Social Curation on the Website Pinterest.com

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ABSTRACT

In this paper we look at the popular social curation website, Pinterest.com and describe some of the user actions taking place within the context of the site. Using Pinterest's API we collected a dataset of over 290,000 pins (images and corresponding metadata) during a month-long period between February and March 2012. From this dataset, a random sample of 1000 pins was selected for analysis. We found that Pinterest users pin content in a wide variety of subject areas with the most frequently observed categories being Food & Drink, Home & Garden Décor and Design, and Apparel & Accessories. Turning towards source type, we found that pins are most likely to come from blogs, which account for 45% of our sample pins.

Pinterest users can 'like', 'repin' and comment on the content pinned by others. Repinning, in which a user can categorize an image onto one of their own boards, is the most frequently observed behavior. User comments, which have been observed in the literature to offer valuable sources of potential metadata, are plentiful on Pinterest. We collected 510 user comments from a random sample of 40 pins and found that four of the six types of comments described by van Hooland, Rodriguez and Boydens (2011) were present in our sample: sharing opinion & judgment, engaging in dialog, sharing a personal history with the image, and providing additional narrative details. We suggest that Pinterest represents a sharing and curating experience that offers insight into information use, reuse and creation on the social web.

Keywords

Pinterest, user-generated metadata, social curation

INTRODUCTION

The web is now a participatory medium where users create and consume content at an unprecedented pace. This study

is part of a larger research agenda to investigate the many user actions taking place around the content of the social curation website, Pinterest. We define social curation websites as sites which combine social features and collecting capabilities. They exist at the intersection of social media sites (such as Facebook, Twitter, Flickr and Tumblr) and push-button private content collection sites (such as Instapaper, Evernote and Read it Later). Social curation sites offer a new way of creating, curating and sharing information on the web.

As a popular and fast-growing site among an increasingly wide demographic, the actions and behaviors observed on Pinterest offer valuable insight to information practices in a social web environment. This preliminary study aims to introduce Pinterest to the information community, provide an overview of some of the illuminating user actions and form a foundation from which detailed analysis can be developed. We first investigate the sources of images used to create entries on the site. Next, we look at the actions of liking, repinning and commenting. Finally, we perform an in-depth examination of commenting behavior by comparing it to an existing typology of user-created metadata from previous social media research.

BACKGROUND

Pinterest

Pinterest was launched as a closed beta site in March 2010, gained significant public and media attention in late 2011, and is currently ranked as the third most popular social network in the US behind Facebook and Twitter and ahead of LinkedIn and Google+ (Experian Marketing Services, 2012). The social networking features of Pinterest are built around the activity of collecting digital images and videos, and, in Pinterest terms, *pinning* them to a pinboard (collection). As our sample of popular pins contains only images, we refer to images for the remainder of the paper. Each pin consists of the image, a user-generated brief description and a link back to the source of the image. Once a pin is created, other community members can add comments, *like* it, or *repin* it. Liking a pin will add the image to the Likes section of a user's profile but will not add it to their boards; repinning an image allows a user to copy and categorize the image onto one of their own boards while maintaining the link back to the original web source.
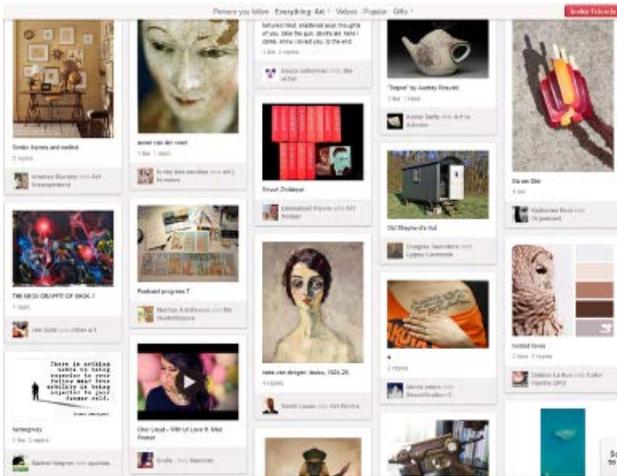
Figure 1. Pinterest interface.

