

Small antecedents: syntax or pragmatics?
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Syntactic and discourse-pragmatic factors influence ellipsis resolution (Hardt and Romero 2004, Frazier and Clifton 2005), but it is often unclear which of these is the source for certain ellipsis phenomena. Using experimental methods to gather rather subtle data on antecedent choice, I show that a condition on presupposition accommodation, *Minimize Accommodation*, constrains ellipsis resolution.

The ellipsis in (1) is resolved with the antecedent modified by the manner adverb, whereas the antecedent-contained deletion (ACD) in (2) is resolved with the small, unmodified antecedent (see Matsuo 2001). In addition to verifying the judgments in (1-2), Experiment 1 tested ellipses in temporal clauses (3), a form of adverbial ACD (Fox and Nissenbaum 2003). Fifteen participants read nine sentences modeled on (1-3), presented in counterbalanced and randomized lists with filler items, and chose an antecedent by answering questions like (4). Readers resolved ellipsis with a small antecedent more often in ACD than in coordination (5). At first it appears that the syntax of ACD makes the modified antecedents relatively unavailable (Matsuo 2001). Further experiments revealed that the source of the difference between (1) and (2-3) is the pragmatic nature of the clause containing the ellipsis (hereafter C_e). The difference is whether the C_e is asserted or presupposed.

The coordinated C_e (1) constitutes an assertion, but the embedded C_e s (2-3) are headed by presupposition triggers *the* and *after*. Definite determiners and strong quantifiers like *every* presuppose the existence of their complement (Stawson 1952) and temporal adverbials like *after* presuppose the truth of their complement (Hopper and Thompson 1978). If a presupposition is unsatisfied, it can be rescued by accommodation (Lewis 1979), a process by which hearers grant a context that satisfies the presupposition (Stalnaker 1973). I propose a constraint on accommodation that prevents comprehenders from assuming a richer context than warranted (*Minimize Accommodation* (MA) in (6), an adaptation of Crain and Steedman's 1985 principle of parsimony). MA compares antecedents for a presupposed elided VP presented out-of-the-blue. The two antecedents for (2), and the presuppositions they induce, are shown in (7a,b). Accommodating the modified antecedent requires a richer context than accommodating the unmodified one (this is modeled with the entailment relation between the two (7c)). According to MA, the small antecedent is preferred. When C_e is asserted (1), MA does not constrain antecedent choice.

This pragmatic account is tested against a syntactic one, which argues that the syntactic structure of (2) and (3) preclude a modified antecedent. If the C_e in ACD (Baltin 1987, Fox 2002) attaches below the projection containing the adverb (8a), then only a small antecedent is available. (8a) is preferred to (8b), the parse that makes a large antecedent available, for processing reasons (Frazier 1978). Experiment 2 tested this syntactic account using antecedents with postverbal adverbs (9a), where the constituency overtly makes the large antecedent available (9b). So while the syntactic account predicts postverbal adverbs are resolved in the ellipsis, the pragmatic account predicts a small antecedent in ACD regardless of syntactic constituency. These predictions were tested with the four conditions in (10) in a computerized questionnaire asking questions as in (4). Small antecedents were chosen more often in ACD (10c,d) than in coordinated ellipsis (10a,b) ($F(1, 47) = 53.70$; $p < .001$, $F(1,15) = 36.59$; $p < .001$). Crucially, (10b) and (10d) differed, showing that the choice of small antecedent was determined by the presence of the presupposition trigger, not syntactic considerations. The pragmatic account was tested in the same way with presuppositional temporal adverbials (11). A main effect of C_e type was found, with larger antecedents more likely in main asserted ellipsis (11a,b) than presupposed ellipsis (11c,d) ($F(1,39) = 13.93$, $p < .01$; $F(1,19) = 20.21$, $p < .001$). (A independent effect of adverb position showed that preverbal adverbs are less likely to be part of the antecedent in all cases.) Experimental methods show that what appear to be syntactic effects of ACD are in fact due to a strategy for handling unsatisfied presuppositions, something readers are sensitive to parsing (Crain and Steedman 1985).

- (1) Ed quietly sang the song and then Fred did ⟨quietly sing the song/*sing the song⟩
 (2) Ed quietly sang the song that Fred did ⟨sing the song/*quietly sing the song⟩.
 (3) Ed quietly sang the song after Fred did ⟨sing the song/?quietly sing the song⟩.
 (4) What did Fred do? (i) sing the song (ii) quietly sing the song

(5)	<i>Experiment 1</i>	<i>Percentage of small antecedent responses</i>
	Coordinated CE (1)	15.5%
	ACD (2)	88.9%
	Temporal adjunct (3)	86.7%

- (6) *Minimize Accommodation*: Do not accommodate more than necessary to rescue an unsatisfied presupposition. [All else being equal, if both contexts C_1 and C_2 are compatible with a presupposition, do not narrow the common ground to C_2 if $C_2 \subseteq C_1$]

- (7) Ed quietly sang the song that Fred did.
 a. *Presupposition of large/modified antecedent*: there is a song that Fred quietly sang.
 b. *Presupposition of small/unmodified antecedent*: there is a song that Fred sang.
 c. *Entailment*: $\exists e$ [sing the song(e) \wedge quietly(e)] \supset $\exists e$ [sing the song(e)]

- (8) a. Ed [_{VP3} quietly [_{VP2} [_{VP1} sang the song] [_{CE} that Fred did]]] (small antecedent only)
 b. Ed [_{VP3} [_{VP2} quietly sang the song] [_{CE} that Fred did]] (large antecedent available)

- (9) a. Ed sang the song quietly that Fred did.
 b. Ed [_{VP3} [_{VP2} sang the song quietly] [_{CE} that Fred did]] (large antecedent available)

(10)	<i>Experiment 2</i>	<i>small antecedent response means</i>
	a. Edna quietly entered the room and then David did. (coordinated/pre)	.494
	b. Edna entered the room quietly and then David did. (coordinated/post)	.391
	c. Edna quietly entered every room that David did. (ACD/pre)	.784
	d. Edna entered every room quietly that David did. (ACD/post)	.716

(11)	<i>Experiment 3</i>	<i>small antecedent response means</i>
	a. After Larry energetically played the game, Fred did. (main/pre)	.455
	b. After Larry played the game energetically, Fred did. (main/post)	.325
	c. Larry energetically played the game after Fred did. (embedded/pre)	.595
	d. Larry played the game energetically after Fred did. (embedded/post)	.500

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