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Synchronic and diachronic microvariation in English *do*

Abstract

In this paper it is shown how an account of the English auxiliary system that has been independently proposed to deal with problems in standard analyses also provides a natural treatment of microvariation among varieties of English. The phenomenon is the use of nonemphatic periphrastic/dummy *do* in positive declaratives (*Mary did visit her brother*), here called "spurious *do*," as found most famously in the English of the 1500s, but attested also in some modern dialects and registers and in child English, and closely related to the use of *tun* in colloquial German. The framework adopted dispenses with two standard but problematic claims about English INFL: the exceptional ability of *be* and *have* to raise to Tense, even across negation, and the existence of PF affix lowering. Instead it is claimed that English has overt verb raising and that finite *be*/*have* are base-generated in INFL, above negation; independent support from the latter is provided from VP ellipsis. The analysis of *do* is that it is an allomorph of the indicative value of the Mood head, whose other indicative allomorph is zero. Mood is above Tense and is where modals are base-generated. It is shown that this system cannot block the generation of spurious *do*, because this would require transderivational comparison. Thus, the narrow syntax makes spurious *do* freely available. Languages and dialects differ on the extent to which they make use of this option. All else equal, it should be dispreferred because it involves one more word than its counterpart without *do*, but numerous advantages, including processing and rhetorical benefits, can outweigh this. The conclusion is that *do* cannot be analyzed as a strictly last-resort device in the way proposed in Chomsky's classic analysis.

Keywords:

do-support, INFL, auxiliaries, modals, periphrastic *tun*, Germanic, mood, VP-ellipsis, Sigma

Synchronic and diachronic microvariation in English *do*

In this paper I show how an account of the English auxiliary system that has been independently proposed to deal with certain problems in standard analyses also provides a natural treatment of a range of microvariation among varieties of English. The phenomenon that will be in focus is the use of periphrastic/dummy *do* in positive declaratives, as found most famously in the English of the 1500s, but attested also in some modern dialects and registers and closely related to the use of *tun* in colloquial German.

1. Spurious *do*

1.1. Essential data

The characterization of the distribution of dummy *do* in Modern Standard English, starting with Chomsky's (1955) classic treatment, has in most accounts had a last resort nature. That is, there are a set of circumstances under which *do* must appear in order to rescue an otherwise ill-formed structure (e.g., one in which a Tense morpheme cannot affix to any valid host). I refer to these collectively as the "standard triggers" for *do*-support: negatives, questions, and emphatics. When none of the standard triggers are present, *do* need not, and ipso facto cannot, appear. The data in this section show that this is not a viable analysis for *do*-support across the range of varieties of English and Germanic. The reason is that in several of these varieties we find free variation between (counterparts of) sentences like (1a) and (1b), with the latter lacking any special prosody, i.e. *do* is phonologically unstressed and semantically nonemphatic.

(1) a. Mary visited her brother.

b. Mary did visit her brother.

I refer to the positive declarative usage in (1b) as "spurious *do*," as a shorthand for the absence of any of the standard triggers for *do*-support listed above.

Spurious *do* is attested for English throughout the 16th century and lasted into the 18th (Ellegård, 1953; Visser, 1969; Warner, 1993).[1] The paradigm in (1) has persisted to this day in South-Western dialects of British English, for which Klemola (1998) explicitly argues that there is genuine free variation in the counterpart to (1) in these dialects.[2] Also, Quirk et al.

(1985 §3.37) note, "In some legal documents in archaic style, the auxiliary *do* construction is used merely as an alternative to the simple present or past tense," giving example (2).

(2) I, the undersigned, being of sound mind, do this day hereby bequeath …

In fact, current-day speakers of Standard English share the intuition that examples (3a–c) are well-formed in the context and register evoked by their content.

(3) a. I, John Hancock, do solemnly swear to uphold the duties of the office of President…

b. We, the employees of Unity Airlines, do hereby announce our intention to …

c. Your Honour, we intend to prove that the defendant, John Doe, did willfully and without regard for public safety drive a motorcycle through the front yard of the plaintiff's home…

Another place where spurious *do* is attested today is in child English. Many researchers have documented uses of *do* that, at least according to the child's prosody, were not invoked by any of the standard triggers, as in (4) (Roeper, 1991; Hollebrandse and Roeper, 1996; Allen, 1995; Zukowski, 1996; Bohnacker, 1999). Crucially, these errors are not part of a more general pattern in which *do* is widely overused, they are specific to contexts like (1b); that is, utterances like (5) are not attested. On the hypothesis that child grammars must conform to UG, this is further evidence that spurious *do* is a possibility in human languages that are otherwise fairly similar to (adult) English.

(4) a. A witch did look like it has slippers.

b. I did wear Bea's helmet

c. I do have juice in my cup.

d. Who did take this off?

e. I did paint this one and I did paint this one…and I did paint this one.

f. You did make my bed a little fan. (Tim 2;11–3;0, Roeper corpus)

(5) a. #He does ran.

b. #He did runs.

c. #It does is.

d. #John doesn't can play alto-sax.