Comments are displayed beneath the image in a comment stream, similar to that seen on other social media sites.

Pinterest is a social and transparent site; usernames, profiles, boards and pins are viewable by other users and the general web-public. Registered Pinterest users can opt to "follow" either the activity of other users or particular pinboards. Activity and certain statistics are public, which allows users to see the number of repins and likes a pin has received and also to read and contribute comments This metadata can act both as a form of social validation for users looking for information and resources *(*e.g. *Hundreds of people have repined this recipe. It must be good")* and as a social reward for users who pin content (e.g. *"Hundreds of people have repined this recipe. I must be cool").*

The Pinterest interface operates on a simple grid based layout (Figure 1) with strong support for social browsing (Lerman & Jones, 2006) and serendipitous discovery. Web 2.0 affordances provided by Pinterest pinning tools allow for quick content creation. These tools, along with the website's lightweight design and low barrier to use, help the user avoid frustration of other collecting and sharing methods that often interrupt a user's primary activity (Marshall & Bly, 2004). Pinterest users can create accounts using their twitter or Facebook credentials, simplifying the process and allowing for the sharing of pins with users' existing social networks.

Pinterest provides simple pin creation tool in the form of a "pin it" browser bookmarklet that lets users quickly create pins from any website they visit. When activated, the tool displays images to the user in a new browser window that from which a representative image is selected. The user selects an image, adds a description and board, and then submits the pin. Many sites, in particular e-commerce sites, have also added a "pin this" link to their product pages. This link, when activated, serves the same function as the bookmarklet described above. Finally, users may create pins from their personal systems by uploading an image or video. In this case, there is no source URL included in the pin.

Social Curation

We define a site, like Pinterest as a *social curation* site. A social curation site combines social media features, such as sharing, liking, commenting and following, with collecting capabilities like creation and curation. Users of a social curation site create surrogates of digital objects, categorize, and share them, mirroring to some degree, the actions and motivations of users who create collections in other social media sites for personal and public purposes (Ames & Naaman, 2007). Users perform the social actions of view, favorite, like, copy, and comment on the collections created by other system users. Comments, descriptions and board names serve both personal organization purposes and social signals to other users.

Social curation can be viewed in the context of the evolution of a participatory web, where users actively create, evaluate and distribute information (Lerman & Jones, 2006). A consequence of the participatory web has been a great increase in the quantity and variety of social annotation and user-generated metadata.

User-generated Metadata

To reap the benefit of user-generated metadata it is important to understand the structure and patterns of activity in the community (Stvilia & Jorgensen , 2010). The community found on Pinterest differs from previous systems that have been studied by the Library, Archive and Museum community in that there is frequently no curatorial supervision provided by content owners. The Flickr Commons, for example, allows tags or comments on images while collections are managed and curated by their owners (in this case, institutional staff). Images added to the Flickr Commons remain under the control of the owner. In contrast, Pinterest users copy material from a source website, where the owner curates, to a new system where the owner has no curatorial oversight. In this way new user created conceptualizations and categorizations of material can occur. We suggest these new concepts and categories could be useful for user-centered indexing practices (Fidel, 1994).

In recent years much research has focused on comparing user tags to traditional knowledge organization systems and the implications of appropriating tags for enhanced information retrieval (e.g. Springer et al. 2008; Yi & Chan, 2009; Stvilia & Jorgensen, 2010; Lee & Schleyer, 2010). Though tagging behavior is occasionally evidenced in the system (by the use of hashtags), Pinterest does not actively encourage it and the main form of discovery remains browsing. Pinterest is rich in other forms of annotation such as descriptions and comments and only a few studies have focused in whole or part at the value of this more narrative type of user-generated metadata. Although there is a shortage of studies compared to research on tagging, the

results that have been reported thus far provide encouraging results.

