

THE SYNTACTIC ROOTS OF DISCOURSE COHESION

COMMENTS ON REINHART'S "TOPICS AND THE CONCEPTUAL INTERFACE"

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There is a burden of proof on any theory that wants to attribute interpretive effects to syntactic and semantic mechanisms of Universal Grammar. It needs to be shown that the effects cannot be accounted for by appealing to principles of rational behavior in general and principles of linguistic pragmatics in particular. In my contribution to this workshop, I explore the possibility that the domain restrictions of adverbial quantifiers are largely computed by pragmatic processes. Reinhart argues similarly that the presuppositional properties of noun phrases are “only a (pale) reflection”¹ of pragmatic processes that interpret topic and focus.² In these comments, I concentrate on three of the many interesting issues raised by Reinhart’s paper.

1. The Architecture of the Grammar

Reinhart proposes a division of labor: focus is a PF phenomenon, topic is an LF phenomenon. This raises a number of important questions.

(i) “Focus is, essentially, a PF issue. Independent considerations of the computational system determine that stress must be assigned to a sentence. At the interface, this property of sentences is used to facilitate communication, using stress as focus.” Since focus needs to be interpreted by the conceptual system (whether focus has semantic effects or only pragmatic ones is not relevant here), the PF representation needs to be accessible to the conceptual systems. This does not agree with the tenets of the Minimalist program, where PF is simply a set of instructions to the articulatory/perceptual systems. In Minimalist doctrine, the only relevant input to the conceptual systems is the LF representation. Reinhart’s conception seems more in line with earlier analyses that had a set of “stylistic” rules that were located on the PF branch but that could affect the semantic/pragmatic interpretation.

(ii) If topic and focus are dealt with by entirely separate grammatical mechanisms, interactions between them will have to be epiphenomenal. Any theories that talk about topic/focus-

¹All unattributed quotes in the text are from Reinhart’s manuscript.

²This view harkens back to Strawson (1964) and Reinhart’s own classic paper on topics (Reinhart 1981).

articulation have to be rethought under this view. Perhaps, they can be replaced by two distinct dichotomies: focus/background and topic/comment, not an unprecedented move.

(iii) The obvious alternative to Reinhart’s implementation posits topic/focus-marking before the LF/PF-split, so that both interfaces can make reference to the markings without having any communication between the branches after Spell-Out. This might have the advantage of allowing for the existence of languages with focus-morphemes and focus-positions, which may not be so easy if focus is essentially a PF issue.

2. The Presuppositions of Strong Noun Phrases

It “has become, by now, almost standard in certain circles” to analyze strong NPs as uniformly inducing a presupposition of non-emptiness on their domain of quantification.³ Reinhart suggests that this is an undesirable move.

There are well-known apparent exceptions to the presuppositional analysis:

- (1)
 - a. All trespasser on this land will be prosecuted.
 - b. Every unicorn has exactly one horn.
 - c. Every unicorn is a unicorn.

These examples are all judged felicitous in spite of the fact that the domains of the NPs may well be empty. Various moves are now possible: these examples could be taken to show a marginal use attributable to an ambiguity of the determiner (de Jong & Verkuyl), they could be taken as evidence that the old non-presuppositional analysis is vindicated and that the apparent presuppositional effects in the majority of cases should be attributed to pragmatic processes (Reinhart), or it could be attempted to analyze them away (Kratzer, Diesing). Reinhart dismisses the last option but I think her arguments do not go through. Here is a restatement of Kratzer’s analysis: These cases all involve a modal operator with scope over the subject NP. The modal binds a world variable in the relevant predicates of the sentence. The presupposition of the NP then gets harmlessly projected to result in the presupposition that in the worlds quantified over the NP domain is non-empty. This is compatible with the actual world not being one of those worlds. So, the NP can be running on empty as far as the actual world is concerned without giving up the existence presupposition. Here is a representation of (1a):

³That natural language quantifiers have an existence presupposition was first argued by Strawson (1950, 1952). Strawson claims to be reconstructing Aristotle’s logic. As shown by Horn (1989: Section 1.1.3 “Existential Import and the Square of Opposition”), however, this is historically inaccurate. There may have been precedents before Strawson, but the history is as yet unclear to me (one suspicion I have concerns Mill). See also Moravcsik (1991), who arrives at a generalization much like Reinhart’s: existential import reliably occurs in empirical contexts and only there.

