The Trivial Generator¹

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Abstract
I discuss a proposal for Optimality theoretic syntax that relies on the mechanisms provided by OT as much as possible. The proposal contains a particular application of OT’s core concepts, markedness and faithfulness. Faithfulness is used in its correspondence theoretic version. Faithfulness constraints organise isomorphic mappings between semantic, syntactic and phonological representations. The model therefore has a strong focus on the interfaces. The three representations each have their own generator. With respect to the syntactic generator it is argued that it can and should be much simpler than the computational system used in minimalist syntax. Economy, another concept from minimalist syntax that has often been taken over in OT syntactic analyses, is argued to better be replaced by the OT genuine conception of markedness which does not simply reward the smallest structure but rather evaluates structures relative to the purpose they are supposed to serve.

Keywords: analytic and synthetic constructions, correspondence, syntactic markedness, syntax-semantics interface, wh-movement

1 Introduction

Taking the OT perspective can have radical consequences for the architecture of the grammar and for our view of what counts as an explanation in linguistic theory.

Minimalism and (mainstream) OT syntax both descend from the generative syntax of the 80s and early 90s. But they have taken opposite directions. The GB model and its predecessors, starting at latest with Chomsky and Lasnik (1977)² divides the labour between two components, a generator (derivational mechanism, phrase structure component etc.) and a constraint system (filters, principles etc.). The two components constitute the grammar which, as a whole, strives for explanatory adequacy.

Minimalism emphasises the generator component of the grammar and seeks to eliminate the explanatory contribution of the filter component to a minimum. The opposite is true of optimality theory which in its classical version claims that linguistic generalisations are about the surface forms, the outputs of the grammar, while the generator component undergoes trivialisation, being merely more than a logical necessity of the model (see Prince and Smolensky 1993, 5). Therefore, OT in fact has a very minimalist spirit – just taking the direction opposite to that of the Minimalist Program.
In early OT phonology, this trivialisation could indeed be observed. The recent years have seen a return of derivational aspects in the guise of serial optimisation, but they do not so much concern the functioning of the generator component. Nevertheless, only few work in OT syntax has strived for a maximally trivialised syntactic generator. Even more so, it might not be unfair to state that most work in OT syntax rather than elaborating a genuine OT perspective on syntax applies OT as an additional tool within already established non-OT frameworks. For instance, most of the papers in Legendre et al. (2001) implicitly take over core assumptions about grammar familiar from the Chomskyan branch of generative syntax, just as the papers in Sells (2001a) adapt OT to LFG without significant changes to the overall view on grammar.

What is rare, is work that explores more radical ways of applying OT to syntax. To execute a radical OT perspective in syntax means to make critical use of OT’s core concepts, markedness and faithfulness, as paradigmatically demonstrated by Baković and Keer (2001). This paper is dedicated to such an exploration. It is organised as follows: section 2 discusses the main differences between the OT architecture of grammar that I have in mind and the model of Chomskyan generative syntax. Section 3 elaborates particularly on the syntax generator. Section 4 elaborates on the syntax-semantics interface. Having established an extremely trivial version of the syntactic generator, I will discuss in section 5, how OT’s notion of markedness correlates with the concept of syntactic simplicity used here. I will especially focus on the relation of syntax and morphology as a test case for syntactic markedness in the OT sense.

2 Syntax from an OT perspective

OT is not the first approach that views grammars as <input,output> mappings. In fact, all versions in the Chomskyan tradition view syntax that way. The difference lies in what are considered as input and output.

The Chomskyan tradition, as quite clearly stated in the minimalist program, sees syntax as a procedure to generate an output pair <p,m> (for “phonetic form” and “meaning”) from a set of lexical items, the numeration in minimalism. The semantic and phonetic subsystems are independent of each other – mediated by syntax. Syntactic structures are fed into these interfacing systems.

So, what we have is a two-step procedure, where syntax proper only plays a role in the first step, the generation of two syntactic interface representations – in the minimalist program they are called Logical Form (LF) and spell-out. The second step consists in the two interpretive processes at the interfaces which lead to a semantic representation and Phonetic Form (PF).

In one of the earliest examples of OT syntactic work, Pesetsky’s (1997) discussion of the syntax-PF interface, the author showed that minimalism and OT could coexist well, if minimalism was used for syntax proper and OT for the syntax-PF interface. The generator in this work produces a set of candidate PF’s.
Subsequently, OT has been applied quite successfully in syntax-prosody mapping (see for example Selkirk 1996, Truckenbrodt 1999, 2000, Szendrői 2001, 2003, Samek-Lodovici 2005, Féry and Samek-Lodovici 2006, Büring 2001, Vogel 2006b). In some of these papers, the optimal syntactic structure is made dependent on prosodic well-formedness to a limited extent. In Samek-Lodovici (2005) and Büring (2001), for instance, the candidates are <syntax,prosody> pairs. Thus, syntax and prosody are optimised in parallel. PF is here not simply an interpretation of syntactic structure, but syntactic structure is also restricted by prosodic wellformedness constraints.

The syntactic generator in OT in such analyses has a different job to do than in minimalism. In minimalism, the generator is designed in such a way that for each numeration there is only one converging syntactic structure for each interface. In OT, exactly this has to be avoided. For each syntactic structure that one might generate in the minimalist way, an OT syntax evaluator also considers a small set of usually quite similar alternative structures and chooses the structure that performs best in the evaluation. Furthermore, a pair of a syntactic structure and its prosodic interface interpretation can be a candidate which requires a very different and especially more complex generator function.

The syntactic part of the generator can be quite minimalist, still. For instance, in the “derivation and evaluation” approach (see for example Part I of Broekhuis, this Volume), the reason why there is a candidate set lies in a kind of underspecification of the generator: if, under a feature-checking approach, syntactic elements may occur in their checking positions or in their base positions, then the candidate set contains a fixed number of structures generated with the same numeration that each differ in which elements occupy their checking positions.

A notorious difficulty of this kind of approach lies in syntactic problems that seem to require lexical variation, too, as for example in the case of “do”-support which has played a prominent role in Grimshaw (1997) where it seems necessary for the numeration in a minimalist analysis to optionally contain “do” in order to construct the appropriate candidate set.

The usual criterion for the selection of the candidate set in OT syntax papers is a bit more liberal, and basically a semantic one: output candidates are equivalent in terms of argument structure, aspect, tense, lexical items, information structure, operator scope. Legendre et al. (1998) use a candidate set where candidates “target the same LF” but might fail – in particular, in the case of Italian multiple wh-questions.

What Legendre et al. (1998) make crucial use of, is faithfulness, a genuine OT conception that evaluates how much the input is preserved in the output. It allows unfaithful candidates – i.e. candidates that differ syntactically and/or semantically from the input – to compete.