The same alternation that is documented for 16th century English emerged in German around the same time and is robustly attested to this day in the spoken language all over Germany (6) (despite prescriptive pressure), as well as in Swiss-German, far-flung German dialects, and Dutch dialects (Erb, 1995, 2001). The examples of spurious *tun* in (7) are from Bärndütsch (Schönenberger and Penner, 1995, p. 318).

(6) a. Sie liest ein Buch.
she reads a book

b. Sie tut ein Buch lesen.
she does a book read

(7) a. Ds Ching tuet sech scho säuber aalege.
the child does self already independently get-dressed
'The child already gets dressed by himself.'

b. D'Muetter tuet sech überlege, was si wott choufe.
the-mother does self think what she wants buy
'The mother thinks about what she wants to buy.'

The parallels between (6) and (1) are so strong that it is reasonable to assume that the properties of spurious *tun* 'do' would also hold in at least some dialects with spurious *do*, and therefore my account of the latter will be guided by, and designed to account for, these properties.

Importantly for maintaining this parallel, spurious *tun* is not limited to V2 clauses: Erb documents it in V-final embedded clauses (as well as various V1 constructions), so it is not critically tied to the C position. One difference between English and German is of course that since German has verb raising, there is no context where dummy *tun* is obligatory (except in some fronting/clefting constructions)—there is always the alternative of raising the main verb to INFL. Aside from that, the correspondences are many. Both *do* and *tun* have homophonous main verb counterparts that differ from the auxiliary use in not allowing stative interpretations. Spurious *tun* is like dummy *do* in being restricted to finite clauses, despite the fact that it has an infinitival form; this is striking since in English *do* generally patterns with modals in being unavailable in nonfinite environments (see section 2.5), whereas many German modals are systematically possible in such environments. I believe that the extent of the parallels between

spurious *tun* and spurious *do* (including restrictions discussed in section 1.3 below) is too great to be coincidental. I therefore use data from present-day spurious *tun* to establish some patterns that most probably held of 16th century spurious *do* but are not verifiable from the textual record.

1.2. Free variation?

The central claim that I set out to account for is that alternations of the type (1a) versus (1b) represent cases of genuine free variation. There are some obvious potential alternatives that should be considered, but that Erb (2001) shows do not go through for *tun*. For instance, one might attempt to argue that (1a)/(1b) and (6a)/(6b) come from different dialects and that all the speakers in question are bi-dialectal (e.g., Watanabe, 1994). Erb argues against this on the grounds that the construction has been attested in all German speech communities where it has been seriously looked for, including those that have lacked close contact with Germany for centuries, e.g. the Pennsylvania Dutch. We would have to be dealing, if anything, with a sociolect lacking geographical boundaries, but this would still miss the fact that apparently anyone who speaks German cannot help but have the spurious *tun* option in their grammars, as witnessed also by the fact that it continues to be actively proscribed in schools; parsimony leads us instead to pursue a single grammar approach. The situation seems to have been similar in England in the 16th century, from what we can tell: according to Roberts (1993), spurious *do* is found in the work of all authors writing at that time.

One might also suggest that (1a)/(1b) and (6a)/(6b) are not truly synonymous, such that *did* in (1b), for example, carries some additional meaning that makes it distinct from (1a). There certainly are dialects where that is (or was) true (e.g. Southern Hiberno-English today uses (1b) with a habitual meaning), but it has been compellingly argued that there are many dialects in which genuine synonymy holds. (See Note 1 and Lightfoot (1991) concerning Early Modern English.) Erb (2001) shows in detail that although there may be statistical tendencies as to where spurious *tun* is more likely to be used in German, there are no hard and fast rules on the semantics of the main verbs it co-occurs with, and no uniform semantics contributed by it. This is not to claim that a speaker's choice on a given occasion is random; Erb (2001) and Lötscher (1983) summarize several plausible factors that play into this choice for German,

including how obscure the conjugated form of the main verb would be. The point is that nothing in the syntax or semantics itself distinguishes the synthetic and periphrastic variants.

1.3. Restrictions on distribution

An important restriction on dummy *do*/*tun* is that they cannot co-occur with the verbs *sein*/*be,* auxiliary *haben*/*have*, or with modals.[3] Samples of relevant data are found in (8), from Erb (2001) for German, (9), from Lötscher (1983) for Swiss German. The historical observation is reported by Lightfoot (1979) and Warner (1993), and the Southwestern English English restriction by Klemola (1998, p. 41). Standard English, even in the contexts where it normally demands *do*-support, shows the same co-occurrence restrictions (10).

(8) a. ??/*Ich tue es gesehen haben.

I do it seen have

('I have seen it')

b. ??/*Du tust dort gewesen sein.

you do there been be

('You have been there.')

(9) *Mer tüend welle ässe.

we do want eat

('We want to eat.')

(10) a. *Do you be feeling all right? (cf. Are you feeling all right?)

b. *I don't have seen Jane. (cf. I haven't seen Jane.)

c. *Do you be a singer? (cf. Are you a singer?)

d. *What does he will buy? (cf. What will he buy?)

