

Information Seeking

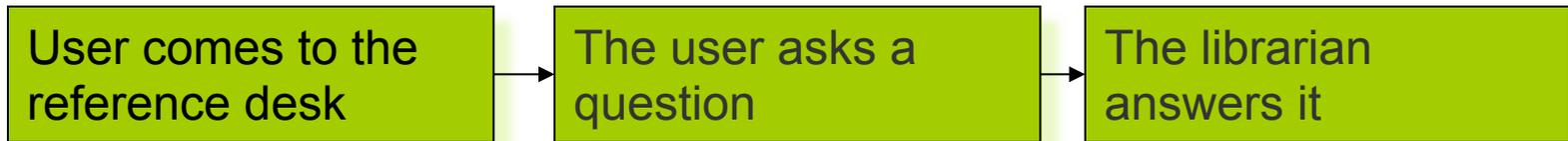
Reference Interviews
KAN Min-Yen

What is a reference interview?

- Process where the user comes to the reference desk and asks for information
 - What type of information do people ask for?
 - What are the characteristics of a reference interview?
 - What factors lead to a “successful” reference interview?
 - How do we evaluate reference interviews?



RI as a process: a first point of view





RI as an information transfer process

- Check whether a (human) system provides the user with a right answer
 - Complete
 - Accurate and timely
- What is the percentage of questions answered correctly?



A Librarian's Lament

We have enticed the academy into cyberspace...without us.

We have proven the value of library resources...but not the librarian

*- R. David Lankes
(Director of Institute of Information Systems,
Syracuse University)*

Why only 55%?!?

Some explanations:

- easy questions may have been eliminated (e.g., no direction queries).
- questions may have been time-sensitive and/or unusually difficult.
- Murfin (70) shows that librarian often misinterprets the question asked.
- Gives definitive answer without verifying with user's need.

One reference interview



- The librarian:
 - I think it went all right from my viewpoint because I didn't have to really interact too much. She seemed capable, she seemed to know what she was doing. I felt she had found what she wanted because she said she had what she needed. She seemed to be capable of handling it on her own.
- Radford (99)

- Would you say that this was a successful interview?

One reference interview

- The student:
 - I felt like she couldn't help me on my subject. Isn't that she didn't know the answer, but I felt that she didn't want to [help]... she looked like she did not know what I was talking about, a blank stare and also almost like irritated.
- Would you say that this was a successful interview?



RI as an communicative art

- When a group of MLS students were sent on a mission to the library to ask a question...
 - 60% said that they might ask another question in the future
 - 30% said that they wouldn't bother asking the librarian even if they have an information need
- No matter what form the reference interview takes on, a form of interpersonal communication takes place
 - Is not and cannot be free of relational dimensions
 - 1 good encounter ≠ 1 bad encounter

When attempts to find information fail, patrons *may* choose to approach the reference desk. If they do, the librarian becomes the *human* interface or mediator between the library and the users' need.

- The critically important moment when users approach and engage the librarian can be the point at which the complexities of the library are **gently explained, fears are calmed, and information becomes accessible**.
- If help is **withheld, given grudgingly, hurriedly**, or in a condensing manner, the encounter becomes the point at which the library appears even more inaccessible. Users can be left feeling **confused, frustrated, and sometimes personally defeated or humiliated**.

- paraphrased from Radford (99)



Question Negotiation

- Anomalous State of Knowledge (ASK)
 - A state in which the user “is unable to specify precisely what is needed to address their need”
- To help the librarian understand the needs of the user, Taylor (68) uses 5 question filters
 - Subject
 - Objective and motivation
 - Personal characteristics of the inquirer
 - Anticipated or acceptable answers
- Escalator Questions

Types of queries in RI

- Directional
 - *e.g.*, Where are the photocopiers?
 - 30-50% of all questions
 - 1 minute or less
- Ready reference – “factoid” questions
 - *e.g.*, Who is the prime minister of China?
 - 50-60%
 - 90% can be answered using standard references; 10%
- Specific-search
 - *e.g.*, Where can I find information on sexism in business?
 - 20%-40%
 - Depends on sources available
- Research Questions
 - *c.f.*, information ecology
 - very low frequency
 - Depends, but generally longer and more challenging (and fun)

What about web search?