The approach by Legendre et al. (1998) seems to assume a non-OT syntax-semantics interface where meanings are part of the candidates in syntactic optimisation. But OT has been used for the syntax-semantics interface, too, and under the heading of bidirectional optimisation (see in particular Blutner 2001) it
played an important role for the solution of certain problems of the syntax-semantics interface. Wilson (2001), for example, explored this for binding theory.

Meaning has always played a crucial role in transformational syntax. While the strong requirement from early transformational grammar that transformations should be meaning preserving had to be abandoned, certain semantic aspects, especially argument structure, are still assumed to be unaffected by syntactic movement – because there are genuine syntactic positions where semantic roles are assigned.

This becomes superfluous in OT. Syntax is meaning preserving in OT per se in the sense that the input cannot be changed by whatever the syntactic generator component is doing. Because the output of the grammar is an <input,output> pair, whichever expression is the optimal candidate will be the optimal expression for the meaning given in the input.

However, an OT conception of both directions of the syntax-semantics interface might lead to a situation like the following:

(1) Optimisation mismatch in bidirectional optimisation:

<table>
<thead>
<tr>
<th>Syntax optimisation:</th>
<th>input: meaning₁</th>
<th>output: expression₁</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semantics optimisation:</td>
<td>input: expression₁</td>
<td>output: meaning₂</td>
</tr>
</tbody>
</table>

The consequence of the scenario in (1) is that meaning₁ is ineffable in the language at hand: the expression that would be ideal for its expression has a more optimal alternative meaning, meaning₂. In this way, bidirectional OT can derive ineffability and ungrammaticality. Bidirectional conceptions of OT syntax use a definition of grammaticality that takes into account both directions of the interface:

(2) Grammaticality: A pair <mᵢ, eᵢ> is grammatical iff the expression eᵢ is the optimal candidate for the input mᵢ and the meaning mᵢ is the optimal candidate for the input eᵢ. (see Vogel 2004a, 2004b, for a detailed elaboration of bidirectional OT syntax)

It is important to note that we are not dealing with an interpretive semantics here. This is an important departure from standard Chomskyan conceptions of the syntax-semantics interface. Instead, syntax and semantics are in a correspondence relation that is established by the OT grammar. The syntax-semantics relation is therefore potentially non-compositional. In fact, applying OT to semantics, as in OT semantics[^4], only makes sense if the syntax-semantics relation is conceived as (partly) non-deterministic – otherwise, there could not be more than one candidate meaning for a given expression. Typical phenomena dealt with here are at the semantics-pragmatics transition, for example blocking phenomena, contextual enrichment, anaphora resolution, ambiguity resolution etc.
This fundamental difference in the syntax-semantics relation has consequences for the OT view on syntax. To be more precise: it should have. The reality is different, as OT semantics is rarely adapted in OT syntax.

The main idea for my correspondence theoretic conception of OT syntax is that the grammar organises the syntax-semantics-PF mapping by way of constraints that require isomorphic mappings from one kind of structure into the other. For instance, semantic scope translates into asymmetric c-command in syntax, which in turn translates into precedence at PF.

Such constraints are potentially conflicting and so we expect mismatches between syntax and semantics (i.e. phenomena of “covert movement” and non-compositional meaning) and syntax and phonology (i.e. phenomena of “PF reordering”) to occur. The syntactic generator that we need for such a grammar conception should be much simpler than the minimalist apparatus which is part of a very different conception of the interfaces. Among the ingredients prominent in (some versions of) minimalist syntax that will not be made use of, are feature checking, movement, a rich inventory of functional categories just for deriving word order, and adjunction.

In the sections below, I will show how this can be made to work. The languages discussed are German and English. As the discussion has a programmatic character, much of what is said here requires empirical exploration and application in a wider range of languages and phenomena.

3 Simplifying the Syntactic Apparatus

3.1 Conditioned Feature Checking

In early minimalism, movement of wh-items is triggered by strong features (alternatively, nowadays, a wh-feature on a head with an EPP-feature). The dimension of feature strength (strong vs. weak feature) or the optional presence of EPP-features is not necessary under an OT approach where movement is regulated by the relative rank of the derivational economy constraint STAY. This has been demonstrated, among others, in minimalist work on wh-movement (Grimshaw 1997, Ackema and Neeleman 1998, Legendre et al. 1998) and Object Shift (Broekhuis 2000, 2008).

Broekhuis (2000) argues that one advantage of the OT model lies in the ability to derive what may be called conditioned feature checking. In Scandinavian, object shift, the movement of an object noun phrase outside or to the left edge of VP, applies if three conditions are met:
i) the verb has left the verb phrase,  
ii) the object is an unstressed pronoun,  
iii) no other material c-commanding the object is left within VP.

(3) **Object shift in Swedish: (Holmberg 1999)**

(a) Jag kysste henne inte  
I kissed her not
(b) ?Jag kysste inte henne  
(c) Jag kysste inte Marit  
I kissed not Marit
(d) *Jag kysste Marit inte

Broekhuis (2000) follows earlier analyses of this phenomenon in that he assumes that the object pronoun in (3a) moves to its case position, i.e. in a position where it checks its case feature. An early minimalist analysis would assume here that the case feature either on the noun or on the head AGR-O, which checks the case feature, must be strong in order to evoke this movement. But then there must be an unchecked strong case feature in (4a) and (3c), which should, erroneously, lead to ungrammaticality. It further remains unclear why (4b) is ill-formed.

(4) (a) Jag har inte kysst henne  
I have not kissed her
(b) *Jag har henne inte kysst  
I have her not kissed

Broekhuis (2000) shows how OT offers a way out: case is unchecked in Swedish in principle, but case movement can be triggered by another factor, here it is the constraint **D-PRONOUN** which requires definite pronouns to leave VP.6

Broekhuis further assumes that the minimal link condition is an inviolable constraint on the generator: there will only be candidates that fulfil the MLC. This explains why (4b) is ungrammatical: although this structure would fulfil D-PRONOUN, it will not even be generated since the object’s movement outside VP violates the MLC if the verbal head has not moved out of VP itself. Broekhuis assumes the constraints **CASE**, which requires case features to be checked and **STAY**, which penalises syntactic movement Grimshaw (1997). The ranking that derives the above observations about object shift is as follows:

(5) **D-PRONOUN » STAY » CASE**

The minimalist conception of feature strength is in this account replaced by the relative rank of the constraint that requires feature checking, **CASE**, and **STAY**. The
high rank of D-PRONOUN leads to “conditioned feature checking”; case movement might apply for a different reason than the checking of the case feature.

Such a reformulation of feature strength as relative constraint ranking has also been used in various OT accounts of $wh$-movement Grimshaw (1997), Ackema and Neeleman (1998), Legendre et al. (1998). The general picture that these accounts draw can be sketched as in (6).

(6) Simple economy-of-movement account of $wh$-fronting vs. $wh$-in-situ within OT:
   (a) CHECK-WH $\rightarrow$ STAY yields $wh$-movement.
   (b) STAY $\rightarrow$ CHECK-WH yields $wh$-in-situ.