In a pilot project report looking at their experience as part of the Flickr Commons, the Library of Congress note that the interaction that has taken place in the form of comments around their image collection has benefitted both the library and visitors to the online collections (Springer et al. 2008). Along with a core group of "history detectives" who provide corrected names, geographic information and event information, the library was particularly gratified to see connections made with the material in the form of personal histories and anecdotes (Springer et al. 2008). Likewise, the Smithsonian's pilot project with the Flickr Commons proved useful in terms of additional visits to images, and collection of user-contributed annotations (Kalfatovic, Kapsalis, Spiess, Van Camp, & Edson, 2009). The US National Archives also receives many millions of visits to its Flickr image stream, and recently launched a new "Citizen Archivist Dashboard" that includes tools for tagging, editing articles, and uploading personal images to the archives, among other crowdsourcing work (http://www.archives.gov/citizen-archivist/).

Marshall (2009) compared tags, titles and captions for a set of similar photographs on Flickr and found that tags tended to elicit different types of description than were provided by titles and captions. In at least some cases, it appeared that people were better at titling and telling stories than they were at coming up with tags. Marshall concluded that narrative metadata may be more effective than tags for capturing certain aspects of images and that information retrieval research, including tagging systems should look at ways to harness that metadata.

 van Hooland, Rodriguez and Boydens (2011) report on the analysis of user comments added to materials in the image database of the National Archives of the Netherlands. Looking at a sample of 355 comments, they developed a typology of six categories of user comments. The most common form of comment was a correction of the displayed database metadata (such as spelling, identification of persons, event, location etc), accounting for 46 percent of the sample. Thirty-one percent of comments were coded as providing relevant narrative details about the image, telling a story that could improve understanding of the image by linking metadata elements such as persons and events etc. Less common were comments of users sharing a personal history regarding the image (9%), stating an opinion or judgment (3%), mentioning a broken or inadequate display (3%) and engaging in a dialog with the institution or other users (1%) (van Hooland, Rodriguez and Boydens, 2011).

RESEARCH QUESTIONS
Our research is driven by a desire to understand information use, reuse and creation on the social curation website, Pinterest.com. In light of this, we ask:

What kind of actions are users performing on the website?

Username	User's textual name as displayed on the website
User ID	Unique numerical system identifier for the user
Description	Pin annotation provided by user
Domain	Web domain where the image was found
Source URL	Unique webpage where image was found
Created Date/Time	Date and time the pin was created
Repin Count	Number of times a pin has been repined by other users
Like Count	Number of times a pin has been liked by other users
Comment Count	Number of comments the pin has received
Comments	Text comments about the pin
Board Name	Name of board the pin appears on
Board Description	User-submitted description of board

Table 1. Selection of Data Collected from Pinterest API

- What is the nature of the material being created, curated and discussed?

- How do users interact with material and other users?

- How can we categorize the type of comments generated around Pinterest items [pins]? How useful is this form of social annotation?

METHODS
Using the Pinterest API we collected a feed of the 'Popular' pins in the Pinterest system between Feb. 15 and March 15, 2012. This process ran approximately every five to 10 minutes and resulted in a collection of 291,125 pins. The dataset was stored in a MySQL database and exported to Microsoft Excel for analysis. The Pinterest API provides a number of data points concerning user actions and pin content, many of which were used in support of this research [Table 1]. It should be noted that the algorithms used by Pinterest to generate its 'popular' page are not made explicit, and are constantly evolving. We can say, with some certainty, that it is not simply a presentation of the 'top' or 'most popular' pins across the site as our dataset included pins which had received very low levels of interaction (in terms of number of likes, comments or repins). Pinterest acknowledges in their support forum that pins from new users may not appear in browsing feeds (of which 'popular' is one) until they have established 'credibility' in the system.