Rose and Levinson categorized three broad areas:

- Navigational
 - Go to a website
 - E.g., `aloha airlines`
- Informational
 - Learn something
 - E.g., `2004 election dates`
- Resource
 - Download something / view something
 - E.g., `kazaa lite`

To think about: What's the percentage of queries in each category?

What's the current state of the art in query classification performance?

Question Variability

- The question alone does not determine its type
 - Aspects of the user
 - (adult, child, professor, student under deadline)
 - Scope of the query
 - (just for fun, winning a bet, for research)

Other ways of classifying questions:

- Known items versus unknown (actual known item correctly formulated?)
- Data retrieval versus document retrieval (c.f., ready-reference vs. specific search)
- Faceted model of query retrieval (Nguyen and Kan, 07; time, space, authority aspects)



Finding and evaluating materials

- Once understood, the query has to be transformed into a search strategy
 - *e.g.*, does the scope of the query imply an article, a book or a bibliography? Do I need to do a catalog search?
- Once material is found, is it actually appropriate to the user?
 - *e.g.*, is the material suitable for citation in a high school report or research publication?

Available sources in the library

○ Access

- Bibliography

- *e.g.*, controlled bibliographies & (union) catalogs

○ Source

- Encyclopedias

- Fact Sources

- Dictionaries

- Biographical Sources

- Geographical Sources

- Government Documents

- CD ROMs

- Online Databases

- The Web



The Information Chain

- Primary sources
 - Conference proceedings, journal articles
 - Monographs
- Secondary
 - Collections
 - Indices
- Tertiary
 - Encyclopedias
 - Reviews

