

# Discussion of

Modeling the information-seeking patterns of  
academic researchers: a grounded approach  
By David Ellis

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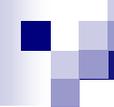
Presented by Nancy Baker

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Bioinformatics Research Review

# What is “grounded theory”?

- **Grounded Theory is most accurately described as a research method in which the theory is developed from the data, rather than the other way around. That makes this is an inductive approach, meaning that it moves from the specific to the more general.- A. L. Davidson**
- The phrase "grounded theory" refers to theory that is developed inductively from a corpus of data. If done well, this means that the resulting theory at least fits one dataset perfectly. This contrasts with theory derived deductively from grand theory, without the help of data, and which could therefore turn out to fit no data at all - Steve Borgatti



# The Research Problem

- Derive models of the information seeking patterns of academic researchers
  - Social science
  - Sciences
  - Humanities



# What approach is best to take?

- Traditional approach – questionnaire and statistics
- Discussion of objectivist vs. subjectivist

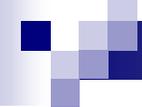
# Objectivist vs. Subjectivist

- Realist ontology
- Positivist epistemology
- Deterministic view of human nature
- Monothetic methodology
- Nominalistic ontology
- Antipositivist epistemology
- Voluntaristic view of human nature
- Ideographic methodology



or ...

- Objectivist views social world as having an existence as hard and concrete as the natural world
- Individual cognition important
- Getting inside situations by evaluating subjective accounts



# Paradigm shift

- From large groups and questionnaires
- To small groups, interviews, observation
- Ellis selects this second method



Next, what models existed for information-seeking? Should they be used?

- Information retrieval model
  - Misleading
  - Parody
- Information man model
  - Primitive

# Model?

- These models not good enough. Ellis decides on a different approach – grounded theory.
  - Doesn't start with model
  - Will generate models and theories from data

# Procedure

- Choose sample

- Wanted a comparison of social scientists, scientists, and humanities researchers
  - 18 physicists
  - 14 chemists
  - 10 English lit researchers

# Procedure (cont.)

## ■ Method

- Discusses pros and cons of direct observation
- Interview method was decided on
  - Interviews were recorded and transcribed
  - Look at questions in the appendix or examples
  - Interviewer could ask other questions
- Coded
  - Did not use predefined paradigm

# Method of analysis in Grounded Theory

- Constant comparative method – 4 aspects
  - Comparing incidents applicable to each category
  - Integrating categories and their properties
  - Delimiting the theory
  - Writing the theory

# Unclear? Time for an example.

## ■ Psychologist

- Look at response
- Features boiled down to
  - Starting (identification of key paper to start search)
  - Chaining (following up on references)
  - Browsing (to identify relevant journal sources)
  - Extracting (working through material in rel.sources)
  - Monitoring (maintaining awareness of area)
  - Differentiating (employing differences to filter material)

# Another example: education researcher

- Starting (employment of online search to locate refs)
- Differentiating (between journals, publishers)
- Monitoring (publishers' lists and journals)
- Extracting (from publishers' lists, journals)

# Synthesis of social scientist findings into a model

- Six categories sufficient to represent generic features of information-seeking
  - Starting
  - Chaining
  - Browsing
  - Differentiating
  - Monitoring
  - Extracting



# Model for physicists

- Initial familiarization
- Chasing
- Source prioritization
- Maintaining awareness
- locating



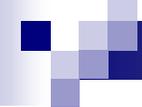
# Model for Chemists

- First six same as social scientists
- Add verifying and ending



# Model for English literature researchers

- Starting
- Surveying
- Chaining
- Selection and sifting
- Monitoring
- Assemble and dissemination



# Conclusions

- Many of the same activities are modeled
- Study showed internal coherence and consistency of findings
- Comparison to other studies showed accurate representation of information-seeking behavior

# Conclusion about grounded theory approach

- Can perceive the issues from the orientation of those studied
- Step toward building accurate models

# Questions?

- Is this a common approach in information science research?
- What are the drawbacks of the approach?
- When would you use this approach in a study?