- (2) $\text{will}_w [\text{all}_x (\text{trespassers}_{w,x}) (\text{prosecuted}_{w,x})]$

Assertion: In all relevant worlds w , all trespassers x in w are prosecuted in w .

Presupposition: In all relevant worlds w , there exist trespassers.

The first of Reinhart's objections to this analysis is that it is non-standard to assume that a modal operator can bind into a strong NP, since we know from work on donkey anaphora that strong NPs are opaque to unselective binding. Note however that what is bound by the modal operator is not the individual variable x but the world variable w . It is in fact easy to see that strong determiners cannot bind off the world variable, since in extensional contexts the world variable needs to be identified with the actual world:

- (3) Every student protested.

$\text{every}_x (\text{student}_{w_0,x}) (\text{protested}_{w_0,x})$

The world variable of *student* in (3) must not be bound by *every*, otherwise we'd be talking not just about actual students but also about students in other worlds. Reinhart's second objection comes from the existence of generic sentences where the existence presupposition of the strong determiner is not defused by the modal operator:

- (4) All unicorns in the park tend to wake up early.

It seems to me, however, that this example is one where the generic quantifier over times has scope below the NP so that it would not be expected to capture the world variable of the NP. This statement is about the dispositional properties of the actual unicorns in the park. Compare (1a) which is a statement about potential trespassers.

Reinhart's third objection is that the analysis does not extend to the example in (1c), because it doesn't obviously involve a modal operator. The proper response here is that it is not the overt presence of a modal operator that is at stake but the modal force (explicit or implicit) of a sentence. It is not exotic to see logical judgments such as (1c) as implicitly modalized, see for example Kratzer (1978).

It is important to see that the non-presuppositional analysis actually makes drastically false predictions about the sentences in (1). If these sentences are not modalized, then the logical theory predicts that they are vacuously true because of the emptiness of the NP domain. This is not correct. Intuitions show clearly that the truth of these sentences is contingent on matters of fact. Consider for example,

- (5) Every unicorn has exactly two horns.

This sentence is confidently judged to be false, not true as logic would have it. Kratzer's approach explains how it is possible to judge this sentence to be false.

Another advantage of Kratzer’s approach is that it might illuminate the difference between *every* and “free-choice” *any*: the latter is reliably read as non-presuppositional, which could be linked to the fact that it is only licensed in modal contexts.

Reinhart takes the descriptive generalization to be that strong NPs are presuppositional only when used in empirical contexts and that they do not show any such effects in non-empirical contexts. I have just suggested, based on Kratzer’s analysis of “non-empirical” contexts, that so far we have no reason to abandon a uniform analysis with existence presuppositions. However, there are examples with a clear empirical flavor that go against the presuppositional approach:

- (6) a. The exhibition was visited yesterday by the king of France.
 b. I did all the work I had to do.
 c. Everyone who needed a tetanus shot came in yesterday.

Reinhart assesses the status of Strawson’s (6a) to be controversial enough to not let it bother her generalization (which would expect a presuppositional effect here). The other two examples from Cresti (1995) are perhaps clearer. Cresti writes that these “seem rather to convey, quite matter-of-factly, whether some routine task was (even trivially) fulfilled at a given time”. It seems then that some weakening is needed in any approach to the issue. One promising idea is that strong NPs only give rise to presuppositions when they are topics (as suggested by Strawson and explored by Cresti).⁴ It would be nice if we could exhibit examples that showed this correlation overtly: *every*-NPs in a non-topical environment without presupposition versus topical *every*-NPs with existential import. But this isn’t easy, since paradigmatically non-topical positions like the subject of *there*-sentences resist strong quantifiers.

I agree with Reinhart that “at worst, we may conclude that the presuppositional effects of strong determiners are still a problem”. But we expect more. A combination of the topic analysis and Kratzer’s proposal would seem to be promising.

⁴An alternative mentioned by Reinhart is Groenendijk & Stokhof’s attempt to derive existential import from a Gricean quantity implicature. I doubt that this will work. The work of Horn, Levinson, and others has shown that quantity implicatures are far less pervasive as once assumed.

3. Diesing's Project

Diesing (1992) proposes a system where the semantic force of indefinite NPs is predictable from their LF-position. Indefinites inside VP are captured by existential closure, while indefinites outside VP have to be captured by some other operator (e.g. an implicit generic operator) or be supplied with their own quantificational force. In the latter case, Diesing suggests, the indefinite will be read as a strong quantifier with an existence presupposition. Reinhart criticizes Diesing's project on various fronts. While I agree with the general drift, there are some points where I would cast things in a somewhat different light.

