

The Minimal(ist) Clause

Comments welcomed!

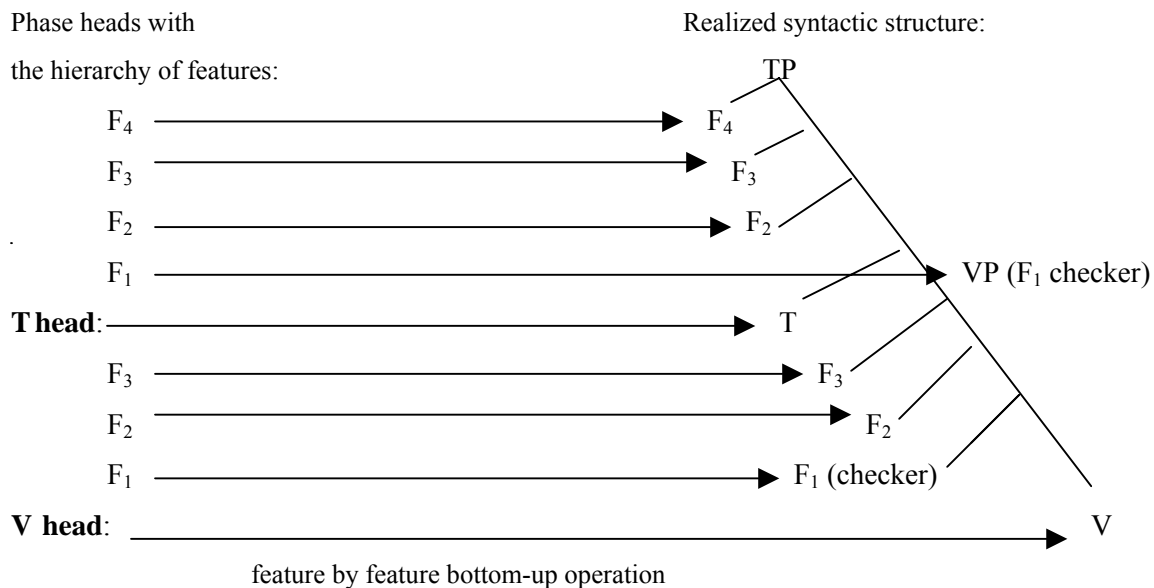
Chomsky (2005) proposes that only phase heads trigger operations. However, to achieve this goal, he needs to introduce the new ‘feature inheritance’ operation and the problematic simultaneity of phasal operations. In this squib I take Chomsky’s proposal seriously, modify the minimalist model and suggest that there is only one head (hierarchy of features) per phase and that this single head triggers all operations. The approach presented here does not need the feature inheritance or simultaneity and in addition has other advantages.

1. There is only one head (hierarchy of features) per phase

I propose that a phase is a projection of the single phase head (compare Grimshaw’s 1991 extended projections); hence phases are defined through the features of the phase head. This means that the phase head is not the highest head in the phase but the first node in the phase. Thus, the situation is reversed: in contrast to Chomsky (2005), there is no top-down feature inheritance from the phase head, there are only features of the phase head projecting in a bottom-up fashion.

A phase head is a hierarchy of features, hence the features probe (apply) one after another. The featural bundle could be associated with a certain lexical item (for example, V or root) or it could be just an abstract head. For ease of exposition, I will call the phase heads V and T and followingly, the phases VP and TP, as demonstrated in (1). The featural hierarchy ($F_1 \dots F_n$) is universal (with parameters for particular languages, for example, not all features must be present in the phase), which, in fact, gives the standard selectional skeleton (simplified: C-T-v-V).

(1)



Checked features that are not relevant for further derivation are deleted; the others (checked or non-checked) project up to the end of the phase. Consequently, the relevant features are visible for selecting by a higher phase head. More specifically, since there is only one projection in the phase and the relevant features of the phase head are projected, it has the advantage that the next higher phase head can see more features than in the standard model. This is relevant, for example, in the case of split ergativity, when there is a relation between tense and argument structure and argument encoding (compare Collins 2002 who argues that there are cases of long-distance subcategorization).

An element checking a feature from the featural hierarchy of the phase head does not project; it just values the appropriate feature. This means that the label of the resulting syntactic object is always determined by the percolated (checked or non-checked) features; compare Chomsky's argument (2005, 11) that labeling applies freely. Note that also in the approach presented here the label changes (as in the standard theory), given the fact that

elements merged with the phase head check (and in certain cases cause deletion of) features of the featural hierarchy.

The fact that it is only the phase head - more specifically, the features of the phase head - that projects can account for why TP cannot appear in isolation without C (Chomsky 2005, 10) or why complements of phase heads in general do not move (Abels 2003). In the present approach, there are simply no such subprojections. This is in line with Chomsky's (1986, 4) claim that intermediate projections are not visible for the rule Move- α .

In the standard theory, there is a hierarchy doubling: universal hierarchy of (null) heads with their features that give rise to the hierarchy of specifiers of different heads (of the same head as well); see discussion in Starke (2001). In the present model, this doubling is not necessary; there is just one plane. The only hierarchy of features of the phase head is in successive steps replaced by the syntactic structure in the course of derivation.

