

Enhancing Exploratory Search with Hedonic Browsing Using Social Tagging Tools

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Exploratory Search is...

- A complex set of search activities within an Information Retrieval system
- Used to broadly explore a topic of interest (Wilson, 2007)
- Used when
 - Search goal is not clear
 - Searching for something complex
 - Searchers are not satisfied with results from traditional search systems

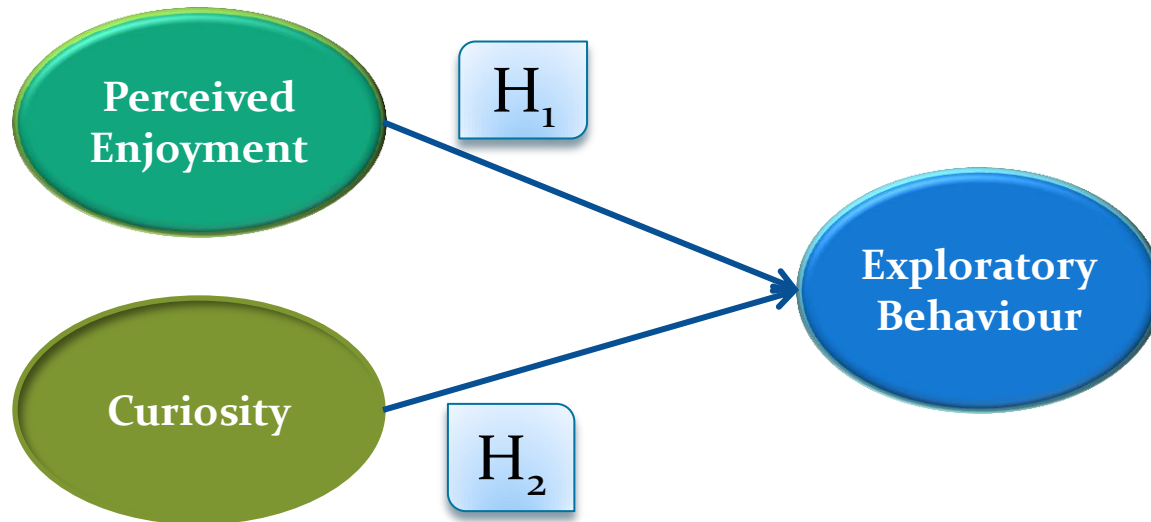
Social Tagging

- a feature of various online social networks
- to organize information elements
- by enabling people to label, annotate, or tag info resources

Main uses of tagging tools:

- To organize resources using the WWW
 - Websites in Delicious and StumbleUpon
 - Photos in Flickr
 - Music and video files in Last.fm and YouTube
 - Books in Amazon.com and LibraryThing
- For information discovery, sharing, and social ranking

Proposed Model (Hedonic Search)



H₁: Perceived enjoyment has a positive impact on exploration of social tagging

H₂: Curiosity has a positive impact on exploration of social tagging

Method















- Exploratory study → Structural Equation Modeling (SEM)
For identifying and estimating models of linear relationships among measured (Explorability) and latent variables (Enjoyment and Curiosity)
- We also used the bootstrapping
To assess the *t*-value significance
(in our case $t\text{-value} = 3.57$ for $p \leq 0.01$).

