
Tense and Modality as Verbal Quantifiers

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The talk builds on Irene Heim's proposal of treating verbal quantifiers like "John thinks". They are base generated at the position of the world argument and QR-ed for type reason. This treatment is extended to the syntax and semantics of tense and modal verbs. They all originate in the position of the modal argument of the verb. Here are some structures to give the idea:

- (1) John slept
 DS: John sleep (PAST) \Rightarrow QR
 LF: PAST λ_1 John sleep t_1
- (2) John will sleep
 DS: John sleep(will(PRES)) \Rightarrow QR 2 \times
 LF: PRES λ_2 [will t_2] λ_1 John sleep t_1
- (3) Mary had to work
 DS: Mary work(have(PAST)) \Rightarrow QR 2 \times
 LF: PAST λ_2 [have t_2] λ_1 Mary work t_1

Actually, PAST is more complicate, namely a relative tense having a time as argument, e.g. the speech time expressed by PRES. This will be explained. The account can treat the binding facts in Sequence of Tense configurations in a straightforward way:

- (4) John believed Mary drank (simultaneous)
 DS: Mary drink(John believe(PAST)) QR 2 \times
 LF: PAST λ_2 John [believe t_2] λ_1 Mary drink t_1
- (5) John believed Mary drank (shifted)
 DS: Mary drink(PAST(John believe(PAST))) QR 3 \times
 LF: PAST λ_3 John [believe t_3] λ_2 [PAST t_2] λ_1 Mary drink t_1

Embedded relative clauses require a special treatment.

The theory assumes that tense and modality (presumably also locative quantifiers) can be hooked at the same argument. This has to be a situation, i.e., a part of the world having a temporal, a modal and spatial aspect. So we will assume a situation framework.

The talk will make the syntax and the involved semantics precise. Furthermore the morphological interface will be addressed. The semantic tenses will be covert and have

interpretable features (e.g. [iPAST]). The features are transmitted as uninterpreted features (e.g. [uPAST]) to the traces they bind. They are morphologically realized at the verb whose argument the variable in question is.

As to the framework used: A generative grammar that allows QR at some level of representation. Normally, QR is restricted to DPs. Verbal quantifiers are covert operators, auxiliaries and verbs of attitude together with the subject. Hence a special type of QR is required.

Literature

- Heim, Irene. 2001. Features of pronouns in semantics and morphology. Ms. Universität Tübingen.
- von Stechow, Arnim. 2004. Binding by Verbs: Tense, Person and Mood under Attitudes. In *The Syntax and Semantics of the Left Periphery*, eds. Horst Lohnstein and Susanne Trissler, 431 – 488. Berlin – New York: Mouton de Gruyter.