

# Pragmatic Knowledge and Bridging Inferences

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What kinds of pragmatic information are necessary for drawing contextually appropriate bridging inferences in conversation (e.g. linking statements such as "I prefer Italy to England. The pasta there was better")? We examined two contemporary pragmatic models of inference generation. One model, Levinson's (2000) view of "presumptive meanings", assumes that inference generation is governed by two default rules that access rich pragmatic knowledge later on in the comprehension process. Another view, Sperber and Wilson's (1995; Matsui 2000), claims that bridging inferences are efficiently generated as implicated premises given the expectation of particular relevant cognitive effects. These models differ, then, in their predictions of when enriched pragmatics shapes utterance interpretation. We report the findings from a series of experiments, measuring both participants' intuitions and reading-times for different bridging inferences. These data generally support the relevance-theoretic view.

The expectation of particular cognitive effects to be achieved by an incoming utterance may not always be generated in the hearer's mind. However, according to Sperber & Wilson, a question is an explicit way of communicating the cognitive effects to be achieved by an incoming utterance. This, in turn, suggests that the person who asks a question is entitled to have rather strong expectations of particular cognitive effects: namely, the relevant answer to his question. One of our experiments, therefore, is designed to compare the comprehension time of two utterance types: a question-answer pair and a juxtaposed utterance pair, each of which describes a state of affairs. Consider the following two sets of utterances, the first of which involve a classic example of bridging inference, namely, the beer was part of the picnic, and the second, a less likely variation:

(1a) Mary: How was the picnic?

John: Well, the beer was warm.

(1b) John: I unpacked the picnic. The beer was warm.

(2a) Mary: How was the job interview?

John: Well, the beer was warm.

(2b) John: I had a job interview. The beer was warm.

A relevance-theoretic view of questions predicts that it is faster to comprehend the utterance 'the beer was warm' in (1a) than (1b). The expected difference in processing time may be explained in terms of how highly accessible the implicature of each utterance is, which possibly facilitates the overall interpretation process. John's utterance in (1), combined with other assumptions and Mary's expectation that John is providing an answer to her question, straightforwardly yields an implicature that the picnic was not totally successful. By contrast, the second utterance in (1b) does not seem to yield any strong implicature, hence, it is predicted that there is no facilitation of the same type. We also predict that the difference in comprehension time is greater between (2a) and (2b) than between (1a) and (1b). In (2), where the relationship between 'job interview' and 'beer' is rather distant, without an expectation of particular cognitive effect, it may almost be impossible to find an acceptable interpretation for (2b). By contrast, in (2a), the interpretation of the second utterance is constrained by the question to the extent that the hearer has to construct the assumption, say, that the beer was offered during the job interview.

Our findings in support of relevance theory suggest that pragmatic information of roughly the same sort enters into listener's understanding of both what speakers say and what they implicate. Bridging inferences appear to be drawn as part of the implicated premises that arise from listeners' attempts to derive appropriate cognitive effects as part of their assumptions about relevance in ordinary communications. These results illustrate the critical importance of enriched pragmatic knowledge in early aspects of linguistic processing.

## References

Levinson, S. (2000). *Presumptive Meanings*. Cambridge, Mass: The MIT Press.  
Matsui, T. (2000). *Bridging and Relevance*. Amsterdam: John Benjamins.  
Sperber, D. & Wilson, D. (1986/95). *Relevance: Comprehension and Cognition*. Oxford: Blackwell.