Folksonomy—a Brief Introduction

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Abstract: The paper gives a brief idea about Folksonomy and its basic attributes. It discusses how the term came into being and how it is used by the users for their personal retrieval. The paper also states the tenets and types of folksonomy and cities instances of its usage.

Keywords: Folksonomy, Thomas Vander Mal, Taxonomy, Semantic Web.

Introduction

Melvil Dewey formulated a sophisticated method in 1876 to categorize the world's knowledge and named as Dewey decimal classification system commonly known as DDC. This system divides knowledge into 10 broad subject areas and several hundred sub-areas and then assigns classification number to a book. However to classify the information available on the internet, a new approach was introduced by an information architect and internet developer Thomas Vander Wal, called folksonomy commonly known as people's taxonomy.

Folksonomy is created from user-generated electronic tags or keywords that interpret as well as express online content. It is also called collaborative tagging, social classification, social indexing, and social tagging. Folksonomy enables a set of users to manage, categorize and summarize online content, and also index information, so that searching could be facilitated and resources could be navigated. For example, users post their photos and label them with descriptive words by tagging in social media. Then the photo will be retrieve while searching on the web using that descriptive keyword.

Vander Wal says "People aren't really categorizing information. They're throwing words out there for their own use." But the cumulative force of all the individual tags can produce a bottom-up, self-organized system for classifying mountains of digital material. Grass-roots categorization, by its very nature, is idiosyncratic rather than systematic. That sacrifices taxonomic perfection but lowers the barrier to entry. Nobody needs a degree in library science to develop this classification. (Pink, 2005)

Definition and origin of term 'Folksonomy'

The term Folksonomy is an amalgamation of two terms—Folk and Taxonomy. The coining was done by Thomas Vander Wal, an eminent Information architect and internet developer. Wal himself has given a short yet precise description of the incident that gave birth to the appellation 'Folksonomy'.

> "On July 23, 2004 in the IA Institute (then called the Asylomar Institute for Information Architecture ...) ... Gene Smith asked, "Some of you might have noticed services like Furl, Flickr and Del.icio.us using user-defined labels or tags to organize and share information.... Is there a name for this kind of informal social classification?". After a few other people answered some other related questions Eric Scheid of Ironclad Information Architecture responded with "folk classification".
> "On July 24, 2004 I responded just after that with, "So the user-created bottom-up categorical structure development with an emergent thesaurus would become a Folksonomy?".
> "I am a fan of the word folk when talking about regular people. Eric put my mind in the framework with one of my favorite terms. I was also thinking that if you took "tax" (the work portion) of taxonomy and replaced it with something anybody could do you would get a folksonomy. I knew the etymology of this word was pulling is two parts from different core sources (Germanic and Greek), but that seemed fitting looking at the early Flickr and del.icio.us.
> "On August 3, 2004 Gene Smith posted in his blog Folksonomy: Social Classification. This blog post received a lot of traffic and opened up the term folksonomy for others outside the closed IA listserve." (Wal, 2007)

It is now quite evident that Folksonomy is people's taxonomy that has three tenets—(1) Tag, (2) Object being tagged and (3) Identity. However, here it must be kept in mind that Folksonomy is not Folk Taxonomy, for the latter is a cultural practice, noted and recorded by folklorists and anthropologists.

Folksonomies consist of freely selectable keywords, or tags, which can be liberally attached to any information resource hence the term 'tag', which might be defined as either an identifying label, or the mark hung around a dog's throat signifying ownership.

Vander Wal (2007) defines folksonomies as follows:

> "Folksonomy is the result of personal free tagging of information and objects (anything with a URL) for one's own retrieval. The tagging is done in a social environment (shared and open to others). The act of tagging is done by the person consuming the information. The value in this external tagging is derived from people using their own vocabulary and adding explicit meaning, which may come from inferred understanding of the information/object. The people are not so much categorizing as providing a means to connect items and to provide their meaning in their own understanding" (Vander Wal, 2007)

Since the term 'folksonomy' has won the day in spite of the extensive debate on the correct name for the totality of tags. 'Tagging' or 'social tagging' are also used as synonyms in many publications, even though technically these terms refer to the act of indexing via tags rather than the mass of tags. Vander Wal (2005) points out that the term 'folksonomy' always takes into consideration the social component of tagging; it incorporates the visibility of all tags to all users and the possibility of adding tags to all resources into its meaning. Also according to Vander Wal (2005), the term 'tagging' rather refers to personal information and resource management that does not make the tags public.

