

image-based site Flickr Winget (2006) indicated five major categories: date and time-based, geographical, narrative, characterization, and individually defined. Bar-Ilan *et al.* (2008) defined ten fields in which comparisons of structured and unstructured tagging can find image metadata elements.

Tagging consistency

There are some potential problems regarding socially created vocabularies – such as the lack of term consistency, synonymy, and polysemy – that may limit the value of tagging as an indexing and retrieval tool. However, term consistency is of the greatest concern. In traditional libraries consistency is the primary evaluation criterion of indexing quality (Rolling, 1981; Zunde and Dexter, 1969; Hooper, 1965). The indexing terms generated by an indexer should be appropriate for reuse. If two indexers index the same document, each one should identify the same or similar topics to indicate the “aboutness” of the document (i.e. what the content describes). In an ideal situation the level of agreement or consensus would provide an indication of inter-indexer consistency. The consistency of the indexing is directly proportional to the quality of subject-based searches in the catalogue. If one intends to reuse and to share hard content tags with users who have less domain knowledge, then tag quality is as significant as library subject heading quality. Several quantitative assessments have objectively measured consistency between two (or a few) indexers (Medelyan and Witten, 2006; Wolfram and Olson, 2007; Wolfram *et al.*, 2009; Medelyan *et al.*, 2009). Medelyan and Witten (2006) reported how a vector space model that underlies the cosine metric could be used to calculate the consistency between two indexers. Wolfram and Olson (2007) and Wolfram *et al.* (2009) applied an inter-indexer consistency density measure based on a vector space information retrieval model in larger environments such as social tagging web sites. Medelyan *et al.* (2009) showed that tag-sets produced by machine-learning-based automatic key phrase extraction were more consistent than human-made tag-sets.

The need for experts' opinions

Many semantic web researchers express interest in tag spaces as ontologies because ontologies seem to resemble a highly structured semantic web (Mika, 2007; Ohmukai *et al.*, 2005). A semantic web can be considered as a subjective realm that resembles traditional library systems in its emphasis on structure and consensus (Campbell, 2006). Creating subjectivities in a tagging system requires suggesting popular and widely-used tags to the users. A shared “intersubjectivity,” i.e. a community of shared concepts, is a way to enhance collective understanding. Campbell (2006) compared the semantic web to social tagging systems within a phenomenological framework adapted from Husserl (1929, reprinted in Kearney and Rainwater, 1996) and found that an intersubjective consensus of tagging systems emerged from important entities and from relationships based on loose structure and high flexibility. Campbell's results were echoed in a study by Halpin *et al.* (2007) that pointed out that a meaningful ontology was extracted by the tag frequency distribution of the “short head” (a set of shared “intersubjectivity” concepts) rather than that of the “long tail”. The most frequently used tags in commonalities always happened at the short head and were combined with stability and information value. It is believed that a short head is more achievable through