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Rightward movement of 'light' constituents

This paper discusses extraposition (EX) of defocused PPs (1) and light PPs (2) in English. Building on and extending the analysis in Göbbel (2007), I will argue that, unlike EX of PP in (focus) neutral contexts, EX of defocused PPs is not prosodically triggered. However, I will defend an analysis in which displacement occurs at PF in both cases and the difference in prosodic representations are the options allowed by the same interface constraints.

In recent syntactic models (Chomsky 2001), syntactic structure is transferred to PF in terms of phases (vP, CP). It will be argued that Spell-out does not only linearize and substitute phonological terminals for morphosyntactic ones, as is often assumed, but it creates a hierarchical PF representation from the syntactic representation. This is necessary because phonological interface constraints (e.g. ALIGN_{LEX}⁰/XP) require access to the full syntactic representations. Intonational evidence will be presented in favour of a model in which Spell-out also specifies an initial prosodic structure by grouping the terminals of a phase together into a major phonological phrase (MaP). MaPs thus formed may have to restructure under certain conditions (e.g. narrow focus), which destroys the phase-based derived prosodic structure, violating OO-Faithfulness (3). EX from NP in (focus) neutral contexts is seen as a process which adjusts the syntactic structure to the requirements of the interface constraints. The essence of optional EX is as follows: due to the complex NP, the output of the syntax is such a big MaP that it has to be broken up into two MaPs or part of the NP is extraposed. Movement at PF is adjunction to an XP that is aligned with the edge of a prosodic domain.

The account of EX of defocused PPs proceeds as follows: From the phase-based derived syntactic output (4a), the Generator generates a set of candidates consisting of pairs of syntactic and prosodic structures (4a-d), which are evaluated in parallel. Candidates (a) and (c) violate Align_R XP twice. In (a), the complex DP contains two NPs requiring alignment with the right edge of a MaP. In (c), two separate NPs are not aligned with the edge of a MaP. Candidate (b) violates Max_{OO}, whereas candidate (d) violates Align_R XP once. Optional phrasing can be accounted for in terms of free ranking of ALIGN_R XP and MAX_{OO}. On the ranking ALIGN_R XP >> MAX_{OO}, candidate (b) is optimal, while on the ranking MAX_{OO} >> ALIGN_R XP both (a) and (c) are optimal. These are the attested prosodic representations. Candidate (d) is excluded because a MaP must contain an accented constituent, and DESTRESS-GIVEN forbids phrasal stress on contextually 'given' constituents.

Concerning EX of light PPs, neither prosodic phrasing nor phrasal stress can be made responsible for rightward shift. They can have different prosodic representations, e.g., as prosodic words in (2) or as affixal clitics incorporated into a PWd (5). I will argue that the optionality is simply a consequence of the fact that they have the same prosodic representation in both base and derived position.

- (1) He máde a próposal (*on this subject*) in Máy (*on this subject*)
- (2) I've réad some cómments (*about it*) today (*about it*) in Time magazine (*about it*)
- (3) Max_{OO}: Every MaP derived by syntactic Spell-out corresponds to a MaP in prosodic structure.
- (4)
 - a. (He made a proposal on this subject in May)_{MaP} ✓
 - b. (He made a proposal on this subject)_{MaP} (in May)_{MaP} ✓
 - c. (He made a proposal in May on this subject)_{MaP} ✓
 - d. (He made a proposal in May)_{MaP} (on this subject)_{MaP}
- (5) Two translations (*of it*) have appeared (*of it*) → ((appeared)_{PWd} əv t)_{PWd}

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The Prosodic Structure of Extraposition

Extraposition differs from leftward movement in some central aspects: It is categorially restricted, it is not sensitive to syntactic islands, and it lacks a syntactic trigger. Based on such observations, it has been argued that extraposition is a phonological operation, rather than a syntactic process (Truckenbrodt 1995, Göbbel 2006). This talk corroborates this view showing that extraposition is prosodically triggered.

I claim that CP-extraposition is a repair strategy that becomes obligatory if the *in situ* CP inhibits an optimal syntax-prosody mapping of the whole clause: It takes place if the constituent following the *in situ* CP is smaller than a phonological phrase (pp), the domain of phrasal stress. This is the case with *in situ* object CPs in embedded clauses (1a), CPs extraposed to the VP in the middlefield (1b), and main clauses with a verb particle in I⁰ (1c).

