Phases and Nominal Interpretation.[*]

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The phase theory of Chomsky (1999, 2000, 2002) holds that derivation of a sentence proceeds step-wise through a series of multiple merge, move, and spellout operations. These operations are organized into "phases". The output of each phase is a partial LF and partial PF, which are then assembled into structures that are fed to the Articulatory/Perceptual and Conceptual/Intensional components. Chomsky defines phases in terms of "complete propositions". This translates for him into a strong lexical phase of the VP and vP, followed by a strong functional phase consisting of TP and CP.

In this short paper, we show that this version of phases conflicts with what we know about the structure of LFs when taken together with the Mapping Principle of Diesing (1992). We show that it predicts the uninterpretablity of sentences that are, in fact grammatical. Instead, following in the spirit of Percus (1993), we propose that the definition of phase be relativized to each argument as set out in (4). Each phase consists of an argument, the predicative element that introduces the argument (V or vP) and a functional category that represents a temporal operator which locates the predicate in time or space (Asp, T, etc.)

1) ***Phases consist of***:
   a) a predicative element (v or V)
   b) a single argument
   c) a temporal operator that locates the predicate and argument in time and space (Asp or T)

This gives rise to phases such as those seen in (2)[1]:

2) a)   Theme Phase $[_{AspP}$ $[_{Asp'}$ Asp $[_{VP}$ *theme* V]]]
    b)   Goal Phase $[_{EndP}$ $[_{End'}$ End $[_v$ *goal* $[_{v'}$ v …]]]]
    c)   Agent Phase $[_{TP}$ $[_{T'}$ T $[_{vP}$ *agent* $[_{v'}$ v …]]]

The clausal architecture created by such phases is essentially that of Travis' (1992) inner aspect approach, or the split VP approach of Koizumi (1995):

3) $[_{TP}$ $[_{T'}$ T $[_{vP}$ *agent* $[_{v'}$ v $[_{EndP}$ $[_{End'}$ End $[_{vP}$ *goal* $[_{v'}$ v $[_{AspP}$ $[_{Asp'}$ Asp $[_{VP}$ *theme* V]]]]]]]]]]]]]

The argument is structured as follows: we start by showing that the Chomsky definition of phases incorrectly predicts the unacceptability of two kinds of sentences in English with specific, definite objects. We then show how relativized phases, as defined above in (1) can be applied to these sentences.

1.   TWO PROBLEMATIC CASES

In phase theory, there is no covert movement. Relationships previously taken to be covert movement are checked through the Probe-Goal relation (via AGREE). This means that the surface position of a phrase also marks its position with respect to scopal relations. Consider the sentence in (4):

4)   The woman always drove her car with her gloves on.

Taking temporal adverbs to mark the left edge of the vP (Emonds 1976), we have, a definite NPs surfacing in the nuclear scope, which can't be rescued without covert movement.

A similar problem is seen in the example in (5):

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[1] We are assuming here, of course, a Hale and Keyser (1993) analysis of theta roles, where theta role is determined by syntactic position.

5)   There was some guy kissing the linguist (when I walked into the room)[2].

We assume that this sentence is acceptable with a non-specific reading of *some guy*,

which we take to be the canonical reading of a *there* existential sentence. In this sentence

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[2] Norvin Richards (p.c.) has suggested to us that sentences such as (5) may have a

reduced relative structure rather than the structure we drew in (6); i.e., are constructed as

in (ia) rather than (ib):

(i)   a) There was [$_{DP}$ some guy [$_{CP}$ Ø kissing the linguist]]   (Reduced Relative RR)

        b) There was [$_{vp}$ [$_{DP}$ some guy] [$_{VP}$ kissing the linguist]]   (Main Clause –MC)
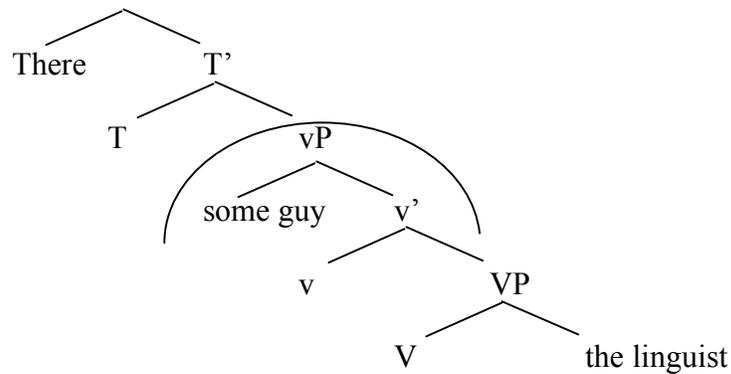

The crucial difference between the two being that in (ia) the linguist and some guy are in

different strong phases (CP and the main clause VP), as such they are not subject to the

interpretive conflict we describe above, whereas in (ib) they are in the same strong phase.