Method

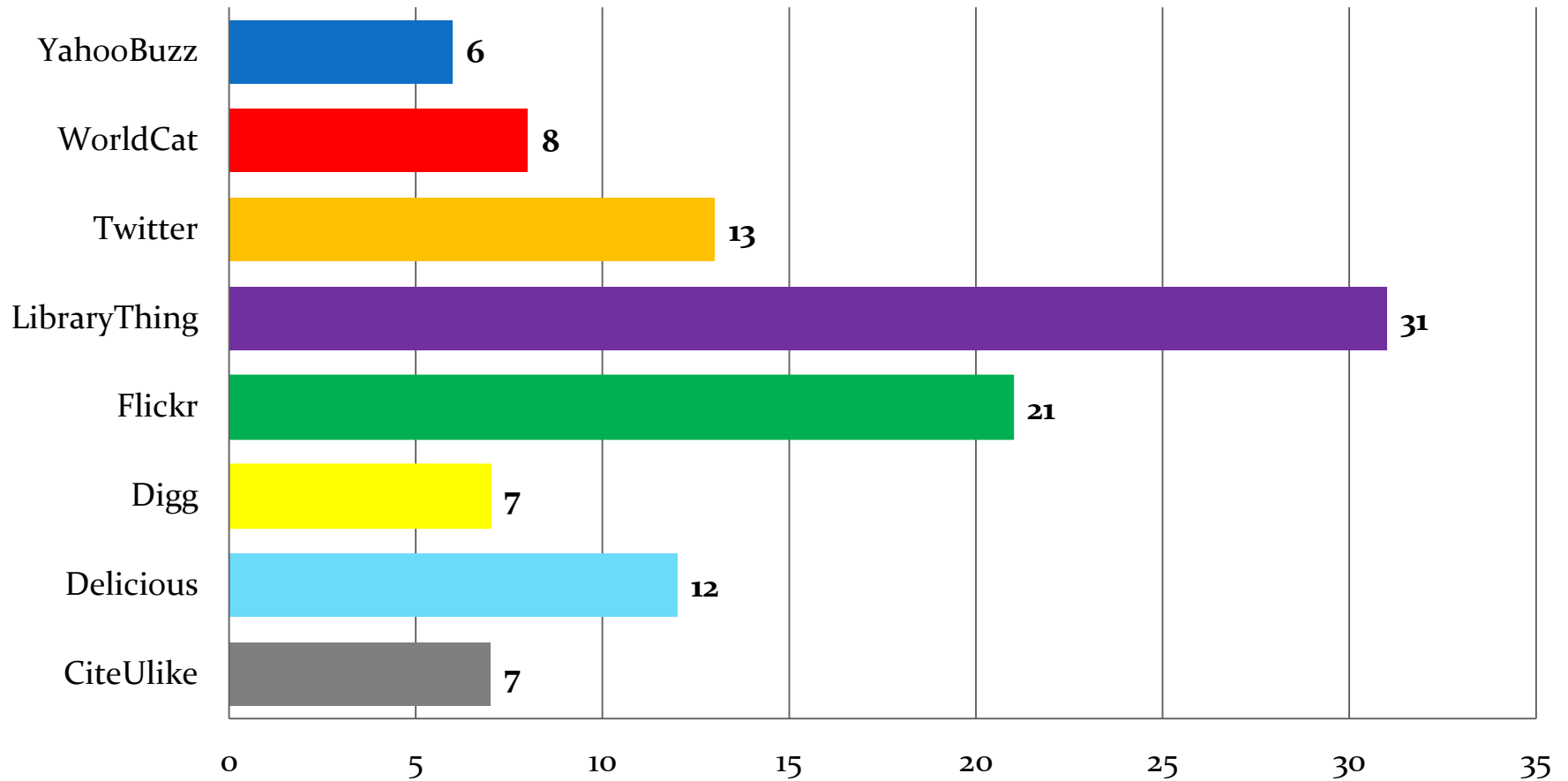
Survey Questions Used Covering Hedonic Factors

Concept	Items	Basis
Curiosity	<ul style="list-style-type: none">• Using tags stimulates my curiosity• Following people's tags is interesting	Moon & Kim (2001)
Exploration	<ul style="list-style-type: none">• Using tags leads to my exploration• Clicking on tags enables me to find related items and topics• Clicking on tags helps me get various topics in a much different way than traditional search tools	Moon & Kim (2001)
Enjoyment	<ul style="list-style-type: none">• I find using tags to be enjoyable• The actual process of using tags is pleasant• The process of using tags is interesting	Davis et al. (1992)

Respondents' Profiles ($N = 38$)

	Category		Frequency	
Genders	Female		11	(28.9%)
	Male		24	(63.2%)
	Prefer not to answer		3	(7.9%)
Age Ranges	21–25		4	(10.5%)
	26–30		10	(26.3%)
	31–35		8	(21.1%)
	36–40		6	(15.8%)
	41–45		3	(7.9%)
	46–55		4	(10.5%)
	56–65		3	(7.9%)
	Disciplines	Engineering		3
Humanities / Social Science			14	(36.8%)
Management			11	(28.9%)
Science			10	(26.3%)