One might object that this is hardly more than a reformulation of the minimalist approach. This even holds, for example, in Ackema and Neeleman’s (1998) account of multiple questions, as in (7a):

(7) (a) Who bought what?
    (b) What did you buy?

Despite the fact that the $wh$-feature on ‘what’ remains unchecked, and would have to be checked in a single question as in (7b), (7a) is grammatical. In minimalism, a solution suggests itself that exploits the distinction between the checker and the checkee of a formal feature: if the [+wh] feature on the clause-initial head C is strong, while that on the $wh$-phrase is weak, then we expect just one $wh$-phrase to be fronted. The OT approach by Ackema and Neeleman (1998) mimicks this by assuming a 3-constraint system, including STAY, Q-Scope (for the $wh$-phrase) and Q-Marking (for the C head).

3.2 Against economy of movement as a violable constraint

It is typical of analyses like the one discussed in section 3.1 that they take over background assumptions from other frameworks without considering their usefulness in OT. One concern that I have is the question how to rule out a candidate structure like the following one:

(8) What did John say?

— place Figure 1 here —

A violation of STAY can be avoided by simply inserting the $wh$-phrase directly in [Spec,CP]. This candidate fulfills both Q-Marking and Q-Scope, hence it should be optimal even (wrongly) in in-situ languages.

In minimalism and its predecessors, structure (8) is usually ruled out by interpretive and case requirements: an NP is assigned its $\Theta$-role inside VP, and
uninterpretable otherwise. Likewise, case is assigned into that position, or another one designated for object case assignment, hence an NP inserted into [Spec, CP] has no case, or its case feature unchecked.

These options are not as straightforwardly applicable in OT. Among most varieties of OT syntax that are on the market, there is consensus at least with respect to one issue: the input contains an argument structure specification.

For this reason, an argument against the structure in (8) in terms of a violation of the $\Theta$-criterion is much less forceful than in a purely derivational system: failure to merge into $\Theta$-position does not lead to a loss of semantic information, if the latter is given in the input.

One principal difference between minimalism (and other purely derivational systems) and OT syntax is the construction of the interfaces between syntax, on the one hand, and semantics and phonology, on the other. In the usual generative conception, syntactic structures are fed into the semantic and phonological modules which interpret the “instructions” the syntactic structure provides.

The OT conception of the interfaces I am advocating brings syntactic, semantic and phonological/prosodic representations into correspondence. It organises their mappings. Semantic and phonological structures are generated independent of the syntactic structure, and they serve as candidates in an OT competition for the optimal syntax $\leftrightarrow$ semantics and syntax $\leftrightarrow$ phonology mappings.

Mapping requirements are typical candidates for violable OT constraints. Examples for constraints on syntax $\leftrightarrow$ semantics mapping are the constraints D-PRONOUN, Q-SCOPE and Q-MARKING, mentioned above. Such constraints can easily come into conflict, and therefore imperfect mappings are expected to be the rule rather than the exception in OT.

Hence, from the logic of an OT model, it would be a mere stipulation to claim that a constraint like $\Theta$-MARKING requiring arguments to be inserted in their $\Theta$-position is inviolable and part of the generator.

A similar argument can be made with respect to case assignment: an NP might be faced with particular syntactic ordering constraints because it has a particular case, but not necessarily in order to receive case. It might bring its case, being a morphological property, already with it.

It is thus difficult to argue that candidate (8) is ruled out by Gen, as the inviolable principle supposed to hold in Gen can hardly be motivated. Hence, economy of movement cannot help us prevent the candidate in (8) from being optimal in in-situ languages. In other words, $wh$-in-situ does not equal absence of $wh$-movement, if base generation into “derived” positions is allowed for by Gen.

I therefore want to propose that there is no place for constraints like STAY. Syntactic movement, if we want to use it at all in OT syntax, should be evaluated by its effects only. It is welcome if it helps fulfilling highly ranked constraints, and disadvantageous if it leads to their violation. But these constraints should not be about movement itself, rather, they should require certain syntactic consequences of semantic, morphological and phonological relations among words and constituents, like, for instance, $wh$-phrase placement, syntactic conditions for case
licensing and agreement, prosodic structuring etc. The impression that we have of syntax as being an economically designed system should be an emergent by-product of this, if anything.\textsuperscript{7} This does not yet imply abandoning syntactic movement per se. However, one conceptual issue might arise. Given that movement as such is not subject to wellformedness constraints, we might find a situation where two structurally different candidates have an identical constraint violation profile. The case I discussed above could be of this kind, or, more schematically, the following pair of trees:

(9)  

\begin{itemize}
  \item (a) — place Figure 2 here —
  \item (b) — place Figure 3 here —
\end{itemize}

This situation would be an artefact of the way the generator is defined. It would not be an empirical issue in any sense. We are well-advised to avoid such candidate pairs for conceptual reasons. The question then would be which of the two trees should be given up. I vote for the “minimalist” solution here to get rid of the conceptually more complicated structure, that is, (9a). Further arguments are given in the following subsection.

\section*{3.3 OT Syntax without movement}

The main motivation for syntactic movement is a particular strategy to solve a design problem for syntactic representations within the Chomskyan tradition: syntactic structures shall at the same time represent word order, constituency and dependency relations among syntactic units. Dependency is expressed locally within a phrase as relation between the phrase’s head and other material within its phrase. Movement is necessary whenever a certain dependency of some element requires a position within the tree that differs from its surface position. For instance, an English object \textit{wh}-phrase receives case within VP, right adjacent to the verb, but occupies the clause-initial position at the surface in simple questions.

There is no intrinsic need to represent for example dependency as local relation within a syntactic structure. Alternative frameworks that do not use movement – LFG and HPSG – separate word order from such dependency relations. Dependency is a good predictor for word order, though, but not without exception, as \textit{wh}-questions show.

Let us now discuss the consequences of a model that gets rid of the three types of syntactic movement: adjunction, head movement and movement into specifier position. We start with adjunction.

In Vogel (2004a, 2004b) I already argued for a grammar that does not use syntactic adjunction. The argument relies on the fact that PF is a complete representation of linear order already, and that the heuristics that is used for the detection of adjunction sites is first of all linear order.\textsuperscript{8} Therefore, the abstract
syntactic device of adjunction does not add new information. By Occam’s razor, it can and should be omitted, if possible. As a consequence, the syntactic representation of a clause now is a set of phrase structure trees, the matrix clause and its adjuncts. The (linear) position of an adjunct follows from violable syntax-PF mapping constraints.

Movement into adjunct position is already abandoned, too, under this assumption. Let me briefly show how it works in this framework. Consider a typical case of leftwards adjunction, English left dislocation which is usually represented as in (10).

(10) [IP Such a book, [IP I would never read.]]

