Analysis of Social Curation on Pinterest: Content, Diversity, and Gender

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You're never too old, too wacky, too wild, to pick up a book and read to a child.

- Dr. Seuss

Dr. Seuss

Repinned by Jennifer Axtman
36 repins 9 likes

Mixed illustration & painting inspiration | From up North

Repinned by Katie Panciera

Tomato & Mozzarella Potato Salad with Lemon-Buttermilk Dressing
From The Kitchen

Pinned by shna streger

vegetarian recipe ideas

Day of the Dead Cake Pops photo by - sari blum
20 repins 7 likes 1 comment

Pinned by Amy Kirby Streger
onto Amy's wedding
onto Erin Jade

Kohirabi Chips from Martha Stewart recipes

Repinned by Jennifer Axtman
onto Eat Like a Caveman

Guilt-Free Single-Serving Funfetti Microwave Cake (gluten free)

Repinned by Katie Panciera
onto Sweets and Baking Recipe Ideas
“[Pinterest’s] goal is to connect everyone in the world through the ‘things’ they find interesting. We think that a favorite book, toy, or recipe can reveal a common link between two people.”

— Pinterest on Pinterest
Honest Toddler
@HonestToddler

So Pinterest helps adults organize photos of all the things they don't have. Sounds fun.

9:30 AM - 24 Apr 13
Why study Pinterest?

» Fastest social network to reach 10M users, growing 4000% in 2011 alone

» Powerful driver for e-commerce

» Social curation, not social networking

» Demographics
What’s Pinterest like?

WE ASKED: What attracts attention?
WHAT FACTORS MIGHT BE IMPORTANT?

Prior work suggests:

Similarity of interests
Specialization
Gender
SPECIFIC DATA WE LOOKED AT...
text

repinning

co-occurrence
Account Settings

Basic Info

Email Address: termeen@gmail.com

Password: Change your password...

Language: English (US)

Country: United States

Gender: Male, Female, Unspecified

Search Privacy: No

Personalization: Yes

Search history: Clear Recent Searches

Recent contacts: Clear Recent Contacts
gender

Connected http://www.facebook.com/profile.php?id=647619433

Log in with Facebook

Yes □ Use your Facebook account to log in

Link to Timeline

Yes □ Post your activity to Timeline

Log in with Twitter

No □ Use your Twitter account to log in

Deactivate Account

Cancel

Save Settings
SUMMARY OF DATA:

- Text
- Repinning
- Followers/Following
- Categories
- Co-occurrence
- Profile: Gender
HOW WE GOT THIS INFO:
Remember how over a year ago, everyone was all excited about the forthcoming Pinterest API? CEO Ben Silbermann even teased its release in a March 2012 email to Pinterest users detailing a Terms of Service change. And API documentation even once popped up on the site, only later to lead to a 404? Well, don’t get all excited again, but the API documentation has returned... um, sorta.

This week, when Pinterest announced support for more pin types (product, recipe, and movie pins) as well as a new Pin It button that works in mobile apps, it also launched a developer site at developers.pinterest.com. The company says the site will be the home to some of the existing documentation and resources that had previously lived on the Pinterest Business site, as well as the new information on the pins and the mobile Pin It button.

"Over time, as more tools become available to third parties, we will continue to post resources on this site," a Pinterest spokesperson says.

New tools like that long-awaited API, perhaps?
SO WE WROTE CRAWLERS
THE REST OF THE TALK:

1. Pinterest vs. Twitter
2. Topics on Pinterest
3. Topic and Diversity
4. Similarity of Interests
5. So what / what next?
1. PINTEREST VS. TWITTER

How does behavior on Pinterest compare to other social network sites? Do Pinterest and Twitter users systematically differ in what they talk about?
DATA

2.6K pinners who tweet
Text from 217K pins
Text from 737K tweets
STATISTICAL technique

We apply an elastic net-based **penalized logistic regression** (PLR) implemented in R’s glmnet package (Friedman, et al. 2010)

PLR handles **sparsity** and **collinearity** well, both common in natural language contexts
distinctively

diy

\( \beta = 3.003 \)
distinctively

\[ \beta = 2.776 \]
distinctively

recipe

($\beta = 2.776$)
old ($\beta = 0.671$)
distinctively

new \( (\beta = -0.96) \)
distinctively

(β = -0.989)
distinctively

now \( (\beta = -0.717) \)
tonight

(β = -2.403)
Three verbs stand out on Pinterest.
use \( (\beta = 0.969) \) distinctively
Want

\( (\beta = 0.173) \)
distinctively need \( (\beta = 0.0916) \)
I want to do this.