We removed duplicate pins (not duplicate images) from the dataset before randomly selecting 1000 pins for initial

Subject	Frequency	%
Food & Drink	149	14.9
Home/Garden Décor & Design	138	13.8
Apparel & Accessories	107	10.7
DIY/Crafts	75	7.5
Humor	69	6.9
Animals	66	6.6
Hair & Beauty	55	55
Travel & Places	54	5.4
Art, Architecture & Design	46	4.6
Weddings	45	4.5
Parenting & Childcare	42	4.2
Inspiration/Thoughts	30	3
Health & Fitness	28	2.8
Holidays & Events	27	2.7
People	19	1.9
Books, Movies, TV	18	1.8
Nature	11	1.1
Religion	7	0.7
Technology & Gadgets	6	0.6
Other	8	0.8

Table 2. Subject/Topics of Sample Pins

analysis [SAMPLE 1]. From this sample, we further isolated a subset of 40 randomly selected pins which we revisited in April 2012 to provide an updated snapshot of user activity and from which we extracted a total of 510 user comments for analysis [SAMPLE 2].

Though some automated analysis was performed on the dataset and samples, the majority of the work reported here was derived from human analysis and coding:

Pin Subject [Sample 1]: Pins (images) were analyzed and coded for subject/topic.

Source Type [Sample 1]: Domain and Source URLs from were analyzed (and visited where necessary) and then coded for type.

Descriptive Statistics [Sample 1 & 2]: numbers of likes, repins and comments were recorded.

Comment Analysis [Sample 2]: User-supplied comments for each pin were recorded and coded using the comment typology developed by van Hooland. Rodriguez and Boyden (2011).

FINDINGS
Pinterest users pin a wide range of material and perform a variety of social actions. From our data we were able to observe a few trends as they appeared in our sample.

Content – Pin Subject
Coding Sample 1 for subject content resulted in 20 categories including our own small 'other' group [Table 2]. Three categories – Food & Drink, Home/Garden Décor & Design, and Apparel & Accessories – each accounted for more than 10% of the sample. Most of our derived subjects can be matched with the board categories that Pinterest offers. Some are exact matches, e.g. Food & Drink, Travel & Places, Hair & Beauty, and People. In other cases, our subjects are occasionally narrower examples (e.g. Weddings versus Weddings & Events, and Nature versus Science & Nature) but more often they are broader than Pinterest board categories. Sometimes this is due to a marriage of topics that Pinterest pulls apart. For example, Pinterest has separate categories for Men's and Women's apparel, but our sample did not warrant making that distinction. Our category Art, Architecture & Design might include the Pinterest categories Architecture, Art, Design, Photography, and Print & Posters. However, browsing these categories, and indeed, any of the Pinterest categories, shows that these are applied both loosely and broadly by users.

Two subjects – Inspiration/Thought and Religion – are not immediately catered for in the Pinterest board categories. The pins that were coded for Inspiration/Thought are also interesting because they are overwhelmingly comprised of text – quotes, poems, proverbs and sayings etc – albeit rendered as an image. Both of these observations suggest that to some extend users will bend the system to fit their needs.

Content – Source Type
Iteratively coding the domain and source URLs of Sample 1, we developed a typology of source type, described, with their observed frequency in the sample, below.

Blogs (45%): Journal-style sites operated by individuals or small groups. Many of these are subject-specific (e.g. focusing on cooking and recipes, fashion trends etc.) while

others operate more as a personal diary exploring a range of topics. Most blogs in our sample are hosted by Tumblr, Blogger, or WordPress.

Ecommerce (9.8%): Sites primarily designed for the *buying* and selling of goods (e.g. Etsy, Victoria Secret, Aldo).

Uploaded by user (8.8%): Pins uploaded by the user from their system. These are a mix of user-owned images (e.g. personal photographs) and images from websites that have been saved to a personal machine.

Search Engine (8%): Image search results from web search engines such as Google, Yahoo! and Bing.