We agree with Richards that there is an ambiguity here between the main clause (MC)

(ib) and reduced relative RR (ia) readings; What is crucial to our story is that sentences

like (5) allow at least the MC reading, which is the one problematic for the interaction of

phase theory and semantic mapping. An anonymous commentator has pointed out to us

that the in the presence of a full relative clause, the reduced relative must precede it:

(ii)   a) [3 men smoking a pipe who really know what they are talking about] are about

        to enter the room

        b). *[3 men who really know what they are talking about smoking a pipe] are

        about to enter the room

Thus to restrict the structure to a MC reading, we simply need a sentence such as (iii):

(iii)   There was some guy who I met at the park kissing the linguist (MC only)

we have a clear marker of the vP edge: *some guy*. We can thus also conclude that vPs mark the top end of the nuclear scope of the clause. What is surprising here is the acceptability of the sentence given the presence of the definite *the linguist*, also presumably within the nuclear scope. Under standard assumptions about how the mapping principle works (see Diesing 1992, and much subsequent work), definites like *the linguist* should raise out of the vP in order to escape the nuclear scope. In versions of the minimalist program prior to Phase Theory, this was accomplished by covert raising of the DP.

In Phase theory, however, this option is not available. Word order considerations alone demonstrate that if we assume that surface order fixes scope and there are no covert operations[3], then it is impossible for *the linguist* to have moved outside the nuclear scope, yet have *some guy* remain inside it (6). (An arch here indicates the nuclear scope. The first phase is the vP and all it dominates.)

6)   TP

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[3] An obvious question arises as to how one deals with inverse scope interpretations of the classic sentence "Everyone loves someone." This is of course a problem for Chomsky, and not us, and we don't attempt a full answer here. However, we might speculate that this kind of quantifier interaction is more appropriately captured by some alternative means to Mayian quantifier raising (May 1980). For example, one might appeal to a cooper storage account (Cooper 1983), which is common among approaches that eschew movement such as HPSG.

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        ┌───┴───┐
     There      T'
             ┌───┴────┐
             T        vP
                  ┌────┴────┐
              some guy      v'
                         ┌───┴────┐
                         v        VP
                              ┌────┴────┐
                              V      the linguist
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When the LF for the lowest phase is created, there is no way for the linguist to move to create an appropriate variable. That is, on a theory with no covert movement, the Mapping principle is seemingly violated, since the definite DP the linguist has to be interpreted in situ, and it is within the nuclear scope.

2.   RELATIVIZED PHASING.

If each nominal has its own phase, it has it's own partial LF and its own bipartite structure for interpretation. Further those interpretive domains will not interact with the domains for other nominals in the clause.

Consider now a relativized phase analysis of the there-sentence in (4). In order to get the correct word order, we will need to assume a certain amount of head-movement occurs in English (Johnson 1991 and Lasnik 1999). More precisely, we assume that *was* is generated as the T node, and that the verb undergoes head-movement to the Aspect node and to the little v head. For reasons of clarity, we don't indicate this movement in the trees that follow.

On the theme phase, we have a typical bipartite structure. The definite NP raises out of the nuclear scope so as to create a variable. This structure is then sent to LF, where it correctly receives an interpretation where the linguist is definite.
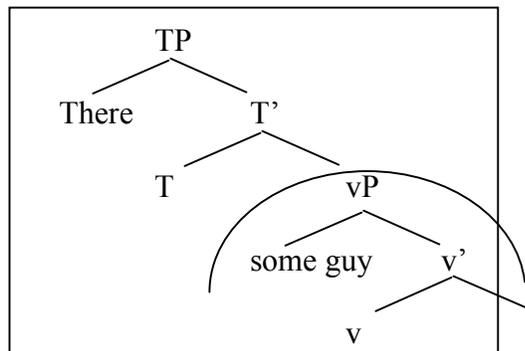
7)

AspP

the linguist   Asp'

To LF phase 1 ←   Asp   VP

V   t
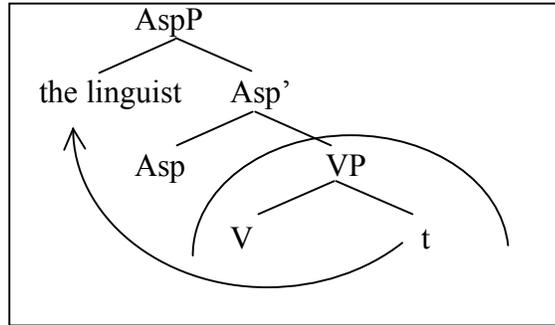
The agent phase is independent of the theme phase, and as such the non-specific some guy, can remain inside the VP (8).

8)

TP

There   T'

To LF ←   T   vP
Phase 2

some guy   v'

v

Note that although this phase contains an AspP constituent, which is dominated by the vP. The Asp constituent's LF has already been created, and thus can't be interfered with by the higher-level nuclear scope.

A similar solution applies to the adverb case: Although the adverb marks the left edge of the vP. The definite NP is interpreted on the theme phase, and thus independent of the agent's nuclear scope.

3.   CONCLUSION

In this short paper, we have pointed out a technical problem with Chomsky's definition of phase when taken in conjunction with the mapping principle. Existential sentences with a non-specific agent and a definite theme don't receive an interpretation because

there is no covert movement of the theme to create a variable in the nuclear scope. Similarly, definite themes appearing to the left of temporal adverbs should be uninterpretable.

Under a version of phasing where phases are relativized to a single argument, these problems don't arise. Each phase has its own nuclear scope, which the nominal can either appear within or not. This analysis correctly predicts that the interpretation of nominals do not necessarily affect one another.

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