Skeptical Linguistic Essays

Chapter 13 Junk Reasoning 3: '(Virtually) Conceptually Necessary'

Section 1 A Bit of Sarcasm

A good move internal to junk linguistics if you want to advance a proposal P about some NL or NL in general but have no genuine evidence or factual argument for P is to say that it is *(virtually) conceptually necessary* for P to hold. First of all, this is pretty deep sounding, the more so since nobody can be sure what <u>conceptually necessary</u> means, and it makes it seem like you really have a good reason to assume P. Second, once you have said P is necessary, even modifying it with the modifier <u>conceptually,</u> the likelihood is high of bluffing many readers since a lot of people are going to be reluctant to argue with P. After all, who wants to put themselves in the position of arguing against something *which is necessary*?[1] Hedging with <u>virtually</u> is also a fine idea because it covers you in case someone suggests that the relevant NL or all of NL is such that P doesn't hold. Almost surely though, no one is going to care that, given the meaning of <u>virtually</u> (see Chapter 12), a claim that P is 'virtually conceptually necessary' admits that it is *not* conceptually necessary. But if some negative and malevolent person, not lacking in our profession, does attack you, an excellent defense is thereby always available: you can simply observe that, since you yourself said it was only *virtually* <u>necessary,</u> of course a small-minded, petty individual could waste people's time by focusing on the trivial aspect in which it isn't.

To address any feeling that the preceding paragraph is *unfair* sarcasm, in what follows, I analyze three actual claims of 'conceptual necessity'. The discussion will show, I hope, that, while admittedly sarcastic, the initial remarks are anything but unfair. Talk of 'conceptual necessity' can be seen as a terminology whose junk linguistic function is to facilitate question-begging and the acceptance of arguably baseless claims, those for which no argument has ever been provided, and, in specific cases, claims for which no viable argument could be provided (since they are false).

Section 2 An Operation Called 'Copy'

Chomsky (1995a: 168-169) states:

(1) "Another standard assumption is that a language consists of two components: a lexicon and a computational system. The lexicon specifies the items that enter into the computational system, with their idiosyncratic properties. The computational system uses these elements to generate derivations and SDs. The derivation of a particular linguistic expression, then, involves a choice of items from the lexicon and a computation that constructs the pair of interface representations. So far we are within the domain of virtual conceptual necessity, at least if the general outlook is adopted."

These ideas are evidently quite basic to much of the work in what is called the minimalist program. No argument is offered for them, and the conceptual necessity terminology suggests that none is necessary. But this is erroneous, since inter alia as it stands (1) is question-begging about the nature of proper grammars for NLs. Built into the remarks are never justified assumptions that such grammars must be generative/computational/constructional/proof-theoretic devices. As discussed in Chapter 6, this assumption is quite gratuitous and an extant, never answered challenge to it has existed for at least twenty years. In Johnson and Postal (1980), Langendoen and Postal (1984) an informal sketch of a non-generative, model-theoretic approach to grammars was provided. Moreover, Chapter 6 argued in a new way that no NL can have a proof-theoretic grammar. The issue *here* is not which view is right. It is only that discourse like (1) builds into its very foundations a refusal to *face the alternative*, exactly the sort of refusal expected of junk linguistics. [2]

A key aspect of (1) is the idea that grammars bifurcate into two components, one a lexicon. Implicit is a view of the lexicon as in effect analogous to a computer file, which is somehow accessed to provide the basis for a construction of sentences. Aoun, Choueiri and Hornstein (2001) attempt to flesh out this picture involving the lexicon in a particular way so as to putatively bring out more clearly the sense in which sentence construction relates to the lexicon, as follows:

(2)   Aoun, Choueiri and Hornstein (2001: 310)

"We believe that Copy is similarly conceptually necessary, in the sense of following from a very uncontroversial design feature of Universal Grammar. It rests on the fact that there is a (virtually unanimously held) distinction between the lexicon and the computational system and that words are accessed from the lexicon. How does Copy follow from this fact? It is universally assumed that the atoms manipulated by the computational system come from the lexicon. How does the computational system access the lexicon? It does so by copying elements from the lexicon to the computational system. That accessing the lexicon involves copying is clear from the fact that the lexicon gets no smaller when it is accessed and words are obtained for manipulation by the syntax. If this is correct, then grammars that distinguish the lexicon from the computational system conceptually presuppose an operation like Copy. As virtually every approach to grammar assumes something like a distinction between lexicon and grammar, Copy is a 'virtually conceptually necessary' operation for much the same reason that Merge is."

Evident is that this account depends totally on the basic question begged in (1) of whether grammars are computational devices which build sentences in the way a computer program creates some output. Only the idea that they are underlies the claim that there needs to be an *operation* which accesses the lexicon and copies its entries as part of a sentence-building procedure. The authors just cited are concerned with the question 'how does the computational system access the lexicon'. But this query obviously depends on an assumption that there is such a system and that it accesses things, claims which are denied by any view which takes an NL grammar to consist of model-theoretically interpreted statements, not operations. So an inevitable aspect of any remarks about 'conceptual necessity' is that they presuppose the existence of the feature claimed to be necessary. Therefore, even if one assumed it made sense to talk about 'conceptual necessity' for aspects of NL, which I do not, one should minimally never take seriously claims that such and such feature is a conceptually necessary feature of NL in the absence of strong evidence that it is, first of all, a feature. Use of the substantively empty conceptually necessary to talk about a supposed copy operation then merely fills space which should be taken up with argument that there is such an operation. In what follows, it is shown that any claim that the existence of lexical items and phrasal combinations of them requires the existence of an operation is entirely false.

Section 3 An Operation Called 'Merge'

Another key claim of the minimalist program is that there is an operation called Merge:

(3) Chomsky (1995a: 226)

"The simplest such operation takes a pair of syntactic objects (SO_i, SO_j) and replaces them by a new combined syntactic object SO_i, SO_j. Call this operation Merge. We will return to its properties, merely noting here that the operations Select and Merge, or some close counterparts, are necessary components of any theory of natural language."

(4) Chomsky (1995a: 378)

"Something like Merge is inescapable in any languagelike system, ..."

(5) Chomsky (2000b: 101)

"First, what operations enter into this component of C_{HL}? One is indispensable in some form for any language-like system: the operation Merge, which takes two syntactic objects (α, β) and forms $K(\alpha, \beta)$ from them."