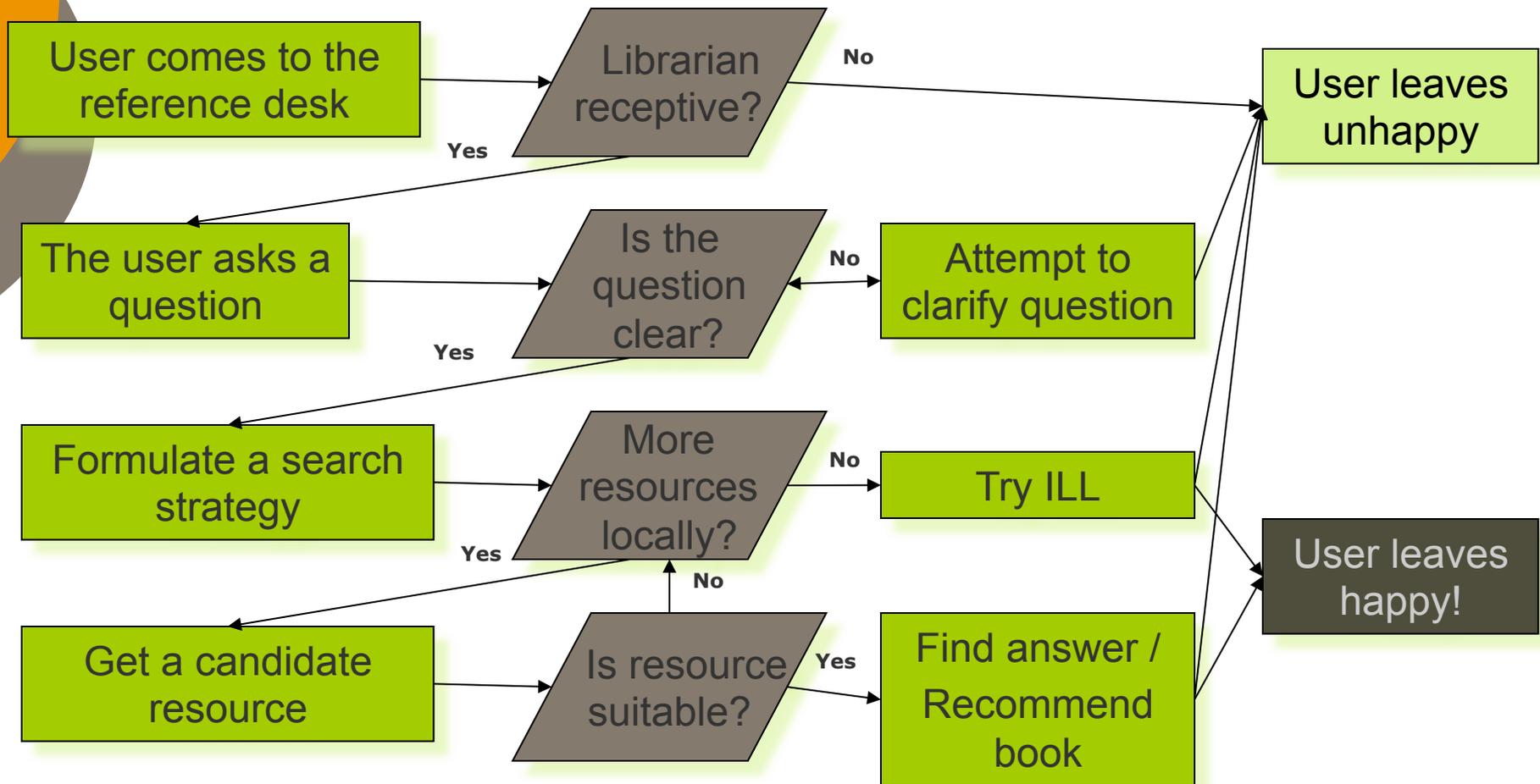
Evaluating a source

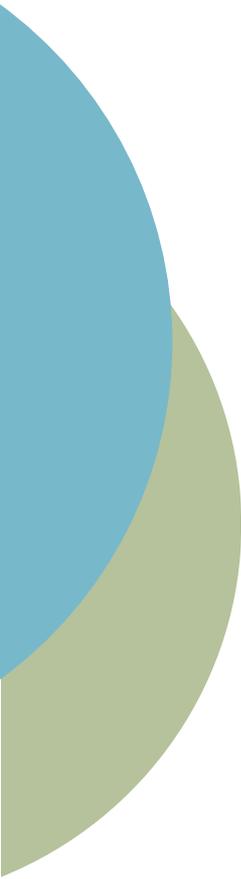
Many criteria to consider, including:

- Purpose
- Authority
- Scope
- Audience
- Cost
- Format

To think about: How do web hyperlinks or reviews perform on these criteria?

RI as a process: revised game plan



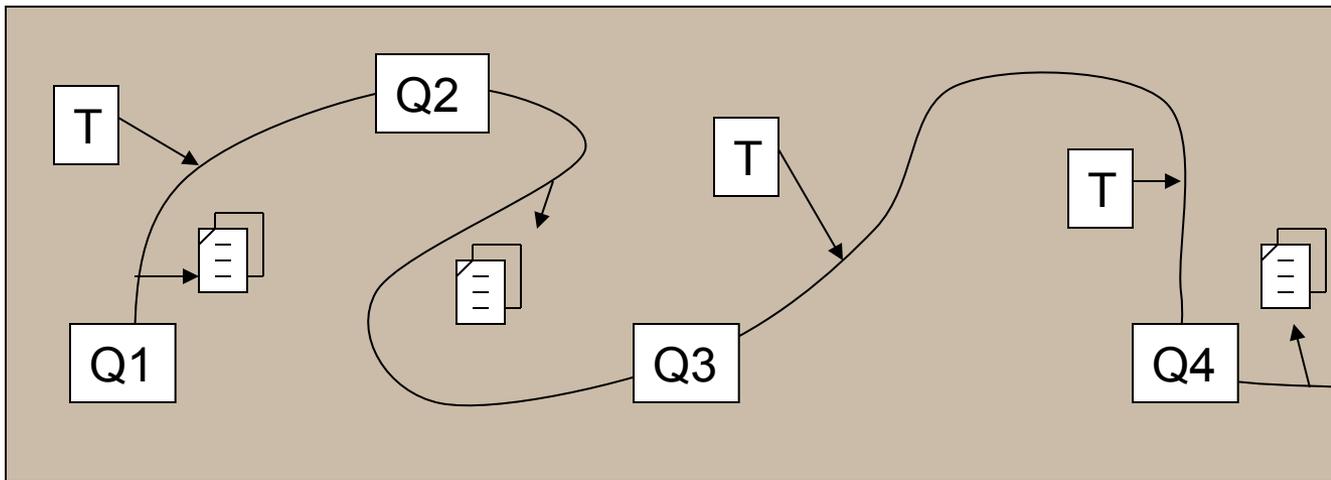


Information Seeking

Information Seeking Process
KAN Min-Yen

Why “seeking”?

