Disintermediation 2.0 Librarians and Systems

Rory Litwin
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University of Alberta SLIS

Please Ask Questions

- Please feel free to raise your hand as I am speaking, and I will call on you.

- It is okay if we stray from my outline a bit.

Outline of talk

- Desk Set
  - Librarianship versus Information Science, circa 1957
  - Jesse Shera at Western Reserve University in the 1950's

- Disintermediation / Re-mediation
  - Disintermediation defined, and discussion of examples
  - Why disintermediate?
  - Essence of disintermediation in quantification
  - Idea of Re-Mediation / shift of control – where does it go?

Outline of talk, cont.

- Disintermediation 2.0
  - The Boolean tool versus the intelligent search assistant
  - Re-Mediation continued via artificial intelligence
  - Some specific AI-based applications we know
  - Problem: Embedded assumptions
  - Problem: Lack of context
  - Problem: Predicting without understanding the person

- From data to wisdom?
- The law of the instrument
- Autonomy and authenticity

Desk Set

Computers and libraries in 1957

Jesse Shera at Western Reserve

The dawn of "LIS"

Will we be replaced by mechanical brains?

Disintermediation

- Travel agents / Expedia and the like
- Accountants / Turbotax
- Print shops / desktop publishing
- Astrologers / astrology software
- Librarians / internet (to put it simply)

Why disintermediate?

- Scale up to a bigger user base
- Scale up to the amount of info being produced
- Self-service
- Remote service
- Save money by employing fewer people(?)
- Empower the user(?)

Quantification

- Computers are counting machines
- Disintermediation is done through quantitative methods (scaling up is multiplication)
- Quantitative questions become data for processing
- Other questions drop out of the system
- Disintermediation and logical positivism (Codified knowledge is separated from the person)
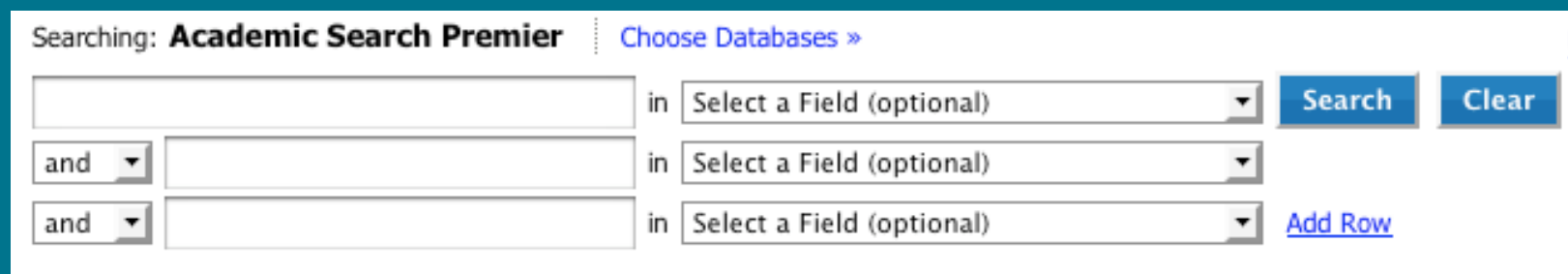
Re-Mediation

- Re-Mediation as an alternate conception of disintermediation
  - Users' choices are guided and circumscribed
  - Knowledge is codified and decisions embedded in software in ways that can have consequences
  - Alternative professional answers and methods less available
  - Perhaps driven more by point-of-view than by any conscious agenda
  - Shift of control from professionals to management & technicians (meaning deprofessionalization)
  - (Thanks to Mary Bryson for the word Re/Mediation)

Disintermediation 2.0

- Artificial intelligence
- Personal search assistants
- Semantic web
- Automated reasoning systems
- Bots
- Data mining
- Target marketing
- "Smart" products
- Natural language question processing

Disintermediation 2.0
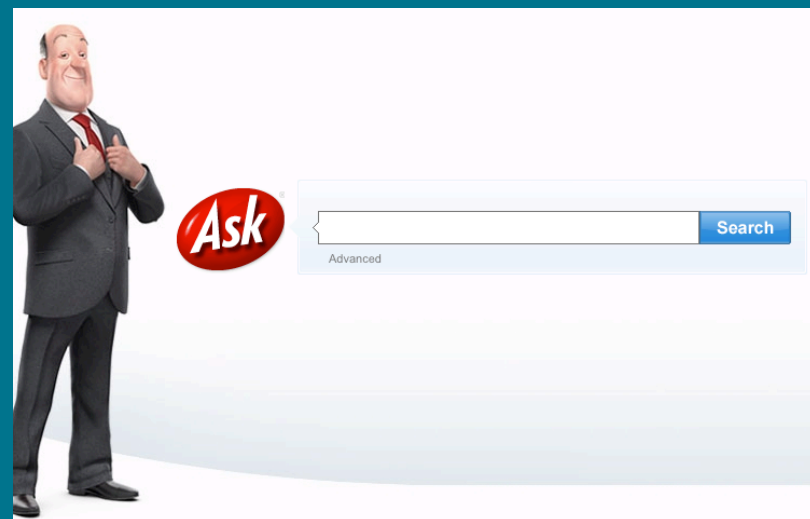

Disintermediation 1.0:

The Boolean tool
Users have access to a huge amount
of information, but need to know
how to navigate their way through

Disintermediation 2.0:
The AI-based search assistant
The system tries to do some of the
user's thinking for him

Re-Mediation 2.0

- What does Disintermediation 2.0 look like through the lens of Re-Mediation?