The direct object, “such a book”, under standard assumptions is left adjoined to the clause, traditionally IP. The syntactic structure for this clause that I am assuming is the non-dislocated one:

(11) [IP I would never read such a book]

The placement of “such a book” at the left edge is now a case of PF reordering only, which is induced by a semantics-PF ordering constraint that requires topics to occur at the left edge. It is ranked higher than a syntax-PF mapping constraint that requires sister constituents to be adjacent at PF; “read” and “such a book” are sisters, but non-adjacent.

We are left with movement into specifier position and head movement. In the previous section, I already showed that a base generation account of wh-placement – a typical instance of movement into specifier position – is promising. I will leave this as it is here.

How about head movement? In our work on the dialectal variation in German verbal complexes (Vogel 2003, Schmid and Vogel 2004, Schmid 2005), Tanja Schmid and I already argued that a PF linearisation based account that does not rely on syntactic head movement is conceptually simpler and empirically more satisfactory.

Another phenomenon that is typical of Germanic syntax and calls for a treatment in terms of head movement is the verb-second phenomenon. In German and other continental West Germanic languages, this is even more apparent than in other Germanic languages, as these show an asymmetry between main and subordinate clauses:

(12) (a) Peter hat ein Buch gelesen.  
P. has a book read  
“Peter has read a book.”
(b) … weil Peter ein Buch gelesen hat.  
because P. a book read has  
“… because Peter has read a book.”
(c) [VP Bücher lesen] macht Spaß.
books reading is fun

“Reading books is fun.”

(d) \[\text{[aux} \ 	ext{[vp Bücher gelesen] zu haben]} \] ist wichtig
books read to have is important

Whereas the auxiliary ‘hat’ in (12a) is in V2 position, the second constituent of the clause, it remains in clause-final position in the subordinate clause (12b). Because of the ordering facts in German verb phrases – as also exemplified in (12c) and (12d), the German verb phrase is assumed to have head-final word order. V2 then arises by movement into the head of a higher head-initial projection, which nowadays is widely assumed to be CP. I.e., the finite verb in (12a) occupies the same position as the complementiser in (12b) and can only get there by syntactic movement:

(13) — place Figure 4 here —

Head-complement order is subject to violable constraints in OT syntax, and variation in their relative ranking is a basic parameter in reconstructing syntactic typology within OT. However, this also means that dispreferred candidates are competitors in each language. A route of analysis for (12a) could then be that we here have a head-initial order that is triggered by a particular syntactic configuration. The analysis then involves no head movement:

(14) — place Figure 5 here —

In Vogel (2004a), I argue that this structure is preferred by a constraint that requires the topmost projection to have the head to the left of the complement:

(15) \textbf{Hd-Comp/Top}

The head of the topmost projection precedes its complement.

Given the constraint ranking in (16), the winning structures (12a) and (12b) are correctly derived.\(^9\)

(16) \textbf{Hd-Comp/Top} \ « \textbf{Comp-Hd} \ « \textbf{Hd-Comp}

Simply put, the constraint ranking has the effect that IP is right-headed within CP, but left-headed in main clauses. This derives the V2 effect without having to assume that the auxiliary occupies a different syntactic position.

The candidates in this conception are [syntax,PF] pairs, where PF is the only locus of linear order, and syntax is a set of syntactic objects, a matrix and adjunct phrases. Constraints require correspondence among semantics and syntax, semantics and PF, as well as syntax and PF. Such correspondence relations usually hold, for instance between relative scope (semantics), asymmetric c-command (syntax) and precedence (PF, linear order), or predication (semantics),
head-dependent relation (e.g. sisterhood in syntax) and adjacency (PF). Being OT constraints, they are, of course, violable.

The possibility of mismatches between those structures is therefore systematically taken advantage of. I did so, for instance, in my analysis of pronominal object shift in Germanic (Vogel 2006b) which I analysed as a mismatch between syntactic structure and linear order which is prosodically triggered. Our aforementioned account of the syntax of German verb clusters is another case in point.

4 An alternative account of wh-movement in terms of syntax-semantics correspondence

This section introduces an alternative account of the typology of wh-movement that does without economy of movement. It is based on the correspondence between semantics and syntax and can be sketched as in (17).

(17) Alternative OT account of wh-movement:
- An object wh-phrase as in “What did you say? ” has a couple of semantic and morphological properties (wh-, case, Θ-role, a.o.) which are syntactically relevant.
- The wh-item is in conflict between which of its semantic properties determines its position, [WH-SCOPE] or [Θ-role]. We assume two constraints, WH-SCOPE and Θ, requiring placement in scope or Θ position, respectively.
- WH-SCOPE is essentially the demand to have a wh-operator c-command its scope domain.
- Θ is the demand for an argument to occur within the phrase headed by its predicate.
- No wh- or Θ features are necessary. Both constraints are formulated purely relationally.
- WH-SCOPE » Θ derives wh-movement.
- Θ » WH-SCOPE derives wh-in-situ.

This derives a core aspect of the typological variation in wh-movement in terms of conflicting semantics↔syntax mapping demands (wh-scope, Θ -role). It might be the conceptually stronger analysis in the sense that it also has something to say about the in-situ position.

Furthermore, I think this kind of approach has an empirical advantage. Note the following problem with Turkish:
[...] It should be noted that, although Turkish is an SOV language, the basic word order is overridden by various other factors. For example, the most unmarked position for a WH-element is to the immediate left of the verb, irrespective of the grammatical relation. The second-best alternative is for the WH-element to be placed in its original position; [...] (Kornfilt 1997; with “original position” it is obviously meant what in generative terms is the theta or case position, i.e. the default position for non-wh items of the same type)

(18) (a) bu kitab-ı kim oku-du?
   this book-ACC who read-Past
   (b) kim bu kitab-ı oku-du?
   who this book-ACC read-Past
   “Who read this book? ”

As the position left adjacent to the verb is the focus position in Turkish, it is easy to integrate Turkish into our alternative account, assuming that focus is on the wh-phrase in (18a), and on the direct object in (18b):11

(19) Constraint Ranking for Turkish:
    FOCUS » Θ » WH-SCOPE

The FOCUS constraint can best be formulated as a constraint on semantics-prosody mapping. Different accounts have been developed by Truckenbrodt (1999), Büring (2001), Samek-Lodovici (2005), a.o. These accounts derive right-aligned focus placement from typologically well-confirmed prosodic well-formedness constraints that require the prosodic head of the intonation phrase to be phrase-final.

An analysis in terms of economy can be extended in the same way, of course. However, Turkish shows that the positioning of wh-items is not simply a matter of having wh-movement or not. The spirit of the STAY-based analysis as such is called into question here.