- Don't want to limit to “retrieval”
- IR: match query to documents.
- Seeking as the larger context: berrypicking or foraging



Information Need

- Taylor's (68) model of need
 - Visceral: The actual, but unexpressed need
 - Conscious: (ambiguous) need, not necessarily verbalized
 - Formalized: *e.g.*, a search statement
 - Compromised: Adapting the question to the resources at hand (the information system)

Berry Picking

“... picking blueberries in the forest. The berries are scattered on the bushes; they do not come in bunches. One must pick them one at a time...”

- paraphrased from Bates (89)

- The nature of the query is an *evolving* one
- The nature of the search process is such that it follows a *berrypicking* pattern
- The query is satisfied not by a final set of documents but by *references and information accumulated over the search period.*



Information Foraging

- Techniques that expert searchers use:
 - Footnote chasing (a.k.a. backward chaining)
 - Citation searching (a.k.a. forward chaining)
 - Journal run
 - Area scanning
 - Subject search in bibliographies and indices
 - Author search

How well does **LINC** support these functions? How about **Google**?



Vocabulary Problem

The fact that a user is looking for something means that they don't know what exactly they are looking for (otherwise, they wouldn't be looking in the first place)

- paraphrased from Belkin *et al.* (82)

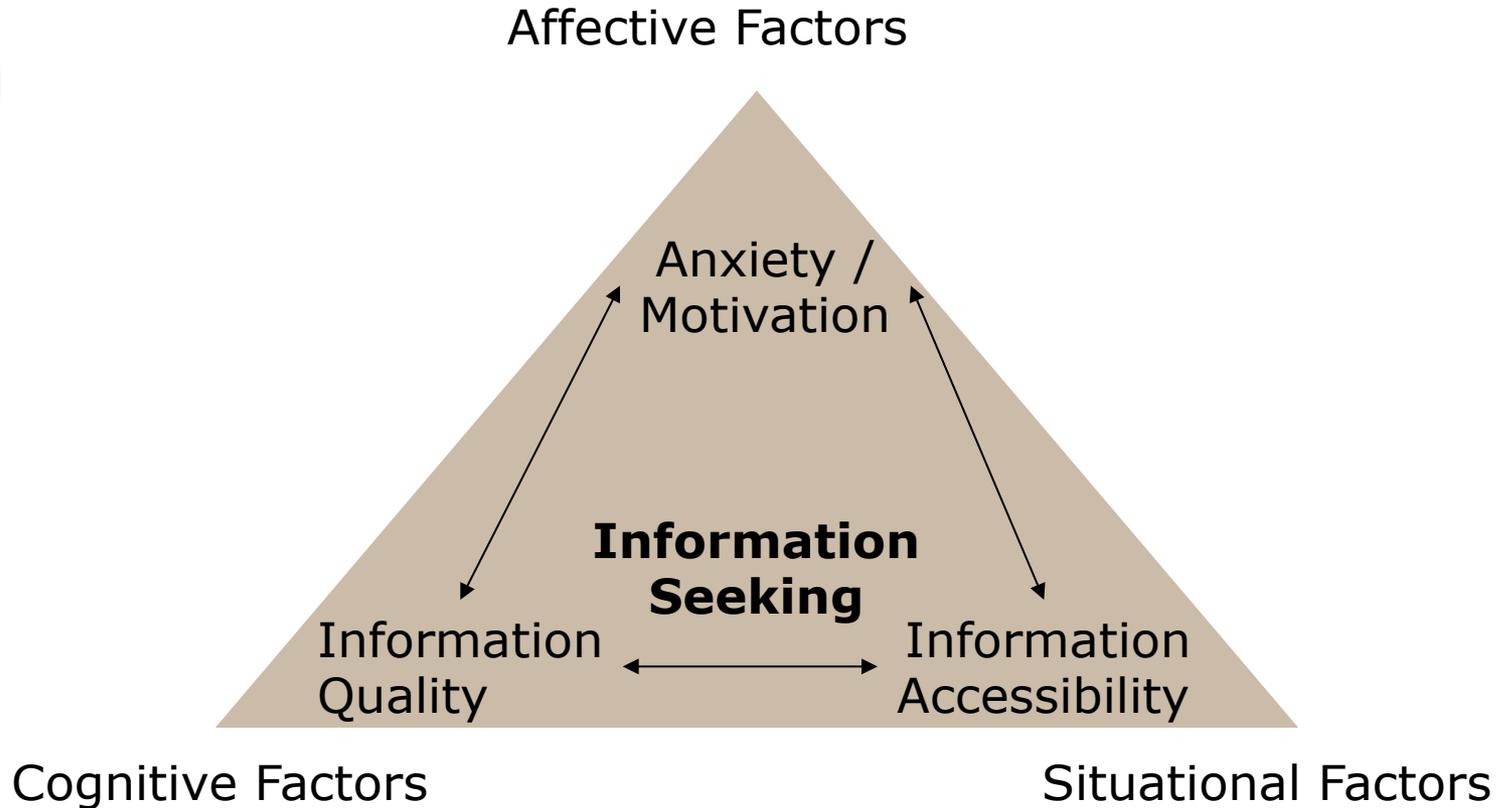
- Therefore, they may not be using the right vocabulary to express their needs.