I want to make this.

I want to try this.

I want to be this.

I want to go.

I want to put.

I want to remember.

I want to know.

I want to have.

I want to work.

I want to eat.

I want to be seen.

I want to be asked.

I want to be done.

I want to be done.

It helps you come up with ways to arrange it.
need to

remember

do

try

make

know

get

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find

learn

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want to

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abou...
A statistical content analysis shows that consumption-oriented words distinguish Pinterest from Twitter.
2. TOPICS ON PINTEREST

What is the structure of topics on Pinterest? What topics are most popular? How are topics related? Do men and women differ in the topics of their pins?
## DATA

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Users</td>
<td>46.4K</td>
</tr>
<tr>
<td>Female</td>
<td>30.0K</td>
</tr>
<tr>
<td>Male</td>
<td>2.2K</td>
</tr>
<tr>
<td>Unknown gender</td>
<td>14.2K</td>
</tr>
<tr>
<td>&gt; 90% following sampled</td>
<td>42.4K</td>
</tr>
<tr>
<td>Pins</td>
<td>3.14M</td>
</tr>
</tbody>
</table>
DERIVING TOPICS...
Pin $p_1$

PINS & BOARDS

$\vec{p}_1 = <0.8, 0, \ldots, 0, 0.2, 0, \ldots, 0>$
Aggregate and normalize topic vectors for all the user’s pins

(Community-based defn)
TOPIC

POPULARITY
TOPIC RELATIONSHIPS
MALE / FEMALE CONTENT
3. TOPICAL DIVERSITY

To what extent do users specialize in particular topics? Do women and men differ in their degree of specialization? What factors, e.g. degree of specialization, attract more followers? (Prior work disagrees re: effect of diversity)
MEASURE DIVERSITY USING ENTROPY
GROUP USERS BY #PINS

More pinning → more diversity
## MALE / FEMALE DIVERSITY

Women pin more diverse content than men.

<table>
<thead>
<tr>
<th># of pins</th>
<th>Group Avg</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 37</td>
<td>0.77</td>
<td>0.73</td>
<td>0.78</td>
</tr>
<tr>
<td>37 - 93</td>
<td>1.35</td>
<td>1.27</td>
<td>1.39</td>
</tr>
<tr>
<td>93 - 174</td>
<td>1.69</td>
<td>1.51</td>
<td>1.71</td>
</tr>
<tr>
<td>174 - 290</td>
<td>1.89</td>
<td>1.74</td>
<td>1.97</td>
</tr>
<tr>
<td>290 - 458</td>
<td>2.04</td>
<td>1.85</td>
<td>2.06</td>
</tr>
<tr>
<td>458 - 707</td>
<td>2.15</td>
<td>1.95</td>
<td>2.24</td>
</tr>
<tr>
<td>707 - 1107</td>
<td>2.20</td>
<td>2.02</td>
<td>2.21</td>
</tr>
<tr>
<td>1107 - 1843</td>
<td>2.25</td>
<td>2.12</td>
<td>2.26</td>
</tr>
<tr>
<td>1843 - 3801</td>
<td>2.28</td>
<td>2.20</td>
<td>2.31</td>
</tr>
<tr>
<td>3801 -</td>
<td>2.26</td>
<td>2.24</td>
<td>2.27</td>
</tr>
</tbody>
</table>
Getting followers correlates with:

- Following others
- Being an active pinner
- Posting popular topics
- Being diverse … enough

PREDICTING FOLLOWERS
DIVERSE ENOUGH?
Are users more similar to users whom they follow than to random users? Are users more likely to repin from users who are similar to them than from random users?

