On Tags and Signs: A Semiotic Analysis of Folksonomies

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In recent years, the practice of tagging resources on the Internet has become a popular activity, due in part to the success of websites that feature tagging functionality, such as Delicious, Flickr, Technorati, CiteULike, and LibraryThing. These websites allow the collection and sharing of bookmarks, photographs, blog postings, academic papers, and books, respectively, making tagging a key method to enable retrieval and sharing within these web services. In alignment with the topic of this paper, the website Delicious offers a useful description of tags and tagging, and this description can be extended beyond bookmarks to a general definition:

Tags are one-word [or multiple words written without spaces or with underscores] descriptors that you can assign to your bookmarks on Delicious to help you organize and remember them. Tags are a little bit like keywords, but they’re chosen by you, and they do not form a hierarchy. You can assign as many tags to a bookmark as you like…This is great for organizing and finding personal data, but it goes even further when someone else posts related content using the same tags. You begin building a collaborative repository of related information, driven by personal interests and creative organization. (Delicious 2009).

Tagging as a practice existed prior to popularization by the websites noted above, but they were among the first to extend the practice beyond the domain of content creators or information specialists (Weinberger 2007). When tagging is done by members of the general public, it is known as the practice of folksonomy (Tech Encyclopedia 2009). For
an understanding of how folksonomies do (or do not) work, the academic discipline of semiotics offers help in understanding the structure of messages and how meaning is created (Littlejohn & Foss, 2008).

Use of semiotics

Semiotics is defined by Littlejohn and Foss as, “the study of signs” (2008, 35), and tags, as folksonomies, are signs. Using a triadic structure of a sign with a signifier, (the “material dimension of the sign,”) a signified, (“the cultural or conceptual dimension,”) and the referent (“the real thing in the world,”) the structure of a folksonomy sign can be broken down as follows (Black 2007a, 5-6):

1. Signifier = a word or single term that is a link appearing on a webpage
2. Signified = what that word link represents to the user, i.e. an expectation of resources on that topic
3. Referent = the actual resources that have been tagged with that word, at that point in time

Examining folksonomies with this semiotic structure initially reveals one of the fundamental difficulties with folksonomies: The referent is almost always unknown to the user until he or she delves deeper into the content for more information. Traditionally, signs have a clear or discernable referent, yet tags as folksonomies, by their very nature, are a mystery to the user. The possibility of a single, clear meaning becomes increasingly difficult to identify.

Through a semiotic analysis of the characteristics of tags as folksonomies, I will explore three inherent difficulties that arise from this practice. To begin, I will discuss the issue of folksonomies’ collective nature, which facilitates open meaning. Then I will illustrate how tagging for one’s own use can result in confusing connotations. Finally, I will analyze how the practice of tagging results in a lack of message coding. Despite these difficulties, tags are emerging as a popular new form of communication in line with more fluid notions of meaning. They are consistent with a post-structuralist notion of semiotics, but are nonetheless problematic in their usage.
Collective Nature Facilitates Open Meaning

Folksonomies, unlike many other forms of communication, are created by individuals acting in isolation from one another and with no coordinated effort. It is rare in communications that many people create one text, resulting in a many to one relationship between creators and their tags. A far more common occurrence is the one to one relationship (for example, in verbal or instant messaging conversation between two people), or the one to many relationship (for example, a television show broadcast to many viewers). If there is an incident of many people creating a single message — for example, a television cast and crew working to deliver a single show — there is still the presence of coordination and community among the group, with members working as a team to create a shared message. However where folksonomies are concerned, many people may be acting alone and unaware of others’ efforts, therefore adding an individualized signified to a preexisting signifier, further refining and expanding the meaning of the tag sign.

All efforts toward creating folksonomies, however, are not done in isolation. For example, when tagging, a Delicious user is given the option to use commonly-applied tags for an item. In addition, both Flickr and Delicious have seen common-interest communities develop, with members working together to expand and share folksonomy practices. Such communities organize and promote an event or topic by agreeing to use pre-designated tags. Despite these efforts at higher levels of organization, such practices are not the norm and there currently exists no method to prevent other users from co-opting these efforts by using the tag to assign their own individual meaning.

