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Use of Folksonomies in Libraries: An Approach to Organise Information and Control Vocabulary

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ABSTRACT

The project investigates folksonomies as a novel strategy to organising information and controlling vocabularies in libraries; it is an inter-based information retrieval methodology comprised of community developed open ended labels that categorise library web resource material. It analyses the tools for folksonomies, such as delicious, flicks, and furls, as well as the usage of folksonomies in libraries, when and how to use them, and also the issues that militate against their use, such as their imperfection and annoyance with taxonomies, among others. The conclusion is that the folksonomy system produces great tags and maintains control over the vocabularies used in subject headers.

KEYWORDS: *Folksonomy, Library, Vocabularies, internet, tagging*

INTRODUCTION

Folksonomy is a system in which people assign public tags to online objects in order to assist them in locating them. In contrast to the taxonomic classification supplied by the content's owner when it is released, this method is also referred to as collaborative tagging, social classification, social indexing, and social tagging (Wikipedia, 2018).

According to Para, Lund, and Ng (2009), the push toward natural language searching is motivated by a desire to alleviate the frustrations of library users accustomed to Web searching's natural language.

When working with a diverse population that lacks formal training in information retrieval, folksonomy can supplement the OPAC's regulated vocabulary by allowing users to locate resources more easily.

Folksonomy is defined by two fundamental qualities. To begin, they enable users to tag information. Second, they enable the building of navigation links from those tags, so extending the search and laying the groundwork for information organisation. The concept is that individuals can categorise items in whichever way makes sense to them, for instance, a photo collection of family vacations (2016, LISBD Network).

Folksonomies are novel and beneficial tools that can assist faculty leaders, particularly librarians and other professionals, in presenting conceptual models of linkages, documents, and other electronic resources. Folksonomies are innovative web 2.0 tools that are ideal for organising papers and resources on a course website, blog, or community of practise website (Kaminski, 2009). Folksonomy is defined as a decentralised classification system that results from an individual's tagging of any item of information or URL address of interest and then maintaining, storing, and organising them in the manner in which the individual prefers for retrieval reasons (Kahlal, 2010).

A folksonomy is a cooperatively developed open-ended labelling system for categorising content such as web resources, online photos, and web links. A folksonomy is distinguished from a taxonomy by the fact that the creators of the labelling system are frequently the primary users (and occasionally the originators) of the content to which the labels are applied. The labels are frequently referred to as tags (sometimes known as categories or facts), and the process of labelling is referred to as tagging (Folksonomy 2007).

A folksonomy is a classification system that evolved from the practise and process of collectively developing and managing tags to annotate and categorise content; these practises are also referred to as collaborative tagging, social classification, social indexing, and social tagging.

The term "folksonomy," created by Thomas VandarWal, is a portmanteau of the terms "folk" and "taxonomy" (2000 as cited by Wikipedia, 2010). According to Shirky (2004), VanderWal is credited with coining the term "folksonomy" by splicing "folk" and "taxonomy" together to form this neologism, which he refers to as a "bottom up social classification." Thus, the essential characteristics of folksonomies are their bottom-up production, lack of hierarchical organisation, and development and use in a social setting. Complete sets of tags - one or two keywords - that a user of a shared content management system uses to organise or classify those pieces of information for retrieval. Users can rapidly add terms to the folksonomy as needed for a single piece of content (Sturtz, 2004).

Thomas Vander Wal coined the term "folksonomy" by merging taxonomy with folklore (Steele, 2009). The term "folksonomy" refers to the classification of resources created by members of the general population. Users add key words to characterise web resources, and these users' keywords are referred to as tags. Tagging is the process of adding tags. The term "tag cloud" refers to the display of accumulated tags as a means of gaining access to resources. Smith (2009) defines a tag cloud as "a way of showing tags in which the most frequently used tags are often highlighted in terms of size or colour." At a glance, tag clouds indicate which tags are more popular, and each tag represents a link. Tags contribute to search engine efficacy by categorising content using a common, accessible, and shared vocabulary.

It is folksonomy. Thus, it is implemented through the use of assigned tags and is frequently referred to as tagging (Shen and Wu, 2005). Tagging phrases assist users in looking for and interpreting material, as well as assisting users in identifying the primary concepts about a topic on the web. Collaborative tagging or folksonomy refers to the method by which a large number of users add Meta data to shared content in the form of keywords / tags (Golder and Huberman. 2005).

