Telescoping and Scope Economy

Although it is generally assumed that quantifiers cannot scope beyond the sentence they appear in, certain universal quantifiers seem to do so. For instance, the quantifier phrase "each degree candidate" in (1) covaries with the pronouns in the example, despite being in a separate sentence. Roberts (1987) calls this phenomenon "telescoping" (after Partee). She proposes a covert operator that binds the pronoun in the second sentence and quantifies over the same individuals or situations as the first sentence, resulting in meanings roughly paraphrased as in (2).
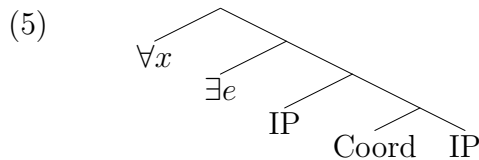
Roberts argues that the apparent wide scope of the quantifier in telescoping is an illusion arising from this covert operator. In cases of separate sentences and explicit conjunction, her analysis predicts the same meaning as a wide-scope quantifier analysis; but in cases of sentential disjunction, the predicted meaning is quite different. Example (3) is a case of telescoping across disjunction. Depending on whether her operator quantifies over individuals or situations, Roberts would either predict a reading of (3) where two universal quantifiers take narrow scope relative to disjunction, as in (3a), or a paradoxical reading, as in (3b). However, the only actual meaning of (3) – the wide-scope reading in (3c) – is not possible using a separate operator for the second sentence.

The disjunction case indicates that a telescoping quantifier might actually take scope over both sentences. In my paper, I argue for this wide-scope analysis using a conception of Scope Economy due to Fox (1999). Fox proposes that a quantifier phrase QP in a co-ordinated structure can only raise above coordination if there is a scopal operator already above coordination that is non-commutative with QP. Coordination itself is invisible to Scope Economy, which is why this higher operator is needed to satisfy Scope Economy and allow the movement. For instance, "Billy" and "every girl" are scopally commutative, ruling out (4a); but "a boy" and "every girl" are non-commutative, allowing (4b).

I argue that the two separate sentences in a telescoping case always form a coordinated structure, whether explicit or covert. The universal quantifier in the first sentence can raise over this coordination, but only when licensed by a scopally non-commutative existential event operator as in (5) and (6). I motivate this event operator by showing data supporting a new constraint on telescoping event structures: for each individual quantified over in a telescoping structure, there is an event e such that both sentences describe e or a sub-event of e. For instance, (7) is not acceptable because there is only one event in the first sentence, and it involves all the individuals quantified over. However, (8) is fine, since although the events of cap-wearing are not temporally distinct, they are distinguished by the distinct caps (see Tunstall (1998) for a good discussion of event differentiation). This constraint follows naturally from the assumption that the quantifier must scope over a covert event operator that in turn scopes over both sentences. On the other hand, nothing in Roberts's analysis would predict such a constraint.

When telescoping involves two separate sentences, I propose they are coordinated by one of several null discourse operators. Kehler (2002) argues for a small set of relations between adjacent sentences in discourse (such as one event following another, one causing another, etc.), and I propose that this null operator is what contributes the extra meaning of these relations beyond the meaning of the component sentences. Roberts and others (e.g., Poesio and Zucchi 1992) point out that two telescoping sentences must form a "possible narrative." This constraint rules out example (9). In my paper, I flesh out the notion of a possible narrative in terms of Kehler's discourse relations and show that this limitation is not actually a constraint on telescoping, but rather an independent constraint on discourse structure. For instance, even the non-telescoping sentences in (10) are ruled out; therefore it is no wonder that telescoping cannot save this discourse.

(1) Each degree candidate walked to the stage. He shook the dean's hand and returned to his seat. (Adapted from Roberts (1987) example 29, citing Partee)

(2) Every situation involving a degree candidate can be extended to one where he walks to the stage. In every such (extended) situation, he shakes the dean's hand and returns to his seat.

(3) Each degree candidate accepted his diploma or his mother did.

    a. $\neq$ Either for each degree candidate x, x accepted x's diploma or for each degree candidate x, x's mother accepted x's diploma.

    b. $\neq$ Either every situation involving a degree candidate can be extended to one where he accepted his diploma, or in every such extended situation (where a degree candidate accepted his diploma), his mother accepted his diploma.

    c. $=$ For each degree candidate x, either x accepted x's diploma or x's mother accepted x's diploma.

(4) a. * Billy wants to date every girl in this class and has already asked her out.

    b. A boy wants to date every girl in this class and has already asked her out.

(5)

(6) [each candidate]$_i$ [$\exists$ an event e] [[t_i walked to the stage in a sub-event of e] Coord [he_i shook the dean's hand in a sub-event of e]]

(7) # Every degree candidate rushed the stage at once. He threw his cap in the air.

(8) Every degree candidate wore a different cap. It represented his specific goals in life.

(9) # Each degree candidate walked to the stage. He liked the dean's tie and wanted a good job after graduation.

(10) # John walked to the stage. He liked the dean's tie and wanted a good job after graduation.

References

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