

Social Tagging & Folksonomies

Emergent Collective Knowledge

Disciplines

- Many disciplines such as computer science, psychology, computational linguistics, and pedagogy have devoted significant research efforts to studying how users classify information online (Panke & Gaiser, 2009).
- Yet, communication is central to online interactivity.

Communication Discipline

- Communication can offer insights into how individuals' create and coordinate online symbolic content that eventually builds and frames online communities.

Online Content Creation & Organization

- Internet content is created & organized in 2 ways:
 1. **Top/down-Expert Design:** Professional content developers build websites and fill them with well-defined and planned-out content. This is a pre-defined classification
 - Information Architecture
 - HTML /XML
 2. **Social Classification-Bottom Up & Folksonomies:** Information is added by users on social media platforms generating content form interactions with organizations and other users
 - Unstructured
 - Structured / Tagging / decision making

Machines, Humans & Understanding on the Web

- “Semantics seems a necessary part of the next generation of the Web. The **information has to be structured** in such a way that **machines can read and understand it as much as humans can, without ambiguity**. Collective knowledge can also represent a useful source for adaptive applications, since tags (and folksonomies) represent a novel aspect to be considered in any collaborative scenario,” (Cena, Farzan, & Lops 2009).

Human Tagging (meaning creation)

- Social tagging is being described as the wisdom of the crowds or Folksonomies (Greenfield, 2007)
- Human decision making is done in the process of tagging
- These types of new media technologies are transforming the way people communicate across the globe (Zimmer, 2009)

Human Tagging (meaning creation)

- **Tagging Text** - Web 2.0 technologies, more specifically social media, gives online users the power to tag online content based on personal knowledge and understandings.
- Structuring and organizing texts into ontologies (the structure of a system and what exists in a system) requires human decision making.

Human Tagging (meaning creation)

- **Social tagging** is different than **Sentiment Analysis** (automated) of Unstructured Text, since users are making decisions when tagging or categorizing online content.
- Developed by human categorization, the **conceptual frame** (politics, art, movies) provides a **information logic**, which can be **understood by machine logic**.

Human Tagging (meaning creation)

- User driven taxonomies or folksonomies (ontologies) let people **freely choose** how to tag, organize, and associate content, which eventually builds into a bottom-up cooperative categorization of resources and topics shared by user communities (Cattuto, 2006).

Machine Logic

- “Web 3.0 (the semantic Web) derives its "wisdom" from software that learns by looking at online content, analyzes the popularity of that content and draws conclusions. Instead of people refining information and opinion, intelligent software would do the same thing,” (Smith, 2009).
- Semantic technologies are still poor analysis tools

Machine Logic

- “The key is that information is presented and labeled so it makes sense to machines. This means **Web content needs to be presented in a language that software can understand**; programming languages such as OWL and SWRL that can be "read" by software. The more Web content written in these languages, the more effective the software will be gathering information and making recommendations for users,” (Smith, 2009).
- Tags can be converted to machine language

Machine Logic

- “The OWL Web Ontology Language is designed for use by **applications that need to process the content of information** instead of just presenting information to humans.” (<http://www.w3.org/TR/owl-features/>)
 - From World Wide Web Consortium (W₃C)

Communication Discipline

- The **communicative and symbolic** nature of folksonomies has implications for communication theory.
- With social tagging being an **interactive cooperative dynamic** (Cattuto, 2006) and “**genre aggregator**” (Panke & Gaiser, 2009, p. 325),

Communication Discipline

- The Internet is used to support and supplement individuals' communication with their communities (Dutta-Bergman, 2005).

Communication Discipline

- In fact, individuals' tagged information is found to have a **dual purpose**. (Ames & Naaman, 2007; Thom-Santelli, Muller, & Millen, 2008; and Panke & Gaiser, 2009).
 1. Tagged information **organizes knowledge for the individual, while**
 2. Tagged information helps **develops a social meaning systems for online communities to utilize**

Emergent User Categories (Knowledge)

- User knowledge is essential to making sense of culturally and contextually bound information such as experts, celebrities, and key figures (Kato, Kurohashi, & Inui, 2008).
- Decision making of the “crowd” is essential to this

Mixed Model - Exercise

- **Create:** a user account on Digg (www.digg.com)
- **Digg:**
 - Go to a major news outlet and “digg” two major stories
 - Go to a blog and “digg” an article
- **Vote:**
 - On two Stories
 - On two comments
- **Comment:**
 - On two stories
 - On two comments

Mixed Model - Exercise

- How do Social-media sites such as Digg reflect:
 - Top/down-Expert Design
 - Social Classification-Bottom Up & Folksonomies
- Are tagging website reflective of true Emergent Knowledge or Semi-Emergent Knowledge?

References

- Ames, M., & Naaman, M. (2007). Why we tag: Motivations for annotation in mobile and online media. In B. Rosson, & D. Gilmore (Eds.), *Proceedings of the CHI 2007* (pp. 971-980). San Jose, CA: ACM Press.
- Cena, Farzan, & Lops (2009). Web 3.0: Merging semantic web with social web. *HT '09: 20th ACM Conference on Hypertext and Hypermedia*, June 29–July 1, 2009, Torino, Italy.
- Cattuto, C. (2006). Semiotic dynamics in online social communities. *Eur. Phys. J. C*, 46(2), 33–37.
- Greenfield, D. (2007). Crowd Control. *eWeek*, 24(26), 36-43.
- Kato, Y., Kurohashi, S. & Inui, K. (2008). Classifying information sender of web documents. *Internet Research*, 18(2), 191 - 203.
- Panke, S. & Gaiser, B. (2009). "With My Head Up in the Clouds": Using Social Tagging to Organize Knowledge. *Journal of Business and Technical Communication*, 23(3), 318 - 349.
- Smith, G. (2009). Web 3.0: 'Vague, but Exciting' Smith, Greg, *MediaWeek*, 19(24)
- Thom-Santelli, J., Muller, M. J. & Millen, D. R. (2008). Social Tagging Roles: Publishers, Evangelists, Leaders. *CHI 2008 Proceedings*, 1041-1044.
- Zimmer, M. (2009). Renvois of the past, present and future: hyperlinks and the structuring of knowledge from the Encyclopédie to Web 2.0. *New Media & Society*, 11(1&2), 95–114.