Chung-chieh Shan - Harvard University Temporal versus non-temporal "when"

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It has been claimed that subordinate "when"-clauses can express non-temporal relations ((1)) as well as temporal ones. In this snippet I will suggest that there is a syntactic contrast between "when"-clauses that express temporal relations and "when"-clauses that do not

- (1) When they built the 39th Street bridge...
 - a. a local architect drew up the plans.
 - b. they used the best materials.
 - c. they solved most of their traffic problems. (Moens and Steedman 1987)

As background, bear in mind Geis's (1970) observation that sentences such as (2) are ambiguous: Alice's arrival may coincide with either Beatrice's telling or Charlie's (suggested) leaving. In this discussion, I will assume that the latter, 'long-distance,' reading for sentences like (2) can only arise via extraction of "when" from the lower clause

(2) Alice arrived when Beatrice told Charlie that he should leave.

Now consider the following scenario: The speaker is a consultant for a mobile phone company that introduced several new pricing plans last month and is now re-evaluating its marketing strategy. One idea the company came up with and implemented was reducing charges for weekend calls. Poring over network usage statistics, the consultant noted that weekend call volume increased significantly since last month

- (3) a. Customers make more calls when rates are cheaper that is, on weekends.
 - b. Customers make more calls when we decided (last month) (that) rates would be cheaper that is, on weekends.

Another innovation of the company was to offer student discounts. The consultant noted that student call volume also increased quite a bit.

- (4) a. Customers make more calls when rates are cheaper that is, for students.
 - b. *Customers make more calls when we decided (last month) (that) rates would be cheaper that is, for students.

Why is (4b) bad compared to (3b)? (The judgments are robust if subtle.) I suggest that it is bad because "for students" forces us to construe "when" as non-temporal "when," but at the same time only temporal uses of "when" involve extraction. Potential support for the latter idea comes from the contrast many speakers find between the sentences in (5).

- (5) a. Alice arrived when Beatrice left at midnight.
 - b. *When did Beatrice leave at midnight?

It is interesting to note in this connection that "when"-clauses do not admit long-distance readings when preposed (Sabine Iatridou, p.c.): in (6), Alice's arrival must coincide with Beatrice's telling, and (7) is incompatible with the scenario above. Still assuming that long-distance readings arise from extraction of "when," we might conclude that temporal "when"-clauses are forbidden from preposing. It remains to be explained why.

- (6) When Beatrice told Charlie that he should leave, Alice arrived.
- (7) * When we decided (last month) (that) rates would be cheaper that is, on weekends customers make more calls.

References

Geis, M.L. (1970) Adverbial Subordinate Clauses in English, Ph.D. dissertation, MIT. Moens, M. and M. Steedman (1987) "Temporal Ontology in Natural Language", in Proceedings of the 25th Annual Meeting of the ACL, 1-7.