

Crossing the Appositive/At-issue Meaning Boundary

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I. Introduction This paper’s goal is to provide systematic evidence from anaphora, presupposition and ellipsis that appositive meaning, e.g. as contributed by the relative appositive in (1), and at-issue meaning, contributed by the main clause in (1), have to be integrated into a single, incrementally evolving semantic representation. While previous literature has provided partial arguments to this effect (Nouwen 2007 for anaphora, Amaral et al 2007 for both anaphora and presupposition), the systematic nature of this evidence – in particular, the evidence from ellipsis we will introduce – has been previously unnoticed.

1. John^x, who_x nearly killed a^y woman with his car, visited HER_y in the hospital.

We propose an analysis of these phenomena that integrates the dynamic account of anaphora and ellipsis as discourse reference to individuals and properties (respectively) with an account of at-issue meaning as a *proposal* to update the input Context Set (CS, see Stalnaker 1978) and of appositive meaning as an *actual* update of the CS that is not up for negotiation.

II. The Phenomena The example in (2) shows that anaphora (*her*) and presuppositions (*too*) in the main clause can retrieve antecedents in – or be satisfied by the propositional content of – the appositive. Example (3) shows that anaphora and presupposition can also occur in the other direction: from the appositive to the main clause. Plural anaphora to (certain) quantifiers is felicitous, both in the at-issue→appositive direction (4), and vice-versa (5). This bidirectionality is exemplified in (6) and (7) for modal anaphora (and subordination), in (8) and (9) for the restorative reading of *again* and in (10) and (11) for *stop*.

2. John, who had been kissed by Mary, kissed HER TOO.
3. John kissed Mary, who kissed HIM TOO.
4. Every speaker, all of THEM PhD students, gave a great talk. (see Potts 2005)
5. Jones, who graded each student’s final paper, gave THEM detailed feedback.
6. John, who might give a presentation, WOULD use slides. Bill WOULD just use the board.
7. John might punch Jorge, who WOULD punch John back.
8. John, who has been sick, is now healthy AGAIN.
9. The window will be opened by Mary, who will then close it AGAIN.
10. John, who is now building a sandcastle, will STOP soon.
11. The sandcastle was only halfway built by John, who had suddenly STOPPED.

Data from NP- and VP-Ellipsis (NPE/VPE) point in the same direction. Since NPE does not require a linguistic antecedent (i.e., is a type of Hankamer and Sag (1976)’s ‘deep anaphora’) we might expect (12)-(13) to be possible regardless of the status of appositive content. But we also find examples of VPE (a type of surface anaphora, requiring a *linguistic* antecedent) in both directions, such as (14)-(15) from the Corpus of Contemporary American English (COCA, americancorpus.org). Finally, the examples in (16)-(17) show that both strict and sloppy readings are available, e.g., Jane was told to help Mary’s sister (strict) vs Jane’s (sloppy) in (16), suggesting that the appositive and at-issue components require access not only to each other’s linguistic form, but also to their *semantic representation*.

12. Melinda, who won three games of tennis, lost because Betty won SIX.
13. Melinda lost three games of tennis to Betty, who lost SIX to Jane.
14. Mr. Gore at first believed the president, and even defended him to Tipper, who DID NOT.
15. So Lalonde, who was the one person who could deliver Trudeau, DID.
16. Mary, who doesn’t help her sister, told Jane TO.

17. John, who helps people if they want him to, kisses them even if they DON'T.

III. Outline of the Account We work with an extension of Dynamic Predicate Logic (Groenendijk & Stokhof 1991): models consist of the disjoint domains of individuals \mathfrak{D} and possible worlds \mathfrak{W} and the basic interpretation function \mathfrak{I} that assigns a subset of \mathfrak{D}^n to any n -ary relation R relative to any world w , i.e., $\mathfrak{I}_w(R) \subseteq \mathfrak{D}^n$. We have variables over individuals x, y, \dots , over worlds w, w', \dots , over propositions / sets of worlds p, p', p^*, \dots , individual constants JOHN, \dots , properties WOMAN, \dots , binary relations VISIT, \dots etc.

Formulas are interpreted relative to a pair of assignments $\langle g, h \rangle$, i.e., they are binary relations between an input assignment g and an output assignment h . Dynamic conjunction is interpreted as relation composition: $\llbracket \phi \wedge \psi \rrbracket^{\langle g, h \rangle} = \mathbb{T}$ iff there exists a k such that $\llbracket \phi \rrbracket^{\langle g, k \rangle} = \mathbb{T}$ and $\llbracket \psi \rrbracket^{\langle k, h \rangle} = \mathbb{T}$. New variables are introduced by means of random assignment formulas like $[x]$, $[p]$, etc. For any variable v , $\llbracket [v] \rrbracket^{\langle g, h \rangle} = \mathbb{T}$ iff g differs from h at most with respect to the value h assigns to v , that is: for any variable $v' \neq v$, $g(v') = h(v')$.

We use a variable p^* to encode the Context Set (CS, Stalnaker 1978) that is incrementally updated in discourse. The at-issue component puts forth a proposal (which the addressee can accept or reject) to update the CS by restricting it to a subset p . Appositives automatically update / constrain the input CS p^* , separately from the speaker's proposal. Appositives also contrast with presuppositions: presuppositions are preconditions for the proposal, explicitly taken for granted by the speaker and required to be satisfied by the input CS.

Sentence (1) above is represented as in (19) below. First, (19a) introduces the proposal to update the CS: we introduce a new variable $p \subseteq p^*$ containing worlds satisfying the subsequent at-issue update. The at-issue and the appositive updates are as in (19b): we introduce a new variable x whose value is John and comment that x nearly killed a woman y . The appositive nature of the update is captured by the fact that the appositive content is interpreted relative to p^* rather than relative to the new proposal p . Relations relativized to propositions are distributively interpreted, e.g., $\llbracket \text{WOMAN}_{p^*}(y) \rrbracket^{\langle g, h \rangle} = \mathbb{T}$ iff $g = h$ and for all worlds $w \in h(p^*)$, $h(y) \in \mathfrak{I}_w(\text{WOMAN})$. The final update in (19b), i.e., $\text{VISIT}_p(x, y)$, is part of the at-issue proposal, so it is interpreted relative to p . Note that, despite the possible non-maximality of the set of worlds p , our CS update procedure will not actually differ from the one in Stalnaker (1978) since, after (19b), there will be an assignment h such that $h(p)$ contains the *maximal* set of worlds in the current CS p^* that satisfy the at-issue relation $\text{VISIT}_p(x, y)$. Finally, (19c) contributes the proposal to update the CS p^* by resetting it to p .

19. a. $[p] \wedge p \subseteq p^* \wedge$
b. $[x] \wedge x = \text{JOHN} \wedge [y] \wedge \text{WOMAN}_{p^*}(y) \wedge \text{NEARLY-KILL}_{p^*}(x, y) \wedge \text{VISIT}_p(x, y) \wedge$
c. $[p^*] \wedge p^* = p$

The full paper analyzes VPE by extending the above dynamic framework with discourse referents / variables for properties along the lines of Hardt (1999) and Stone & Hardt (1999).

In sum, the robust patterns of anaphora, ellipsis and presupposition between at-issue and appositive meaning are accounted for in a unidimensional framework that captures the backgrounded/non-proposal nature of apposition in its semantics as well as its pragmatics.

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