Social Curation (7.9%): Sites similar to Pinterest in that their main function is to collect and curate material for public or community consumption. Sites may be general (e.g. Weheartit) or specific (e.g. Polyvore) in focus.

Image and Video Sharing/Hosting (4%): Sites whose primary function is as a place where users can upload and store images and videos. This category includes services like Twitpic and Photobucket which are primarily used for hosting and sharing on external sites and sites like Flickr which also have well established social community and curation features of their own.

Online Magazine/Group Blog (3.8%): These sites have many magazine-like features, – diverse content type (e.g. articles, opinion pieces, and reviews) frequent updates (usually multiple times daily) and many contributors – but no physical publication. Examples of this type of site include TechCrunch, Houzz, and BoingBoing.

Newspapers & Magazines (3.6%): Sites thatexist as the web presence of a printed newspaper (e.g. The New York Times) or magazine (e.g. Better Homes and Gardens).

Company (2%): These sites exist as the web-presence of a company but act as a point of information and contact rather than as an outlet for selling goods or services. Sites in this category were most often smaller, localized businesses and services.

Forum/Online Community (1.5%): These sites primarily act as open or closed forums and online communities (e.g. deviantART).

Social Networking Service (1.4%): Sites such as Facebook which focus on building and maintaining relations between people with interests, activities and backgrounds in common.

Personal (1.3%): These sites generally promote or provide information about an individual (e.g. official celebrity websites)

A small number of pins fell outside of this typology. These included junk/spam sites, sites no longer in operation, and sites with restricted access. Other categories with very low representation (<0.5% of Sample 1) included Library,

	Average	High
Likes	75	3352
Repins	470	22897
Comments	4	112

Table 3. Likes, Repins & Comments [Sample 1]

	Average Feb-March 2012	Average April 2012
Likes	112	241
Repins	921	1695
Comments	5	12

Table 4. Likes, Repins & Comments [Sample 2]

Archives and Museum sites and Reference & Encyclopedia sites.

User actions – Likes, Repins and Comments
After looking at what was being pinned, we turned our attention to some of the user behaviors that were taking place around that content – namely the actions of liking, repinning and commenting on pins. The most frequently observed user action is repinning which allows the user to add the image to one of their own boards. The second most common action, liking an item, will add the image to the "likes" section of a user's profile but will not add the image to any of their boards. On average, pins in our sample were six times more likely to be repinned than they were liked. Comments were by far the least frequently observed user action in our sample, although certain pins attracted large numbers of comments [Table 3].

We revisited the pins of Sample 2 in April 2012 and compared the numbers of likes, repins and comments to the numbers observed during the first period of data collection. Significant increases can be seen in all three categories, speaking to the popularity of Pinterest [Table 4].

User-created Metadata - Comments
In order to look more closely at a particular type of user – created metadata – comments – we collected a total of 510 comments from Sample 2 and analyzed and coded them using the typology developed by van Hooland et al. (2011) as a framework. As with their previous study, our categories were neither exclusive nor inclusive; a single comment could be assigned to multiple categories. The distribution of comments across categories is presented below with some examples from the sample.

Sharing opinion/judgment: 55%

This was by far the most frequent type of comment in the sample, although it accounted for only 3% of the comments in the van Hooland study. Often these comments were simple exclamations of praise such as *"Love this!",*

"Cute!", "Perfect" and *"Great idea"*. Few comments expressed a negative opinion. Pinterest seems to foster a generally positive community, who seek to avoid confrontation and antagonism. Where users did raise a dissenting voice, comments tended to be longer, somewhat apologetic and explanatory:

"Omg. I would never in a million years do this with my child. I'm sorry but this looks incredibly dangerous"

Engaging in Dialog: 19%

The second most frequently observed comment was an engagement in dialog with either the original pinner or other users. Van Hooland, Rodriguez and Boydens (2011), report dialog as being a very small fraction of their sample (1%), but it is unclear whether they only count questions in this category. We take a broader view as found that dialog within Pinterest comments can take several forms.

