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Anaphora: A Reference Guide is a collection of 8 papers investigating anaphora from syntactic, semantic and psycholinguistic perspectives. As such, the book provides a broad overview of the range of anaphoric phenomena which have been investigated. The authors have all independently made important contributions to the field, and most of the papers in the volume either review or extend those contributions. Though the volume as a whole is unlikely to redirect research into anaphora in a major way -- Barss’s and Langendoen and Magloire’s papers perhaps being exceptions -- it is very useful in outlining our current understanding of anaphora, problems with that understanding, directions for potential further research, and references to consult for past results. Below I illustrate one of the major results discussed or derived in each of the articles, and then give a brief (too brief) comment on the positive and negative aspects of the paper overall.

Andrew Barss’s “Timing Puzzles in Anaphora and Interpretation” offers a new and interesting solution to several well-known problems related to reconstruction effects. One such problem can be illustrated with the following examples from Higginbotham (1988).

(1) a. [Which musician], [t₁ played [which piece that you asked him, to play]]?

   b. ?* [Which piece that you asked him, to play], did [which musician], play t₂?
(1b) is a weak crossover (WCO) violation. (1a), however, is perfectly acceptable. Higginbotham accounts for this difference by requiring a bound pronoun to be c-commanded at S-structure by a trace of the operator it is dependent on. Within the Minimalist Program, however, such a solution is not available, since S-structure does not exist as an independent level at which restrictions can apply. Furthermore, applying the WCO constraint at LF is of no help since both examples share the LF representation in (2) (linear order of operators aside).

(2) [which piece that you asked him, to play], [which musician], [t₁ play t₂]

To overcome this problem, Barss proposes two modifications to the minimalist framework. The first is to compute the semantics of a sentence step by step in concert with the syntax. Anaphoric expressions, of course, would pose a problem for this analysis if they were required to find their antecedents immediately upon merger, since typically an antecedent won’t be merged into a sentence until after the anaphor is. Barss overcomes this with his second proposal, an adaptation of Pesetsky’s (1989) earliness principle, which requires anaphoric dependencies to be formed and filtered as early as possible in a derivation. For a bound pronoun, as early as possible means as soon as the pronoun, its binding quantifier and the trace of that quantifier are all present in the structure. Applied to (1a), the first point at which the three elements needed for interpreting
him are present is when which musician is raised. At this point, the anaphoric dependency is formed, and since it does not violate any principles of grammar it is allowed by the filter. In (1b), in contrast, the dependency cannot be formed until after the antecedent which musician is (covertly) raised. At this point, however, the pronoun him is already in a position in which it is not c-commanded by the trace of which musician. Any attempt to analyze the pronoun as a variable bound by which musician will thus be filtered out as a WCO violation.

+ Coherent and principled way of incorporating past results from Binding Theory research into the Minimalist Program
- Details of the process of incremental semantic interpretation not made sufficiently clear

Ayumi Ueyama’s “Two Types of Scrambling Constructions in Japanese” uses binding phenomena as probes for determining the structure and properties of scrambled sentences in Japanese. Ueyama builds on the idea that there are two fundamentally distinct types of scrambling construction, referred to as a Deep OS-type construction (OS = Object-Subject order) and a Surface OS-type construction. She argues that a dislocated element (DL) in a Deep OS-type construction (= a Deep DL) does not show WCO effects and allows the DL to have wide scope. A Surface DL, in contrast, does exhibit WCO effects, disallows wide scope of the DL, and also shows reconstruction effects. Using these properties as probes, she then argues for the following novel generalizations:
(3) a. The DL in the long distance OS-type construction is necessarily a Surface DL.
   b. There is at most one Deep DL in a clause.
   c. In the multiple OS-type construction, it is harder for the second DL to be a Deep DL than for the first DL.

Taking these effects to be properties of LF representations, Ueyama argues that a Deep DL must be dislocated both at PF and at LF, while a Surface DL must be dislocated only at PF but not at LF. This forms the core of what she refers to as the Essential Analysis of these two types of scrambling. She further argues that the generalizations in (3) prohibit analyses which correlate Deep OS-type constructions with the possibility of A-chain reanalysis (e.g. Saito 1992, Saito and Fukui 1998, and Boskovic and Takahashi 1998), or analyses which assume that a Deep DL undergoes movement.

+ Generalizations laid out clearly and well argued for
- Missing explanation of why different types of expressions behave differently with respect to binding

    Janet L. Nicol and David A. Swinney's “The Psycholinguistics of Anaphora” uses semantic priming effects to investigate how speakers retrieve antecedents for anaphoric expressions. Semantic priming is a well-documented phenomenon whereby processing one word facilitates access to semantically related words. Upon hearing the word “frog”, for example, speakers will be able to more quickly access a related word like “toad” than
a non-related word like “boy”.