- (1) a. *?weil er, [CP dass die Erde eine Scheibe ist], zeigte.
b. *weil er [VP gezeigt, [CP dass die Erde eine Scheibe ist]], hat.
c. *?Das schließt nicht, [CP dass wir hier nicht auch Probleme haben], aus.

The heads in I⁰ neither form a pp of their own, nor can they be phrased together with the preceding intonational phrase (ip). After CP-extraposition these heads are integrated into the preceding pp of the main clause (2a). Extraposition is optional if the phrase following the *in situ* CP is able to form at least a pp (2b).

- (2) a. (weil er zeigte)_{pp} (dass die Erde)_{pp} (eine Scheibe ist)_{pp}
b. Sarkozy selbst war, [CP nachdem er die Jugendlichen als Abschaum bezeichnet hatte], in die Kritik geraten.

The empirical data to be discussed include extraposition of finite and infinite object clauses, subject clauses, embedded verb second clauses, attributive clauses, relative clauses to subjects and objects, and extraposition fromthetic sentences. The influence of focus on extraposition will be considered.

The requirement that constituents following an *in situ* CP must be at least a phonological phrase follows from the Strict Layer Hypothesis (Selkirk 1984, 1996), which states that prosodic constituents are exhaustively parsed: A prosodic category may only dominate a category from an immediately lower level. Thus, an ip may immediately dominate only pps, but not prosodic words (w):

- (3) *? ((weil er)_{pp} (dass die Erde)_{pp} (eine Scheibe ist)_{pp} (zeigte)_w)_{ip}

The proposal also shows that ips may be recursive (against Selkirk 1996): An ip may be embedded into another ip as long as all constituents are exhaustively parsed (cf. (2b)).

To summarize, the position of embedded clauses seems to depend not only on syntactic requirements but also on prosodic conditions. This result has an impact on the grammatical architecture; it shows that the syntax-phonology interface must be bi-directional.

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Extrapolation as PF movement: further arguments in its favour and some refinements of its treatment

It is the standard assumption that extraposition (EX) in German is to be analysed by syntactic means. However, focussing on the EX of relative and of noun complement clauses, we want to demonstrate that the different syntactic approaches to EX proposed in the literature cannot account for many empirical facts in German, cf. e.g. (1)-(3). (In (1), extraposition is enabled by contrastive focus; in (2), a full, accented DP impedes extraposition; in (3), a non-accented DP does not impede extraposition, the dependencies between the extraposed clauses and their source position have to be non-nested.) Furthermore, although extraposed elements often emanate from focussed constituents (Shannon 1995), we will argue that they do not acquire any information structural property by the detachment. In addition, EX does not induce any binding or other interpretative effects. All these observations suggest a prosodic approach to EX. Therefore, building on Truckenbrodt (1995) and Göbbel (2007), we propose a PF condition for EX in German, which accounts for the mentioned facts and also, by appeal to a mapping between phases and prosodic units, for the subtle but stable judgement that extraposition from an NP with argument structure (cf. the process denoting *Bemühung* in (4b)) is less good than from an NP without argument structure (cf. the result denoting *Vorhaben* in (4a)).

Extraposition in English does show effects beyond phonology (e.g. with regard to binding, illocutionary force (Lehmann 1984:204), idiomatic interpretation, cf. (5b)). Thus, we will argue that Inaba's (2007) suggestion is correct that extrapositions in German and English are quite different things, the former being a phonological process, the later a syntactic one.

- (1) a. *Der Dichter hat gesagt, dass er auswandern will, der im Nachbarhaus lebt.
b. DERjenige Dichter hat gesagt, dass er auswandern will, der im Nachbarhaus lebt.
- (2) a. *Maria hat dem Bekannten die Kollegen vorgestellt, der im Lotto gewonnen hat.
b. Maria hat sie_i dem Bekannten t_i vorgestellt, der im Lotto gewonnen hat. (Inaba 2007)
- (3) a. ?? Sie hat keinem etwas gesagt, was ihm nützte, der ihr begegnete. (Haider 1994)
b. Sie hat keinem etwas gesagt, der ihr begegnete, was ihm nützte.
- (4) a. Otto hat das Vorhaben begrüßt, das Experiment durchzuführen.
b. ? Otto hat die Bemühung verfolgt, das Experiment durchzuführen.
- (5) a. Max war über den Bären dienst entsetzt, den ihm Karl erwiesen hatte.
b. *Mary praised the headway last year that John made. (Hulsey & Sauerland to appear)

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On the Nonlocality of Complement and Adjunct Extraposition