Sometimes questions were asked of the general community, directed at no one in particular such as *"Where can I find this?"* and *"Does anybody know where this is?"*. Since Pinterest allows the @username affordance to notify users when they have been mentioned in a comment, many users use the comment sections to notify friends and family that a pin might be of interest to them e.g. *"@xxxxx this made me think of you"*.

Other forms of dialog that exist include answers to previously posed questions (e.g. *"@xxxxx if you click the picture it will take you to the site where you can find the all the details"*) and conversations between individuals:

"@xxxxx my mom wanted to mention she's proud of how famous you've become"

"@xxxx lol she needs to get on Pinterest!"

Sharing users' personal history with an image: 15%

Fifteen percent of comments focused on linking a user's personal history to a pin. Sometimes pins elicited general, but very personal, feelings of nostalgia: *"This brings back memories of living in Holland"*. Other times, users sought to create a connection to an image that lacked any definite link: *"Kinda looks like my wedding dress", "Looks like our Wheaton Terriers"*. For other pins, the personal connection is very concrete, for example, on an image of a church the comment *"My husband and I were married here in 1998"*. Personal history comments can be very emotive. On a pin related to running, one user commented, *"I am turning 50 this year, I have never taken care of me, this is MY year, for me. I have started running again making my health a priority!"* Personal histories such as this often facilitate dialog as other users seek to congratulate, commiserate, and add their own stories.

Addition of narrative details relevant to the image: 10%

The provision of additional narrative details was a small but often significant part of the comments we analyzed. Comments of this type included traditional contextual metadata about the image such as events and place names, e.g. *"This picture looks like it was taken in Nice."* Other comments offer narrative details provided as advisory or 'expert' testimony and speak to the fact that pins are often representations of products and activities:

"... if you use it daily, the vinegar will eventually carve pits in the glass..."

"I found that they ran kind of small, the elastic waist band was very tight..."

Narrative details may be also be relevant but factually inaccurate or disputed. On a pinned image of Florence Owens Thompson, (Dorothea Lange's famous 'Migrant Mother' image) the following information is offered in a comment:

"I have a book about great photos of the 20th century. It explained that this woman had sold the tires from her vehicle earlier to get food. By the time this picture was taken, she was stuck in a "Hooverville" with no money, no food, and no help"

This information is relevant to the image, but perhaps not in the way the commenter intended. Thompson and her family claimed much of the information presented about the image as factual, including that the family had sold the tires from their car, was inaccurate or misleading. As such, the detail provided by the user is important because it highlights the popular understanding of the image and its context, but not necessarily because it tells a truth

Miscellaneous/Junk: 1%

A small portion of user comments fell into this final category. These comments were either spam (e.g. *"Check out this site..."*) or the meaning could not be interpreted.

Two categories of comments offered by Van Hooland, Rodriguez and Boydens, correction of the displayed metadata and mentioning wrong display, were not found in our sample.

DISCUSSION

Pin Content
Pinterest offers little restriction on what users can pin to the site. Pins must be in the form of an image or video, but beyond that Pinterest simply encourages users to "organize and share all the beautiful things you find on the web". An analysis of our sample showed Pinterest users are pinning material related to a wide-range of subjects. A strong focus on material related to food and drink, décor and design, and DIY and crafts points to the role Pinterest and other social curation sites might fulfill for the hobbyist and leisure information seeker.