There is no geometrical difference between specifiers and heads. In the approach presented here, both specifiers and heads are just checkers of some feature from the featural hierarchy of the phase head. Thus, since there is no geometrical difference between specifiers and heads, all (internally or externally) merged elements obey the Extension Condition. Consequently, the well-known problem with c-command in the case of head movement does not arise (see discussion in Matushansky 2006). The standard distinction between heads and phrases and differences in locality of movement can be modeled as a competition for certain types of features (see, for example, Roberts 2001, Starke 2001 or Rizzi 2004). Languages can differ with respect to whether a certain feature is checked by a head or a phrase; consider, for example, Slavic prefixes and Germanic particles. There are also cases where a phrase can compete for the same feature with a head; recall doubly-filled COMP filter and discussion in Pesetsky & Torrego (2001), (2004) and see also Rackowski (1998) who argues that in Malagasy adverbs can be both heads and specifiers. This has, of course, consequences for interpretation because the interpretation of phases (sentences) is determined by the values of

features. Consider a *wh*-feature: it can be valued by a *wh*-element, complementizer or by a *wh*-relative pronoun giving different interpretations. If there is no such element, the *wh*-feature can get the default value, which is declarative. It is also true that an element can check more features from the featural hierarchy of the phase head, see, for example, Newmeyer (2004) who argues that *wh*-relative pronouns are topics.

If it is necessary to differentiate or keep the notion of ‘complement’, it can be defined as usually through the first merger (of the appropriate element with the phase head). If it is not the case, there can be just a phase head merged with geometrically non-different elements that check different types of features and that are combined in accordance with the principle of compositionality. Note that the complement (selectional) relations are already encoded in the featural hierarchy of the phase head and that selected elements are often merged as specifiers in the standard theory. See also discussion in the next section, where I argue that the Phase Impenetrability Condition (Chomsky 2000, 2001) using the notion of domain (complement) is not necessary.

2. Successive cyclic movement without PIC

Successive cyclic movement to the phase edge is driven by the Extension Condition and by the Activation Condition. Take, for example, an object with the *wh*-feature. When the whole VP phase is derived, that is, when all features of the phase head are checked (valued), the object still has the unchecked *wh*-feature. Thus, given the Activation Condition, the object with the unchecked *wh*-feature is forced to move (see Bošković 2005) and given the Extension Condition the object moves to the edge of the phase. In this way, the object will target the edge of every phase on its way up. The fact that the object must move is driven by the interface condition that phases cannot be spelled out – they are not convergent at the interface - if they contain an unchecked feature. So, I assume the convergence theory of

phases (Chomsky 2000, 95, 107). Note that the convergence approach applies to features of the phase head as well as to features of other elements, as in the case of the *wh*-object here.

Given this approach, one might wonder whether it can happen in the derivation of a sentence that the VP phase would contain no unchecked features and so it could be spelled out avoiding the subsequent merger with the phase head T. The derivation would have no continuation. This case probably is not possible because there is always an unchecked feature on an element in the VP phase; see Alexiadou & Anagnostopoulou's (2001) proposal that some element must raise out of *v*P.

Another question is what piece of derivation is sent to the interfaces. This question cannot be answered by the Phase Impenetrability Condition (no matter whether the strong version (Chomsky 2000, 108) or the weak version (Chomsky 2001, 14)) because according to this condition it is the domain of the phase head that gets spelled out. Given the fact that the phase head is the lowest node in the phase in the present approach, this would mean that first the domain of the phase head V is spelled out and then the domain of the phase head T (that is, VP) is spelled out. This is an undesirable result because the VP phase would be spelled out twice (in two pieces), in contrast to all subsequent phases, which would be spelled out as one piece. Therefore it seems reasonable to abandon the PIC and rely only on the convergence theory of phases. If one does not rely on the PIC, whole phases can be spelled out, and one can get rid of the problem with the mismatch between the size of the phase and the size of what is spelled out (see discussion in Abels 2003). Given the fact that only whole phases are spelled out and the fact that phases can be spelled out only if they do not contain an unchecked feature, phases will be sent to spellout after completing the next higher phase at the latest. This will happen, for example, in the case of successive-cyclic *wh*-movement. Consider again the *wh*-object moved to the edge of the VP phase. The VP phase cannot be spelled out because it still contains the object with the unchecked *wh*-feature. Then, the phase head T (the hierarchy of features) is merged and the features probe feature by feature

according to the given hierarchy. Subsequently, if there is no wh-feature in the hierarchy that can move the wh-object, the object moves to the edge of the TP phase, given the Activation Condition and the Extension Condition, and then the derivation continues. However, if there is a wh-feature in the featural hierarchy that can move the wh-object, the VP phase will be spelled out earlier (under the condition that there is no unchecked feature in the featural hierarchy of the phase head V).

One might ask whether it is necessary for the goal element to move in the absence of the final target of movement, whether it can stay in situ and wait for the probe feature there (see, for example, Takahashi 1994). This way is viable but it has the disadvantage that in the case of long-distance movement the goal element would wait for its probe several phases and consequently all phases between the goal and probe could not be spelled out. Since the computational burden should be reduced as much as possible, the Activation-Condition way is preferable to the in-situ derivation.

3. Conclusion

In line with Chomsky (2005), I have argued that phase heads trigger all operations. In contrast to Chomsky (2005), I have argued that there is only one head (hierarchy of features) per phase and that the phase head is the first node in the phase. I have made a few arguments for this proposal and discussed the issue of successive cyclic movement.

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