Again though, nothing motivates talk of any operation combining syntactic objects other than the question-begging that grammars should be computational/generative/proof-theoretic. The claim at the end of (3) and in (4) and (5), hedged only by talk of close counterparts, that the existence of such is a *necessary* feature of any theory of NL is not grounded in any way. So talk of necessity again fills space which should have been taken up by arguments for computational grammars and/or arguments against model-theoretic ones, the latter nowhere to be found. The junk linguistic character of the preceding is brought out most sharply by the lack of reference anywhere in such writings even to the existence of alternatives to computational grammars. And this failure is of course well-motivated. To make the model-theoretic alternative explicit would be to highlight the need for an argument favoring computational grammars and the need for responses to extant arguments against computational limitations. Since there is no sign that such arguments could be constructed, talk about 'necessity' usefully (from a junk linguistic point of view) obfuscates that actually highly controversial and in fact unsupportable assumptions are simply being advanced as items of dogma, with no intellectual foundation or justification.

Just as Aoun, Choueiri and Hornstein (2001) attempt to elaborate the putative conceptual necessity of Copy, they proceed in the same way with Merge, stating as in (6): ³

(6) Aoun, Choueiri and Hornstein (2001: 309)

"Chomsky (1993) has argued that Merge is a virtually conceptually necessary operation. In what sense is this so? Its conceptual necessity rests on its link to a very obvious feature of natural languages: sentences are composed of words that are arranged in larger phrasal structures. Given this fact, there must be some operation for composing words into phrases, and this operation is Merge. What makes Merge 'virtually conceptually necessary' is that every theory needs an operation like it in order to accommodate this obvious fact about natural language."

For convenience of reference, I break up their passage into individual sentences and clauses placed in numbered angled brackets:

(7) <1> Chomsky (1993) has argued that Merge is a virtually conceptually necessary operation.

   <2> In what sense is this so?

   <3> Its conceptual necessity rests on its link to a very obvious feature of natural languages:

   <4> sentences are composed of words that are arranged in larger phrasal structures.

   <5> Given this fact, there must be some operation for composing words into phrases, and this operation is Merge.

   <6> What makes Merge 'virtually conceptually necessary' is that every theory needs an operation like it in order to accommodate this obvious fact about natural language.

The authors' footnote 31 refers to (7) as involving *reasoning*. Accepting this, one can examine that reasoning by attempting to construe (7) as an actual formal argument. Certain conclusions are immediate. Subparts <1>, <2> and <3> could be of no relevance to the reasoning. The premiss is <4>. Sentence <5> claims that there follows from <4> at least the existence of some operation composing words into phrases = Merge, and possibly some necessity (via the <u>must</u>). Statement <6> repeats that such an operation exists and concludes that

it is conceptually necessary (hedged with _virtually)_ and that every theory needs it. So the structure of the putative argument is (8):

(8)a. Premiss   = Sentences are composed of words arranged in larger phrasal structures.

   b. Intermediate   Conclusion   = There is some operation, Merge, composing words into phrases.

   c. Ultimate Conclusion   = That operation, Merge, is virtually   conceptually necessary.

As it stands though, this putative reasoning is just non-sequiturs. No logic ever proposed permits any deduction of b. from the premiss, of c. from b, or of c. from the premiss. As it stands, no valid logical connection at all is established between the premiss and the final conclusion c. or the intermediate conclusion b.

What would have to be done to convert (8) into an actual argument? Needed are further premises relating (8a) to the existence of operations. One of these would need to be an analog of an axiom of infinity of set theory (see e.g. Stoll, 1979: 298; Partee, ter Meulen and Wall, 1993, 216). Because if there are only finitely many compositions of words in the collection, they could be listed just like the atoms of the lexicon, and no operations to form them could conceivably be required. So necessary for conversion of (8) into an argument is an additional premiss something like:

(9) The collection of phrasal combinations of words contains   infinitely many members.

But that still doesn't permit an entailment of (8b) by known logic. One would evidently need   a more articulated premiss like:

(10) The existence of an infinite collection of (phrasal) combinations of a finite number   of objects (words) entails   the   existence   an _operation_ of   object (word/phrase) combination.

With an axiom like (10) one could develop a version of the original argument in which (8b) actually followed logically.   But just to advance (10) as an axiom _without supporting argument_ is no more and no less than to make explicit a specification of the question-begging of whether NL grammars are proof-theoretic or model-theoretic.   Moreover, no serious argument for (10) could ever be advanced, since it is just false. For it is of course standard in formal studies to

specify the membership of infinite collections of complex objects (set-theoretically 'built' of simpler ones) without operations via the specification of a n axiom system together with a model-theoretic interpretation of the statements the axioms represent. [4]

It is important enough to illustrate the possibility of non-proof-theoretic characterizations of (infinite) collections that I will instantiate it for the case a t hand, by taking a trivial though infinite linguistic model, and showing how one can characterize precisely all and only the allowed combinations with no analog of a Merge operation whatever. The model, already specified in Chapter 6 , consists of the full infinite collection whose initial elements are:

(11)a. My father died.

    b. My father's father died.

    c. My father's father's father died.

    d My father's father's father's father died.

    e. My father's father's father's father's father died.

As Chapter 6 noted, this infinite collection can be schematized via the Kleene star notation as:

(12) {My + (father+'s)*+ father + die+ ed}

But for simplicity, I will regard <u>father's</u> and <u>died</u> as unanalyzed lexical atoms. So the total lexicon for the miniNL at issue in something like the terms of t h e authors being criticized is the four word set in (13):

(13) {my, father, father's, died}

I will also assume that the notion 'arranged in larger phrasal structures' of t h e quoted material simply means that the linguistic objects are *linguistic trees* in t h e standard sense defined by various well-known explicit axiom systems such a s that in Partee, ter Meulen and Wall (1993: 441-442). The task then is to define an infinite collection which includes at least one such tree for each element of t h e collection schematized by (12) and no structure for anything else For concreteness, I assume that the relevant constituent structures are defined b y the following constituency assumptions. Full sentences involve trees whose root nodes are labeled S and consist exclusively of NP + Verb. Subjects of clauses a r e defined by nodes labeled NP. Intuitive possessor phrases of the form <u>my</u> a r e defined by nodes labeled Pos[A], intuitive possessor phrases of the form <u>father's</u> a r e

defined by nodes labeled Pos^B, and there is a larger possessive constituent defined by nodes labeled Pos^C. The following ten axioms suffice to characterize the relevant collection:

(14) The language schematized in (12) consists of all and only the members of the collection {X}, such that:

   a. x ε {X} if and only if X is a linguistic tree in the sense of Partee, ter Meulen and Wall (1993: 441-442) whose nodes are a subset of $\{n_a,....n_q\}$, whose nonterminal labels are a subset of {S, NP, V, Pos^A, Pos^B, Pos^C} and whose terminal labels are those of (13), and:

   b. a node n_j is labeled 'S' if and only if it is a root node, and:

   c. a node n_j is a root if and only if there are two nonterminal nodes n_k and n_l such that n_j immediately dominates n_k and n_l, and n_k is labeled NP and n_l is labeled V, and:

   d. a node n_j is labeled V if and only if there is a terminal node n_k which (i) is immediately dominated by n_j and (ii) is labeled 'died', and:

   e. a node n_j is labeled NP if and only if there are nodes n_k and n_l such that n_j immediately dominates n_k and n_l, and n_k is labeled Pos^C and n_l is labeled N, and:

   f. a node n_j is labeled N if and only if there is a terminal node n_k which (i) is immediately dominated by n_j and (ii) is labeled 'father', and:

   g. a node n_j is labeled Pos^C if and only if there are nodes n_k and n_l such that n_j immediately dominates only nodes n_k and n_l, and n_k is labeled Pos^A and either $n_k = n_l$ or n_l is labeled Pos^B, and:

   h. a node n_j is labeled Pos^A if and only if there is a terminal node n_k which (i) is immediately dominated by n_j and (ii) is labeled 'my', and:

   i. a node n_j is labeled Pos^B if and only if either (i) there are nodes n_k and n_l such that n_j immediately dominates only nodes n_k and n_l, and either $n_k = n_l$ and there is a terminal node n_m immediately dominated by n_k and labeled 'father's' or (ii) $n_k \neq n_l$ and both n_k and n_l are labeled Pos^B, and:

   j. If n_k and n_l are sister non-terminal nodes, then n_k linearly precedes n_l if n_k is labeled NP or n_k is labeled Pos^A or n_k is labeled Pos^C.

The nonobvious aspect of these axioms is that the form <u>my</u> is the only representative of the Pos^A constituent and has no other analysis, that <u>father's</u> is the only *lexical* instantiation of Pos^B and that the recursion which renders the miniNL (denumerably) infinite is due to the fact that a node labeled Pos^B can

immediately dominate two other nodes labeled Pos^B (permitting unbounded left branching, right branching, or center embeddings for Pos^B nodes). [5] I claim that the set of strings schematized in (12) is exactly the union of the yields of the set of trees which satisfy the logical conjunction of the tree-defining axioms and the axioms of (14).
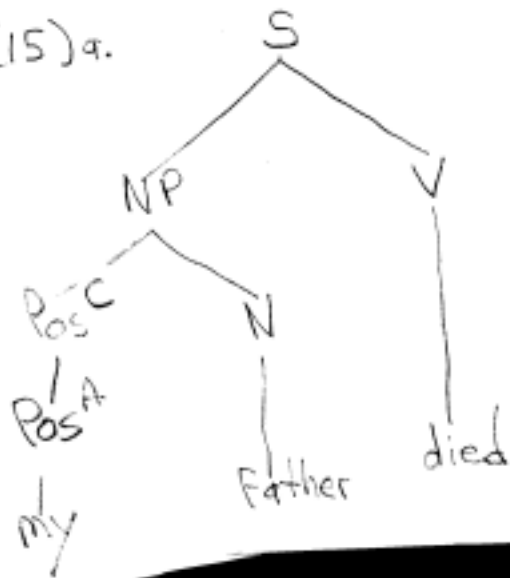
This overall axiom set is satisfied by e.g. clauses containing NPs like those in (15), but not satisfied by those containing NPs like those in (16):