The images that users pin, and the boards that they curate, maybe focused around a particular space or place, person, activity (e.g. family activities, things to make) or event (e.g. wedding, party, holiday). Sometimes content is pinned as a
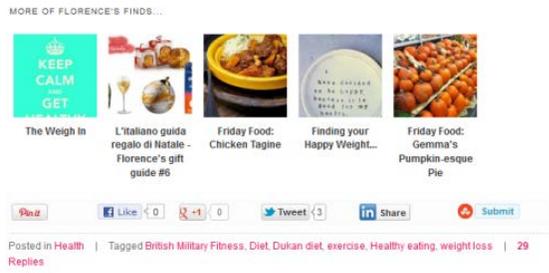
Figure 2. Pin it buttons as seen on a blog [top] and ecommerce site [bottom]

marker of record or achievement (*Been Here/Done That*), other times it can be viewed as a reflection of character (*These are the things that I like/This is the stuff that makes me laugh*). While Pinterest is often lauded as a space for finding and recording inspiration, the product is often a reflection of aspiration (*Here are the things I wish I had/ Here is how I want to look*). Since Pinterest is a social site with few concessions for privacy, the notion of self-presentation is of potential interest. It may be that the fact that pins are publically visible and attributable influences what people choose to collect. Pinterest's other social features (discussed below) may also influence this behavior.

Although we found value in coding pins for subject as a measure of the type of material being pinned, it is important to note in any discussion the subject or 'aboutness' of a pin is very context dependent. When an image is repinned it can take a subtle or even dramatic change in meaning. An image of a group of actors which is originally pinned as TV and Entertainment becomes about fashion and apparel when it is repined with the attention focused on a dress one of the actors is wearing.

In our sample, blogs were by far the most common source of pins. Since our sample is a small snapshot of user activity, we do not make any claims that this is representative of Pinterest content as a whole. However, it does offer some insight into the content that is populating the 'popular' feed, and by association, the content which is drawing user engagement and action.

We were somewhat surprised by the number of pins uploaded by the user from their own system. This may be a result of users moving their personal 'favorite' folders online (or making an online copy) or it may be some users prefer to make local copies of digital material. Another note-worthy source of pins was other social curation sites.

Curating content from one of these sites to another is an interesting phenomenon and one which deserves further study.

Blogs and Ecommerce sites in particular have been swift to recognize the popularity of Pinterest and the benefit of having their material pinned (increased web traffic and sales). "Pin it" links on these types of sites provide the user with a simple way to add content to Pinterest, and in some cases, companies and websites have already pre-populated the pin description (e.g. *"I Love the [product] at [company]"*).

Libraries, archives and museum sites represent <0.5% of source type in our sample. However, content from cultural institutions did appear more often in our sample – sourced from blogs, other kinds of websites. In light of this, libraries, archives and museums may want to think about ways to make their content more easily discoverable (e.g. sharing widgets on their collection sites) as well as whether they want to have a presence on Pinterest where they can promote the dissemination of their material and be involved in the discussion and activities which happen around it.

User actions: Liking/Repinning/Commenting

The social actions of liking, repinning and commenting on pins are extremely common on Pinterest. Repinning is far and away the most frequently observed action highlighting that users not only have a desire to view and save interesting content but to act as social curators themselves. As previously mentioned, these actions are publicly visible: each pin shows the number of times it has been liked and repinned, along with a feed of any comments it has received. Each user profile contains Likes and Activity sections where others can view what pins have been liked, repinned and commented on by that user. In light of this, these user actions may act as a form of reward or mark of approval. Gamification or 'Pin optimization' doesn't appear to be widespread, but there is no shortage of blog posts and web articles advising individuals and brands how to gather repins and followers.

Although they are the least frequently observed user action, comments are perhaps the most illuminating. Pinterest asks that users be respectful of individual tastes and despite a rapid population increase it seems that civility still reigns. In our analysis we found that the most frequently observed type of comment was the expression of a personal opinion or judgment. The vast majority of these were positive, either focusing on the content of the pin (e.g. *"Wow! So cute!"*) or praising the uploader *(e.g. "Thanks for sharing"*, *"I'm so impressed you made this"*). Where dissenting opinion was offered, it usually came with an apology and reasoning.

The second most frequently observed type of comment was engaging in dialog, something which van Hooland, et al (2011) found very uncommon. We suggest a number of factors to explain this difference:

- The nature of the resource: Images on Pinterest often represent a physical object that people want to have. As such they are motivated to ask where they can get it, or how they can make it.