Anomalous State of Knowledge

- means that the seeker realizes that there is a gap or lack of knowledge in some area: an **ASK**.
 - Partial or even incorrect search results can alter the ASK and change the seeker's perception.

Three aspects of Information Seeking



From Choo *et al.*, 00



Cognitive Factors

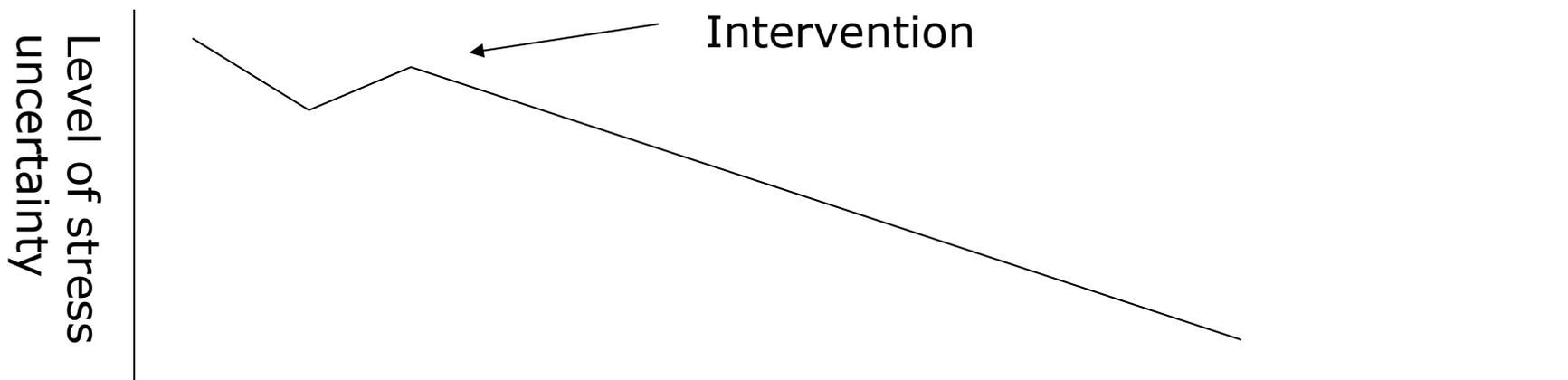
- Selecting a source that is most relevant and useful

Recap:

- Purpose
- Authority
- Scope
- Audience
- Cost
- Format

Affective Factors – Kuhlthau (93)

- Initiation: uncertainty
- Selection: optimism
- Exploration: confusion/frustration/doubt
- Formulation: clarity
- Collection: sense of direction and confidence
- Presentation: satisfaction or disappointment





Implications of Kuhlthau (93)

- Users tend to try to move towards certainty
- Vague, invitation mode transforms to focused, indicative mode
- Corollaries:
 - Too much redundant information = boredom
 - Too much unique information = anxiety
 - Unfocused search without selection/formulation gives information overload = anxiety



Situational Factors

Often the most important situational factor:

Perceived source accessibility

- Principle of Least Effort – Zipf 49
 - Rural libraries get less utilized than urban ones
 - RBR / ILL services / acquisition library features rarely used

Dimensions of Accessibility – Culnan (85)

- Physical / Automated library
 - Physical (gaining access to the store):
Location, location, location!
 - Interface (translating a need to the store):
Catalog use, organization of library
 - Informational (retrieving potentially relevant information):
Locating the book, article

What about the digital library?