In a recent paper, Kiss (2005) has argued that relative clause extraposition should best be conceived of as an anaphoric process, where the extraposed clause is semantically attached to a nominal antecedent contained within the local clause. Empirically, this perspective is supported by split-antecedents, the type of morphological features involved in agreement, and the absence of island effects. Kiss shows that adjunct extraposition crucially differs from complement extraposition in this respect:

- (1) a. * Man hat den Überbringer der Mitteilung beschimpft, dass die Erde rund ist.
b. * Hier habe ich bei den Beobachtungen faul auf der Wiese gelegen, daß die Erde rund ist.
- (2) a. Man hat die Frau des Boten beschimpft, der den Befehl überbrachte.
b. Hier habe ich bei vielen Versuchen faul auf der Wiese gelegen, bei denen die Schwerkraft überwunden wurde.

Recently, however, Kiss's approach has been challenged by Müller (2004) for failing to recognise apparent cases of non-local complement extraposition:

- (3) Ich habe [von [dem Versuch [eines Beweises [der Vermutung _ i]]]] gehört, [daß es Zahlen gibt, die die folgenden Bedingungen erfüllen]i .

It is of note that Müller's counter-examples always involve extraposition along a chain of complements. Nonlocal complement extraposition from adjuncts still appears to be degraded, thus contrasting quite strongly with adjunct extraposition:

- (4) a. Man hat über den Beweis der Theorie gelacht, daß die Erde eine Scheibe ist.
b. * Man hat bei dem Beweis der Theorie gelacht, daß die Erde eine Scheibe ist.

Thus, a uniform approach must fail to predict this complement-adjunct asymmetry, observable with complement extraposition, but unattested for adjunct extraposition. Furthermore, acceptable cases of non-local complement extraposition are characterised by a semantic affinity between the extraposed clause and the syntactic heads along the head-complement chain. I therefore suggest to analyse adjunct extraposition as an anaphoric process in the spirit of Kiss (2005), yet to account for cases of nonlocal complement extraposition along head-complement chains in terms of argument composition, possibly constrained by semantic bridging.

Kiss, Tibor. 2005. Semantic constraints on relative clause extraposition. *NLLT* 23:281–334.

Müller, Stefan. 2004. Continuous or discontinuous constituents? *Research on Language and Computation* 2(2):209–257.

Extrapolation without Subjacency

Extrapolation of relative clauses has traditionally been analyzed as rightward movement and has been taken to obey stricter locality constraints than movement to the left. Specifically, Chomsky (1973) introduced the notion of Subjacency and claimed that an extraposed phrase can cross at most one cyclical node (S or NP). Baltin's (1981) even stricter Generalized Subjacency allows only one maximal projection to be crossed by extraposition. Although Chomsky (1986) has later introduced the less restrictive Barriers framework and Baltin (2006) admits that there are problematic examples involving extraposition from within prepositional phrases, these authors and many others still believe that there is clear evidence for syntactic locality constraints on extraposition even within the domain of one clause.

We scrutinize the different proposals of subclausal locality constraints on extraposition in the light of empirical data. We show that none of them can be upheld as a non-violable syntactic constraint since many authentic counterexamples such as (1) can be found.

- (1) *For example, we understand that Ariva buses have won [DP a number [PP of [DP contracts [PP for [DP routes [PP in [DP London]] t]]]] recently, [RC which will not be run by low floor accessible buses.]*
(<http://www.publications.parliament.uk/pa/cm199899/cmselect/cmenvtra/32ii/32115.htm>, 02/24/2007)

We also present the results of an experimental study on English and German which investigates whether the acceptability of a sentence with an extraposed relative clause is affected by how deeply the antecedent of the relative is embedded inside the matrix clause. In addition to collecting acceptability judgments, we also measure the effect of depth of embedding on reading times in a self-paced reading study to determine whether there are similar effects on acceptability (competence) and reading times (real-time processing). To get an impression of the magnitude of the effect of the factor *depth of embedding*, we cross it with the factor *height of attachment*, which subsumes linear distance and number of crossing dependencies – factors usually regarded as processing factors and not as syntactic constraints.

Initial results for English show a slight effect of *depth of embedding* on acceptability in that sentences in which the antecedent of the relative clause is embedded more deeply are slightly less acceptable. However, this effect is rather small compared to the effect of linear distance from antecedent to relative clause and number of crossing dependencies. In fact, items with Subjacency violations get better mean acceptability ratings than contrasting items without such violations but e.g. an intervening noun phrase between antecedent and relative clause. We therefore argue that the counterexamples to subclausal locality constraints we present cannot be explained as exceptions and that extraposition does not obey any categorical subclausal locality constraint. We rather think that Subjacency effects on extraposition should also be regarded as processing effects and should not be modeled in syntax proper.