While Saussure, a founder of semiotic theory, believed one cannot freely choose any word and have it express a clear meaning (Littlejohn and Foss 2008, 107), folksonomies do not include a preventative measure that dissuades users from choosing any word arbitrarily to assign significance, even when it defies the sense of how others use the word. When many users add individual meanings to one tag, inevitably the result will be one folksonomy with multiple (and occasionally indiscernible) meanings. This phenomenon is akin to Black’s observation that, “the possibility of ‘truth’ – of knowing anything with certainty – is denied; and moreover, the stability of the ‘sign’ (as imagined by Saussure) is [also] denied” (2007b, 12). In this case, then, we are left with “floating signifiers,” where the signi-
fields remain constant, but the meaning carried by the signifiers is “changeable and haphazard” (Black 2007b, 12). This open-ended approach resulting from collective, uncoordinated tagging creates a lack of certainty regarding what that tag sign means, and fosters fluidity in what meaning can be discerned.

Problem with Folksonomies

The practice of tagging is useful as a personal means to organize data and as a mnemonic device for retrieving one’s records – it was originally for this use that Joshua Schachter created Delicious (Schachter 2008). When one moves beyond the personal uses for tagging, however, to the social and collective aspects, the utility of the practice becomes more problematic. There are essentially two levels of complication:

1. Individual’s tags may be difficult for others to understand; and
2. Individuals may have tagged items inappropriately for others’ needs.

A good example of this problem is demonstrated by a search I performed on January 10, 2008, on Flickr for photos of Hawaii. In addition to the expected images of beaches and volcanoes, one also gets, among the top results, a picture of a couple at an outdoor restaurant and a close-up of a lizard (both presumably located in Hawaii). While these photographs may have a relationship to Hawaii that is useful and apparent to the creator, the searcher seeking more traditional notions of the islands is forced to browse several items unrelated to his or her query.

Another example of tagging difficulties arises in a scan, also performed January 10, 2008, of the most popular tags at Delicious. This scan reveals some obviously meaningful tags (youtube, tv, psychology), but also finds a number of others that are puzzling (toread, fic, fun), thus demonstrating the way in which users participate in folksonomies for personal use, in a manner that is not often useful to others.

An additional problem arises in the way that current technology and practice are not able to disambiguate the multiple senses one signifier may have (for example, homonyms such as: asp, the programming language and asp, the snake) or to join multiple signifiers sharing the same signified (for example, blog, blogs, weblog). Morville believes that folksonomies are thus fundamentally flawed due to their inability to, “handle equivalence, hierarchy, and other semantic relationships
causing them to fail miserably at any significant scale” (as cited in Weinberger 2007, 166). However, Weinberger argues that computers, possibly via artificial intelligence, will eventually address some elements of ambiguity in folksonomies (Weinberger 2007).

Tagging for the self results in confusing connotations

The example mentioned earlier of an image on Flickr showing a couple at a generic restaurant presumed to be in Hawaii highlights how the personal use of tagging results in a lack of sign clarity. Most websites that offer tagging encourage users to partake in its the shared aspects, making public sharing of tags a default action that must be deactivated in order to keep tagging private. When left public, an individual’s folksonomy is then available to anyone using the tagging application for that particular website, regardless of whether or not the user has actually made a conscious decision to participate. These sites are ideally suited for personal use, but its creators often favour their application as a social tool: Schacter, the creator of Delicious sees the site as “primarily an ‘amplification system for memory,’” and, as Weinberger notes, “encourages people to use the tags that are meaningful to them, whether or not they are meaningful to others” (Weinberger 2007, 165-6). The popular use of tags like fun and inspiration on the Delicious website as of January 10, 2008, suggest that people are, in practice, using tags in this manner.

The difficulty that arises in taking communications intended primarily for personal use and making them available to the public is that the full meaning available to the sign creator is not generally available to the sign receiver. Langer believed that all messages are made up of both meanings common to communicators (which she called denotation), and meanings that are personal and private (which she called connotation) (Littlejohn and Foss 2008). To understand a sign’s meaning, both are important. Denotations are often clear in folksonomies, except in cases of homonyms, yet the connotations that a folksonomy creator had intended when tagging a particular resource do not travel with the message to the folksonomy receiver. The connotations are still present, but there exists no way to begin to understand them. In many other communications media, further exchange, rich background information, or context exist, that allow a communication receiver to understand the communication creator’s connotative meaning. When tagging, one individual’s con-
notations are rolled into the collective connotations of the folksonomy, thus occasionally resulting in what amounts to “sign schizophrenia”. Regardless of the communication, it is doubtful that any communication receivers are ever fully able to grasp all the connotative senses of a communication sender without direct interpersonal clarification. With folksonomies in particular, users are far more likely to face puzzlingly personal tags or tags denuded of significant meaning in environments like those described above.