To sum up: the surface position of the wh-item is always determined by some semantic property, no matter which position it is. The wh-item bears several semantic properties with conflicting placement requirements (Θ-role, scope, focus), and the conflict is resolved in the usual OT way. We do not need to specify particular positions for these properties. Their syntactic consequences are always relational, i.e. the placement requirements can completely stated in terms of the item’s position relative to other elements.
4.1 Reinhart (1995): syntactic economy relativised by syntax-semantics interface needs

This subsection deals with a phenomenon that has been discussed by Reinhart (1995). She notes the following grammaticality contrast for English:

(20) a. *Bill$_1$ wonders what$_3$ who$_2$ bought.
    b. Who$_1$ wonders what$_3$ who$_2$ bought?
    c. Who$_1$ wonders what$_3$ Bill$_2$ bought?

This is a problem for economy of movement, as the order of the wh-items in the subordinate clause in (20b) violates superiority, and hence it should be ruled out for the same reason as (20a). But, surprisingly, the subordinate clause’s subject NP does not induce a superiority violation here, just as in (20c).

This observation about (20b) is only correct, as long as the two embedded wh-phrases do not compete for the embedded [Spec,CP] position in (20b). ‘Who$_2$’ has matrix scope. This distinction is difficult to integrate into a minimalist analysis, if [WH] is a purely formal syntactic feature:

(21) — place Figure 6 here —

The [WH] Comp of the embedded clause should attract the closest [+wh] element, which is who$_2$ in both (20a,b). The main problem for the analysis lies in the fact that the [WH] Comp is blind for the semantic scope of the wh-elements it attracts.

Reinhart’s solution relativises the Minimal Link Condition (MLC) to semantically equivalent syntactic structures. This interpretation of the MLC in terms of competition and blocking is already close to an OT account.

Reinhart’s idea can be implemented quite nicely in OT. Assume that there is no formal [WH] feature, no attraction of such features, and no checking. Assume further that wh-elements have scope over whatever they c-command, and need not stand in an A-bar position. Take the constraints WH-SCOPE and $\tau$ from above. Consider the following OT competition:

(22) input: Qxy [ x wonders Qz [y bought z ]]
    Candidate structures:
    a. *Who$_x$ wonders who$_y$ bought what$_z$
    b. *Who$_y$ does who$_x$ wonder what$_z$ bought
    c. $\sqrt{\text{Who}_x$ wonders what$_z$ who$_y$ bought

The three candidates are Reinhart’s examples in (20). The input specifies the reading where both the matrix subject and the embedded subject have matrix scope. Which is the optimal syntactic structure for this reading?

(23) OT tableau for (22):
Structure (22a) has two violations of WH-SCOPE, because neither the embedded object nor the embedded subject occupy their scope positions. Structure (22b) has only one violation of WH-SCOPE, because the matrix subject wh-phrase remains in situ. However, both the embedded object and the embedded subject occupy their scope positions and therefore incur violations of Θ. The candidate in (22c) exploits the fact that the matrix subject wh-phrase simultaneously satisfies both WH-SCOPE and Θ in the same syntactic position. This gives this structure the advantage of having one violation of Θ less than (22b), for the embedded wh-object, ‘what’. The only element that violates WH-SCOPE is the embedded ‘who’. This is the optimal candidate.

(22b) might even be worse under a definition of WH-SCOPE that requires a wh-operator to c-command all elements that belong to its scope domain. This is not met, though what, is in the embedded [Spec,CP], because one element of this domain, who, has moved higher – such a definition of WH-SCOPE is thus even able to derive wh-island effects. Let me summarise the claims I have made so far:

- Syntactic constraints should formulate placement requirements as purely relational consequences of particular semantic, morphological, or (perhaps) phonological properties of syntactic elements.
- Gen does not contain any checking operations.
- Consequently, the respective features and their (functional) projections are unnecessary.
- So, Gen simply consists of one operation, Merge, which is used to construct structures from lexical items that are conform with X-bar theory.

We can go one step further in excluding multiple specifiers and complements. As the heuristics for the relative relation of such elements would again only be their linear order which is already represented at PF, we are left with four phrase structure rules:

<table>
<thead>
<tr>
<th>Qxy [ x wonders Qz [ y bought z ] ]</th>
<th>WH-SCOPE</th>
<th>Θ</th>
</tr>
</thead>
<tbody>
<tr>
<td>(22a)</td>
<td>*(y) *z</td>
<td></td>
</tr>
<tr>
<td>(22b)</td>
<td>*(x) *(y)*z</td>
<td>*(y)*z</td>
</tr>
<tr>
<td>(22c)</td>
<td>*(y) *(z)</td>
<td>*(z)</td>
</tr>
</tbody>
</table>

(24)  
- a. XP → [X X]  
- b. XP → [X X ZP]  
- c. XP → YP [X X]  
- d. XP → YP [X X ZP]  

12 Let me summarise the claims I have made so far:

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- b. XP → [X X ZP]  
- c. XP → YP [X X]  
- d. XP → YP [X X ZP]
The syntax of an output candidate is a forest, i.e. a set of X-bar conform binary branching trees with at most one X’ node including a matrix and its adjuncts.

5 Syntactic Simplicity and Markedness

Both minimalism and Optimality Theory use meta-principles. In minimalism, one such principle is economy, both derivational and representational. Optimality Theory relies on the principle of markedness. This section discusses how these two concepts relate.

OT’s notion of markedness is close to the traditional understanding of this term. Typical claims about the differences between marked and unmarked versions of an expression are the following:

- The unmarked expression is typologically more frequent than the marked one.
- When a language has the marked expression, it also has the unmarked expression.
- In languages that have both the marked and the unmarked expression, the contexts in which the marked expression can occur build a proper subset of the contexts in which the unmarked expression can occur.

How does syntactic simplicity correlate with this traditional conception of markedness? Optimality Theory is good at modeling so-called “repair strategies”. A typical case in phonology is the neutralisation of a marked feature, which happens under particular conditions, as, for example, in German final devoicing – where syllable-final obstruents lose voice, for example, /rad/ → [rat]:

(25) German final devoicing (after Wiese 1996):

\[ [+\text{obstruent}] \rightarrow [-\text{voice}] \]

As we will see in the following subsection, syntactic repair strategies are not always the unmarked option, and the unmarked option is not always the structure that is less complex. A further issue is the relationship between analytical and synthetic expressions. Sometimes, we use syntactic means in order to fill a ‘morphological gap’. Are these syntactic means therefore less marked? And if so, why is the syntactic route often blocked when the morphological route is available, and how can this all be integrated in a theory of syntactic markedness?

5.1 Optional and Obligatory Complementisers

A nice example of an unmarked-marked pair of two syntactic expressions are the two versions of English subordinate clauses, with and without complementiser, here not quite precisely called CP and IP, respectively. Their division of labour has been subject to several OT analyses (see for example Baković and Keer 2001, Grimshaw 1997).
Interestingly, ‘that’-clauses, i.e. CPs, have to be seen as the unmarked option in the classical sense. The contexts where they are possible are a proper superset of those where the ‘that’-less (IP) variant is possible. For instance, when the clause is fronted, only that-clauses are possible, while both forms are legitimate in final position:

(26)  a. I would never say John should leave  
     b. I would never say that John should leave  
     c. That John should leave, I would never say  
     d. *John should leave, I would never say

The complementiser becomes obligatory with the insertion of an adverbial preceding the subject Grimshaw (1997):

(27)  a. *She swore/insisted/thought, most of the time, they accepted this solution.  
     b. She swore/insisted/thought that, most of the time, they accepted this solution.