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Post-Cyclic Linearization of Structure with Rightward Dependency

Examining how Fox and Pesetsky's (2005) (F&P) Order Preservation approach to linearization could be extended to rightward movement (RM), I show that OP is incomplete in accounting for some characteristic properties of rightward movement. This leads me to argue that RM is essentially different from leftward movement (LM): RM is a relativized, processing-motivated, post-cyclic phonological phenomenon, in that it is subject to violable, processing-motivated, phonological constraints on linear order such as nested dependency and right-edge heaviness.

Under F&P's analysis of cyclic linearization, escape hatch effects are an artifact of the role played by phases (CP and VP in F&P) in linearization: "leftward movement from a Spell-out domain D must take place from the left edge of D (and conversely for rightward movement)" (F&P:12). As F&P suggests, RM should take place essentially the same way as LM, which appears conceptually welcome because it maintains that RM is subject to the same OP requirement as LM. The flip side of this, however, is that it makes wrong predictions like the following. First, RM may, in principle, take place successive cyclically like LM, contrary to the widely recognized generalization that RM is clause bounded (Ross 1967). Secondly, the OP analysis of RM should allow not only nested dependency as in (1a) but also crossing dependency as in (1b) in multiple RM, though the latter is generally prohibited. This is because OP is irrelevant to phase-internal operations.

(1) Multiple Extrapolation from NP:

- a. $[\boxed{\text{CP}}_{\text{TP S}_{-s}} [\boxed{\text{VP}} \text{V O}_{-o}] \text{adv}] \text{EX}_o \text{EX}_s$
b. $[\boxed{\text{CP}}_{\text{TP S}_{-s}} [\boxed{\text{VP}} \text{V O}_{-o}] \text{adv}] \text{EX}_s \text{EX}_o$ ($\boxed{}$ are phases.)

This problem does not arise for LM because crossing dependency is observed in many cases of multiple LM, e.g. object shift and the verb movement it is contingent on.

(2) Object Shift:

- $[\boxed{\text{CP}} \text{S V} [\text{TP O Adv} [\boxed{\text{VP}} \text{_{-v} \text{_{-o}}}]]$

Given these, I argue that unlike LM, RM is not a syntactic movement but should be analyzed as a processing-motivated phonological phenomenon. Under this view, we can attribute the nested dependency constraint on RM to the requirement of processing efficiency (Fodor 1978). In fact, the requirement is relativized rather than rigid, and can be overridden when the phrase extrapolated from the object is heavier than that extrapolated from the subject (Frazier and Clifton 1996, Hawkins 1994). I will further argue that right-edge heaviness is purely phonological, rather than semantic or informational, based on the data from Salish languages where informational prominence is dissociated from prosodic prominence (Davis 2007).

A New Constraint on Extraposition

We will discuss new evidence from ongoing corpus studies and experimental investigations on the topic of extraposition in German. As far as clauses are concerned, a simplified picture of extraposition in German can be stated as follows:

- Infinitival clauses which are complements of a small class of functional verbs (modal verbs, perception verbs, *lassen* ('to let')) are prohibited from extraposition.
- Infinitival clauses which are complements of control verbs (main verbs selecting a *zu*-infinitive with the exception of raising verbs) can optionally be extraposed.
- Finite complement clauses must extrapose.
- Non-complement clauses (adverbial and relative clauses) can optionally be extraposed.

The empirical evidence that we will summarize in our presentation confirms the general picture given above. At the same time, it reveals several simplifications some of which have already been noted in the syntactic literature but have not so far been backed up by quantitative information. Among others, the following refinements are necessary:

First, modal verb constructions disallow complete extraposition but allow a kind of partial extraposition ('verb-projection raising'). Experimentally elicited grammaticality judgments show that partial extraposition is accepted to a much larger degree than expected by prescriptive grammar.

- (1) a. ... dass Peter seinem Opa das Buch hat geben wollen.
that P. his grandpa the book has give want
'... that Peter wanted to give grandpa the book'
- b. ... dass Peter seinem Opa hat das Buch geben wollen.
- c. *... dass Peter hat wollen seinem Opa das Buch geben.

Second, control verb constructions allow complete intraposition, complete extraposition and a mixture between both ('third construction'). Experimental and corpus data show that acceptability and use of these constructions is verb-dependent in a gradient way.

