Information Scent

Available Information Growing Exponentially



YouTube Uploads per Minute



As of 2012, users upload 72 hours of video every minute

Image from: http://www.techspot.com/news/41096-youtube-35-hours-of-video-uploaded-every-minute.html

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Growth of Human Capabilities

Growth in attention



Attention is a Limited Resource

A wealth of information creates a poverty of attention and a need to allocate it efficiently.



Herbert Simon

Humans as Informavores



Just as the body survives by ingesting negative entropy, the mind survives by ingesting information. In a very general sense, all higher organisms are informavores.

Inspired by Optimal Foraging Theory



An animal will forage as long as the expected gain within a patch is greater than the expected rate of gain from a new patch.

Tb = average time to next patch

T* = Optimal time to stop foraging a patch

Patches



Image from: http://srq-ag-food.blogspot.com/2011/04/april-29th-arbor-day-native-and-fruit.html



Adapted from Charles Gibbs

Information Foraging Theory

- Information Patches: The temporal and spatial nature in which information is clustered.
- Information Scents: Determination of information value based on navigation cues and metadata.
- Information Diet: Decision to pursue one information source over another

Informavore's Goal



Basically: maximize information gain, minimize the work necessary to accomplish that information gain.



As long as I predict that I'm more likely to find my target information on my current path than by backing up, keep going.

Web Behavior Graphs (WBGs)





- Make sure users can accurately predict what information they will find using a link/category.
 - labeling word choice
 - Organization (remember card sorting?)
- Make sure users know where they are and how it relates to their goals

- Signal that information on your site is nutritious and easy to catch
 - Show sample content to help increase information scent cues
 - Support good navigation and search to make it easy to get to the content

- Make it easy for users to find related content.
 - When thinking about the expected tasks, are there related ones you can support?
 - With undergrad research, once I've found out what a typical project looks like, maybe I want to know how to get involved. Is that supported?

• Encourage return behavior. Know what your users come looking for and making it easy to find that.

In Practice

- To be useful, you need to know:
 - What information goals users have coming to your site.
 - What words they will associate with those goals.
 - Parc also has an algorithm that tries to infer these.
 - Given each goal, where you want them to end up and by what path.
- Then, you can look at where they deviate, what's more attractive, and fix the proximal information.

Business vs. Pleasure

- Users surfing without a specific need (e.g. let's see what's on Google News, Reddit, etc) won't fully follow this.
- But, even when the goal is something like "entertain me" designing for good proximal cues is still a good reflex.

A walkthrough

You want to buy a new tablet during the holiday sales. You need for it to allow you to primarily give presentations, take notes, read/write email. But you would also like to be able to run some desktop/laptop applications. What are the best choices?

Ground Rules

- Start from a search engine.
- Nominate one person in the group to be the searcher.
- Others in the group construct an annotated web behavior graph including the pages, what info on the pages leads to the navigation decision (i.e. the information scent), and the searcher's warmer or colder rating.