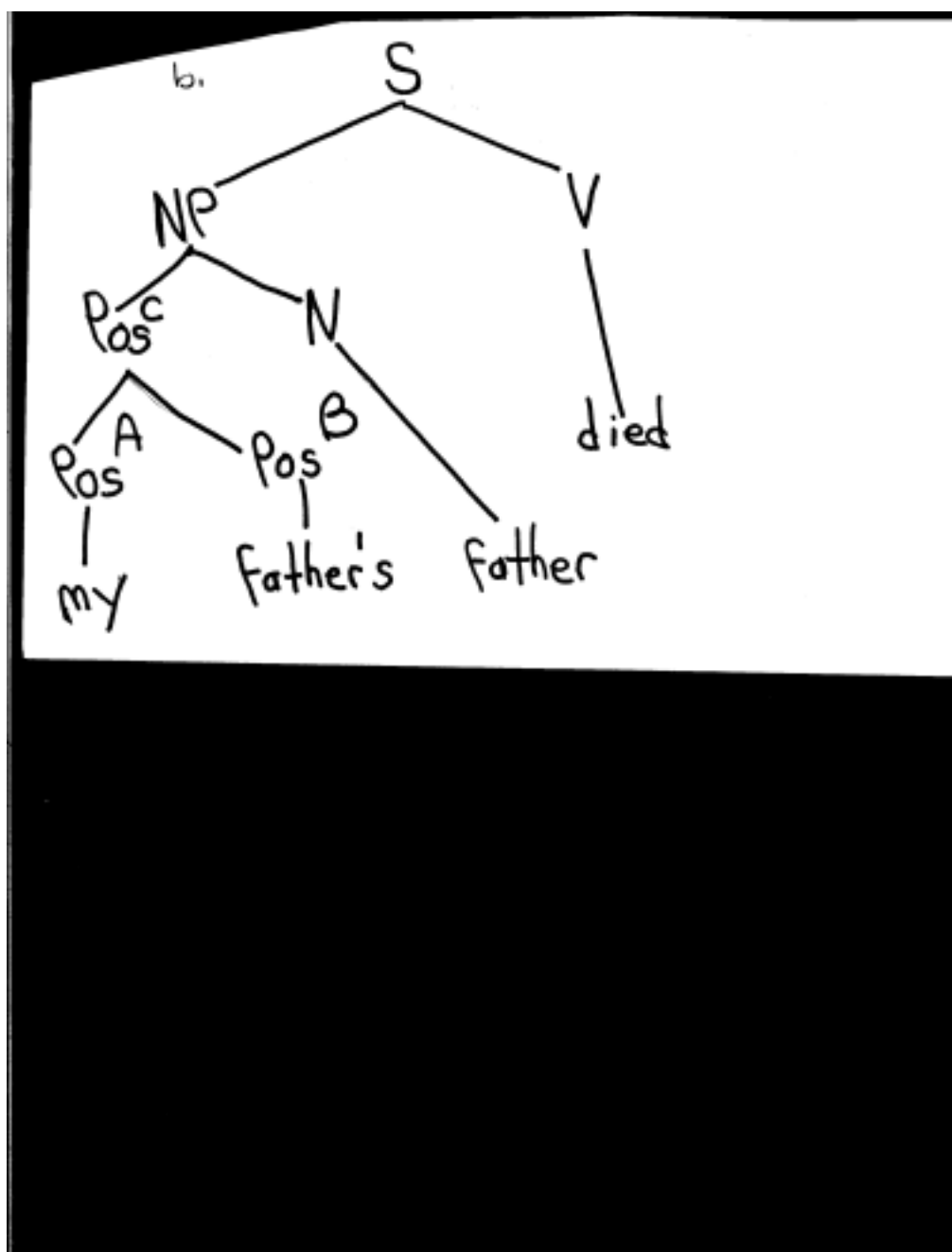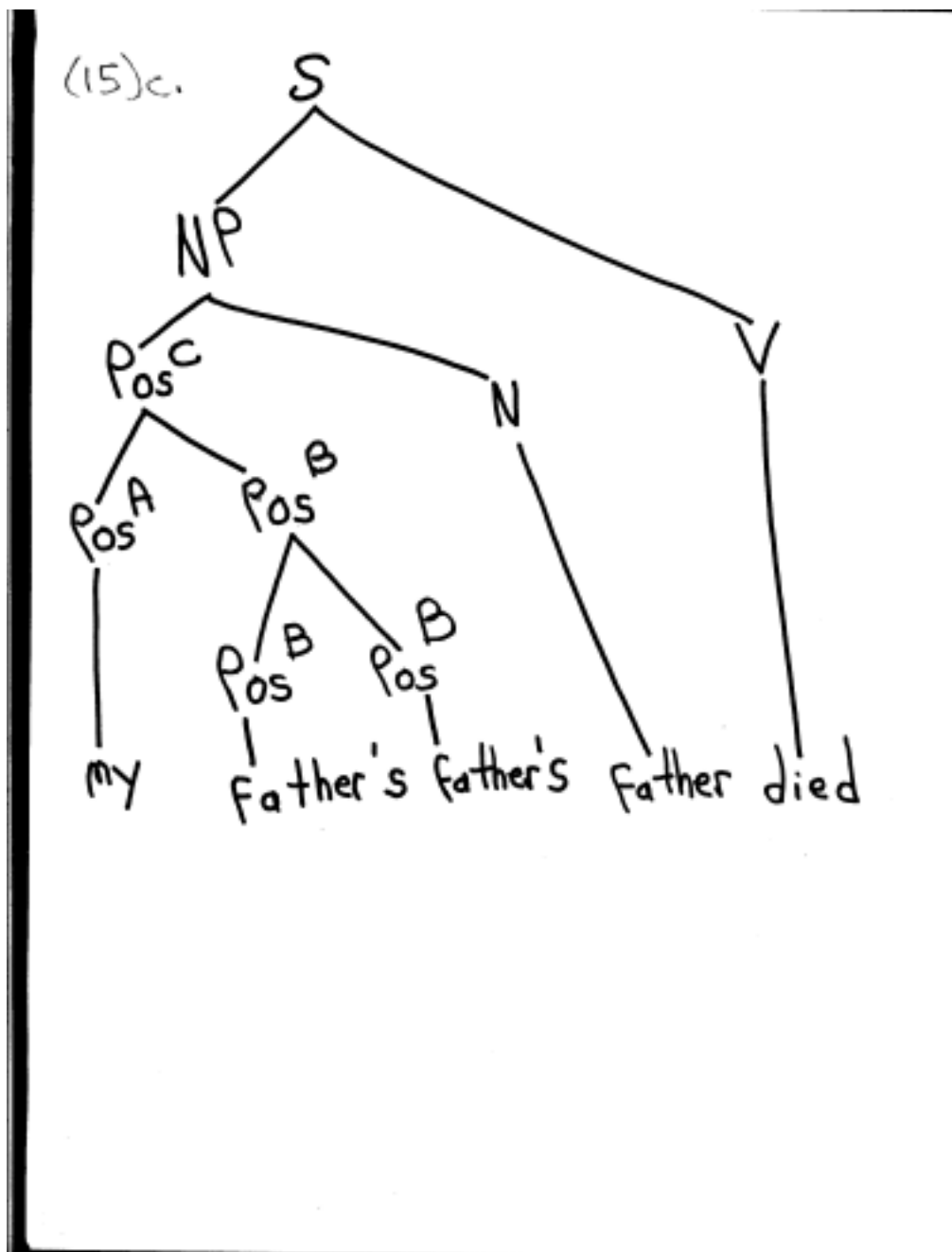(15) Good Structures, that is, Models of (14)
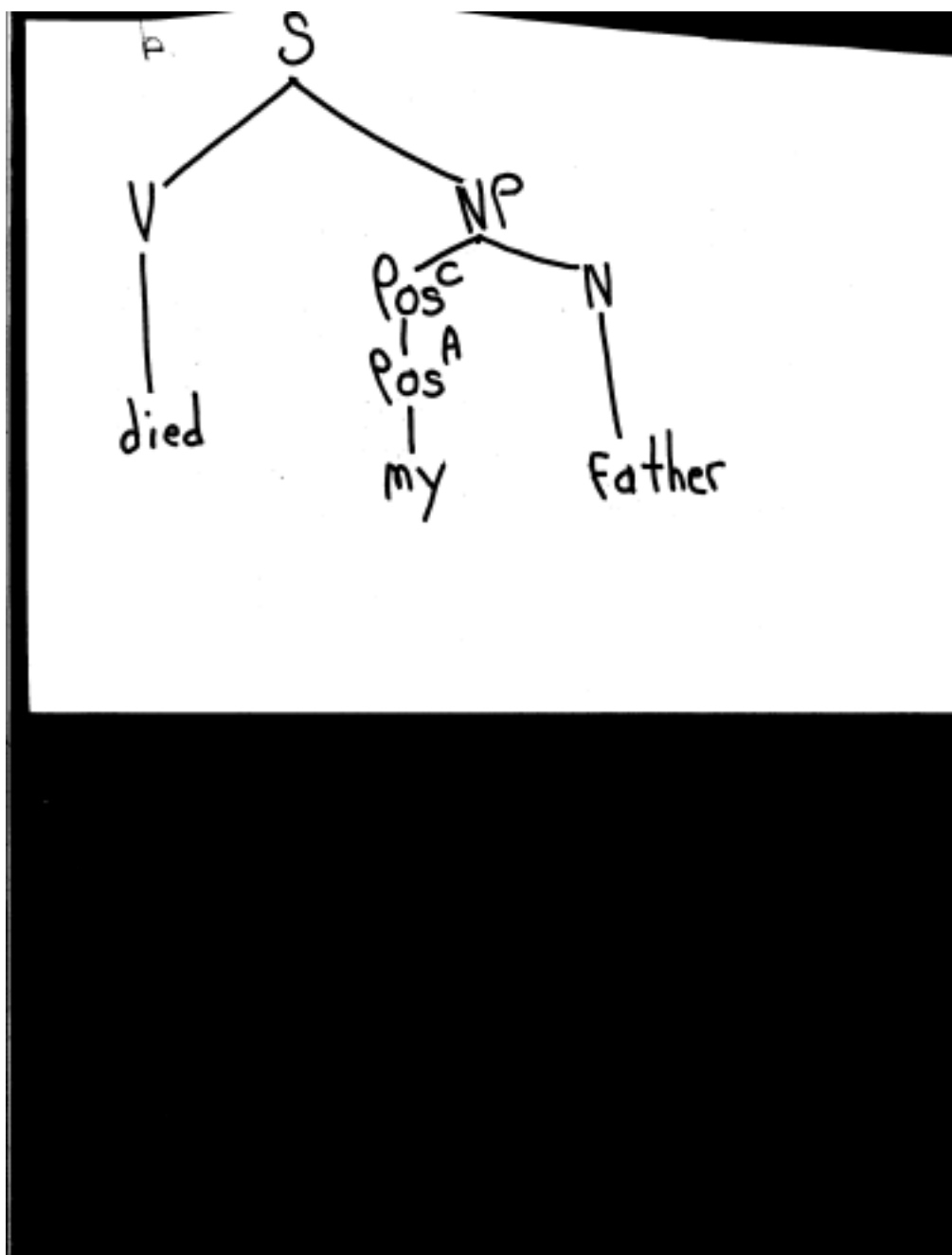
   a.