- (2) a. ... dass Peter das Buch zu kaufen versucht hat.
that P. the book to buy tried has
'... that Peter tried to buy the book.'
- b. ... dass Peter das Buch versucht hat zu kaufen.
- c. ... dass Peter versucht hat, das Buch zu kaufen.

In accordance with most of the syntactic literature on German, we assume that intraposed infinitival clauses can either form a clausal constituent by themselves, or can be fused with their matrix clause, with the result that infinitival verb and matrix verb form a verb cluster. Functional verbs obligatorily lead to verb-cluster formation and therefore forbid clausal extraposition. In all other cases, extraposition is optional.

We will argue based on data as above that the ease of verb-cluster formation is crucial in determining whether a clausal constituent shows up in extraposed position or not. Ease of verb-cluster formation is assumed to depend on two (not necessarily independent) factors: (i) Lexical-conceptual lightness of matrix verb and embedded clause. (ii) The amount of argument-structure operations required for fusing verbs.

For example, modal verbs have few lexical-conceptual content and obligatorily fuse with their infinitival complement. Control-verbs have more lexical-conceptual content and therefore allow or even strongly prefer extraposition, depending on their exact meaning. We will show how this proposal extends to finite complement and non-complement clauses and how it can be formalized in a restricted version of categorial grammar (Williams, 1993).

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On differences in prosodic behavior of syntactic constructions placed after the right sentence brackets in German and Russian

The “Nachfeld” is a facultative position in German sentence typology. Nevertheless, syntactic constructions that are placed into the “Nachfeld” can also be obligatory as is shown in the following sentence: *Es werden gebraucht drei rote Bauklötzen*. (There are needed three red building bricks).

In this case the “Nachfeld” is occupied by a subject which can be classified as a construction of the “enges Nachfeld”.

In our talk we will discuss the results of a completion experiment with German and Russian sentences. Native speaker should complete a set of sentences with different kinds of syntactic constructions that occupy the position after the right sentence brackets. German literature differentiates between the “enges Nachfeld” with NPs or PPs, for example, the “rechtes Außenfeld” with topicalization expressions and other additions, and the “weites Nachfeld” which comprises sentences.

We have controlled the question whether there is a stable interrelationship between the syntactic construction and its intonation unit and if there are differences in the prosodic attachments of these units.

To interpret our German data, we used GToBI, a descriptive model for German intonation. For Russian we took TOBI, the general describing model for intonation contours.

In particular we can make statements about differences in the prosodic behavior in German and Russian. This is an interesting aspect because word order is different in both languages.

Does a free word order facilitate a separate intonation unit or can the results of the Russian experiment be compared to those of the German experiment?

Our work is associated with the SFB 673 *Alignment in Communication*.

Literatur:

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Extrapolation and Right Node Raising

Extrapolation and Right Node Raising (RNR) are right edge phenomena. In this talk, we will explore how they interact, both empirically and theoretically, using data from the Germanic languages (mainly Dutch). We will show that extrapolation (including Heavy NP Shift) can feed RNR and, somewhat marginally, the other way around, and also that these examples differ from constructions with a split antecedent.

We claim that neither extrapolation nor RNR involves rightward movement. Instead, we advocate the following:

- Extrapolation is specifying coordination in combination with forward deletion.
- RNR is sharing (multidominance). The right edge effect is the result of prosodic and semantic interface conditions.
- Sharing can be non-local.

Extrapolation may violate various locality constraints, and therefore cannot be analyzed as rightward movement (Koster 2000). Nevertheless, reconstruction effects (Büring & Hartmann 1997) indicate that a simple analysis in terms of right-hand base-generation (Culicover & Rochemont 1990) will also not do. Following De Vries (2002), we argue for an analysis in which a) part of the clause is syntactically repeated, now including the relevant additional constituent in its canonical position; b) this part is attached to the clause as a specifying conjunct (comparable to an apposition); c) all repeated material in this (second) conjunct is phonologically deleted (normal forward deletion in coordination), which gives the effect of extrapolation of a certain constituent.

Conditions on extrapolation differ from those on leftward movement, and similarly, RNR (backward ellipsis) behaves differently from forward ellipsis. Following the tradition started by McCawley (1982), we analyze RNR in terms of multidominance. However, it has become clear that the right edge effect cannot be derived syntactically (Kluck 2007); rather it is the result of interface conditions (Hartmann 2000), including contrastive intonation on the preceding word(s). We think a synthesis of these ideas is possible and even necessary.