Instruments for Folksonomy

Folksonomy, a novel user-driven approach to knowledge organisation, may help ease some of taxonomies' shortcomings. Folksonomies-based websites have two fundamental capabilities: they allow users to "tag" stuff and they construct navigational links from those tags to assist users in finding and organising that information later.

When applied to an actual collection of data, the distinctions between folksonomies and other classification and Meta data methods become increasingly obvious.

According to Noruzo (2006), the most extensively used and popular folksonomy-based systems are as follows:

1. Del.icious: www.delicious.com
2. Flickr: www.f1ickr.com
3. Youtube: www.youtube.corh
4. Citeulike: www.citulike.org
5. Connote: www.connotea.Dr~
6. Teclmorati: www.technorati:com
7. Furl: www.furLnet
8. Tagcloud: www.tagcloud.com
9. Yahoo's my web: http:/ / myweb.com
10. Simply: www.simply.com
11. Unalog: www.unalog.com
12. Shadows: www.shadows.com
13. Spurl: www.spurLnet
14. Settle: www.scuttle.org
15. Tagzania: www.tagzania.com
16. Dabble: www.dabble.com
17. Library thing: www.librarything.com
18. Wink: www.wink.com

Flicker, Delicious, and Furl are the three most frequently mentioned examples of folksonomies in operation. Additionally, it is worthwhile to investigate the relationship between the concept of folksonomies and the tactics used by Google in their web search algorithm.

Flickr

Flickr.com enables users to store and share digital images with family, friends, and the broader public. Flickr enables users to tag their images as they submit them to the site, assisting them in organising their dozens or even hundreds of images. These tags can then be used to categorise the images in the collection.

Furl and Del.icio.us

De1.icio.us and Furl.net operate similarly to 'Flickr, but with electronic bookmarks instead of digital images. Rather than organising links using a hierarchical folder system, like most web browsers do, these services allow users to tag their favourites. Convergence is more important to the operation of Delicio.us and Furl than it is to Flickr. The Flickr user categorises only his own stuff, whereas several users categorise the same piece of information on bookmarking sites. This second strategy enhances the odds that a single piece of material will be classified in the manner that a unique user expects, but also raises the potential that further instances of that content will appear in categories that the user does not expect or wish. To mitigate the impact of these erroneous categorizations, the sites rank bookmarks inside each category according to the number of users who classified the link with that phrase. Thus, the content that is most likely to be associated with the folksonomy term is pushed to the top of the stack.

Google

In a more abstract sense, Google's search engine likewise makes extensive use of a large folklore. Google's PageRank system matches user searches to web pages in part based on clues contained in the linked text on the web pages it scans (Brin& Page; 1998). A web page's links send their associated text to Google's folksonorny. Google reads this content as a categorisation of the page referred to by the hyper link.

THE APPLICATION OF FOLKSONOMY

Folksonomy can be applied in a variety of ways, including the following:

• *Managing and Creating Tags*

The plural form of folksonomy is folksonomies. Folksonomy is a collaborative process for creating and managing tags that are used to annotate and categorise information. Essentially, folksonomy is the use of phrases that assist computer search engines in recognising your website and categorising it appropriately on a search engine results page. This is accomplished mostly through the use of tags, or what some refer to as key words. However, folksonomy is also referred to as collaborative tagging, social classification, and social tagging.

• *Bookmarking on Social Media*

Around 2004, folksonomy gained popularity on the Internet through social software applications such as social bookmarking and photo annotation. The websites that support tagging and the folksonomy principle are referred to as- in the context of web 2.0 because participation is extremely simple, not to mention the fact that tagging data is used in a variety of ways to assist in finding the information you're looking for, including tag clouds. Essentially, tag clouds are used to visualise the most frequently used tags in a folksonomy. Additionally, the term "folksonomy" is used to refer to the collection of tags generated during social tagging.

Another thing to keep in mind about folksonomies is that, while they can be utilised in a variety of contexts, they are largely Internet-based. Essentially, the purpose of folksonomy trigging is to make content easier to search for, discover, and traverse through time. Additionally, few people realise that a well-developed folksonomy is extremely accessible as a shared vocabulary produced and recognisable to its primary users. However, as folksonomies grow in internet-mediated social situations, it is typically possible to determine who produced them. This essentially means that folksonomy users frequently stumble into the tag sets of another user, who typically interprets the tag material in a way that makes sense to them. This provides the user with an incentive to search similar content, which is also referred to as pivot browsing.