(15) a.

```
                    S
                   / \
                 /     \
               NP       V
              /  \       |
           PosC    N     |
            |      |      |
           PosA    |      |
            |      |      |
            my   Father  died
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b.

b.

c.

(15)c.

S
NP
Pos^C
Pos^A   Pos^B
Pos^B   Pos^B
N
V
my   father's father's father died

(16) Bad Structures, that is, non-Models of (14)

a.

(16)a.

b.

b.

S
├── V
│   └── died
└── NP
    ├── Pos^C
    │   └── Pos^A
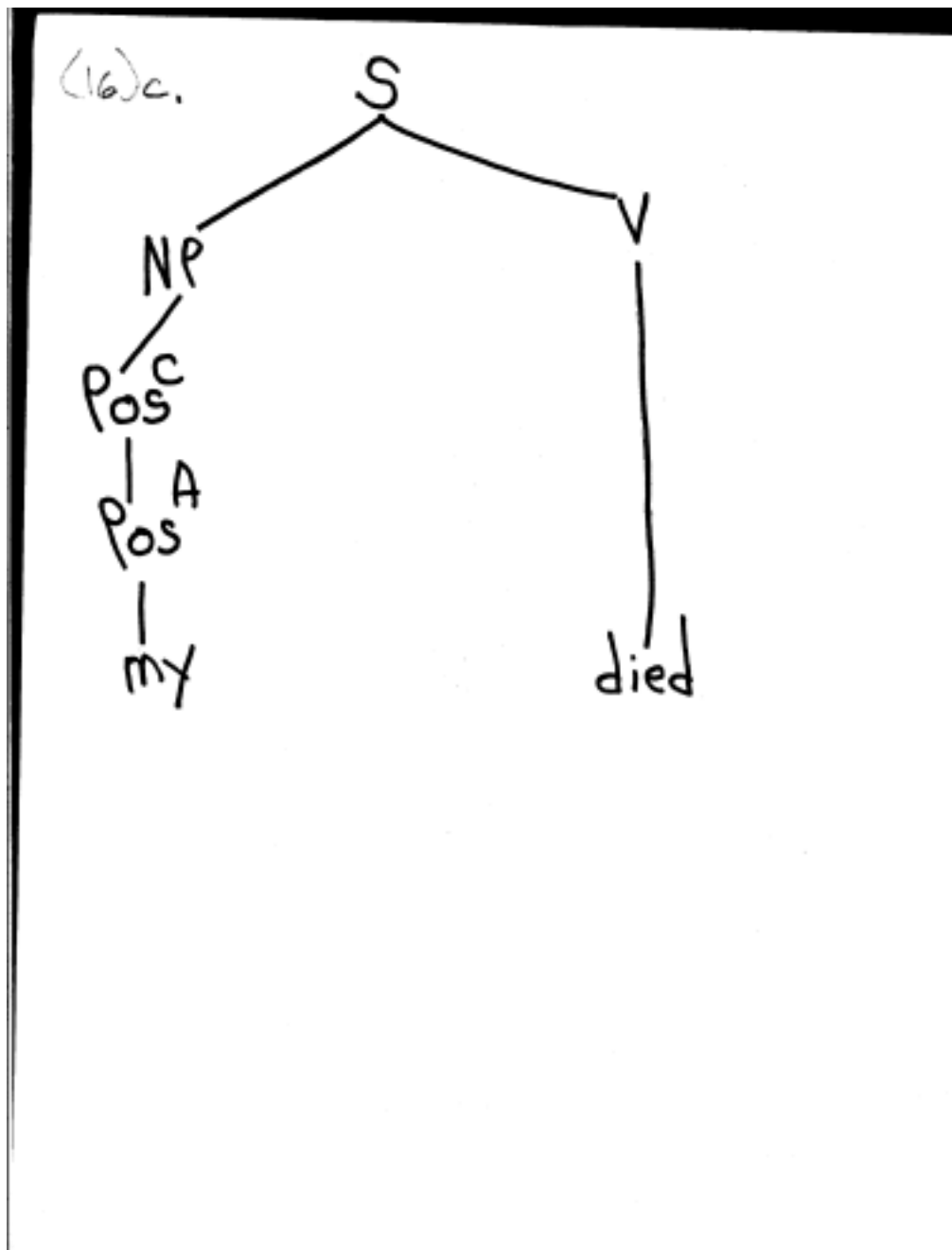   │   └── my
    └── N
        └── father

c.

(16)c.

Clearly then, one can perfectly well specify the membership of a collection, more specifically, a collection of standard linguistic trees, with no appeal to *any* operation, hence no appeal to Merge, and equally with no appeal to a lexical access operation like Copy. Claims that such operations are (virtually) conceptually necessary/inevitable/inescapable, etc. are mere propaganda which cannot cover up the fact that such operations have never been argued to serve any proper function in a linguistic theory. To show that they did, one would at

the least need an argument that proof-theoretic grammars embodying operations (like Merge, Copy, various transformations, etc.) are superior to model-theoretically interpreted grammars consisting of *statements* (like e.g. those of (14)). As far as I know though, the literature is entirely free of any such argument.

If one had six, eight, ten or a dozen solid, fact-based arguments for a position P, one would, I suggest, never be motivated to talk about P's conceptual necessity. One must then suspect (the reader can check it out) that whenever such idiom is used, one is in the realm of junk linguistics, a propaganda activity in which one seeks to promulgate or defend P *despite* the fact that one has no argument or evidence for it.

Section 4 A Property Called 'Displacement'

There is much talk in recent minimalist writings about a putative property called *displacement*, which seems to be no more than a renaming (for unknown reasons) of what was formerly called movement. This is more often cited than explained, but one does find the following:

(17) Hornstein (2001: 4)

"sentences show displacement properties in the sense that expressions pronounced in one position are interpreted in another, .."

This highly informal account is only modestly informative. The notion of being 'interpreted in a position' is hardly clear. For instance, what is a position? Is it a feature of the superficial form of sentences, of some abstract 'logical structure', or what? So, in what positions exactly are the *phonetically empty* elements, recognized en masse in the views talking about displacement, interpreted? Moreover, consider for example the DP subject in (18b), which seems to yield the same overall clausal interpretation as that in (18a):

(18)a. Each of the gorilla leaders was taller than any woman.

   b. The gorilla leaders were each taller than any woman.

The phrase the gorilla leaders in (18b) is, I guess, pronounced in subject position. Is it interpreted there, hence in a different position than the same words with the same meaning in (18a)? Further, in what position is a phrase with the meaning of the subject of (18a) interpreted in (18b)?

Setting aside such issues, the notion, whatever it means, seems too broad. So the highlighted WH phrases in (19a, b) seem to have equal claim to being interpreted in e.g. an object position of the verb _buy_:

(19)a. It is a car _which_ you won't regret agreeing to buy.

    b. It is a car _which_ years from now you won't have to ask yourself why you agreed to buy it.

And yet, given the resumptive pronoun in (19b), historically only that in (19a) has been taken to involve movement/displacement.

Consider too, paired topicalization and left dislocation cases like:

(20)a. Marsha wants that/*that you pet her gerbil.

    b. That/*[That you pet her gerbil]$_1$, Marsha wants t_1 very badly.

    c. That/*[That you pet her gerbil]$_1$, Marsha wants it$_1$ very badly.

(21)a. Marsha sought it/to outrun the grizzly/*outrunning the grizzly.

    b. Marsha considered it/outrunning the grizzly.

    c. *[Outrunning the grizzly]$_1$, Marsha should never have sought t_1/it$_1$.

    d. [Outrunning the grizzly]$_1$, Marsha should never have considered t_1/it.

The key fact is that in these cases, left dislocatees, which link to resumptive pronouns, obey the same strict categorization constraints as do topics and the same as would the same phrases in the position of the gap/resumptive pronoun. This means that if topics are taken to instantiate displacement but left dislocatees are not, 'generalizations are lost'. This argument would be very strong if it were true, as seems to be widely accepted, that strict subcategorizations of the type in question are required to be local in a very limited sense.

The problem is perhaps worse in:

(22) That two and two is seven, that, I am quite sure of.

Here, the clausal topic would seem to have a call (in this jargon) to be interpreted as the object of the preposition, a position where it could never be pronounced. But if anything has been displaced from that position in the terms at issue it would have to be <u>that.</u> Examples at least grossly parallel to (22) are common in Germanic languages, e.g. Swedish; see e.g. Andersson (1982: 35).

All this is just to indicate that the current terminological incarnation of the earlier notion of a transformationally moved phrase is not at all clear in its extension. Despite this, one reads:

(23) Chomsky (2001: 8)

"and Merge yields the property of "displacement," which is ubiquitous in language and must be captured in some manner in any theory"

(24) Chomsky (2001: 8-9, note 29)

"Recourse to any device to account for the displacement phenomena also is mistaken, unless it is independently motivated (as is internal Merge). If this is correct, then the radically simplified form of transformational grammar that has become familiar ('Move α' and its variants) is a kind of conceptual necessity, given the undeniable existence of the displacement phenomena."

(25) Hornstein (2001: 6)

"It is self-evident that natural languages manifest 'displacement' in the sense that expressions in a sentence are heard in one position yet interpreted from another."

In such declarations, one is told, problematically, that there is some NL property, displacement; but implicit and more than problematic is the additional assumption that this property represents transformational movement, an idea made explicit in (24). Once more, talk of conceptual necessity is supposed to make it seem beyond question that such *movement* is an undeniable feature of NL. But the transition from recognition of the sort of facts putatively taken in some frameworks to motivate talk of transformations to a claim that thereby one *must* recognize transformational mechanisms is a non sequitur.