Finally, we show that a ‘remerge’ approach to sharing (in a bottom-up Minimalist derivation) explains why RNR can be non-local, and that it can be combined with extrapolation straightforwardly.

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Right Dislocation in Japanese: A Preliminary Study

The purpose of this talk is to present a proper analysis of the Japanese Right Dislocation (JRD) that is compatible with a restrictive theory of phrase structure. We show that the JRD construction has antisymmetric structures, on the basis of considerable evidence as to binding phenomena and quantifier scope interaction.

According to Kayne's (1994) antisymmetric view of phrase structure, rightward movement/adjunction is universally prohibited since if it were allowed, it would result in a structure in which what follows linearly is hierarchically higher than what precedes. Hence, JRD appears to pose a problem. To solve the apparently problematic cases, Tanaka (2001) proposes that the JRD construction actually involves two independent clauses and that the apparent right-dislocated element is actually scrambled and left-adjoined to IP within the second clause, followed by the truncation of the lower IP. We point out that the bi-clausal approach, as it stands, cannot be tenable empirically. It cannot offer natural accounts for the discrepancies between JRD and scrambling, such as the impossibility of a right-dislocated *wh*-phrase and the possibility of right dislocation of a left branch element. We instead defend the double topicalization approach to JRD by incorporating the theory of leftward VP remnant movement articulated in Baltin (2006). The nonconstituency of the verb and its arguments in preposed position predicts that the post-verbal position in all languages is structurally lower than the preverbal position. It is also observed in light of the discrepancies between JRD and scrambling that the ordering of topic and focus in Japanese should be captured in terms of Rizzi's (1997) articulated clause structure and that the Left Branch Condition should be characterized as a condition on PF representations.

Finally, we demonstrate that the Turkish and Hindi Right Dislocation, which are discussed by Kural (1997) and Mahajan (1997), respectively, will also be reanalyzed in terms of this alternative analysis.

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A dynamic perspective on Left-Right Asymmetries: *CLLD* and *Clitic Doubling* in Greek

Dynamic Syntax is a grammar formalism which reflects directly the dynamics of incrementally mapping a string of words to a semantically transparent logical form. Because no separate intermediate syntactic structure is postulated, traditional locality restrictions like the *Right Roof Constraint* must be attributable to the construction process and timing of introduction of new elements into the representation. This emerges in DS as an immediate consequence of monotonic and compositional bottom-up accumulation of information on the semantic tree: at early parsing stages interpretational processes may assign underspecified structure/content with delayed construal, interpretational processes at the closing stages may not.

In terms of discourse/semantic effects, right- (unlike left-) dislocates associated with pronominal expressions in the main structure receive special context-bound construals, the pronoun having to be construed with respect to its (discourse) context. DS mechanisms reflect this left-right asymmetry as what is introduced time-linearly first can introduce the context for processing what follows, whereas late additions can only be construed by reference to what precedes. Analogous locality restrictions on interpretation constrain clause bound scope construal for quantifying expressions. Interpretation of quantifiers in DS involves accumulating scope-dependency constraints, with evaluation as a final step in each predicate-argument domain, with indefinites the only type of quantifier that admits anaphoric-like dependent scope construal.

Such interpretational and structural restrictions interact in clitic duplication of arguments in, e.g., Modern Greek, where left-right asymmetries are analysed in terms of *CLLD* (left periphery, unbounded) vs. *Clitic Doubling* (right periphery, clause bound). I argue that the established DS tools mentioned above allow a non-ambiguity account of clitics in all their occurrences, with variation explicable from multiple strategies interacting in the construction of semantic structure, the range of effects seen as resulting from the stage during processing where the clitic or the doubled DP make their contribution to the resulting representation.

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Postverbal Constituents in Uyghur and Khalkha

Khalkha (Mongolian) and Uyghur (Turkic) - two Altaic languages with the basic SOV word order - exhibit leftward scrambling yielding OSV order. They also allow postverbal constituents, yielding SVO and OVS. The main aim of this study is to show that postverbal elements in Uyghur are derived via rightward movement as shown in (1), and that the ones in Khalkha are not derived as parts of the sentence they adjoin to but belong to a second sentence, which is subject to phonological deletion under identity to the first sentence as in (2), similar to the proposals made for Japanese (Whitman 2000, Tanaka 2001, Abe 2004):

(1) Uyghur: [t_i O V] S_i (2) Khalkha: [OV][S ØV]

We argue that this difference results from the presence of EPP effects in Khalkha as opposed to the case in Uyghur, which lacks such effects. EPP as the feature regulating the projection of specifiers in the functional domain (Chomsky 2000) imposes a degree of configurationality onto the phrase structure and blocks the projection of specifiers on the right. Thus, Uyghur lacking EPP effects allows for specifiers both on the right and on the left, whereas Khalkha can only project specifiers on the left due to EPP effects.