Distribution of User-Generated Content

It's worth noting that, while folksonomies are internet-based, they are not part of the World Wide Web's protocols. This means that not every website on the Internet makes use of folksonomies; in fact, folksonomies are most prevalent in web-based communities where provisions for creating and using tags are made at the site level. The purpose of folksonomies is to enable community members to share user-generated content or to collaboratively label existing content (FeldMan, 2010).

When is it appropriate to use folksonomy?

According to Wikipedia (2010), some individuals make the error of attempting to create taxonomy when they lack a complete view of the material that requires classification. They end up with an insufficient method of arranging their data. When new information becomes available, it is possible that they will be forced to attempt 'and rethink their taxonomy. The benefit of adopting a folksonomy is that you do not have to know everything before you begin. Allowing users to classify material in their own terms is necessary if you wish to delegate classification to them "increased uptake. The last thing they want to do is attempt to classify and organise their own data using someone else's worldview. Therefore, if you trust your users sufficiently to allow them to categorise their own data and have the necessary tools in place to help them, folksonomies may be perfect for you.

How to Make the Most of Folksonomy

After users create accounts in folksonomy-based systems, they can begin bookmarking web sites; each bookmark contains the web resource's URL, title, and the date and time the bookmark was generated. Thus, the user saves the address of an online resource on his/her web space that he/she desires to visit in the future. To establish a collection of individual bookmarks, assign tags, and designate individual bookmarks as public or private, some sites periodically verify that bookmarks still work; tell users when a URL no longer works.

Generally, folksonomy-based systems aggregate tagged resources (links) by day. Each link entry includes the user's name, the title of the web resource, the resource's URL, and any keyword tags or comments associated with the item (Noruzi, 2006).

Folksonomy's Characteristics

Just as the users of a folksonomy are diverse, so are their appearances. Certain folksonomy tag clouds are extremely simple—they are barely discernible from standard text save for little variations in text size or colour. Others are rather lovely, especially when organised with a visual background. Additionally, the manner in which folksonomies are transformed into tag clouds varies. Users can generate tag clouds using either tag cloud software or twine tag cloud generators. Alternatively, sophisticated users can design a bespoke folksonorny tag cloud by manually coding it in php or java code.

Folksonomy makes extensive use of an unstructured vocabulary, and so shares many characteristics with any other system that makes extensive use of natural language descriptions. However, folksonomy distinguishes itself by incorporating a social element not found in other indexing systems. '

As an Uncontrolled Vocabulary, Folksonomy

As unregulated vocabularies, folksonomies have numerous issues, including uncertainty in the meaning of and distinctions between terms, an abundance of synonyms, different degrees of specificity, and a lack of guidance on syntax and subtle changes in spelling and

phrasing (Spiteri, 2005; Mathes, 2004). Additionally, syntax is system-dependent: whereas some systems permit spaces within tags or distinguish between capital and lowercase letters, others do not (Mathes, 2004). Additionally, indexer error may be increased in folksonomies due to inappropriate usage; for example, Spiteri (2005) notices the use of the tag "archaeology" for resources regarding dinosaurs and prehistoric germs. Additionally, whereas controlled vocabularies are employed by professional indexers with a semblance of objectivity, the interests of the folksonomy's user are plainly subjective. Uncontrolled vocabularies do have some key advantages over controlled vocabularies: the hurdles to entrance are far lower in terms of effort, time, and cognitive load than with a controlled vocabulary (Mathes, 2004). This trait enables tagging systems to be adopted much more widely.

Folksonomy as a Form of Social Organization

With a 'small number of indexers and little overlap,' large numbers of users in folksonomy present opportunities not available in traditional indexing in the indexed contents. The vast number of indexers, when added together paired with the fact that indexers and audiences are identical, enables a close relationship between indexing and uses including repetition and imitation (Udell, 2004; Spiteri', 2005). Users negotiate the meanings of terms in these procedures in the same way that markets negotiate prices. Individual meanings do not have to be abandoned—while this market process may end in homogeneity, communal meanings develop as a result of the aggregation of individual work (Shirky, 2005). Numerous strategies exist in folksonomy systems to support this common meaning. These include recommending tags that others have used for the same resource, displaying statistical links between frequently used tags, and allowing users to cooperate on combining tags they believe are equal. These take the place of certain of the thesaurus's functions in a regulated vocabulary.

