Exploiting Social Networks for Internet Search

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Presented by Danny Tarlow
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The General Plan

1. Their Big Questions
   - What types of content is Google bad at finding?
   - Can this information be found by exploiting a social network?

2. My Big Questions
   - Would we want to share this content?
   - Do their experiments convince us of anything?
   - What could they have done to make this better?

3. Further Discussion
1. **Their Big Questions**
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3. **Further Discussion**
Outline

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3. Further Discussion
What types of content is Google bad at finding?

They say: Content that is...
- New
- Ambiguous
- Isolated
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Can this information be found by exploiting a social network?

They say:

- Yes
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First... can we define this content?

- How do you find recently published content?
Would we want to share this content?
New content

First... can we define this content?

- How do you find recently published content?
  - I use RSS feeds (Google Reader)
Would we want to share this content?

New content

My simple experiment: How long does it take Google to index?

*BBC News Front Page*

- 10 min - 0 0
- 22 min - 1
- 2 hrs - 1 1 1 1
- 4 hrs - 0 1 1 0 1
- 5 hrs - 1 1
- 6 hrs - 1 0
Would we want to share this content?

New content

My simple experiment: How long does it take Google to index?

ESPN.com
2 hrs - 0 0 0
11 hrs - 1
Would we want to share this content?

New content

My simple experiment: How long does it take Google to index?

*PhD Comics*

24 hrs - 1
Would we want to share this content?  
Ambiguous content

Michael Jackson
9th result for
“Michael Jackson computer science"
> 500 otherwise

Michael Jackson
Would we want to share this content?
Isolated and poorly linked content

1. Deep web
   - ... /pres0031.html
   - ... /target21.html
   - On personal homepages

2. Dark web
   - http://72. ... .163/status.asp

Why is it isolated?
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Main Result 1

13.3% of URLs viewed were in PeerSpective but not Google

- Were these cross-user views or repeat visits/refreshes??
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Augmenting Google results with PeerSpective results yielded 9% more clicks

- Were these cross-user clicks or “bookmarks”?
- Is clicks the right metric to use?
- Bias is a known issue with search results.
Main Result 2

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Further Discussion
My two cents:

- Distinguish between within-user behavior and cross-user behavior
- Run experiments comparing their system to:
  - 5 additional random results
  - 5 additional Google results (results 11-15)
  - 5 results from Google Scholar
- Focus more specifically on the disambiguation problem
What could they have done to make this better?

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3. Further Discussion
Are they conflating “browsing” with “searching”?

- e.g. StumbleUpon
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Is privacy a deal-breaker for real-world deployment?

- How would you design a system that respects privacy?
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More Questions

Is is possible to spam PeerSpective?

- How would you design a system that is robust to spam?
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- How would you design a system that is robust to spam?
What are characteristics of a problem that you should exploit social networks to solve?