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Rightward *wh* Movement in Sign Languages

The current reflection on rightward movement is mainly based on cases like extraposition or Heavy NP shift, but evidence from sign languages indicates that also genuine rightward *wh* movement exists (cf. Neidle *et al.* 2000 and Cecchetto *et al.* 2006). In this talk we focus on Italian Sign Language (LIS).

In LIS *wh* phrases move to the right periphery and questions are associated to a specific non-manual-marking (roughly, lowered eyebrows). We will show that *wh* non-manual-marking is just another way to connect the foot and the head of the *wh* chain. More generally, we hypothesize that sign languages can mark *wh* chains in two ways, either by movement or by non-manual-marking (they can also use both devices at the same time).

Since non-manual-marking is normally considered the sign language counterpart of prosody, our finding that non-manual-marking marks *wh* chains converges with evidence emerging from work showing that *wh* chains are marked by prosodic devices in spoken languages (cf. Deguchi and Kitagawa 2002 and Ishihara 2002 for Japanese and Richards 2006 for a cross-linguistic extension).

In LIS, as in other sign languages, rightward movement takes place also in core cases of syntactic movement, like *wh* movement. Therefore, the hypothesis that rightward movement is restricted to PF does not seem tenable. However, in LIS rightward movement is associated in interesting ways to prosodic marking of a syntactic dependency. In the last part of the talk, we will show how this association to prosody can explain why *wh* movement is rightward in LIS.

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Rightward movement from a Top-Down perspective

Extraposition shows peculiar properties such as “clause”-boundedness (Akmajian 1975, Baltin 2006), adjunct/argument asymmetries sensitive to directionality (Baltin 2006) and the definiteness constraint (Fox & Nissenbaum 1999). This cluster of properties, which are usually resistant to a non-stipulative unified account, can be handled in a natural way if we drift away from the standard conception of bottom-to-top derivation and we redefine structure-building operations top-down, left-to-right, assuming a (weaker) version of the Linear Correspondence Axiom (Kayne 1994) in a head-driven, phase-based derivation.

A left-to-right (Phillips 1996) top-down (Chesi 2004) derivation, able to capture discontinuous dependencies using memory-buffers (Chesi 2007, Bianchi & Chesi 2005), requires that: 1. phases be N(ominal extended, in the sense of Grimshaw 1991)P(rojection)s and V(erbally extended)P(rojection)s (which roughly correspond to DP and CP phases in standard minimalism); 2. the phrase structure be built phase by phase, following a Linearization Principle (similar to the LCA), by *merge*, *move* (their top-down definitions are irrelevant for the present discussion) and a third structure building operation dubbed *phase-projection*: phase-heads (N or V) project locally the minimal set of dominance relations so as to satisfy their (lexically encoded) selectional requirements. Selected phases (i.e. arguments) are projected (as Larsonian VP-shells) by the previous phase-head and, once the last selected phase is projected, the projecting phase becomes computationally closed (i.e. no further dominance relations can be introduced in this phase); unselected (computationally speaking, nested) phases are not predicted by phase projection and they need to be computed while the superordinate phase is still open (they are functional specification of the superordinate phase).

In the case of extraposition of objects, nominal selection requirements would be unsatisfied in situ, then the quantificational status of the DP (nominal phase) host (Baltin 2006) is the escape-hatch that forces the DP to be QR-ed (rightward, as discussed in Bianchi & Chesi 2007) then remerged in a peripheral position when selectional requirements can be satisfied locally (complying with a Complement-Principle-like requirement, Guéron & May 1984). On the other hand, extraposition of adjuncts is implemented by means of *late merge* (Fox & Nissenbaum 1999). Both procedures are (“clause”/phase)-bounded since: i. QR cannot scope out of the superordinate phase (Chesi & Bianchi 2007); ii. an adjunct clause, in order to be a nested phase, needs to be attached to the first open (and compatible) superordinate phase.

This approach also predicts that: 1. extraposition is not a feature-driven movement, though it affects scope relations (e.g. selectively bleeding condition C effects, Fox & Nissenbaum 1999, following the derivational top-down implementation of binding principles proposed by Schlenker 2005); 2. the quantificational status of the host is important for a relevant subset of phenomena (this can hardly be captured in a purely phonological way, e.g. Göbbel 2007), moreover, the directionality of QR does not need to be stipulated (Bianchi and Chesi 2007, Vs. Fox & Nissenbaum 2001).