Pronouns can prime for words related to potential antecedents, as illustrated with the following sentence:

(4) The boxer told the skier that the doctor for the team would blame him * for the recent injury.

Sentences like this were read to subjects, and a visual target word was presented at the point of the asterisk. The target was either related to one of three potential antecedents -- punch for boxer, slope for skier, and nurse for doctor -- or a control word. Interestingly, semantic priming effects were found for punch and for slope, but not for nurse. This indicates that subjects access the lexical semantic content of the two syntactically possible antecedents the boxer and the skier immediately upon processing the pronoun, but do not access that of the impossible antecedent the doctor. To explain these results, Nicol and Swinney propose that structural and featural information of NPs is stored separately from their lexical content as the NPs are processed, and that those NPs that mismatch an anaphoric expression in features or are syntactically ruled out as possible antecedents are taken out of consideration. Semantic content is then retrieved only for the remaining permissible NP antecedents.

+ Good discussion of benefits and shortcomings of different experimental methods
- All discussion based on previous work with no new experimental results
Dana McDaniel’s “Two Pronominal Mysteries in the Acquisition of Binding and Control” looks at two puzzles in the acquisition of Binding Theory. The first is why children fail to obey Binding Principle B for a long time on a variety of tasks. The second is why children insist on sentence-internal reference for pronouns, treating pronouns on a par with non-arbitrary PRO. For reasons of space, I will focus here on only the former puzzle.

Though English-speaking children as old as age 6 know what a pronoun can refer to, they do not know that it cannot refer to the subject of its clause. *Prima facie,* it looks like these children lack Principle B in their grammar, and therefore permit more possible interpretations for sentences containing pronouns than adults. Assuming that all grammatical learning is based on positive evidence, however, this leads to a puzzle: since adding Principle B will only eliminate possibilities from their grammar, how can children acquire it? There would appear to be no positive evidence which could force a child to eliminate previously accepted interpretations from the child’s grammar.

McDaniel offers a programmatic answer to this problem. She argues that children actually do have Principle B in their grammar, but that their apparent failure in Principle B tasks stems from their not being sensitive to the role that focus plays. At some point, children hear apparent Principle B violations, from which they conclude that non-coindexed NPs can be coreferent. It is not until they gain a sensitivity to focus, however, that they
learn the specific conditions under which this type of coreference is possible.

+ Clear delineation of the two puzzles; good overview of past results in acquisition of binding conditions
- Details / theoretical consequences of focus based solution to first puzzle missing

Mario Montalbetti’s “Reference Transfers and the Giorgione Problem” investigates restrictions on reference transfer. He analyzes Quine’s (1953) famous example in (5) as involving a reference transfer in the subject from an individual to his name.

(5) Giorgione was so-called because of his size

The pronoun *his* refers back to the individual Giorgione, while the particle *so* refers to the name.

While anaphora involving reference shift is possible, the following examples show that it is restricted.

(6) a. Norman Mailer reads himself before going to sleep
   b. *The ham sandwich ate itself/himself with a fork and knife*

In (6a), it is an individual doing the reading, and a book or paper that is read. The subject is thus given a normal interpretation, while the anaphor is shifted. In (6b), the subject is shifted to the individual who ordered the ham sandwich. The anaphors here, however, are impossible under the intended reading in which what was eaten was the sandwich and not the person. Montalbetti accounts for this distinction by claiming that anaphors (as
opposed to pronouns) cannot refer to the unshifted meaning of an antecedent after shift occurs.
+
Develops principled theory of interaction between binding and reference shift
-
Notions important to the theory, such as timing of reference shift, not adequately spelled out

Karen Zagona’s “Tense and Anaphora: Is There a Tense-Specific Theory of Coreference?” answers the question in the title negatively. Instead she argues that times are arguments that acquire lexical and grammatical features via syntactic relations of normal types, and are then subjected to the same licensing conditions as other argumental expressions.

To back up this claim, Zagona presents a theory of the tense system which treats [+Past] as features marked on a VP that check grammatical function. [+Past] is interpreted as an R-expression, requiring that the time referred to by a [+Past] VP be disjoint from that of any higher c-commanding time. Assuming a matrix TP to be structured as [\(\text{Arg}_1\) [Tense \(\text{VP}\)]], with \(\text{Arg}_1\) referring to speech time, this derives as a result that a [+Past] VP must refer to a time distinct from speech time. To eliminate the possibility of a future interpretation, Zagona proposes that hierarchical structure determines temporal order, as in (6).

