Temporal Adverbials and Stereotypical Intervals

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In this paper I show how the denotations of certain temporal adverbials depend in part on an aspect of world knowledge: stereotypical intervals. The focus of this study will be the temporal adverbials *not yet* and *never* in English. Standard denotations for *not yet* and *never* (i.e., those that merely quantify intervals of time and order them with respect to Reference Time) do not fully specify their truth conditions because the span of time for which an event is felicitously asserted to not have occurred varies depending on the type of event, i.e., the interval(s) of time within which a given event typically occurs, the stereotypical interval. In particular, the standard type of denotation for *not yet* fails to differentiate it from *never.* I show how Semantic Frames (Fillmore, 1982) can be used, in conjunction with Discourse Representation Structures (Kamp and Reyle, 1994) to capture the type of world knowledge needed to accurately specify these truth conditions.

The examples below show the behavior of *not yet* and *never* in present perfect sentences.

(1)  
   a. Jeff hasn’t visited New Orleans yet.  
   b. Jeff has never visited New Orleans.

Items 1(a, b), in a neutral context (i.e., one in which the time interval for event realization has not been delimited by linguistic or non-linguistic context) are essentially paraphrases (I ignore, for the purposes of this study, the presupposition associated with *not yet,* which has been addressed extensively by Löbner (1989). They both assert that the event [JEFF VISIT NEW ORLEANS] has not been realized as of utterance time.

(2)  
   Jeff has been staying with us for a week and . . .  
   a. he hasn’t shaved yet.  
   b. he has never shaved.

Items 2(a, b) show that both *not yet* and *never* can be delimited by context. In 2(b) *never* now chooses a smaller, contextually-determined interval of time (based on the contribution of *for a week*) for asserting the non-realization of [JEFF SHAVE]. Again, 2(a) and 2(b) are paraphrases.

(3)  
   a. I haven’t paid the rent yet.  
   b. I have never paid the rent.

(4)  
   a. Elections haven’t taken place in Panama yet.  
   b. Elections have never taken place in Panama.

The items in (3) and (4) show again the behavior of *not yet vs. never* in neutral contexts. In this these items, unlike in (1), the (b) sentences are not paraphrases of the (a) sentences. Even in a neutral context, we do not interpret 3(a) to mean that I have never paid before, only that I haven’t paid the rent as of utterance time going back to the last time I would have been expected to do so. This contrast is seen even more starkly in (4).
The difference between the interpretations available in (1) and those available in (3) and (4) relate to facts about the world. There is no stereotypical cycle for visiting New Orleans. In contrast, the fact that paying rent and having elections occur in stereotypical cycles is an element of world knowledge ideally captured by Semantic Frames (Fillmore, 1982). A semantic frame is a type of knowledge constellation surrounding given events and situations (relating to the physical world or to culturally-bound phenomena) which can be linked to a set of lexical items. Frames can be linked to one or more lexical items and can likewise be linked with each other via inclusion and inheritance relations.

I will designate events that occur in stereotypical intervals as SI events, and those that do not as non-SI events. The differential interpretations of the (a) and (b) sentences in (3) and (4) suggest that, in the case of present perfect sentences, by default in neutral contexts, not yet is sensitive to the SIs of SI-events, while never ignores these SIs and chooses instead the largest interval of time conceptualizable for asserting event non-realization.

I propose an SI-sensitive denotation for not yet and a non SI-sensitive denotation for never:

(5) not yet: \( \lambda E. [\text{at all times } t, t \geq t_d, t \leq \text{RT}, \neg E] \), where E is a proposition asserting the realization of an event \( e \), \( t_d = t_{SI} \) of \( e \), and RT is reference time.

Here, \( t_d \) is the earliest conceptualizable time for event realization and \( t_{SI} \) is the nearest past semantic frame-linked time invoked by the SI-event’s semantic frame.

(6) never: \( \lambda E. [\text{at all times } t, t \geq t_d, t \leq \text{RT}, \neg E] \), where E is a proposition asserting the realization of an event \( e \), \( t_d \) is the earliest conceivable time for the realization of \( e \), and RT is reference time.

References