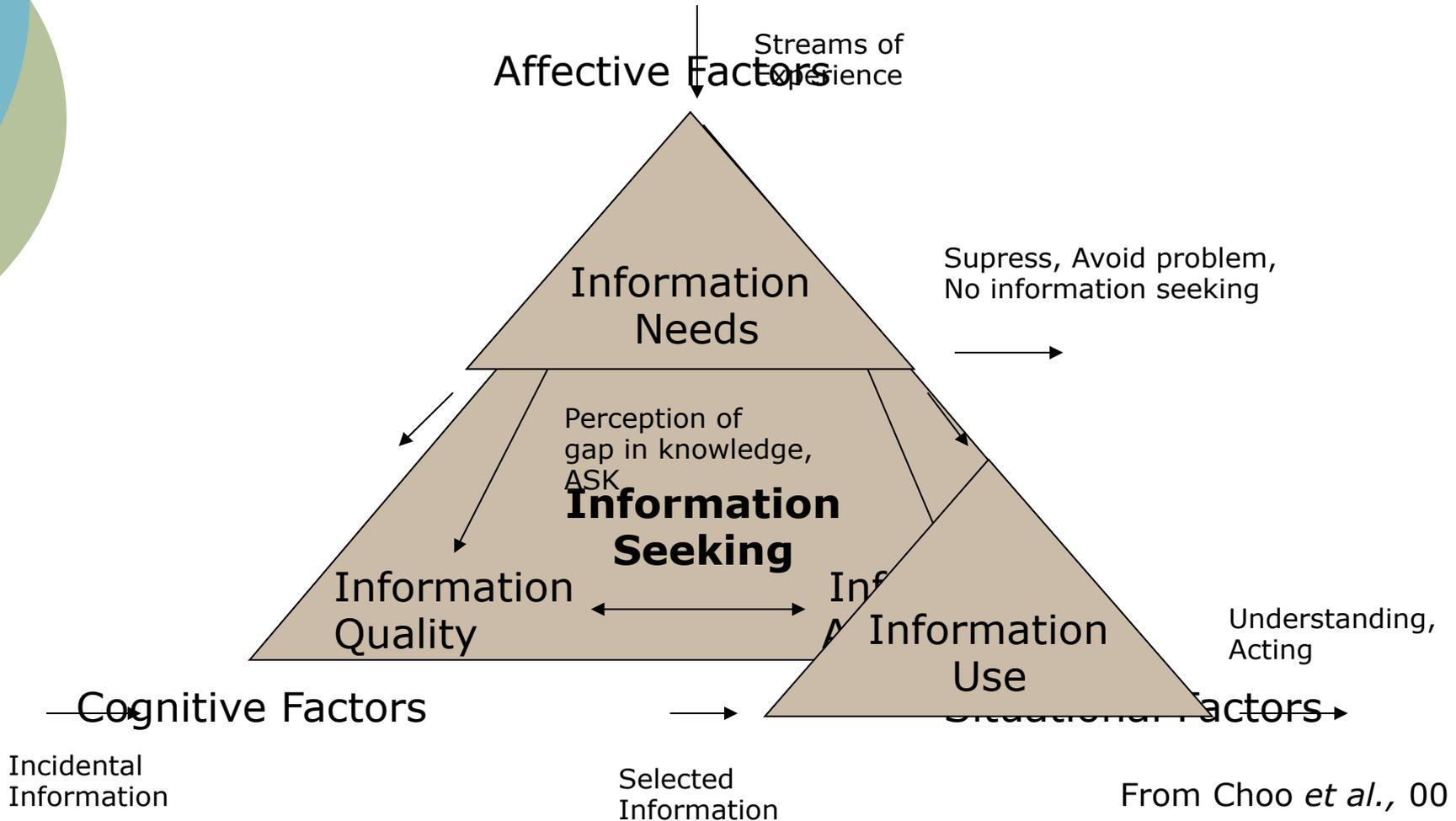


Quality is (often) secondary!

- People often access easily accessible material first irrespective of quality
- But informed professionals accept ideas from sources in proportion to their technical quality

But what about the **uninformed**?

Putting the models together



From Choo *et al.*, 00