(6) Where (Temporal) Argument a asymmetrically c-commands (Temporal) Argument b, a and b disjoint, \(b < a\).

She then derives a future interpretation by assigning sentences
containing will a structure as in (7).

(7) \[ \{ \text{TP Arg}_i \{ x \; \text{will} \} \{ \text{TP Arg}_{i,\text{Past}} \{ v \; \text{Tense} t_i \} \} \]  

Here, the speech time is marked as disjoint from the structurally higher event time, and by (6) is required to precede the event time, resulting in a future interpretation for the event.

+ Interesting distinction between contributions to temporal ordering made by tense and by aspectual relations between events.
- Argumentation imprecise; technical details ambiguous

Hajime Hoji’s “Surface and Deep Anaphora, Sloppy Identity, and Experiments in Syntax” revisits the question of how to distinguish surface anaphora from deep anaphora. Both types of anaphora can give rise to sloppy identity, as illustrated in (8).

(8) a. John\(_i\) will vote for his\(_i\) father. I want Bill to \textit{ec} too.

b. John washed his car. Bill did the same thing.

Hoji argues, however, that only in cases of surface anaphora like (8a) is the sloppy reading solely attributable to the LF representation. In deep anaphora cases like (8b), sloppy identity interpretation is made available by resources outside the language faculty.

To establish these claims, Hoji conducts a number of experiments, one of which I illustrate here. Hoji notes that the establishment of the formal dependency needed for bound variable anaphora is only possible if the bound expression is [+\(\beta\)], i.e. a dependent expression such as a pronoun or anaphor. As a comparison of (8a) with (9) shows, sloppy identity in a surface
anaphora construction is subject to the same requirement -- the sloppily interpreted expression must be $[+\beta]$. 

(9) John will vote for John’s father. I want Bill to eat too. (8a) does, but (9) does not, allow for a sloppy reading. This same contrast, however, fails to show up in cases of deep anaphora, as can be seen by comparing (8b) with (10). 

(10) John washed John’s car. Bill did the same thing.

Here, both examples allow for a sloppy reading despite the impossibility of bound variable anaphora in the first sentence of (10). A total of 5 experiments of this type are given in the paper. In addition to probing the formal properties of deep and surface anaphora, the paper also serves to categorize a range of constructions in both Japanese and English as instances of either deep or surface anaphora.

+ Clear outline of constructions in Japanese and English which involve surface / deep anaphora

- Formal analysis weak or lacking; important judgments unclear

D. Terence Langendoen and Joël Magloire’s “The Logic of Reflexivity and Reciprocity” gives a semantic account of the logical properties of a variety of reflexive and reciprocal sentences. To do so, the authors extend Goodman’s (1951) analysis of plural properties of one place predicates to two-place predicates. Goodman proposed four plural properties of one-place predicates: disjunctive (D), nucletive (N), expansive (E) and cumulative (C). Langendoen and Magloire consider combinations
of these properties in two-place predicates. Of the 16 logically possible combinations, they argue for the need to acknowledge 6 combinations: EC (i.e. expansive-cumulative), CC, DD, DN, 2D (i.e. disective in the second argument), and NN.

After categorizing 2-place predicates according to the above classification scheme, the authors go on to show how a predicate’s classification restricts the range of possible interpretations for sentences with co-referring plural arguments. For example, in the schematic example below, if \( P = \text{be in love with} \) (11a) is equivalent to (11b,c), while if \( P = \text{be looking at} \) (11a) is equivalent to (11d,e).

(11) a. Ann and Bob P Ann and Bob
   c. Ann and Bob P themselves, AND Ann and Bob P each other
   d. Ann P Ann and Bob P Bob, OR Ann P Bob and Bob P Ann
   e. Ann and Bob P themselves, OR Ann and Bob P each other

The above results form a baseline against which the logical behavior of reflexive and reciprocal predicates, with and without anaphors, is compared. This makes it possible for Langendoen and Magloire to propose criteria for reflexivity and reciprocity, which interact with both the plural properties of predicates and with whether reflexivity is expressed overtly (e.g. \textit{They shaved e.o.}) or covertly (e.g. \textit{They shaved}) to derive the interpretations found for a wide range of reflexively and reciprocally interpreted sentences.
+ Novel principled approach to understanding variations in interpretation of reflexive / reciprocal sentences with plurals
- No discussion for why only a subset of possible combinations of plural properties in 2 place predicates is needed
References