Types of Folksonomies

There are two types of folksonomies: (1) Broad Folksonomy and (2) Narrow Folksonomy. In Broad Folksonomies a considerable number of users contribute to the creation of tags. It allows a large number of users to tag same resources by using their own and convenient vocabulary. In Narrow Folksonomies only a handful of users tag particular items, thus are not very common. It may be derived that Folksonomy is a demand of time, since the present phase of human kind has been getting more and more involved in computing and information environment. (Pink, 2005)

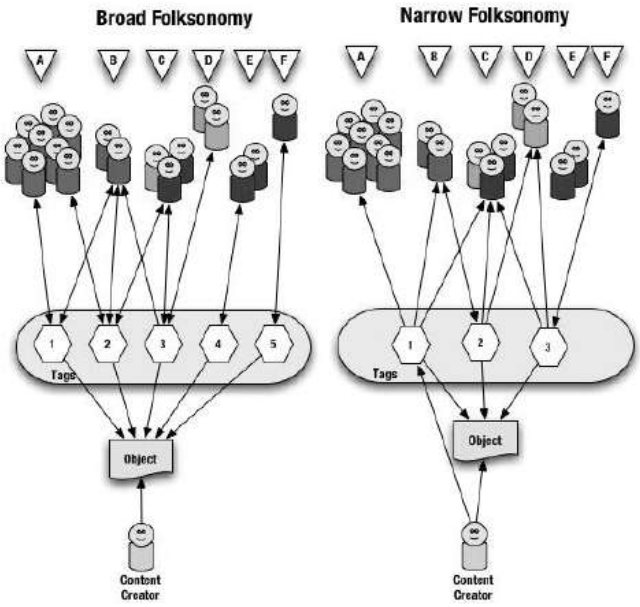

Fig 1: Broad and Narrow Folksonomies. Source: Vander Wal (2005).

Use of Folksonomy

Folksonomy may even foster a Semantic Web, where every Web page would contain machine-readable metadata, describing its content. (Folksonomy) Such metadata could drastically enhance the precision (the percentage of relevant documents) in search engine retrieval lists. Nevertheless, it is hard to perceive how the large and varied society of Web page authors could be taken into confidence to insert metadata to their pages in a steady and reliable way. (Folksonomy)

Folksonomy has achived such fame that "At the Art Museum Community Cataloging Project, officials from the Guggenheim, the San Francisco Museum of Modern Art and a half-dozen other establishments are taking a folksonomic approach to their online collections by allowing patrons to supplement the specialized lexicon of curators." (Pink, 2005)

Folksonomy has indeed revolutionaised the idea of post-coordinate indexing, democratising the tagging of ritrieval of information in this era of Information Society.

In itself, folksonomy is especially suitable for systems where no authority is present inorder to organise the classifications. That is one of the reasons why it is gaining popularity on the web. The democratic aspect of the method also leads to a very rich description for each item. Namely items that are tagged by many persons are usually characterised by a spectrum of tags, revealing the diverse levels of descriptions associated to them. Nonetheless, the richness of the methods may also be a weakness in practice, in order to retrieve useful information from a database for instance. This is due to the very large number of tags associated to each item, as well as to the use of terms that have not been optimized by an authority, such as synonyms or words written with several orthography.

Folksonomy and Semantic Web

Folksonomy indented to make a body of information which is increasingly easy to search, discover, and navigate over time. Folksonomy hold a key in developing semantic web and information retrieval system. Web content is searchable through machine readable metadata. Not sure every web authors have added metadata in their pages. It's also time consuming to learn and use.

Folksonomies in the OPAC

Can folksonomies provide the edge that online catalogues need to be competitive in a world dominated by Google and Amazon?