The very unclarity of the notion displacement already touched on in itself renders suspicious a claim that any hypothesis about how it can be described (that is, movement) has any kind of necessity. And such suspicion should expand by orders of magnitude when it is recognized that there are, of course, a variety of nontranformational ways of describing each of the phenomena characterized in minimalist terms as displacement. To justify any claim of necessity, it would be requisite to show minimally that movement accounts are superior to available alternatives, e.g. those of HPSG, LFG, categorial grammar, etc. But attempts to do this seem to be nonexistent.

In their place, one finds only substantively empty, self-serving comments like the following:

(26) Chomsky and Lasnik (1995: 25)

"The transformational rules still exist. Such devices appear to be unavoidable in one or another form, whether taken to be operations forming derivations or relations established on representations."

That is, without argument, transformations are claimed to be unavoidable although the phenomena they are claimed to describe have for more than twenty years been described in a variety of distinct frameworks *which avoid them*, including GPSG, HPSG, LFG, APG (see Johnson and Postal, 1980), categorial grammar (see e.g. Steedman, 1996; Jacobson, 1992) and others. Again then claims of (conceptual) necessity, inevitability are found as the only justification for the arbitrary and factually unsupported decision to adopt some view, here that to invoke a framework utilizing grammatical transformations. A serious basis for the latter in the late 20th and early 21st centuries would have required substantive arguments for the superiority of transformational descriptions over those available in, inter alia, the other frameworks mentioned. [6] But in junk linguistics, it suffices to invoke a fake conceptual necessity or inevitability. One cannot fail to suspect that the reason for this is that those who invoke conceptual necessity for appeal to transformational mechanisms are aware of their inability to argue for their adoption on genuine substantive grounds. [7]

Section 5 Conceptual Necessity Based on 'Non-existent' Objects

There is a further aspect about the claims that have been considered to the effect that Copy, Merge and Move are conceptually necessary, hedged or not. The attempted justifications for this, in so far as one can discern them, hinge, as we have seen, on appeal to lexical items and their composition into larger phrases, up to sentence level phrases. Recall though that Chapter11 considered in detail the claim of Chomsky (1999: 34) that "These are not entities with some ontological status; they are introduced to simplify talk about properties of FL and L, and can be eliminated in favor of internalist notions." Here the these clearly denoted sentences.

But the *combination* of these views is incoherent independently of the incoherence of the ontological view on its own. For although Chomsky (1995a) and the works by Hornstein et. al. attempt to justify Copy and Merge, that is, parts in their terms of the FL (faculty of language) and L (the internal grammar), via appeal to the properties of words and phrases built out of them, Chomsky (1999) has declared that such words and phrases, parts of sentences or expressions in his terms, *are not real things* and can be eliminated in terms of the internalist notions. I ridiculed this view in Chapter 11. More ridicule is in order though since in context with the conceptual necessity claims, it yields a totally vicious circle. The combination of the 'not entities with some ontological status' view plus the conceptual necessity claim means that the putatively conceptually necessary features of FL/L can only be justified as such by appeal to things *claimed not to exist*. So, in such terms, e.g. Merge is putatively conceptually necessary to form phrasal combinations of words, ultimately whole sentences, which Chomsky (1999) has declared not to be real things. The appropriate analogy is to a claim on page 3 of a housing development proposal that incorporation of a special super-sensitive security system is (virtually) conceptually necessary in all new houses to ward off *ghosts* following a statement on page 2 that ghosts are not real.

At the beginning of this Chapter, I suggested that what followed would show that while the first paragraph was sarcastic it was not *unfairly* so. I think I have met that burden. And in the process I hope to have shown the versions of junk linguistics at issue in the proper light. For what could be a better (partial) characterization of the sort of play-acting at linguistics which junk linguistics represents than a documentation that it seeks to show some aspect of something is (virtually) conceptually necessary by appealing to properties of things it has claimed have no independent existence!

The perhaps jarring term play-acting just used deserves a bit of exegesis. First, it entered the linguistic literature no later than when Chomsky (1958: 39) wrote a propos of some contentless claims by B. F. Skinner: "To speak of 'conditioning' or 'bringing previously available behavior under control of a new stimulus' in such a case is just a kind of play-acting at science." Second, if, as I believe, that terminology was appropriate in the case of Skinner's empty claims, how could it not be appropriate a propos of an equally empty and deceptive claim that talk of

a feature of a putative mechanism is conceptually necessary to characterize properties of objects claimed to be a mere fa☺on de parler of that mechanism? Third, and most significantly, how is it that the same individual who at the beginning stages of the generative grammar movement he initiated was evidently sensitive to the presence of play-acting in others, now more than four decades later so freely produces discourse of comparable quality? Reflection on such a question is necessary, I would say, if one is to gain some appreciation of the scope and role of junk-linguistic activity in contemporary linguistics.

Section 6 Conclusion

I have argued repeatedly in this chapter that invocations of (virtual) conceptual necessity take their place as part of a longstanding and fundamental program of question-begging about the nature of grammars. One should confront this claim with declarations such as (27):

(27)   Chomsky (2001: 3)

"The minimalist program is the attempt to explore these questions. Its task is to examine every device (principle, idea,...) that is employed in characterizing languages to determine to what extent it can be eliminated in favor of a principled account in terms of general conditions of computational efficiency and the interface condition that the organ must satisfy for it to function at all"