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Against a uniform treatment of extraposition

The phenomena subsumed under “extraposition”, originally represented by data like (1), offer interesting research areas in German, because German is in principle an SOV-language and the post-verbal occurrence of an element is therefore to be regarded as something derived or marked. In this talk I mainly consider post-verbal positioning of the complement clause to a verb (cf. (2)) and of the restrictive relative clause (cf. (3)) in German:

- (1) I met a woman __ yesterday [who likes to drink beer]
- (2) ich habe ihr __ erzählt [dass ich zu ihr komme]
- (3) ich habe eine Frau __ getroffen [die gerne Bier trinkt]

Within the standard generative framework (cf. Büring & Hartmann 1997, Müller 1995), all of these are treated as a uniform phenomenon, namely as a syntactic rightward movement operation to some higher adjoined position. For the extraposition in English (1), there is indeed empirical evidence for a syntactic (i.e. not phonological) status of this operation (cf. Culicover & Rochemont 1990). Now, this analysis for English has been carried over to the apparently similar phenomena in German, (2) & (3). Despite the theoretical advantage of a uniform treatment, however, I propose a difference analysis for the two types of extraposition in German, respectively. I claim that the post-verbal complement clause, (2), is not a result of rightward movement but represents a base-generated structure, as already advocated by Webelhuth (1992) or Haider (1997). For the post-verbal relative clause in German, (3), I argue that it involves rightward movement which takes place in the post-syntactic component, showing that the operation in question does not bring about LF-relevant semantic effects. I then turn to another type of construction in which both a complement clause and a relative clause show up extraposed:

- (4) weil er jedem Mädchen erzählt [dem er begegnet] [dass er einen Porsche besitzt]
- (5) *weil er jedem Mädchen erzählt [dass er einen Porsche besitzt] [dem er begegnet]

I demonstrate that my proposal naturally explains these data, for which there has been offered no satisfactory account so far.

Extrapolation of Relative Clauses: Influences on Acceptability Judgments

Extrapolation of relative clauses in English has been widely assumed to be subject to non-syntactic restrictions such as (i) focus requirements, (ii) the predicate restriction, and (iii) the definiteness constraint. It is claimed that the extraposed phrase and/or its antecedent NP must be interpreted as focus (1a). A sentence in which some other constituent is focused seems unacceptable (1b) (cf. Guéron 1980, Rochemont and Culicover 1990):

- (1) a. What did you sell to Shirley?
We sold that PAINTING to Shirley that was in the SHED.
b. Who was that painting that was in the shed sold to?
*We sold that painting to SHIRLEY that was in the shed.
(Rochemont and Culicover 1990:26)

The predicate restriction requires that the predicate in the sentence must be one of “appearance in the world of the discourse” in order to allow extraposition from a subject NP (Guéron 1980 and Rochemont 1978). Thus, (2a) is a felicitous instance of subject extraposition, while (2b) sounds distinctly odd.

- (2) a. A man arrived who wasn't wearing any clothes.
b. A man screamed who wasn't wearing any clothes.
(Rochemont and Culicover (1990:65)

In view of examples like (3), it seems that the determiner of the antecedent NP of extraposition must be indefinite (definiteness constraint) (Rochemont 1978). However, it has been shown that the acceptability of sentences with extraposition from definite NPs may be improved by embedding the relevant examples in appropriate discourse contexts (cf. Guéron 1980, Maynell 2003, Rochemont and Culicover 1990).

- (3) a. A cocktail waitress entered the dining room who was wearing a blond wig.
b. ?The cocktail waitress entered the dining room who was wearing a blond wig.
(Maynell 2003:4)

While there is a general consensus that the above-mentioned restrictions have an effect on the acceptability of extraposition constructions, there is no clear evidence on which of these factors has the greatest influence and whether one restriction can be explained as following from another.

In this paper, the different proposals are scrutinized and put to an empirical test. Specifically, using the technique of magnitude estimation, it is investigated whether and in what ways the acceptability judgment of a sentence that contains an extraposed relative clause is influenced by (i) the focus requirement, (ii) the predicate restriction, and (iii) the definiteness constraint. The factors are crossed in order to test the magnitude of the effect caused by each factor. The results will lead to an improved understanding of the nature of the constraints on extraposition.

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