Folksonomies as Access Points

Not only are tag clouds an excellent byproduct of folksonomy classification. Additionally, they can function as a "gateway" or "doorway" to a section of your website or other centralised content. Some even utilise them in place of a sitemap (any word or phrase in the tag cloud becomes a link). There are numerous methods for creating these gateway tag clouds, in which each word or phrase is linked to a certain page on your site. Probably the simplest method to do this is to utilise an online tag cloud generator that supports the inclusion of links.

As Social Organisers, Folksonomies

Folksonomies are distinct from the traditional taxonomy used to arrange information hierarchies. "A folksonomy is designed to be user-governed, with content categorised according to the tags supplied by the user. These tags influence the words and phrases that appear in a tag cloud. The classic example is flicker's approach of displaying photographs vertically and categorising them using tags submitted by users from all around the world. Sites such as flicker are excellent for searching and collaboration. A frequent technique used by website owners and bloggers is to embed a cloud tag widget directly into their site in order to visually organise blog entries or site content. For some good examples, see this article from Smashing Magazine.

Analyzers of Folksonomies

Finally, another fantastic method in which folksonomies can assist web designers, site owners, teachers, librarians, administrators, researchers, and practitioners is by organising essential words, phrases, and themes in a text document or set of data. As previously said, this might be a very promising approach for qualitative research data analysis, assisting the researcher in identifying the major themes in their data (Kaminski, 2009).

THE ADVANTAGES OF FOLKSONOMY IN THE LIBRARY

Librarians and information professionals have reaped enormous benefits from incorporating folksonomy into library activities. Among the advantages are the following:

- *Low Infrastructure Costs:* Makes use of existing low-cost, open-source, and frequently-free Internet technologies.
- *Low development costs:* individuals simply begin tagging.

- *There are no specialised taxonomists required:* Elimination of cataloguers' and indexers' bureaucracy.
- *Increase in Adoption:* You have complete control over how you organise and reorganise your belongings. You can tag items the way you choose to suit how you operate.
- *No Learning Curve (it's easy):* You don't have to learn someone else's view of the world. Users tag stuff the way that they view the universe, not the way that someone else sees the universe making the creator the authority when it comes to what he intended his work to be about. .
- *Highly Adaptive:* Because the user determines what to tag something and can use numerous tags.
- *Doesn't Reinvent the Wheel:* Users can make use of folk taxonomies or the shared lexicon of existing' concepts in folk taxonomies. An employee-generated folksonomy might therefore be considered as "emergent enterprise taxonomy (Wikipedia, 2010).

Baker (2012) says that the growth of folksonomies affords librarians an opportunity to provide greater service. By analysing search behaviour such as information smell, foraging and community produced subject terminology. Libraries can customise tools to meet the needs of their patrons. Making library operations more user-friendly and intuitive boosts their relevance and unity. In an increasingly visual world, descriptive metadata has become king.

PROBLEMS MILITATING AGAINST THE USE OF FOLKSONOMY

Folksonomy, the technique of allowing users to give metadata to items, is often condemned as being inconsistent, messy and resulting in metadata only useful to the person who allocated it. Proponents believe that it engages users, encourages them to use their own vocabulary in describing items, and may be the only way to index the massive number of photographs being published on the webs. There are lots of people who consider folksonomies are somehow inferior to 'real' classification systems like taxonomies, it's unsystematic and, from an information scientist's point of view, typically branded unsophisticated.

Furthermore:
Folksonomy is Imperfect: The tags used probably won't ever be sufficient for an information classification specialist, such a librarian or a records manager. The tags merely show the writers guess, in his own words, what .his content is about.
Polysemy and Synonyms: The tags don't discriminate between terms that have numerous and/or related meaning.
Meta-Noise: Some tags might not be important to some users' scalability; some say it gets messy when it grows big. Its new-people are afraid to try new things sometimes.
It's Frustration with Taxonomies: Although taxonomies are ubiquitous, it might be challenging to create things and execute them. For objects, taxonomies are quite expensive to design and maintain, frequently involving months long initiatives by numerous members of the team. For sites with hundreds (or even millions) of pages, this Herculean work can sometimes never complete as a result broken taxonomies can stay until the design team undertakes a new redesign. Secondly, taxonomy may fail to reflect the

OBSTACLES TO THE USE OF FOLKSONOMY

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Numerous people believe that folksonomies are inferior to 'real' classification schemes such as taxonomies; they are unsystematic and, from an information scientist's perspective, sometimes described as unsophisticated.