Setting aside issues about whether characterizing NLs has anything to do with organs (see Chapter11 and references therein), one must recognize that the apparently laudable program of examining 'every device, principle, idea, ...that is employed in characterizing languages', a program which, so limited, *anyone* could support, has so far never led to any examination whatever of whether or not the whole idea of computational/generative/proof-theoretic (as opposed to model-theoretic) machinery is appropriate (still less, required) for NL grammars. Until this is done, and I would not advise losing any sleep waiting, all the apparent open-minded examination of notions employed in characterizing NLs is actually conceptually internal to questions which have now been begged in the tradition represented by (27) for going on fifty years.

Use of termnology like (virtually) conceptually necessary and inevitable by authors to characterize the properties of their own ideas can be viewed as an

attempt to provide certain views with a sort of priveleged status, with the goal of placing them at least rhetorically beyond the demands of serious argument or evidence. One would not be surprised then to find that the utilisers of such expressions invoke other sorts of priveleged status claims as well. Observe then:
(28) Chomsky (2001: 1)
"A stronger thesis is that the biolinguistic approach has a kind of privileged status, in that every constructive approach to human language and its use presupposes it, or something similar, at least tacitly. That too seems to me tenable, but I will not pursue the issue here."

Here work W informs its readers that the foundational position underlying W has a *privileged* status. One is not told what that means but clearly an author only says such a thing with a persuasive goal. The implication is that *opposing* positions, of course not cited, if any, need some sort of extra or special justification. The only putative reason given for this status is a mere claim, exactly as unsupported as the claim of privilege, that every 'constructive' approach to NL presupposes the author's position, or something similar, at least tacitly. Cutting through the forest of associated hedges ('constructive', 'something similar', 'tacitly') one sees only the same unsupported and false assertions analyzed in Chapter 11 that everyone accepts (must accept?) the foundational assumptions of the author. In short, it is more of the same sort of junk linguistic attempt to establish fake security for the indefensible. The underlying theme is that 'I do not have to argue for my position but you have to argue for yours, because mine is privileged'. Readers who find this sort of rhetorical move convincing should be prepared to try it on their own.

Anyone can of course claim that their position is privileged in some way. [8] But one can be sure that unless such a claim is buttressed with detailed and viable argument, one is deep into the realm of junk linguistics involving question-begging, pretense and propaganda. Real linguistics would have no need for this sort of actually desperate attempt to keep attention away from alternatives because its results would impose themselves by their truth and the evidence for them and it would not need to fear comparison with alternatives. But the junk linguist is ever insecure, aware at some level of facing not only the risk of being wrong, the everyday possibility for every genuine researcher, but the more serious danger of having the unsupported pretense on which junk linguistic work

is based revealed for what it is. Real research *should* involve some fear of error and falsehood. But for those involved in junk linguistics, the principle threat will always be from the truth.

Notes

1 In an earlier, more religious historical context, one might have said, with no less basis or content and probably similar hoped for opposition-numbing effect, that 'It is God's Will that P holds'.

2 The issue of choice between proof-theoretic and model-theoretic approaches to grammar is clouded by inadequate accounts of the history of ideas. Consider:

   (i) Chomsky (1995a: 162-163)

"I (= Chomsky: PMP) have *always* understood a generative grammar to be *nothing more* (both emphases mine: PMP) than an explicit grammar."

This is easily seen though to be an extreme falsehood; it clearly contradicts both (1c) of Chapter 6, repeated in (ii), and (iii):

   (ii) Chomsky (1959: 138)

"The weakest condition that can significantly be placed on grammars is that F be included in the class of general, unrestricted Turing machines."

   (iii) Chomsky (1957: 13)

"The grammar of L will thus be a device that generates all of the grammatical sequences of L and none of the ungrammatical ones."

Both these quoted assertions from the 1950s are evidently (grotesquely) incompatible with claim (i). A model-theoretic grammar is not a Turing machine at all and thus cannot be included in the class of such. Moreover, such a grammar does not generate anything in the technical sense, since there is no requirement that the collection it specifies is a recursively enumerable set, or even a set; see Langendoen and Postal (1984, 1985).

Claim (i) appears in a footnote, where it functions as part of a distorted reply to the correct remarks of McCawley (1988), who concluded that Chomsky's (1986a) position represented, as Chomsky (1995a: 162) quoted: "a sharp change in my (= Chomsky's: PMP) usage that gives the enterprise an entirely different cast from that of the 1960s, when the task was taken to be 'specifying the membership of a set of sentences that is identified with a language'." As (iii) shows, despite the denials, McCawley's claim was grounded in historical reality.

Chomsky (1995a: 162-163) then went on to claim: "But the characterization h e gives does not imply that 'generative' means anything more than 'explicit'; there is, furthermore, no change in usage or conception, at least for me, in this regard." But quotes (ii) and (iii) show the falsity of the claim that 'generative' was intended to denote only 'explicit', which would have been historically bizarre given that it was a technical notion from logic, and one having rich content far beyond any appeal to 'explicitness'. Thus Chomsky (1965: 9) specified: "The term 'generate' is familiar in the sense intended here in logic, particularly in Post's theory of combinatorial systems." And any technical specification of generative reveals the same point. So Partee, ter Meulen and Wall (1993: 35) specify: "A formal grammar (or simply grammar) is essentially a deductive system of axioms and rules of inference (see Chapter 8), which generates the sentences of a language as its theorems." Like any such account, this clearly brings out the specific proof-theoretic character of generative grammars, which are built out of the analogs of logical rules of inference, not out of statements, like model-theoretic grammars. But either type could be explicit.

3 The same concepts of conceptual necessity appealed to by Aoun, Choueiri and Hornstein (2001) are found in Hornstein (2001: 211-212), with, however, nothing in the way of additional tenable support.

