

A Question on the ‘Conversational Background’

This assignment is completely open-ended. There are absolutely *no* predetermined ‘right’ or ‘wrong’ answers. The task put before you is simply to reflect on an issue and write about it thoughtfully.

This assignment concerns the nature of the ‘context dependency’ seen in modals. Specifically, it targets the following (general) question: **what does the context *really* provide to the meaning of the modal.**

Let’s begin by reviewing the answer that emerges from the system developed (so far) in class. In the system developed in ‘Part 2’, the meaning of a modal combines with the meaning of the null pronoun ‘BASE’. The meaning of the null pronoun ‘BASE’ is assumed to be a function of type $\langle s, \langle st, t \rangle \rangle$, from worlds to sets of propositions. Furthermore, the meaning of a modal is a function of type $\langle \langle s, \langle st, t \rangle \rangle \langle st, t \rangle \rangle$, along the following lines:

(1) Lexical Entry for the Modals

- a. $[[\text{may / can}]]^w = \lambda B_{\langle s, \langle st, t \rangle \rangle} . \lambda p. \exists w' \in \cap B(w): p(w') = T$
b. $[[\text{must / have-to}]]^w = \lambda B_{\langle s, \langle st, t \rangle \rangle} . \lambda p. \forall w' \in \cap B(w): p(w') = T$

Under this analysis, then, what the context (directly) provides to the meaning of a modal sentence is a function of type $\langle s, \langle st, t \rangle \rangle$ -- essentially a *description* of a set of propositions. Under this view, at a given context, there is some salient group of $\langle s, \langle st, t \rangle \rangle$ functions, and the modal makes reference to some member of this set. Some examples of such functions include:

(2) Possible Values for ‘BASE’

- a. $\lambda w. [\lambda p . p \in \text{the laws of the state of MA in } w]$
b. $\lambda w. [\lambda p . p \in \text{the laws of the UMass Linguistics Program in } w]$
c. $\lambda w. [\lambda p . p \in \text{John's wife's goals in } w]$
d. $\lambda w. [\lambda p . p \text{ is known in } w]$
e. $\lambda w. [\lambda p . p \text{ is true in } w \text{ (up to the present) }]$

Now, given the lexical entries in (1), when this (contextually provided) $\langle s, \langle st, t \rangle \rangle$ function combines with the meaning of the modal, it is then fed the evaluation world w as its argument, yielding a *set of propositions*. This set of propositions is then intersected together to produce the restricted set of worlds that the modal quantifies over.

Thus, under this analysis, there is a sense in which the context *indirectly* provides the following to the meaning of a modal sentence:

- A set of propositions (*i.e.* ‘ $B(w)$ ’)
- A set of possible worlds (*i.e.* ‘ $\cap B(w)$ ’)

After all, the context provides the value of the argument ‘B’ in (1), and this then determines the values of ‘ $B(w)$ ’ and ‘ $\cap B(w)$ ’, the restriction of the modal.

Because there is this *indirect* sense in which the context provides either ‘a set of propositions’ or ‘a set of possible worlds’, the following sorts of things are often (loosely) said:

(3) **The Context Dependency of Modals (Loose Talk)**

- a. For a modal sentence, the context ‘provides’ / ‘determines’ *a set of propositions*.
- b. For a modal sentence, the context ‘provides’ / ‘determines’ *a set of worlds*.

Of course, if we are assuming the picture in (1) and (2), statements like those in (3) are simply meant ‘loosely’. What the context *really, directly* provides is a *description* of a set of propositions (a type $\langle s, \langle st, t \rangle \rangle$ function).

With this as background, your assignment for this week is the following: *discuss what happens if the ‘loose talk’ in (3) is taken seriously*. That is, discuss the consequences to our theory of modals if we adopt either of the assumptions in (4).

(4) **Revision to the Semantics of ‘BASE’**

- a. The pronoun ‘BASE’ is of type $\langle st, t \rangle$ (a set of propositions).
What the context directly provides to the meaning of a modal sentence is a set of propositions.
- b. The pronoun ‘BASE’ is of type $\langle st \rangle$ (a set of possible worlds)
What the context directly provides to the meaning of a modal sentence is a set of possible worlds.

How must our lexical entries for the modal auxiliaries be revised? What kinds of truth conditions does our system end up yielding? Are there any problems you encounter in attempting to build a system based on these assumptions? What kind of picture emerges regarding the nature of the ‘context’, *i.e.*, what kinds of things are ‘on people’s minds’ when they are conversing?

You don’t have to answer all the questions above, but your discussion should touch on some of them, as well as any related matters that you think are of interest.