- Who programs the "mechanical brains," who pays them, and what is their agenda?

- Who is this Jeeves, and can I trust him?

Some specific applications

- The Next-Gen library catalog
- The recommender engine
- Tracking-based target marketing
- Smarter search engines / personalized results
- Wolfram Alpha and the like
- Customer service phone robots (perhaps not ready yet)

Scholarly recommender engines
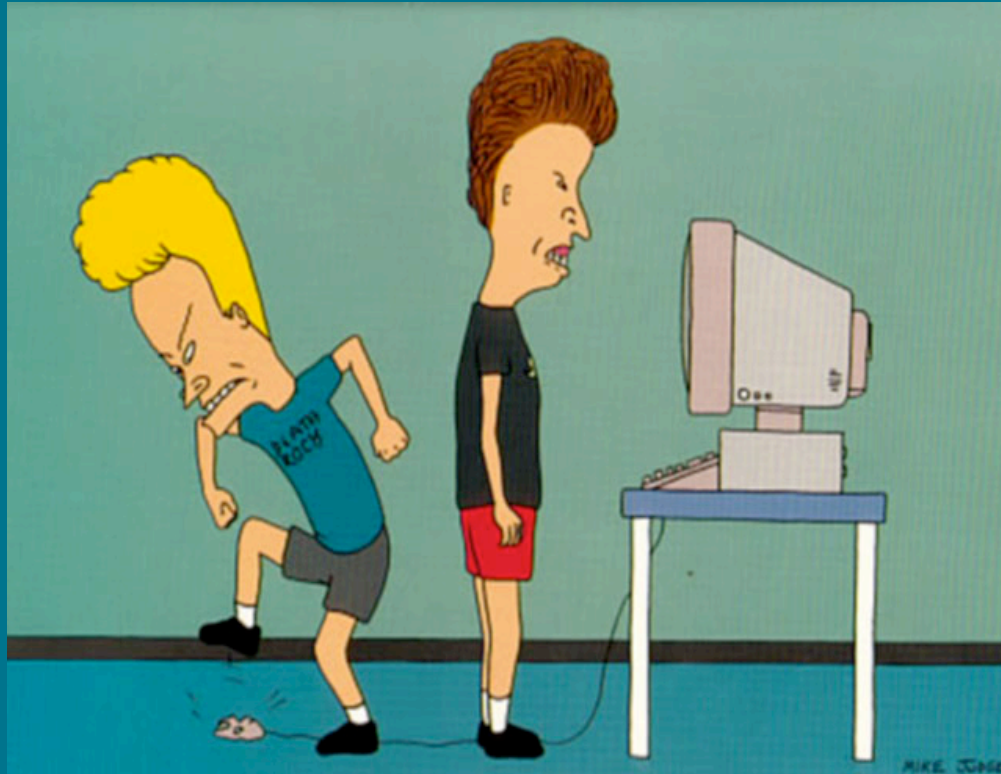
Uhh, Hey Beavis… This scholarly recommender service wants me to rate this article…

Problem: Embedded Assumptions

- Systems you interact with either:
  - Assume you are like the "average" person or
  - Make assumptions based on your data-mined "profile"

- Jeeves, or your personal shopper or whatever, cannot SEE you.

- We are pushed into manifesting identities defined as market niches.

Problem: Lack of Context

- Reference librarians understand information needs with the help of the context of the question.
- Context is the ground for intuition and insight, as well as meaning.
- Automated systems (and information scientists) typically follow the positivist assumption that "facts" and ontologies have meaning without a context.
- (Context: time, place, person, culture, situation)

Problem: Predicting Without Understanding

- AI:
  Brute force prediction, crunching user data.

- Human intermediary:
  An "If I were you in this situation" understanding.

- Example: Recommender engine.
- Example: Smart search engine.

Info-Sci Hierarchy of Information

- Data – Information – Knowledge – Understanding – Wisdom
  (Russell Ackoff's conception of information)

  This conception assumes that human experience is reducible to an accumulation of "data" that can be processed by a computer just as by a person's mind.

  i.e. at bottom we are bits and bytes.

  If not, what are some other ways of thinking about thinking, and what are the implications for information studies?

The Law of the Instrument

- "Give a small boy a hammer, and he will find that everything he encounters needs pounding."

  Abraham Kaplan, in *The conduct of inquiry: Methodology for behavioral science*, p. 28 (1964)

Autonomy and Authenticity

- Heidegger's concept of *Das Man*
- Are we defined by marketing concepts? Shunted along paths?
- Does the recommender engine care about the individuality of our research needs?
- How is the process directed?
- Is the appeal of self-service interfaces about our desire for autonomy? Is it a false promise?
- What is the connection between interpersonal interaction and authenticity?
- Do the reflections of user data offer a way of authentically knowing and being ourselves, or do they get in the way?
- What is an individual you meet in person versus an individual as represented in the data network?