The possibility of complementiser-less clauses is restricted to complements of so-called bridge verbs. Many verbs only allow for a clause with complementiser:

(28)  a. I regret that John left  
     b. *I regret John left

Considerations about the economy of representation would suggest that the version with the complementiser is the marked option, because it has more structure. This is clearly not the case. We thus conclude that the grammatically unmarked form is not always the shortest (or literally unmarked) form. There is a discrepancy between economy of structure and syntactic markedness.  

The complementiser can also be understood as a marker for subordination. We can then say that it is the unmarked case for a subordinate clause to have a complementiser. This observation seems to stand in opposition to the traditional notion of markedness. However, this is also a matter of perspective. If we see the two forms as possible variants of English clauses in general, we find that that-less clauses can serve as both main and subordinate clauses, while that-clauses can only serve as subordinate clauses. That-less clauses, from this perspective, have the wider distribution.

All of this suggests that, especially in syntax, expressions are not marked or unmarked as such. They count as (un)marked for a particular purpose:

i) The unmarked main clause has no complementiser.

ii) The unmarked subordinate clause has a complementiser.
We can nevertheless make the following two statements:

iii) Subordinate clauses are more marked than main clauses.

iv) Clauses with a complementiser are more complex than those without one.

The statements in (i) and (ii) can be interpreted as the result of the interaction of the two markedness tendencies expressed in (iii) and (iv). The latter statements can be reinterpreted as scales:¹⁴

![Equation]

(29) main clause < subordinate clause
     IP < CP

By using the method of harmonic alignment, as established by Prince and Smolensky (1993), Prince and Smolensky (2004), we can construct two universally fixed sub-rankings of constraints composed by aligning the two scales appropriately:

(30) a. *MainCl/CP » *MainCl/IP
    b. *SubCl/IP » *SubCl/CP

The typological claim is that it is universally more harmonic for a main clause not to have a complementiser, and for a subordinate clause to have one. The interleaving of these two subrankings is open to typological variation. For English, it is crucial that *MainCl/CP is ranked higher than all the other constraints, as this is the structure that never occurs.

As this analysis shows, economy of structure does indeed play a role, but perhaps not in a pure way, but only indirectly as part of a constraint subsystem that is derived by harmonic alignment. More complex structures are sometimes preferred, in particular, in order to maintain a contrast.

This reminds of Horn’s (1984) ‘division of pragmatic labour’, the observation that unmarked forms tend to be used for unmarked situations and marked forms for marked situations. When a pair of two forms stands in such a relation, the more general form will be blocked by the more specific one in a ‘neutral’ context. This is not the case with our two sentence types, but the next section will discuss a candidate for such an interaction, English do-support.

5.2 Do-support, Periphrasis, and Markedness

As we saw in the previous section, the decision which of two syntactic structures has to be considered as less marked is not necessarily decided simply by considering structural complexity. This also holds for the second example I would like to discuss, English do-support. Consider the following examples:¹⁵

(31) (a) John left.
Do-support is the analytic version of a simple tense form, it alternates with the
tense inflection on the verb. A couple of contexts make it obligatory – in (31), we
have contrastive verum focus (31c), negation (31d), and non-subject questions
(31e). Which is the unmarked form, do-support or tense inflection? If we follow
the reasoning above, then the unmarked form is the one which is more widely
applicable and which occurs especially in difficult environments. This is clearly
the case with do-support. However, the unmarked expression should also be
possible in an unproblematic environment. But as the judgement in (31b)
nicates, this is not the case for do-support.

These observations thus do not fit the picture of markedness in syntax that we
developed thus far. I see two possible explanations for the oddity of (31b) which
are in line with our theory of syntactic markedness:

(i) The non-acceptability of (31b) is not an instance of syntactic illformedness,
but due to pragmatic blocking.

(ii) (31b) is well-formed, its low acceptability is due to a prescriptive norm
within the speech community.

Explanation (i), pragmatic blocking, could rely on the theory of conventional
implicatures, as founded by Grice (1975), and further developed, for example, by
Levinson (2000). It can happen that two semantically equivalent forms stand in a
scalar opposition. These scales are called Horn-scales after Horn (1984) who was
the first to give a systematic account of such phenomena. It was originally
developed to derive pragmatic effects of the usage of quantitative expressions: the
use of “some”, for instance, pragmatically excludes the meaning “many” though
semantically it doesn’t. Levinson extended this to oppositions of grammatical
forms, thus developing a pragmatic theory of grammaticalisation.

The example that Levinson has studied in detail is the English system of
pronominal and anaphoric reference. The SELF-anaphora (himself, herself, itself,
myself etc.) are nowadays the only option for a locally bound pronoun in English.
But in Old High English, the simple pronouns him, her, it were still possible, i.e.,
‘John shaved him’ could mean that John shaved himself. What has changed since
then, according to Levinson, is the conventionalization of the scale
‘SELF-pronoun – pronoun’. This had the consequence that in contexts where the
SELF pronoun is used, the simple pronoun is blocked.

The oddity of (31b) might result from another instance of such a division of
pragmatic labour. The first assumption that I make is that the synthetic form is
preferred over the analytic form in general:
**Blocking of analytic forms** If two forms differ only in whether they express a feature by a morpheme or by a function word and build a Horn-scale, then the form that uses the morpheme blocks the form that uses the function word.

It is striking that the syntactic structure of (31b) is not unacceptable per se, but, as we see in (31c), requires, or induces, an additional semantic feature, verum focus. This is in fact a precondition for the building of a Horn-scale in Levinson’s sense: the forms involved in a Horn-scale are wellformed according to core grammatical criteria. Thus, *do*-support is syntactically wellformed, even in (31b), but because of the division of pragmatic labour, its use induces a semantic contrast – if no such contrast is intended, the use of the dispreferred form is not justified.

