Designing Comprehensive Computational Models of Conversational Implicature
Session 3, Day 2
Instructions for Working Groups

The purpose of this working group is to investigate the design space for a computational system that can both generate and interpret all the examples of conversational implicature included in the sample dialogue fragments below. More specifically, what would the architecture for such a system be? For example, different specialized modules, each devoted to a specific kind of implicature, or rather one general purpose reasoner? Which (concrete) mechanisms — e.g., non-monotonic logic, planning, etc. — are necessary to deal with these examples?

Ideally, each working group should propose an architecture for the discourse level showing: inputs (e.g., semantic representation of utterance), outputs, knowledge sources (e.g., plan library, KLONE KB of world knowledge, beliefs of speaker/hearer, mutual beliefs, WORDNET, etc.), and appropriately labelled modules of the system (e.g., abductive theorem prover). (Each group should designate a representative who will provide a brief summary of the proposed design to the entire group at the last symposium session, e.g., by use of a diagram on an overhead transparency.)

A secondary purpose of this working group is to help give a concrete foundation for the discussion in tomorrow's working groups on *Future Directions for Computational Models.* We suggest that you have a look at the suggested items for tomorrow's discussion, and that you add to those any others that may come up in today's discussion.

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Fragment 1
1  A: Are the roses fresh?
2  B: They are in the refrigerator.
3     But they're not very fresh.
[Comments: Account for the implicated Yes if (3) is missing.
Account for the cancellation of the possible implicature by (3).]

Fragment 2
1  A: Have you bought the roses?
2  B: I've ordered some.
[Comments: Account for the scalar implicature in (2).]

Fragment 3
1  A: Are you going to rent a car in Chicago?
2  B: I can't drive.
[Comments: Account for the implicated No in (2).]

Fragment 4
1  A: Do you know how to take the cover off this please?
2  B: OK, turn the screw [counterclockwise] to loosen it, and then lift the cover.
3  A: Thanks.
[Comments: Account for the implicated adverbial, [counterclockwise],
in (2).]
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