD’03

- **Independent Cascade Model**
  - Information *diffuses* over time
  - Each neighbor who converts has a *one-time* chance to convert others

- **Linear Threshold Model**
  - Each node considers the preferences of all neighbors
  - If total weight passes threshold, a node converts
Video suggestion and discovery for YouTube: Taking random walks through the view graph
Shumeet Baluja, et al., Google, WWW 2008

Opportunities

- Crowd-sourcing
- Gaming as Work?
- How do preferences propagate naturally?
- What predicts fads?
- How do recommenders influence propagation?
5. MySpace

Social Network
Heather Ann Tucci

“I just want to let everyone know August 19 2006 Joe Renner and Joe Shafer died and me and Samatha were hurt. … Both of them knew what they were getting in to. Yes it’s my fault because I was the driver but think about how many of you did what I did.”

Twitter

- Story about VC lunch
- Hudson river pictures
- NYT Tweets during superbowl
- NBA Player who tweeted during half-time of a game
So I once went on a movie date with a guy who thought it was sort of weird that I posted to Twitter about the movie in mid-date. In retrospect, it probably was weird, and a bit rude, and I wouldn’t do it again (and no, there was no second date).

Twitter has started to advertise a number of applications using the small box on profile pages that it first introduced earlier this month. Before today Twitter had reserved the space for links to its own services like Search, but now they are advertising a number of sites and apps, including Tweetie, a popular iPhone client.

Other apps popping up include TweetDeck and TweetHive, which was just announced earlier today.

The ads are unobtrusive, and they’re promoting useful applications that are all Twitter-related so they blend nicely with the page. The question now is how much money is actually changing hands - John Battelle writes that Federated Media is sharing some of its revenues from TweetDeck, but also notes that Twitter has a history of promoting apps it finds interesting without getting paid for it.

Update: Tweetie developer Loren Brower says that he actually isn’t paying Twitter a cent to get featured on the site. Tweetie came to him, explaining that it wants to promote projects like Tweetie which promote “variety, relevance, and value” (apparently a number of twitter employees use the app).
Discussion

- Social Implications
- Opportunities
- Threats
6. Windows Live
7. MSN

ISP and Content Provider

8. Wikipedia

Next slide, please!
WikiBiology on MySpace

1:20 – 2:15: edit wikipedia to make truth
“What if the number of elephants in Africa were increasing?”
Creating, Destroying, and Restoring Value in Wikipedia
Group 2007

Reid Priedhorsky
Jilin Chen
Shyong (Tony) K. Lam
Katherine Panciera
Loren Terveen
John Riedl
Who contributes Wikipedia’s value?

User: Maveric149

3.8 million least frequent editors

0.5% of value

Wales Swartz

14% of value
Challenges

- How can vandalism be detected?
- How efficient is Wikipedia?
- How much conflict is valuable?

9. Ebay

Online Auctions
Customers Selling to Customers
### Amazon (#13)

Most Important Resource is Customers

Customers “Selling to” Customers
Six Steps to Spiritual Revival
by Pat Robertson
List Price: $24.95
Availability: Usually ships in 24 hours
Used It now from $7.99
Edition: Hardcover
See more product details

Customers who shopped for this item also shopped for these items:
- The Bird of the Air by Pat Robertson
- The Ultimate Guide to Angel Sex for Men by Bill Brent
- Esther's Gift by Jan Karon

Explore similar items

Customers who own clothes also shop for:
- Clean Underwear from Amazon's Target Store
- Clothing Size Chart from Amazon's Nordstrom Store
- Arm Sleeves from Amazon's Urban Outfitters Store

Google Trends Front Page
Carlson School March 2009

Google Trends Labs

Top Trends (USA)

1. Apple
2. Google
3. Facebook
4. Twitter
5. Twitter
6. the good life magazine for men
7. lake at aurora
8. websites
9. ioc education
10. monthly apps

Now: Google Trends: see what's hot in the US politics this election 2013

Explore the audiences of specific websites with Target Audiences

Google Home - About Google Trends

©2013 Google
Today's Hot Trends (USA)

1. *scientology is a cult*
2. *team blackout*
3. *rod carew*
4. *you google*

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4Chan vs. eBaumsWorld

- **4Chan**
  - Google Trends Hack
  - Chocolate Rain
- **eBaumsWorld**
  - Many other hacks
  - “copyright” fight with 4chan
The Internet is Serious Business

“A phrase used to remind those who voluntarily leave the house that being mocked on the Internet is, in fact, the end of the world.”

- Encyclopedia Dramatica
The Social Cost of Cheap Pseudonyms

The Information Cost of Manipulation-Resistance in Recommender Systems
Resnick and Sami. *ACM RecSys 08.*

Increasing Contributions
**What Theory Tells Us…**

- **Collective Effort Model**
  - People will contribute more if:
    - They believe their effort is important to the group
    - They like the group

- **Smaller is Better**
  - Slovic, Fischhoff, & Lichtenstein, 1980
  - People feel greater concern when the reference group they’re part of grows smaller.

- **Specificity Matters**
  - Small & Loewenstein, 2003
  - Specific identity of those helped is important in drawing people’s support.