Furthermore:
Folksonomy is Imprecise: The tags used will almost certainly never be adequate for an information classification specialist, such as a librarian or records manager. The tags merely provide the author's best guess, in his own words, as to the subject matter of his article.
Synonyms and Polysemy: The tags make no distinction between terms with many and/or related meanings.

Meta-Noise: Some tags may be irrelevant to some users' scalability; some claim that it becomes messy as the user base grows. It's new—at times, folks are afraid to attempt new things.

It's Taxonomies Frustration: While taxonomies are common, designing and implementing them may be challenging. Taxonomies are extremely expensive to establish and maintain for objects, frequently requiring months of work by multiple team members. For sites with thousands (or even millions) of pages, this Herculean work is frequently never completed, leaving faulty taxonomies in place until the design team undertakes a comprehensive overhaul. Second, if taxonomies are not thoroughly evaluated with the intended audience, they may fail to accurately reflect their users' languages. As a result, the site becomes less successful; resulting in user failure, user irritation, or increased support costs (Porter, 2005).

According to Kahlal (2010), there are four major issues with folksonomy tagging: polysemy, synonymy, plural, and tag depth (specificity).

Polysemy

Polysemy is a term that refers to a word that has two or more comparable meanings; a polysemous word has numerous "poly" related senses (semi). Polysemy dilutes query results by returning items that are related but may be irrelevant. Polysemy is superficially comparable to homonymy, which occurs when a term has many, unconnected meanings (Golder and Huberman, 2008).

Synonymy

Synonymy, or the usage of distinct words with similar or identical meanings, creates a bigger challenge for tagging systems, as inconsistency between systems and inconsistency among the terms used in tagging can make it extremely difficult to be certain of the terms chosen. It's difficult for a folkonorny user to be consistent with the terms used for tags; for instance, items regarding the web may be tagged as World Wide Web or www. Synonymy is a serious issue.

Since it is hard to predict how many objects "out there" a user would like to see returned by his/her search query (Golder and Huberman, 2008).

Plurals

Plurals, parts of speech, and spelling all have the potential to undermine a tagging system. For instance, if the tags cat and cats are distinct, a query for one will not return both, unless the system is capable of performing such substitutions, which is a disadvantage of folksonomy-based search.

The disadvantage of these approaches is that a web resource with the tag cat would not be discovered by the queries.

Dimensions (Specificity of Tagging)

Specific refers to the degree to which the user (classifier) should be precise in translating an idea into an index phrase. Web resources can be classified according to their level of specificity,. The depth of tags indicates the number of tags associated with a certain web resource in the system. Tonkin (2006) deduces that the selection of tags is inextricably linked to user behaviour and habits.

CONCLUSIONS

To summarise, folksonomies are a fascinating technology rather than a tried-and-true design tool. However, because they allow users to perform the majority of the organising work for the content on a web site, they may still prove to be a beneficial time saver for librarians and information managers managing the 'adding of information into an already burdened architecture.

In general, the Folksonomy system makes effective use of a variety of data when exposing related tags. Cost differences are often to the same goal in control vocabularies under subject titles. Subject headings lists, on the other hand, may employ the same statistical techniques as folksonomies.

To locate related subjects (as the library does), and useful deviations from the expected cross-references may arise. Until now, this type of data has not been utilised in library classifications. Spiteri (2005) has stated that folksonomies might be utilised as a foundation for developing restricted vocabularies that correspond to the users' language. This might be a unique strategy

employed in a regulated system, such as a cooperative internet.

Folksonomy is taking place. Users are saturating the web with content and categorising it themselves. Professional indexing based on precise terms, consistent syntax, and image-specific research cannot hope to keep up with the flood of unique photographs and information being uploaded to the web, either in terms of time or cost. Folksonomy is not a panacea; it is imprecise, inconsistent, and only meaningful to a particular user. There are techniques to increase the consistency of a folksonomy, although the balance between enforcing standards and encouraging individuals to generate unique material is precarious. With folksonomies, technology may be able to overcome some problems; computer programmes may eventually be able to distinguish specific content beyond the pixel level and assign metadata (although at that point it becomes highly debatable if it is still a folksonomy (Willey, 2011).

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