While in Standard English the scale ‘*do*-support – morphological tense’ is conventionalized, there exist English dialects which are in a state comparable to Old English in Levinson’s example: they use *do*-support even in neutral environments. This has been reported by Kortmann (2002) for the southwest counties of England\(^\text{16}\) where “unstressed *do* [occurs] as simple tense-carrier in affirmative sentences:

\[\text{We } \text{do } \text{breed our own cows. This man what } \text{do own this, } \ldots\]
\[\text{We’ve been up milking at 6 o’clock in the morning, and then we did go on haymaking, } \ldots” \text{ (Kortmann 2002, 197)}\]

Among German dialects, this phenomenon is even more widely spread, though also most German speakers will presumably agree that (32) is illformed as a Standard German sentence:

\[(32) \quad ?*\text{Maria tut } \text{schlafen}\]
\[\text{M. } \text{does sleep}\]
\[\text{“Maria is sleeping”}\]

(32) probably sounds to most Germans as colloquial, dialectal, or child speech. For Standard German, a sociolinguistic explanation for the low acceptability of (32) seems plausible – it is the result of the exposition to prescriptive pressure by language norms put forward for decades in the media, the literal and academic world, and at school.\(^\text{17}\)

### 5.3 Comparative Adjective Formation

The two versions of comparative adjective formation in English follow a pattern similar to *do*-support: short adjectives are formed with \(-er\), those with 3+ syllables are built with more. The two options have nearly complementary distribution:

\[(33) \quad (a) \text{ easier, } \text{more easy}\]
\[(b) \text{ *intelligenter, more intelligent}\]
\[(c) \text{ luckier, more lucky}\]
Adjectives with two syllables are somewhat in between. Via a Google search, it is possible to find both versions for ‘lucky’:

(34) (a) http://www.omgclothing.com/score/36052/Liberals_are_luckier_in_love!
(b) “How You Can Be More Lucky”
(http://www.somethingyoushouldknow.net/transcript8_13_03.htm)

Analytic comparatives of ‘easy’ can be found in coordinated adjectives:

(35) Periphrastic comparative adjectives with a disyllabic adjective:
(a) “But then turn to an open source language, inspired by Unix shell programming, but, oh, so much more easy and powerful.”
(http://www.awaretek.com/programming.html)
(b) “AOSell integrates with America Online software to make researching stocks with AOL more easy and productive.”
(http://www.softdepia.com/business_solutions_sub_155_1.html)
(c) “Act for the more easy and speedy recovery of small debts, within the city of Rochester, and the parishes of Strood [etc] and the ville of Sheerness”
(http://library.kent.ac.uk/library/special/html/specoll/acts.htm)

This can even be observed with monosyllabic adjectives:

(36) Analytic comparatives with a coordinated monosyllabic adjective:
(a) “Just hope that the script kiddie graphic interface will be more nice and sober in the future.”
(forum.sysinternals.com/forum_posts.asp?TID=7003andPN=1andTPN=57)
(b) “Being the North the poor area, the South the more nice and old area, with medium class all over it and some old rich people also.”
(geoimages.berkeley.edu/wwp904/html/AYRTON.html)
(c) “I spent around thirty hours or so working on the Everything Engine, trying to refactor it into something a little more nice and usable.”
(www.oreillynet.com/onlamp/blog/2006/06/refactoring_everything_retros p.html)

As in the case of do-support, periphrasis is an option the system can ‘fall back’ to in a non-trivial syntactic context. Although the expressions “easier and speedier” and “nicer and older” are available, the analytic “more easy and speedy” and “more nice and old” are not blocked anymore. Hence, in the context of our discussion about markedness we again notice that the analytic form, the ‘more’-comparative is the one that is more widely applicable, and, thus, should count as the less marked form, despite its being blocked in the case of small adjectives in unproblematic contexts.
In the absence of a morphological strategy, the analytic form is even obligatory in the simple cases. This can be seen with *less*-comparatives:

(37)  
(a) “That’s less nice. And we hope.”  
(www.aquinas.ac.uk/documents/download.asp?nodeid=2631andlibraryversionid=1719)  
(b) “A little less nice and a lot more nasty would have made Shallow Hal twice the film.”  
(www.totalfilm.com/cinema_reviews/shallow_hal)  
(c) “I had to make her a bit less nice and a bit more willing to make mistakes and get involved with people.”  
(fictionwriting.about.com/od/interviews/a/alixohlin_2.htm)

This is expected: without a morphological alternative, no pragmatic blocking can apply. If there was a genuinely morpho-phonological or morpho-syntactic constraint ruling out analytic comparatives with small adjectives, we would expect this constraint to also apply with the *less*-comparative. ‘*Less nice*’ should then be illformed. As we see, this is false. The illformedness of ‘*more nice*’ in unproblematic contexts is thus indeed dependent on the existence of a morphological alternative – the two forms build a Levinsonian Horn-scale.

Summarising the discussion in the last two sections, we can state that from a purely formal perspective, analytic forms are less marked than synthetic forms, because they are more generally applicable. But whenever we have an alternation between morpheme and function word, and this relation has become conventionalised in the form of a Levinsonian Horn-scale, the less marked analytic form is blocked in neutral environments, due to the principle of the ‘division of pragmatic labour’.

Furthermore, whether a morphological variant is present must be determined by the language particular lexicon. Though it might be a universal possibility to have such structures in the candidate set, the lexicon of the language and its morphological subsystem have to provide it. Thus, candidate sets – and maybe Gen with respect at least to its morphological component – may indeed vary from language to language precisely in whether they offer morphological variants that induce blocking due to conventionalisation in the form of a Levinsonian Horn-scale.

Assuming such a language particular (morphological) Gen would not mean giving up the idea of universal grammar: in OT, first of all Eval and the constraint set are universal, whereas Gen might not necessarily be universal in all respects, with the lexicon including the systems of morphological inflection as one major source of language particular restrictions on the candidate set. The blocking mechanism described in this section should also be a universal property of languages.
5.4 Agreement with First and Second Person in Relative Clauses

Thus far, the results of our discussion on the relation between markedness and structural simplicity showed that analytic forms are the less marked forms, i.e., those forms that are more widely applicable, and the last resort the system can fall back to under difficult circumstances. Thus, richer, more explicit structures are less marked than those which are more condensed.

However, this should not mean that structural richness is less marked in general. One example of a richer, but more marked structure that occurs only as repair form are resumptive pronouns in German relative clauses. German relative pronouns are marked for third person and agree with their head noun in the $\phi$-features person, number and gender:

\[(38)\] (a) Der Mann, der da steht …
   the man-3SgMasc the-3SgMasc there stands
(b) Die Frau, die da steht …
   the woman-3SgFem the-3SgFem there stands
(c) Die Leute, die da stehen
   the people-3Pl the-3Pl there stand

But German lacks relative pronouns for first and second person. Using the third person relative pronoun alone leads to ill-formedness, especially when an appositive relative clause is extraposed (39a), (39b). The structure is repaired by inserting a resumptive pronoun that bears the missing person features (39c). This option is ruled out in third person (39d) (underlining indicates relativiser and its antecedent, the additional pronoun is in boldface):

\[(39)\] Relative pronoun agreement with first/second person in German:
(a) *Ich gehe zu ihr, der sie am besten kennt.
   I go to her the-3SgNomMasc her at-the best knows-3Sg
   “I'll go to her, who (i.e., me) knows her best.”
(b) *Ich gehe zu ihr, der sie am besten kenne.
   I go to her the-3SgNomMasc her at-the best know-1Sg
(c) Ich gehe zu ihr, der ich sie am besten kenne.
   I go to her the-3SgNomMasc I her at-the best know-1Sg
(d) *Peter geht zu ihr, der er sie am besten kennt.
   P. goes to her the-3SgNomMasc he her at-the best knows-3Sg
(e) Peter geht zu ihr, der sie am besten kennt.
   P. goes to her the-3SgNomMasc her at-the best knows-3Sg

While (39a), (39b) are clearly odd examples, (39d) sounds first of all ‘archaic’, as if it stemmed from an 18th century Shakespeare translation. Nevertheless, leaving
the resumptive pronoun out, as in (39c) is clearly the preferred and fully acceptable option, and this strongly contrasts with (39a), (39b).