Folksonomies are flexible and self-moderating, but when combined with a more traditional hierarchical taxonomy they may be able to offer the personal, interactive and productive search experience that people are looking for in an online catalogue. Next generation interfaces by vendors such as Innovative Interfaces are betting on just this. Their new browser, Encore, allows users to search and add tags to the OPAC.

Once we have integrated a folksonomy into the online catalogue, an exciting opportunity arises. Works would be described both by the taxonomic Library of Congress Subject Headings, but also by the folksonomic tag cloud. If we could benchmark the h index, to determine at what h value a tag cloud would sufficiently describe the work, then we could use the h index to create a conversation between the folksonomy and the taxonomy.

Folksonomy Vs. Taxonomy

Folksonomy tags are added by the reader or anyone other than the author, but Taxonomy tags are usually added by the auther. Flicker is ag ood example of folksonomy, which lets users describe the photos, and tags them in the right category . taxonomy tags are usually added by the author. WordPress is a good example of taxonomy, which allows content to be organized in categories or closed tags.

The only way to reduce the discrepancies is by combining the two methods of folksonomy and taxonomy. A new process should be adopted by asking the opinions of the users. This method, though not foolproof, may improve the language itself, by giving it more structure. Thus, folksonomy can operate as a loose thesaurus that finds different interpretations of the same word.

Some advantages of Folksonomy :

- To provide additional keywords to help search engines and tag services add up your keyword counts and classify your post content.
- It can adapt to the language quickly, and can be applied to new concepts.
- It has a lower cost to maintain, since the workload is shared by multiple users adding to the content every day.
- It's a very flexible system, since the content is tagged almost every day.
- To provide additional navigation on your site, like an index reference, helping the user find related post content.
- Cheap, easy way to classify web content
- Capable to adapt to user style
- Scalability- easy for everyone use
- Reflects user's vocabulary
- Help machine to retrieve best information in the web. (if done with accuracy)

Some Disadvantages of Folksonomy :

- Over tagging can lead to irrelevant results, making the search meaningless.
- It has led to inconsistencies, misspellings, and different punctuation.
- People can voice their biased opinions, which can influence the tagging.
- Polisemy- Same tag with different meaning (ex- Chicken, Windows)
- Synonyms – Different tags with same meaning (ex- Mate, friend; Ocean, Sea)
- Plural Vs Singular
- Acronym and abbreviations
- No spaces allowed (only single word)
- Language Barrier
- Organized by amateur
- Anti-spam measure is tough

Conclusion

Web is infinite, can't rely on experts to classify things. Its upto end users to contribute. Single tag is not going to speak the language. The number of increase in tag that matters. (Ex. Flickr). Some extend taxonomy also can't be ruled out (Ex. Library catalogue). We have to capitalize on the benefits of both the systems. University of Pennsylvania adopted Penn Tagg. Beyond the partnership with Taxonomy, Folksonomy moves forward in future classifying web towards creating semantic web. In this scenario, the taxonomy and folksonomy are in conversation with each other as a proxy for a librarian-user dialog with the h index as the moderator. Here we get the best of both worlds: the flexible, adaptable, and cheap folksonomy can continue to monitor the changing meaning of a work, while the orderly taxonomy can prevent chaos from overriding the online catalogue. Benchmarking such a useful metric as the h index will require a larger sampling of user-generated tags, possibly by discipline, genre, and form.

Folksonomies present a valuable addition to the spectrum of knowledge representation methods. They appear in the context of user collaboration in Web 2.0 environment and provide easy and comprehensive access to large data collections. With web users taking control over document indexing, folksonomies offer an inexpensive way of processing large data sets. User centered approaches to tagging have multiple benefits, as they can actively capture the authentic language of the user, are flexible and allow new ways of social navigation within document collections. Yet some problems derive from the unstructured nature of tags which may be solved by improving the users' tag literacy, by (automatic) query refinements, or by processing tags through natural language processing. In the future, the advantages and shortcomings of folksonomies will be considered more closely as advanced approaches to the use of social tagging applications are emerging. Folksonomies and traditional knowledge representation methods are not to be viewed as rivalling systems; additionally, new options for combinations of different techniques will be designed. This will also be particularly beneficial in specialized contexts, since the number of professional database providers, libraries, and museums that have adapted folksonomies continues to grow.

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