

Speech Engines

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Three theories of search

Google's equivocation



“Google is constantly evaluating Web sites for standards and quality, which is entirely **subjective**.”



“... the algorithmic result of several **objective** factors, including the popularity of search terms.”

Two theories of search

Conduit	Editor
Common carrier	Newspaper
Passive	Active
Objective	Subjective
Websites' speech	Google's speech

The speech in search?



Conduit: Websites' speech
Editor: Google's speech



Conduit: Websites' speech
Editor: Google's speech

The speech in search?

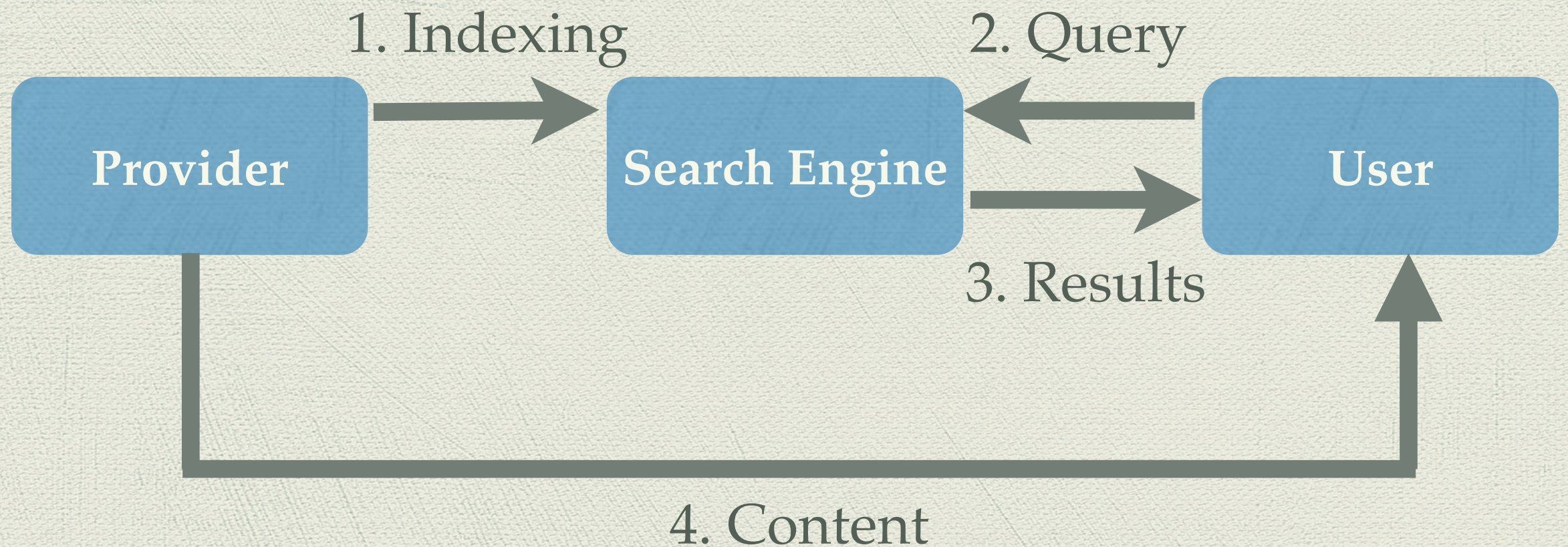


Conduit: Websites' speech
Editor: Google's speech



Conduit: Websites' speech
Editor: Google's speech

It takes three to search



What users want

- ◆ The Internet is unimaginably large
 - ◆ Speakers and listeners need to find each other
 - ◆ Search engines are a listener-directed matching technology
- ◆ Search users are *active listeners*
 - ◆ They use search engines to select among website speakers
 - ◆ Good for autonomy and individual development
 - ◆ And for equality, diversity, efficiency, etc.

A third theory

Provider

Conduit

Search Engine

Editor

User

Advisor

The advisor theory

- ◆ Three characteristics of an agency relationship:
 - ◆ Searchers need help
 - ◆ Searchers are diverse
 - ◆ Searchers know less than search engines do
- ◆ Consequences:
 - ◆ Access to search
 - ◆ Loyalty

Case study: search bias

A model of relevance

- ◆ Searchers have personal informational goals
 - ◆ Queries express those goals imperfectly
 - ◆ Search engines observe, extrapolate, and implement
- ◆ Rankings are opinions about websites' relevance to users
 - ◆ Search engines' subjective approximations of objective characteristics of users' subjective goals
 - ◆ I.e., deductive opinions *about* evaluative opinions

Falsifiability

- ◆ How to prove a search ranking false?
 - ◆ “This is relevant” is too vague to fail
 - ◆ “[I believe] this is relevant” is false if dishonest
 - ◆ (And if so, it’s uttered with actual malice)
- ◆ Cf. “This instrument deserves a AAA credit rating.”
- ◆ Google believes its own rankings, even if others disagree

Algorithmic rankings

- ◆ Wu: “[N]onhuman or automated choices should not be granted the full protection of the First Amendment, and often should not be considered ‘speech’ at all.”
- ◆ Human judgments are embedded in the choice of algorithm
- ◆ It’s tempting to use the “algorithm” as a baseline ...
- ◆ ... but it’s algorithms all the way down

Access and loyalty

- ◆ There is broad consensus about the “right” results for some searches—but these are not the searches in controversy
- ◆ Interventions threaten access because courts understand less about relevance than either searchers or search engines do
 - ◆ Beware of the seen and the unseen (providers)
- ◆ It is a (contested) empirical question whether market forces suffice to ensure loyalty
 - ◆ Be sure that interventions are focused on *searchers'* goals

Thinking about search

- ◆ Understand any practice from search users' point of view
 - ◆ Mistrust both search engines and providers
- ◆ Access and loyalty are constraints on each other
 - ◆ Access warns that regulators who enact their theories of relevance impose speech on users
 - ◆ Loyalty recommends protecting users when they are unable to monitor the quality of search results

Discussion