(i) I agree with Reinhart's main thrust. Attributing the interpretive effects of the syntactic position of indefinites to a syntactic mechanism of tree-splitting should be a last resort. Such "non-trivial complications of the computational system" may be made unnecessary by independently motivated principles of the pragmatics of topics.

(ii) Reinhart suggests that Diesing's project is really a non-starter since it "stands in sharp contrast to the most fundamental assumptions of current syntax". I beg to differ on this point: Diesing's basic gimmick has tremendous intuitive appeal. What Diesing tries to explain is the following observation (for the moment let us take it for granted that her observations are correct): first, while German and Dutch allow indefinite NPs to occur VP-internally or VP-externally, English has no choice in the matter (subjects are VP-external, objects are VP-internal); secondly, in German and Dutch surface positioning correlates with semantic strength of the NP, while in English indefinites are systematically ambiguous. In English then, we obviously have LF-movement (subject lowering, object raising), otherwise we wouldn't have ambiguity (subjects would always be strong, objects always weak; and while that may in fact be quite common, it is definitely not forced). In German and Dutch, LF movement is ruled out somehow. It is this prohibition against LF-movement that Reinhart targets as non-standard: "LF was never considered the level at which parametric variation can be stated". It seems to me that theoretical intuitions supporting the unavailability of LF-movement in German are in fact not hard to develop. The idea is simply that Dutch and German can do "LF"-movement early, and because of that they can't do it again late. Diesing's account would for example mesh more or less with Pesetsky's Earliness Principle. If that seems non-standard still, we could invent a minimalist feature [-Existential Closure] and declare it strong in Dutch and German, so that NPs that need this feature have to leave the VP before Spell-Out. Put simply, if the sole purpose of NPs leaving VP in Dutch and German is to become mapped into the restrictive clause, then it

would be uneconomic to allow them to yo-yo back into the VP at LF. Economy principles do hold at LF, ruling out unnecessary LF-movement.⁵

(iii) Reinhart disputes that indefinite NPs are ambiguous between a weak reading and a strong/presuppositional reading. She claims that there is no ambiguity in (7).

(7) Two firemen are available.

Reinhart rightly says that the difference in interpretation here is not a truth-conditional one. “The ambiguity we are expected to note ... is extremely subtle. It can be tested only when the N set is empty, i.e. in a world containing no firemen. Next, what we are asked to check here is our meta-theoretic intuitions regarding whether the sentence is undefined or false, in such a world, or even less reliable intuitions about which contexts we could have uttered the sentence in.” I think this is unfair. There are two interpretations here, even as admitted by Reinhart, who says that firemen could be topical or not. And that will have interpretive effects. Whether the interpretive effects that we DO find motivate Diesing’s tree-splitting is another matter.

The research tradition whose empirical foundations Reinhart denies goes back to Milsark (1974, 1977), who discussed the ambiguity of (8):

(8) Some salesmen walked in.

Based on earlier observations by Postal (1966), Milsark draws a distinction between weak *sm* and strong *some*. There are two ways he discusses of bringing out the difference (both slightly flawed): intonation and overt partitivity. First, there is an interpretive effect depending on whether the determiner is stressed or not:

(9) a. Sm SALESmen walked in.
b. SOME salesmen walked in.

There is one problem here: (9b) with stress on the determiner has another reading where we don’t necessarily get a strong construal: stress on *some* may just reinforce a scalar implicature to *some but not all*. Milsark says “absence of stress is a reliable indicator of the *sm* reading, but that both readings may under certain conditions receive stress”. Reinhart’s counterexample to the intonation test is an example of the additional reading:

(10) There are SOME ghosts in the garden.

It seems to me that the two ways of reading (8) with stress on the determiner are in fact further differentiated by intonation. The strong construal naturally has a final rise (signalling an at least implicit continuation having to do with what the other salesmen did), while the additional scalar

⁵For a different perspective on how to properly embed Diesing’s idea in a mainstream syntactic framework, see Adger (1994).

construal has no significant secondary stress. The second way of disambiguating between the weak and strong construals is by overt partitives:

- (11) Two of the firemen are available.

The partitive construction in (11) is roughly synonymous with the strong construal of (8). As Milsark points out however, this is only a rough equivalence since the definite determiner in (11) will bring its own complications into play.