Systems Reported

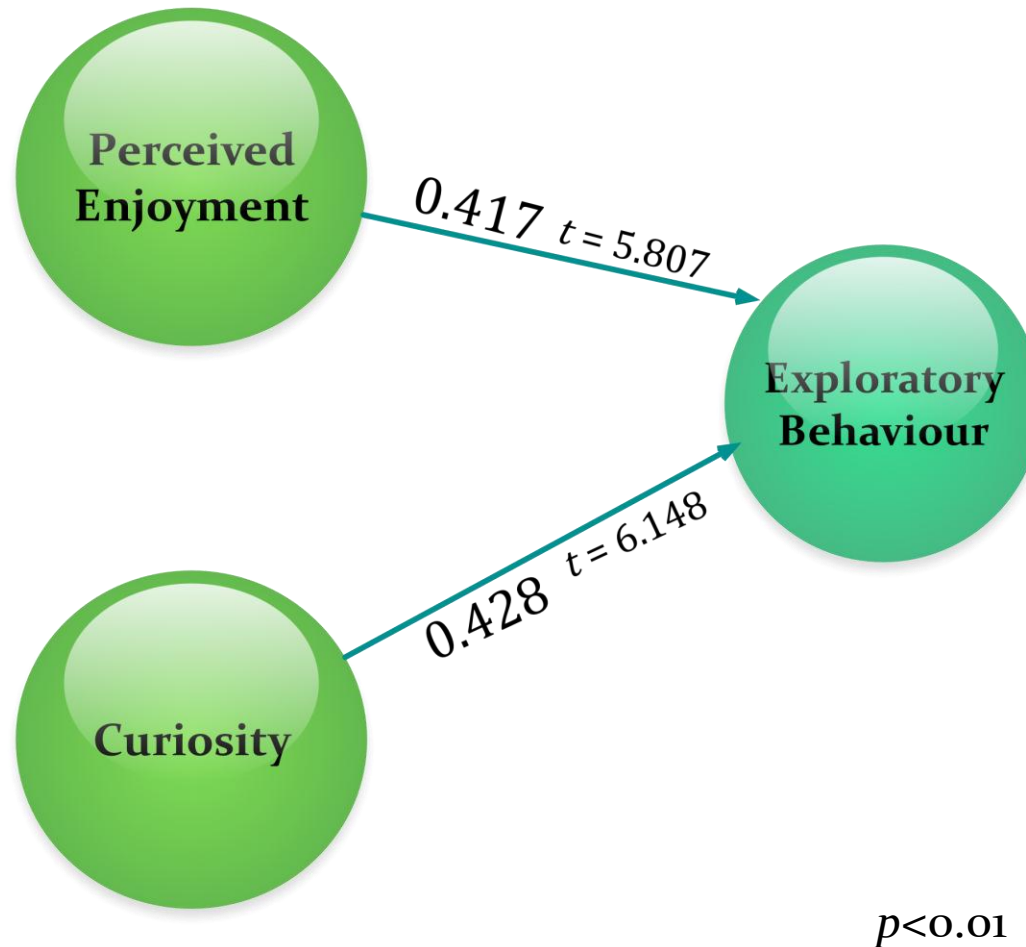


Pearson Correlations

	Explorability	Perceived Enjoyment
Curiosity	0.75**	0.76**
Perceived Enjoyment	0.74**	

** highly significant ($p < 0.001$)

Structural Model



Results

Strong positive association between exploratory behaviour and experiences of enjoyment and curiosity when using social tagging

Implications

- Hedonic aspect could be used to motivate workers
- Use of collaborative tagging intelligence
- Greater efficiency and effectiveness

Caveats

- Pilot test only ($N=38$)
- Only some tagging systems reported
 - No info on proprietary or purpose-built systems
 - Not all from one organisation
- The current constructs were based on few questions

Future Directions

- Test the composite (2-dimensional) hedonic factor on attitude and the intention to use social tagging tools
- Associate the hedonic dimensions with other factors such as ease of use, usefulness and measure its influence on the actual use of social tagging tools
- Further analysis is in a forthcoming article

Questions?