Lack of Message Coding

In addition to the problematic nature of a single tag, the environment of folksonomies is problematic. This environment, or discourse, allows creators to essentially package their messages in a way that receivers will be able to both know that the messages are meaningful and have the means to understand the message’s meaning. Hall outlines the importance of encoding and decoding messages:

Discursive ‘knowledge’ is the product not of the transparent representation of the ‘real’ in language but of the articulation of language on real relations and conditions. Thus there is no intelligible discourse without the operation of a code (2006, 167).

These encoding and decoding instructions are critical for successful communication, yet in the cases of Flickr and Delicious, sufficient forms in the discourse have either not developed or they are not widely known and adopted.

Context helps enable communication receivers to decipher meaning, yet with folksonomies we are simply presented with a tag and no context. For example, on the Flickr website, the tag hawaii cannot be accompanied by the words “Joe Smith’s holiday last year,” which would assist receivers in contextualizing photographs of a holiday meal at a restaurant. Langer believes that a communications’ framework, or context, is crucial. Littlejohn and Foss summarize her views:

The real significance of language is in discourse, in which we tie words together into sentences and paragraphs. Discourse expresses propositions, which are complex symbols that present a picture of something. The word dog brings up a conception, but its combination with other words provides a unified picture: The little brown dog is nestled against my foot (Littlejohn and Foss 2008, 106).

On Flickr, however, there is only the word ‘dog’ as a tag, and selecting the tag generates results including not only photographs of a beloved household puppy, but also of hot dogs and other conceptually unrelated images. The importance of discourse to facilitate meaning of individual signs is echoed by Desouza in her paper on the role of semiotics in
human computer interactions (HCI), in which she identifies that, “HCI artifacts are communicated as signs, in a particular kind of discourse that we must be able to interpret, learn, use, and adapt to various contexts of need and opportunity” (De Souza 2005, 2). Granted, folksonomies do not exist in a vacuum, but when browsing a list of tags or when searching for items via a tag, there is minimal context related to that transaction beyond offering related tags; there are no explanations of the tag, no disambiguation, and no further help.

In a study by Kipp and Campbell at the University of Western Ontario regarding tagging on the Delicious website, the researchers found that despite the personal nature of tagging, and while consensus and patterns appeared to develop, a number of problems remained:

This study does not definitively resolve the controversies surrounding collaborative tagging... users employ a wide variety of conventions in constructing tags: conventions which they apply inconsistently. Time will tell whether consistent conventions emerge (Kipp and Campbell 2006, 11).

Folksonomies and the practice of tagging are comparatively new communication methods, and thus the conventions have not solidified, nor have all users mastered the ability to read folksonomy texts. This situation, although pronounced in folksonomies, is not unique: the Internet and other new media have also, “accelerated the process of creating structure, and so subjected it to the huge possibilities for playing with signs” (Black 2007b, 13). New media enable and encourage experimentation with prior structure, making the establishment of conventions even more uncertain. Even if there existed established conventions for folksonomies that aided the encoding and decoding of messages, many users would still be too unfamiliar with them to make meaningful contributions. It is likely, however, that as folksonomies mature we will see a number of conventions crystallize, possibly resulting in some stabilization of meanings. Regardless of this progression, tagging and folksonomies-creation remains, at their core, a personal and simultaneously collective practice, ensuring that the signifieds of folksonomy signs will always remain, to some degree, in flux.

What Is the Future of Folksonomy Signs?

Semiotics analysis shows the complicated relationship between communicator, interpreter, referent, signified, and signifier. The individual nature of the tagging process is
such that results seldom reflect the searcher’s intended aims. Despite this, and the significant challenges presented by the use of folksonomies and tagging, the application of these technologies continues to proliferate on websites such as Flickr or Delicious. Vander Wal, who coined the term folksonomy and continues to write on the topic, offers some insights about why people continue to use tagging as a means to describing digital items. He argues that “tagging seem[s] to be working for finding things, more from exploration and serendipity than through searching and intent” (Vander Wal, 2007). It can thus be seen that the meaning of a given folksonomy is not a literal notion of the signified. Rather, the meaning of a folksonomy sign can be conceived as an invitation to explore the world of things beyond the lines of that word.

References

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