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**CommunityLab Research**

- Social science to increase contributions
  - Accessible to designers
  - Algorithms, interfaces, toolkits

- **GroupLens @ Minnesota**
  - Recommender algorithms and interfaces
  - John Riedl, Joe Konstan, Loren Terveen

- **Bob Kraut and Sara Kiesler @ CMU**
  - Social psychology of computer use

- **Paul Resnick and Yan Chen @ Michigan**
Numerical values are represented by smilies

- 😊 = Most Valuable
- 😊😊 = Very Valuable
- 😊😊😊 = Valuable

Who the contribution helps

Value of each contribution

Results

Self-report

<table>
<thead>
<tr>
<th>Score</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self</td>
<td>3.87</td>
</tr>
<tr>
<td>All MovieLens</td>
<td>3.13</td>
</tr>
<tr>
<td>Similar Group</td>
<td>2.97</td>
</tr>
<tr>
<td>Dissimilar Group</td>
<td>2.94</td>
</tr>
<tr>
<td>Control</td>
<td>2.68</td>
</tr>
</tbody>
</table>

1: Strongly Disagree
2: Disagree
3: Neutral
4: Agree
5: Strongly Agree

Behavioral data

<table>
<thead>
<tr>
<th>Score</th>
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<tbody>
<tr>
<td>Self</td>
<td>7.2%</td>
</tr>
<tr>
<td>All MovieLens</td>
<td>10.2%</td>
</tr>
<tr>
<td>Similar Group</td>
<td>15.8%</td>
</tr>
<tr>
<td>Dissimilar Group</td>
<td>5.9%</td>
</tr>
<tr>
<td>Control</td>
<td>7.4%</td>
</tr>
</tbody>
</table>

Want *Smilies* on the regular interface?

Probability of rating a movie
Opportunities

- How can contributors be motivated?
- How can social attacks be mitigated?
  - Mail list “unsubscribe”
- How does social psychology interact with defense algorithms?
  - Can the griefers be encouraged to give up?
- Can freedoms be preserved?

10. Craigslist.org

Renting Apartments in NYC
$10/posting: $2.5M/year
Could generate $500M/year with ads
“users haven’t asked for banner ads”
I DON'T UNDERSTAND—
I'VE WATERED DOWN CONTENT,
REDESIGNED WHAT WAS LEFT
AND GAVE IT ALL AWAY FOR
FREE ON THE INTERNET AND
YET I STILL CAN'T GET ANYBODY
TO READ A NEWSPAPER...

paper cuts

2007 total: 2,166+ *

* June to December 2007
2009 layoffs / 2006 layoffs / Report buyouts/layoffs
paper cuts

2008 total: 15,724+ jobs

UK to wait and see on virtual world taxes

British tax authorities are keeping a close eye on virtual economies but are waiting for the result of a U.S. Congressional investigation before taking action.

- Under moves to guard against tax evasion
- Sales tax on virtual goods
- Proceeds are usually linked to real-world sales
- Government agencies look at online marketplaces

Adam Reuters - Reuters' bureau chief in Second Life.

In reality, he is Adam Parry, a veteran tech and media journalist.

Second Life is a virtual online world where users can create virtual versions of their personalities.

Recent interview subjects:
- On SL, they close? Email them to adaminist@secondlife.com
- US Dollar and SL Moneys over last 24 hours: USD 2.39 vs 1 LSL 0.001 USD
Messages

- Web 2.0 is The Social Web
- People Connecting to People
- Technology Enabling Community

Altruism, Selfishness, and Contribution on the Social Web

John Riedl

GroupLens Research
University of Minnesota
Discussion Topics

- What will happen with virtual economies?
- Why did Google buy YouTube?
- Broadcast -> Narrowcast -> Virtual Life
- Copyright in the Digital Age
- Governing Online Communities
The Social Cost of Cheap Pseudonyms

The Value of Reputation on eBay: A Controlled Experiment

- Web link structure in hyperbolic space
- from Tamara Munzner
Videos for this Presentation, for Kevin

- After (7) YouTube
  - Making a Guitar in Second Life
  - 0:45 – 1:45
  - Suzanne Vega Concert in Second Life
  - 1:00 – 1:40
- World of Warcraft Video
  - 0:00 – 2:05 (entire video)
- After (9) Wikipedia
  - Wikiality on YouTube
  - 1:20 – 2:15: edit wikipedia to make truth

Bit Bucket
YouTube 'cat torturer' traced by web detectives

A teenager who posted videos of himself torturing a cat on YouTube has been arrested after being tracked by internet detectives.

By Matthew Voice
Last Updated: 12:32PM GMT 17 Feb 2009

The youth was shown throwing the animal against a wall, hitting it in the face and holding it under a running shower in the bathroom sink.

In one scene, PrityCatsPrityCat can be heard in the background. A third youth can be heard laughing in the background.

Related Articles

© Telegraph UK
In a vulnerable state

What might have driven a teenager to avenge the death of a cat? The story has yet to be told.

There is no evidence of Parliament plc

Death of Obama's little baby: complex Obama was born to those who could not bear to think of the future. Could this be the moment of his birth?