Milsark has a minimal pair that may pass Reinhart's desire for unsubtle data:

- (12) a. #Sm people are jackasses.
b. Some people are jackasses.

The weak construal of an indefinite subject of an individual-level predicate in (12a) is, to quote Milsark, "nonsense". Only the strong construal makes sense.

Other facts supporting the ambiguity have a more syntactic flavor. Dutch and German positioning of NPs is of course Diesing's prime exhibit. Other relevant data include the choice between accusative case-marking and no case-marking in many languages, for example Turkish as discussed by Enç.

So, we can conclude with Milsark that "distinguishing these readings in particular cases can be a devilishly subtle business". But that's no reason to give up on scientific inquiry. As Milsark writes towards the end of his paper, the absence of truth-conditional differences "is bound to be bothersome to anyone who wishes to restrict the domain of semantics to those areas of meaning relevant to the determination of truth-conditions. Not having any such prejudices myself, I am not terribly bothered by the situation. At worst, it would mean only that the complex of interpretive phenomena which is the subject of this paper is not to be called 'semantics'." So be it.

(iv) The effects Diesing deals with are real, albeit subtle. Her analysis works (more or less). But is it really necessary to put this machinery into the grammar? Here, I agree with Reinhart: we can do better. The distinction between weak and strong indefinites is a purely pragmatic one. Many people in fact have had this intuition. The idea would presumably be this: indefinites can have at least two different pragmatic forces, one corresponding to the weak construal and the other to the strong construal. The important questions are what the explicit pragmatic theory is, how it links up with the strength of NPs, and how pragmatic status is signalled in the linguistic form of sentences.

Reinhart seems to treat indefinite subjects and indefinite objects in different ways (an important difference from Diesing). For, subjects Reinhart points out that sometimes they are forced to be non-topical: when they are in *there*-sentences.⁶ But other than that, there are no grammatical constraints on whether they are interpreted as topics or not. For indefinite objects, the story is that when they occur VP-externally in Dutch, this scrambling is motivated only if there's narrow focus on the verb, hence the object is non-focussed and then we get interpretive consequences from the absence of focus.

This differential treatment of subjects and objects seems undesirable to me. We should perhaps stay closer to Diesing's more satisfying generalization by saying that topical indefinites are strong, non-topical indefinites are weak. In Dutch and German, syntactic position expresses topic-marking. Whether this is universally the case at LF would have to be investigated.

Reinhart presents one argument that VP-external indefinite objects are not topics. She argues that the Dutch anaphoric pronoun *diens/deze* can only refer to non-topics (instead of analyzing them as non-subject anaphors). We find the following pattern:

- (13) a. Lubbers_j begroet Mitterand_j bij diens_{i/*j} aankomst op het vliegveld.
 b. [Talking about Max_j] ... al snel kwam hij Felix_j tegen en diens_{i/*j} zoon suggereerde dat ze naar een bar zouden gaan.
 c. Lubbers_j zal [een niet met name genoemde Europese premier_j]_i morgen op het vliegveld ontmoeten, wanneer deze_{j/*i} uit Tel Aviv terugkomt.

Let us grant that this pronoun cannot refer back to the main topic of a sentence. This does not show that the scrambled indefinite in (13c) is not also a topic, unless a sentence can only have one topic. This, however, is a dubious assumption:

- (14) As far John and Mary, he saw her last night for the first time in a month.

It would seem that there are other ways of explaining (13c) that appeal to a hierarchy of topics, something which is needed anyway for examples of contrastive topics.

I suggest the following picture (not too different I think from Reinhart's vision): topic/focus-articulation is one of the ways sentences cohere into a discourse. The notions of topic and focus can be expressed in a variety of ways depending on language-specific choices. Diesing's work can be seen as investigating the syntactic expression of topichood. The weak/strong ambiguity of indefinites is a side-effect of their topic status.

⁶Reinhart disprefers a Diesing-style explanation for the weakness of subjects of *there*-sentences, because it would be incompatible with "expletive replacement". Most of the syntactic literature in fact seems to have taken the semantic properties of *there*-subjects to be incontrovertible evidence that expletive replacement is wrong. In Chomsky's new system, one could argue that the only features of the *there*-subjects that move at LF are the ones responsible for agreement, leaving the "substance" of the NP inside VP (Alec Marantz, pc).

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