

# Relevance, Salience and Emergence:

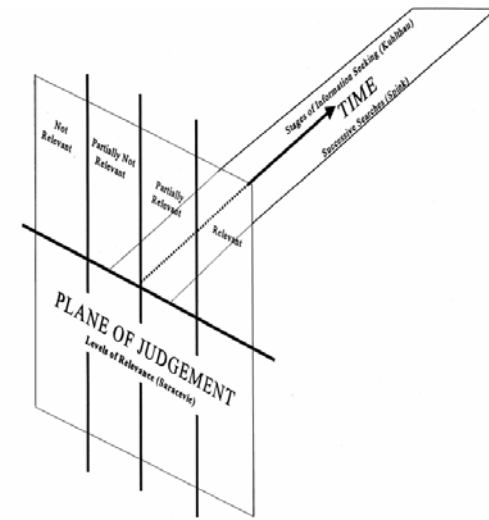
Perspectives on information retrieval in pragmatics

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# 1. Relevance

- System-based relevance
    - System constraints or algorithmic
  - User-based relevance
    - Topicality (aboutness)
    - Pertinence (informativeness)
    - Utility (usefulness)
    - Motivational (future action)
- (Borlund 2003; Greisdorf & Spink 2000; Saracevic 1996)



# Relevance in pragmatics

- **Cognitive Principle of Relevance**

“Human cognition tends to be geared to the maximization of relevance”.

(Wilson and Sperber 2004: 610)



# Defining relevance

- a. Other things being equal, the greater the positive cognitive effects achieved by processing an input, the greater the relevance of the input to the individual at that time.
- b. Other things being equal, the greater the processing effort expended, the lower the relevance of the input to the individual at that time.

(Wilson and Sperber 2004: 609)



# Positive cognitive effects

- “A worthwhile difference to the individual’s representation of the world”
  - Contextual implications
  - Strengthening, revision or abandoning of available assumptions
  - Reorganization of knowledge

(Wilson & Sperber 2004: 608; Van der Herst & Sperber 2004: 142)



# Processing effort

- Effort of perception, memory and inference required (Wilson and Sperber 2004: 609)
- Often measured in terms of processing time



# Key issues (1)

- Defining positive cognitive effects relative to communities of practice

(cf. Park 1994)

- Going beyond topical relevance to include viewpoints (Harter 1992: 613)



## 2. Salience

- Degree of consciousness about different meanings, or the degree to which they are 'noticed'

(Verschueren 1999: 183)

- Graded salience hypothesis:  
"More salient responses (meanings) are accessed faster than and reach sufficient levels of activation before less salient ones"

(Pelag, Giora & Fein 2004: 174; Giora 2003)



# Presentation of information

- “ [The] information structure of a sentence or utterance [can] communicate what is regarded as salient by the term by staging the information” (Lo Castro 2003: 95)
- In English, commonly achieved through thematizing a constituent (Lo Castro 2003: 97)



## Key issues (2)

- Relative placement of information within a text impacts upon its salience
- Information structure varies across languages



### 3. Emergence

**Waitress:** And what would you like to drink?

**Herb:** Hot tea, please. Uh, English breakfast.

**Waitress:** That was Earl Grey?

**Herb:** Right.

(Clark 1997: 589)

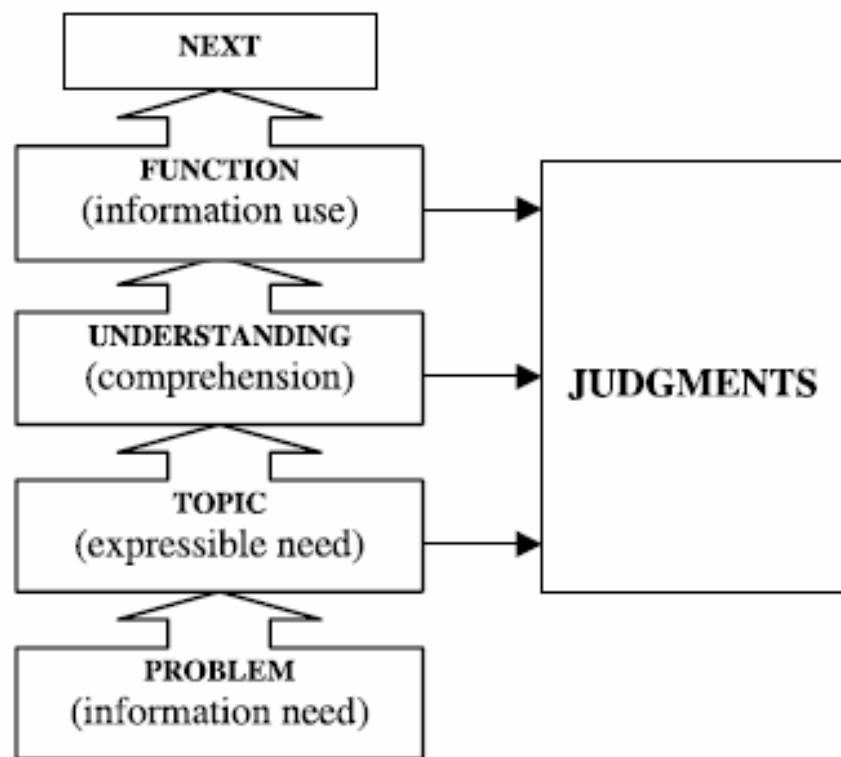


# Information needs and emergence

- A participant's cognitive processes are responsive to prior, current and potential inputs. (cf. Arundale 2005: 59)
- Information needs are thus dynamic and emergent (Harter 1992: 610-611)



# Problems for linear models information retrieval



Greisdorf (2003: 420)



## Key issues (3)

- Building a non-linear, dynamic process model of information retrieval that accounts for emergence



# Selected references

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