4. SIMILARITY OF INTERESTS
USED COSINE SIMILARITY TO
MEASURE SIMILARITY
DID SOME SIMPLIFICATIONS FOR
COMPUTATIONAL FEASIBILITY
RESULTS

Users repinned from similar users
Users tended to follow similar users
5. SO WHAT? / WHAT NEXT?
WHAT NEXT?
GENDER DIFFERENCES

More study needed
For example, why aren’t men all that interested in “stereotypically male” topics?
Cupcakes, Boots, and Shirtless Jake Gyllenhaal

If you like any of those things, you should be on Pinterest.

By Farhad Manjoo | Posted Tuesday, Dec. 6, 2011, at 5:52 PM

At Slate’s annual retreat last summer, Holly Allen, one of the magazine’s Web designers, buttonholed me and exclaimed, “Have you heard about Pinterest? You’ve got to write about it!” I hadn’t heard about it, and rather than explain what it is—because while Pinterest is many things, easy to explain isn’t one of them—she rushed to get her iPad to show me the site.

Since then, I’ve noticed paeans to Pinterest everywhere I go. Several readers have extolled me to write about it, calling it their favorite new thing on the Web. I’ve spotted Pinterest stickers on laptops at the offices of both Facebook and Google. And every day, my Facebook and Twitter feeds brim with links to Pinterest. This mania got me thinking that I really should write about why Pinterest is so wonderful, and how it’s the hottest new social site since Tumblr. There’s only one problem: I just don’t get it.

OK, I understand the very basics: Pinterest is a graphical social bookmarking site, a way to display and organize images. It’s a virtual pinboard, except that instead of having a physical pinboard, you have a digital one. It’s a place to share images of things you like or want to try. It’s a library of tastes. Even sites that aren’t traditionally visual are joining it, like the New Yorker, which uses it to feature their favorite cartoons, a little bit like the way a blog might use the StumbleUpon widget to feature reader submissions.

If we look closely, we can see that Pinterest is also a little bit like a blog. It has the same potential for self-expression. The Web is full of places to display your content, from Flickr to Youtube to Google+. But it’s also full of places to share that content, from Twitter to Facebook to Slashdot. Pinterest brings together these two activities—displaying and sharing—into a single platform.

I can see that Pinterest is also a little bit like a social network. It is about sharing. It is about having friends who have friends who are followers of the followers of your board. It has a hierarchical structure, with big boards at the top, followed by small boards at the bottom. It’s also a place to explore, because you can see what people you follow are following and what boards they’re on. And it has a social component, because you can see who is following who.

But why do people like it? It is partly because it’s pretty, and partly because it is like a blog. It allows people to display their own work, and to share it with others. It also allows people to see what others are doing, and to get inspired. It is also like a social network because it allows people to see what others are doing, and to get inspired. It is also like a social network because it allows people to see what others are doing, and to get inspired.

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Tumblr: There's only one problem: I just don't get it.

OK, I understand the very basics: Pinterest is a graphical social bookmarking site, a way to show off cool images you find online. Its motto should be, “If you see something, Pin something.” When you find a picture on the Web that you like—Diane Von Furstenberg boots, blue velvet cupcakes, Amy Adams—click the Pin It button to send the image to your Pinterest page. People on Pinterest can follow your Pins, and you can follow theirs. This may sound similar to any number of other services online—Pinterest shares some features with Twitter, Facebook, Delicious, StumbleUpon, and Tumblr—but the site’s novel design encourages more ferocious bookmarking and consumption of those bookmarks. Pinterest displays your friends’ pictures in a striking, forever-scrolling table, a virtual pinboard of really pretty pictures. If you’re into pictures—especially of fashion, home décor, food, and animals—you should stop reading and sign up right now.

