

Paradox of clarity: defending the missing entailment theory

Assertions of clarity (*It is clear that Abby is a doctor*) have been studied in Barker and Taranto (2002), Taranto (2006), Barker (2007). The most obvious analysis is that a clarity assertion *It is clear that p* is true iff *p* is entailed by publicly available evidence; but in this case, the assertion would be uninformative. Barker and Taranto's solution involves the notion of a 'linguistic side effect'. I argue against their proposal, and suggest that a variant of the 'missing entailment' theory (discussed but rejected by B&T) fares better. I furthermore discuss a possible way of formalizing this idea.

Barker and Taranto suggest that the role of the clarity assertion is to set standards of evidence (B&T 2002, Taranto 2006) or justification (Barker 2007) adopted in the current discourse. Their theory has the following shortcomings:

1. *It is clear that p* does not entail *p*. (However, for the assertion to be pragmatically flawless, the speaker must believe *p* at the moment of utterance.) Thus the following sentence is not predicted to be contradictory:

(1) #It was clear that Abby was a doctor, but in fact she was not.

2. Once set, the initially vague standards for justification can only get looser (worlds with tighter standards have already been eliminated). Therefore, the second statement in the following situation should be abnormal, when in fact it is not:

(2) *A woman in a lab coat appears.*

— Clearly, this is a doctor.

A man appears, not just in a lab coat, but with a stethoscope as well.

— Clearly, this is another doctor.

3. A theory based on possible worlds does not explain why clarity assertions can be used in mathematical discourse, where no possible worlds are involved, and the standards of evidence are not debatable:

(3) Take a number divisible by 9. Clearly, it is also divisible by 3.

4. Clarity assertions can have an overtly marked experiencer (*It is clear to A that p*). In this case, evidence that *A* has is considered, which does not have to be available to the other participants in the conversation:

(4) I have known John for twenty years, and it is clear to me that he is lying.

B&T's theory does not explain why in the cases when the experiencer is omitted, it is the common ground that is considered as the basis of evidence.

Barker and Taranto consider an alternative to their theory, which they call the 'missing entailment' theory. That is, 'an assertion of clarity merely identifies propositions that are already entailed, but which have somehow not been reflected in the common ground' (Barker 2007). They reject this proposal on the following grounds:

1. Some entailments do not allow clarity assertions:
 - (5) — John ate a sandwich and drank a glass of beer.
— #Clearly, then, he ate a sandwich.
2. Clarity is asserted when there is no entailment, p may be merely likely. (Abby might not be a doctor, just a TV actress.)

The first of these objections is handled if we stipulate that the inference that a clarity assertion alludes to should be nontrivial (conjunction simplification, as in (5) is too simple; certain lexical inferences, such as *bachelor*→*unmarried*, are out as well). The second is dealt with if we allow the inference to use defeasible rules.

The solution I propose is thus the following: *It is clear to A from q that p* is true iff there exists a nontrivial (possibly defeasible) inference from evidence q , available to A , with true conclusion p . When A is not specified, the evidence should be available both to the speaker and the audience.

In order to implement this solution, we have to abandon the point of view, standard in formal semantics, that represents the information state of an agent as a set of possible worlds. Rather, the state of an agent can be approximated by a set of formulas, as in Konolige (1986) or Duc (2001). Duc proposes a variant of dynamic logic, where

$$\langle F_A^* \rangle B_A \phi$$

means ‘after the agent A performs some inference, he will come to explicitly believe ϕ ’. Taking rules of inference as elementary actions and using the standard tools of dynamic logic apparatus to build complex actions, we will be able to specify classes of inference, for example, excluding the trivial ones.

The same kind of dynamic representational logic can be useful when dealing with such constructions as belief assertions, indirect speech and evidentials.

Barker, Chris. 2007. Clarity and the grammar of skepticism. <http://semanticsarchive.net/Archive/zExYWRkY/barker-clarity.pdf>

Barker, Chris, and Gina Taranto. The paradox of asserting clarity. In Paivi Koskinen (ed.), *Proceedings of the Western Conference on Linguistics (WECOL) 2002*, Volume 14, Department of Linguistics, California State University, Fresno. 10–21.

Duc, Ho Ngoc. 2001. *Resource-Bounded Reasoning About Knowledge*. Ph. .D thesis, Univ. of Leipzig.

Konolige, Kurt. 1986. *A Deduction Model of Belief*. San Francisco: Morgan Kaufmann.

Taranto, Gina. 2006. *Discourse Adjectives*. NY:Routledge.