4 According to the view being criticized, an operation, Merge, is virtually conceptually necessary. And it is part of a putative overall computational system, that is, one which, by definition, characterizes a recursively enumerable set of objects. Given the latter, if, contrary to fact, the existence of phrasal combinations of words over an infinite range really rendered Merge conceptually necessary, this would have important consequences for *mathematics*.

For it is of course well-known, as touched on in Chapter 6, that any recursively enumerable set can be coded as a set of numbers via the device of gödel numbering. Therefore, the output of the computational procedure claimed to be the heart of the minimalist notion of grammar can be regarded as a recursively enumerable set of numbers. If it were true that specification of such a set entailed the existence of an operation (e.g. Merge), it would follow that *number theory* requires analogous operations to e.g. specify the collection of natural numbers, normally specified via Peano's Axioms. But of course number theory

invokes no analog of Merge at all. Is this basic mathematical theory, developed over millenia by multitudes of history's finest mathematicians, thereby inadequate? The absurdity of such a consequence gives some measure of the lack of seriousness of the claim of Merge's conceptual necessity.

5   See Chomsky (1965: 12) for the concepts *left-branching*, etc.

6   One should note that in the early stages of generative grammar, say from 1955-1978, to justify appeal to a transformational mechanism for the description of some phenomenon Q, it sufficed to argue (i) that Q was a syntactic phenomenon and (ii) that a transformational description of Q was superior to a phrase structural one, these two classes of devices arguably being the only syntactic ones available. The current situation though bears no relation to that one.

7   The question begging involved in current talk about displacement is by no means limited to the few authors cited here in this connection. It is, for instance, built into the very structure of a proposed October, 2002 conference Triggers to be held at Tilburg University, The Netherlands. Its call (http://kubnw8.kub.nl/~breitbar/triggers/index.html A.Breitbarth, A.Breitbarth@kub.nl) is reproduced here in full:

"CONFERENCE ANNOUNCEMENT
Phrase structure and displacement are prominent universal properties of natural language. While some approaches have tried to eliminate transformational operations, displacement continues to play a crucial role in derivational theories such as Minimalism. Concentrating on displacement we can ask ourselves two different questions:
(i) Why does it exist in human language? and
(ii) How is it implemented?
The latter question has been discussed frequently but not always exhaustively. Chomsky (1986) proposed that movement is governed by a condition of Last Resort: Move-alpha is applied only when a failure to apply it will lead to a structure that violates general conditions and causes a derivation to crash. For example, the Case feature of a DP would act as a trigger for the movement of the DP, which, unmoved, would violate the Case Filter. Such assumptions raise the following very general question: what are the possible triggers of movement? Pursuing the above line of inquiry, Chomsky (1995, 2001a,b,c) proposes more generally that formal/morphosyntactic features are required to implement

movement. These features include the phi-features of Infl and v, the Case features of a DP, and the EPP feature of Comp, Infl, and v. But apart from these cases of (internal) Merge/displacement that are triggered by the Case-Agreement and Periphery systems (corresponding to the distinction between A-movement and A-bar-movement), there are several other categories of movement that do not seem to be similarly triggered by morphosyntactic imperfections (that is, uninterpretable features) in any obvious way. These phenomena include:* covert displacement (does it exist or not?) * differences in quantifier scope - assuming that QR is a core operation in natural language, how is it triggered? Is it a (non-local) interface property or some local semantic feature which forces covert action at the relevant phase? * cases of optionality as in the case of Scrambling * cases of partial Wh-movement in languages like German or Hungarian* cases of multiple Wh-movement in languages like Bulgarian * Stylistic Fronting in Scandinavian and other cases of inversion It is an empirical question whether all possible triggers for word order phenomena are morphosyntactic in nature. Very often, extra-syntactic factors such as discourse or information structure (LF interface conditions) or prosodic properties (PF interface conditions) seem to play an important role as well. As an alternative to the feature elimination requirement ('drag chains'), it is possible that output conditions require the presence or absence of a certain element in certain context ('push chains'). There is some diversity in the different approaches regarding the locus of such influences (within narrow syntax, at the interfaces, or even beyond). Summing up, the following questions arise:

1. Are all movement operations triggered? (This question extends in particular to various movements needed to implement the kind of analyses required by Kayne's LCA)

2. Is external Merge also subject to triggering and if so, how do these triggers differ from the ones found operative in internal Merge?

3. Are all triggers for displacement operations of a uniform nature or are there a range of mechanisms allowed by UG?

4. Can prosodic properties of a phrase trigger movement?

5. Can requirements of discourse or information structure trigger movement?

6. Can quantifier scope and other semantic properties trigger movement?

There is a strongly felt need to clarify such issues. By organizing this conference, we hope to provide a forum to work towards settling at least some of these

questions."

Although the authors of this document observe correctly that some approaches to syntax do not appeal to transformational devices, the entire outlined structure of the conference ignores this and takes displacement as a fact; a key question is then why it exists. But evidently no aspect of the conference will be devoted to arguing that transformational movement exists or with countering arguments that it does not.

8 One might ask whether the *present* author's invocation of the notion of *best theory* in Postal (1972b) was an earlier illegitimate appeal to privilege of the sort just criticized. I would suggest not. The reasons are that (i) the claim of privilege, that is, that one type of framework was inherently superior to another, was buttressed by argument, which it was the whole purpose of the article to elaborate; (ii) the overall claim had the form of a standard Occam's Razor simplicity argument. And it is universally acknowledged that if one theoretical system S_1 is a proper subset of another S_2 but has the same factual implications, S_1 is superior to S_2, that is, is privileged. These remarks are entirely independent of any issues concerning the *validity* or *soundness* of the purported Occam's Razor argument.