Advertisement

I suspect that my problem with Pinterest is that I’m just not that into pictures of fashion, home décor, food, and animals. Most of Pinterest’s users are women, and the pictures that greet you when you visit for the first time show off stereotypically feminine pursuits. Indeed, many of the site’s users jokingly refer to Pinterest as an outlet for nonsexual porn for women—food porn, furniture porn, fashion porn. (The site’s terms bar nudity, which is interpreted narrowly enough to permit lots and lots of shirtless photos of Jake Gyllenhaal.)
57 Reasons Why Guys Are Scared Of Pinterest

Why is Pinterest such a hit with the ladies? The following images — pulled from various Pinterest boards curated by the female sex — may help explain why.

posted on April 25, 2012 at 5:10pm EDT

Whitney Jefferson
BuzzFeed Staff

1.

The magic wand that makes men disappear!
Pinterest Is Tumblr for Ladiez

Quick! Name the most perplexing social site you can think of. If you are a dude, it is probably Pinterest.
a brand identity that the company has both coyly cultivated and gently refuted. In its mission statement, Pinterest says its raison d’être is “to connect everyone in the world through the ‘things’ they find interesting.” But when you’re enticing “people all over the world” to “Redeforate your home!,” “Plan a wedding!,” “Find your style!” and “Save your recipes!,” you might as well announce, “Guys, it’s like when she takes you towel shopping at Bed Bath and Beyond.”
Tech guru Deanna Zandt pointed out to me that Pinterest first attracted housewives and crafters, and while it’s becoming more diverse and feminist all the time, its image as a “women’s site” stuck. She credits the label as a factor in keeping the space safe, saying, “There's also a glaring lack of misogynist content, which signals to other women exploring the space that it's cool for them to be there.”

Even the site design subtly signals that men who bring a lot of baggage about sex and gender should stay away. “The banner is curly and pink-ish, and I think that just reads as ‘girly’ to a lot of people,” said Jill Filipovic of Feministe. “Hence men not using it as heavily.”

The pink and girly exterior of Pinterest works as a jerk force field, keeping the most piggish men away, leaving pinners to indulge their interests in peace.
IF MORE SANE PEOPLE WERE ARMED

THE CRAZY PEOPLE WOULD GET OFF FEWER SHOTS

TOWEL ON THE GROUND

BATHROOM IS CONSIDERED A MESS
OR IS IT JUST...?
WHAT NEXT?
PERCEPTIONS OF PINTEREST

Pinterest vs. other sites
Who uses Pinterest?
You v. other pinners
Initial impressions
Friend import / social influence
WHAT NEXT?
MORE DETAILED
TOPICAL
ANALYSIS

Not just “DIY & Crafts”:
“Woodworking”
“Scrapbooking”
“DIY Jewelry”
etc.
SO WHAT?

BETTER

PERSONALIZATION

Right amt. of diversity
Emphasize categories, esp. finer-grained categories

‘ME-TERESTING’
Not
‘MANTERESTING’
SUMMARY

Men & women differ in the type and diversity of content they pin.

Pinning diverse content means more followers… up to a point.

Interest similarity is a powerful driver of repinning (and following).
References


THANKS! QUESTIONS?
ASIDE: GENDER DIFFERENCES CONSIDERED (NOT) HARMFUL? WHEN, WHERE, WHY?
“Imagine a world in which every single human being can freely share in the sum of all knowledge. That’s our commitment.”
Define Gender Gap? Look Up Wikipedia’s Contributor List

By NOAM COHEN
Published: January 30, 2011

In 10 short years, Wikipedia has accomplished some remarkable goals. More than 3.5 million articles in English? Done. More than 250 languages? Sure.

But another number has proved to be an intractable obstacle for the online encyclopedia: surveys suggest that less than 15 percent of its hundreds of thousands of contributors are women.

About a year ago, the Wikimedia Foundation, the organization that runs Wikipedia, collaborated on a study of Wikipedia’s contributor base and discovered that it was barely 13 percent women; the average age of a contributor was in the mid-20s, according to the study by a joint center of the United Nations University and Maastricht University.
Effect of Movie Gender on Article Length

Female-interest topics = Lower quality articles
DO THE GENDER INEQUALITIES ON WIKIPEDIA MATTER MORE THAN (OR LESS THAN OR JUST AS MUCH AS) THOSE ON PINTEREST?
Edit your home feed

New! It’s super easy to add stuff you love, and remove stuff you don’t.

No Thanks  Try It Out