- Absence of metadata: Pinterest users must describe their pins, but they are free to do so as they please. Without a standardized set of fields or recommendations, 'basic' information such as place, names or price is often missing from the pin.

- Visible community: Pinterest users know the site is popular and that any questions they ask have a good chance of being seen by many people, therefore increasingly the likelihood of receiving a response.

- Site affordances: On Pinterest, "@username" will alert the user that they have been mentioned in a comment. Users take advantage of this not only to respond directly to an individual but also to alert friends and family of interesting pins.

- Easy answers: A number of users ask questions which have already been answered earlier in the comment stream, or can easily be discerned from the available metadata (e.g. source).

Critical comments relating to the existing metadata were not observed in our sample, although it was the most commonly observed type by van Hooland et al (2011). Though we do not suggest that this type of comment does not appear at all in the Pinterest system, its scarcity might again be explained by a number of factors relating to the differences in community and content between the two systems. Users likely have different expectations and benchmarks for social curation sites like Pinterest and digital collections of libraries, archives and museums. Authoritative, accurate metadata is largely expected from the latter, whereas it may be inconsequential to many users of the former.

Comments related to users' personal history and connection with images have recognized value. Pinterest appears to nurture, or at least attract, the type of community where people like to share. Fifteen percent of comments were characterized as sharing a user's personal history with an image, and many of the comments providing the addition of narrative details relevant to the image were framed as personal connections. Take for example, the case of what looked to be a lace skirt. The accompanying description simply said "lace" and the source link provided no additional information. The consensus in the comments was that it was a skirt, until somebody provided some additional detail and a personal story:

"It's actually shorts, I just got them at XXX for $22.50. They just got them in."

The user comments collected from our sample are interesting for the insights they provide about the Pinterest community and for the enhancements they offer to images and existing metadata. This latter point in particular suggests that Pinterest may be a hospitable and beneficial venue for libraries, archives and museums to share their resources.

Limitations

This study looks at a small sample of content found on Pinterest. We can offer interesting observations on user actions and behaviors but make no generalizations. Our sample was selected from the site's 'popular' feed; a larger or differently selected sample may have produced different results. While actions such as repins, likes and comments offer a rich and valuable source of data, they can only tell us what is happening, not why.

CONCLUSION

This paper presents exploratory research of an extremely popular social curating site, Pinterest.com. We found that blogs and e-commerce sites are the most popular sources of pins - images added to the site, with blogs alone accounting for 45% of the pins in our sample of the most popular pins. The social nature of the site is reflected in repinning, liking, and commenting behaviors. Repinning is a popular behavior, and reveals changing contextual dependencies, changes in meaning, as an image is repinned. Users most frequently use comments as a means to share opinions, engage in dialog with other users, and provide personal histories. This user-created material enriches the metadata attached to an image and provides enhanced description and user opinions. Categories we found most frequent, Food & Drink, Home/Garden Design, and Apparel, are conducive to subjective judgments. We suggest the nature of the collections curated on Pinterest motivates users to add opinions, personal information and engage in online conversations with other users; however future work is needed to explore this idea.

Pinterest offers many exciting paths for further research. We intend to look at more of the user-created metadata – to investigate how descriptions, board titles, and comments can be tied together in a narrative or to reveal new conceptualizations of images. Work is underway to explore how material from library, archives and museums is represented on Pinterest. What kind of social annotation/discussion is happening, who is involved and directing it, and how can social curation including user-created metadata help improve us understand interpretations of cultural objects? Examining usage statistics and interaction data can only tell us so much. Future work will also include qualitative interviews with users. We want to find out more about why people choose to pin an image and what compels them to add likes, repins, comments, or follow another user. Questions related to copyright and "ownership" of digital media are yet to be addressed despite implications for social curation. This work introduced Pinterest and social curation; we expect issues of collecting and curation in the social media landscape to be important

fields of research for the information community for the foreseeable future.

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