Modeling temporal reasoning: aspectual information in determiners, adverbs, conditionals and dialogue

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Dynamic Aspect Trees (DAT, ter Meulen 1995/7, ter Meulen & Smessaert 2004, ter Meulen 2006) predict how given information may be transformed, manipulated or condensed, while preserving its temporal content, based on the notion of ‘chronoscope’. Conditional contexts and dialogue provide novel insights into information sharing between agents, where the focus meaning of aspectual adverbs characterizes which alternatives must be derived within a temporally constrained context.

Weak, downward entailing Determiner Phrases (DPs) with stative predicates are strongly preferred in English over strong DPs with negated descriptions of change, cf. (1).

(1) a. * Every child was not singing anymore.
    b. No child was still singing.

Since ‘existential contexts’ accept only weak DPs, cf. (2), their presuppositions are projectable, for the restrictive relative clauses in (3ab) in perfect tense are unproblematic for either kind DP.

(2) a. * There was every student not singing anymore.
    b. There were no students still singing.

(3) a. Every student who had been singing, was no longer singing.
    b. No student who had been singing, was still singing.

Presuppositions of aspectual adverbs also account for the indexical inferences in (4).

(4) a. There are [F still three] students here. => Students are leaving
    b. There are [F already three] students here => Students are coming

With the decreasing no longer this must be added as assumption before conclusions about the number of students in the class can be derived.

(5) a. There are no longer two students in this class. =>
    - if students are leaving => max one student left over in class
    - if students are coming => more than two students in class
    b. Two students are no longer in this class.

Raising the DP to subject, cf. (5b), makes the DP definite, anaphoric, i.e. not in focus.

Aspectual adverbs modifying weak DPs are constrained in monotonicity, unless blending to a meta-temporal interpretation as counterfactual, cf. (6).

(6) a. Already/*still three students have arrived. => students are on their way
    b. Three students have already/*still arrived.
    c. Still/*already three more students have left. => students are leaving
    d. Three students have still left.
With temporal adverbial phrases, aspectual adverbs support scalar inferences, cf. (7) and (8).

(7) a. John was already living in NYC before 9/11.  
    b. John was still living in NYC after 9/11.  
    c. 9/11 did not make John leave NYC.

(8) a. John was still living in NYC before 9/11.  
    b. John was no longer living in NYC after 9/11.  
    c. 9/11 made John leave NYC.

Focus on aspectual adverbs indicates the speaker’s judgments regarding the relative speed of a described event, cf. (9), (10), leading to similar monotonicity constraints.

(9) a. *Few people are already leaving  
    b. There are only (a) few people who are already leaving  
    c. A few people are already leaving

(10) a. *Nobody is still here  
    b. There still is nobody here  
    c. *Everyone is not here anymore

Speaker’s subjective judgments may project into the common ground in interrogative contexts.

(11) a. Anyone still here? CG: there was someone here.  
    b. Anyone already here? CG: there was noone here.

(14) A: The baby is asleep.  
B: STILL? / ALREADY?

In dialogue, partners share as Common Ground the ROOT node of their personal DAT, and communicate to share more labeled nodes.

References