Using such a resumptive pronoun is totally ruled out in restrictive relative clauses:

(40) *Ich kenne einen Mann, der er Maria kennt

“I know a man who (he) knows Maria”

I conclude that the resumptive pronoun in (39c) is a repair form that is invoked by agreement requirements. There is an agreement chain starting from the head noun of the relative pronoun, “Ich”, via the relative pronoun to the finite verb of the relative clause. Especially in order to avoid an agreement clash with the finite verb of the relative clause, the resumptive pronoun is required.

(39c) is the syntactically more complex expression, but in this case it is also the more marked expression. Use of an additional pronoun is restricted to cases like (39c). There is also another important difference: while in all examples that we discussed we are dealing with function words that express a feature that could be expressed by a morpheme, the feature in this latter case is agreement, i.e., a purely formal property of the relative pronoun – of course, one that it is unable to express. In the other cases above, the expressed properties were tense and comparative, i.e., semantically relevant properties.

5.5 Summary

Let me briefly sum up the results of this section:

Analytic forms where a function word expresses a semantically relevant feature are less marked than their synthetic alternatives, because they have broader application. Their avoidance in unproblematic contexts is due to the division of pragmatic labour. There has been a considerable debate about the integration of these pragmatic aspects into optimality theory, especially in the context of bidirectional OT, see for instance the paper by Blutner (2001), and the collection by Blutner and Zeevat (2004). I sketched a bidirectional model of OT syntax that is able to capture relevant aspects of Horn’s division of pragmatic labour, as they are relevant for syntactic analyses, in Vogel (2004a,b).

Pronominal or clitic doubling, as we find it in the preceding subsection, is used to fulfil agreement requirements. It does not serve a semantic purpose in such cases, has an isolated range of application, and is therefore the marked option.

Structural economy in the strict sense seems to hold when function words are used to express a purely morpho-syntactic property like agreement, but not when they express semantically relevant properties like tense or comparative. Thus, it seems that the unmarked syntactic expressions are typically analytic constructions. These unmarked analytic constructions can be seen as standing in a balance between compression (synthetic constructions) and redundancy (doubling).
However, this is counterbalanced by the pragmatic constraints governing language use.

6 Conclusion

The starting point of my discussion was the shift of explanatory burden from Gen to Eval within OT. One consequence of this shift should lie in a simplification of the syntactic generator, compared to a purely derivational system like minimalism. I argued that OT’s syntax generator can indeed do without a couple of important ingredients of minimalist theory: features, feature strength, functional projections, movement, and also, to a certain extent, economy of representation. Much of this still requires further evaluation and critical examination.

A genuine OT model makes crucial use of faithfulness and markedness. I proposed that faithfulness should be used for the OT account of the interfaces in a correspondence theoretic fashion.

Markedness is OT’s replacement for economy. Representational economy is called into question from an empirical perspective: the syntactic structures that count as unmarked, according to typological and distributional criteria, often are not the ‘shortest’ ones. Syntactically unmarked structures tend to be non-redundantly analytic.

Analytic constructions are those with the broadest applicability. We further found that the situations where analytic constructions are ruled out have two characteristics: we have a syntactically unproblematic context, and a synthetic alternative is available. I argued that these cases should be treated as instances of the pragmatic blocking of the analytic form by the synthetic one. However, the (syntactic) well-formedness of the involved expressions is a prerequisite for such pragmatic blocking to apply.

What is left of minimalism in this approach? To be honest, not much. The properties of the generator component that the presented account needs can be found in most syntax formalisms. Properties specific of minimalism, like movement, feature checking and economy of derivation and representation are not very useful from a consequent OT perspective. This trivialisation of the generator is a consequence of the radical execution of OT’s output orientation as a theory of the interfaces. But still, such a radical trivialisation of the generator is – to my mind – very much in the spirit of the Minimalist Program.

References


This paper is a revised version of Vogel (2006a). I thank Hans Broekhuis and an anonymous reviewer and the audience at the DEAL conference in Berlin, Dec 17-19 2005, for helpful comments and discussion.

For a detailed discussion of the traces of the “Filters and Control” approach within current theorising see Broekhuis (2008), Broekhuis and Vogel (2011).

But it is important to note that the mechanisms of derivational OT still are quite different from those of derivational syntax. See the contribution by McCarthy and Pruitt in this volume.

See Blutner et al. (2006) for an overview.

I laid out this model in Vogel (2004a), applying core ideas of McCarthy and Prince (1995) in their reconstruction of faithfulness as correspondence between an input and an output representation.

Note that Hans Broekhuis has revised his earlier account, adopting an approach in terms of “shape conservation” which no longer assumes inviolability of the MLC. See Broekhuis (2008) and also Broekhuis (this Volume). The constraint CASE is renamed as EPP(CASE) in these more recent proposals.

This is very much in line with recent proposals by Grimshaw (2001), Grimshaw (2006) though she takes a different avenue to fulfil this goal.

Semantic considerations are another indicator of adjunction sites – in particular for base positions of adverbials.

See Besten (1983) and more recently Sternefeld (2006), Haider (2010) for detailed discussion.

The two constraints “Comp-Hd” and “Hd-Comp” require “complement before head” and “head before complement”, respectively. The definition of “Hd-Comp/Top” is an informal version of the one given in Vogel (2004a).

The latter assumption has been confirmed to me by Orhan Orgun, p.c.

I carried out this analysis in Vogel (2010).

That the X’ node in some of these structures is redundant, is an independent issue that is not relevant here.

Recall that we use use the labels CP and IP for clauses with and without complementiser. Traditional analyses of non-subject wh-fronting in English assume a CP structure. These cases have to be distinguished from what is at issue here.

See also the detailed analysis by Grimshaw (this Volume) for another view on do-support.

Kortmann quotes Wakelin (1986), according to whom this region is mainly constituted by the counties of Cornwall, Devon, Somerset, South Avon, Wiltshire and Dorset, with East Cornwall, Devon and (West) Somerset forming its core.
The history of the stigmatisation of auxiliary “tun” in the course of the creation of standard German has been reconstructed by Langer (2001).
Figure 1
Figure 2
Figure 3
Figure 4
Figure 5
Figure 6