There are some isolated dialectal exceptions to the ban on using the dummy auxiliary, but in the cases I am aware of it is clear that either *do* or *be* has a different status from that of the standard language. For example, where *do* carries habitual meaning, as in Southern Hiberno-English,[4] the following are possible:

(11) a. He does be here every Friday.

b. They do be angry.

Here *do* is behaving like *will* or any other modal. And in Belfast and other Northern Hiberno-English dialects, *be* is treated as a regularly inflected main verb that carries habitual meaning, so it is not surprising to find it co-occurring with *do*:

(12) a. He bes here every Friday.

b. Does he be here every Friday?

c. *Bes he here every Friday?

(13) a. He doesn't be here every Friday.

b. *He bes not here every Friday.

(14) He DOES be here every Friday.

Something similar is true in Black English (AAE), though main verb inflection is generally null and so cannot provide independent evidence for the status of *be* (Green, 1993; Déchaine, 1993).

(15) a. Bob doesn't be angry.

'Bob isn't usually angry.'

b. Sue DO be reading books during class!

'Sue is SO usually reading books during class.'

Similarly for child English, although Roeper (1991) reports individual children as saying *This didn't be colored* ('This wasn't colored'), *Does the fire be on every day?*, *Didn't be mad*, etc., his conjecture is that this is because these children still think *be* inflects like a main verb and hence does not raise; some children in his study were saying things like *He bes here*. Anecdotally, Denison (1993) reports that his child at age 5 was still saying *Did you be quiet?* and *I didn't be naughty*; I would speculate that *be quiet* and *be naughty* were learned as main verbs, having been heard almost exclusively in the forms *Be quiet!* and *Don't be naughty!* Thus, the generalization to which I know of no clear exceptions is that when *do* is semantically a true dummy and *be* carries only its pure grammatical meaning, they cannot co-occur.

The one pandialectal footnote to this generalization is the case of imperatives:

(16) a. Do not/Don't be late!

b. Do be careful!

(17) a. *Ben't late! *Be not late!

b. *Not be late!

To explain this I essentially follow Emonds (1994). The idea is that (16) reflects a sort of paradigm gap: *be* has no raised imperative form (17a), perhaps because the imperative functional material consumes the ability of *be* to be merged above Σ. In the grammatical positive imperative *Be careful!*, *be* must be below Σ, i.e. unraised.[5] (What Emonds means by a paradigm gap is that there is no form of the verb *be* that can be both above Σ and an imperative.) Thus, unlike in finite clauses, *be* cannot act as an INFL supporter in imperatives, but as (17b) shows, imperatives still contain some INFL material that requires support if it is blocked from combining with the main verb. Only in that case, when there is no way to realize the structure using just a form of *be*, can *do* and *be* co-occur. I take this as evidence that the ban on such co-occurrence that applies everywhere outside imperatives should derive from a competition for limited space above Σ.

In summary, the generalizations we wish to account for are these. First, spurious *do*/*tun* can be in free variation with tensed verbs within one grammar of a single speaker, except with the auxiliaries, copula, and modals. This represents a sort of intragrammatical microvariation. Second, there is diachronic and dialectal variation with regard to whether and to what extent the spurious *do*/*tun* option can be exercised. Around 1550 it was rampant in English, as is its counterpart in many present-day German dialects, but in modern standard English and High German it is extremely restricted.

2. Theoretical Framework

2.1. Motivation

The theory that yields an account of these phenomena, developed in Schütze (1997, 2001b, 2002), had as its original motivation an unrelated goal, namely to provide a more principled alternative to popularly accepted views on two apparently odd properties of the English auxiliary system. For concreteness I take the system in Bobaljik (1994) as a representative of these views because it is worked out very explicitly, but almost all the points that follow would apply to any other extant model in the Chomskyan tradition.

The first issue I addressed in that earlier work concerns why and how the finite auxiliary and copular *be* and finite auxiliary *have*[6] surface above negation and undergo subject-auxiliary inversion (SAI), while tensed main verbs do not. The received wisdom has been that *have* and *be* are *sui generis* in two respects: in crossing negation, these verbs are apparently allowed to violate the Head Movement Constraint (Travis, 1984), and whether negation is present or not, they move to a higher position than other finite verbs in English do, uniting with INFL morphology syntactically. Attempts to justify these quirks have often involved claiming that English *not* is not a head, for the former, and that the semantic lightness of these verbs drives them to move overtly to a position to which contentful verbs need only move covertly. Neither of these claims is appealing.

For one thing, there is no independent motivation for the claim that semantic lightness can force overt movement, and it is doubtful that such a generalization can be maintained. Emonds (1994) argues against Roberts's (1985) proposal that assigning no theta-roles is the property that makes a verb raise overtly. He points out that *get* and *become* are essentially inchoatives of *be* (and of uses of *have* in which it undergoes raising in British English), thus having the same theta-structure, but these verbs cannot raise overtly to INFL.

For another, *not* displays various head-like behaviours. One of these behaviours is licensing VP ellipsis (Lobeck, 1995; Potsdam, 1998). Lobeck states, "evidence from ellipsis in negative, tensed clauses supports the analysis of *not* as a head, NEG, [rather than a specifier,] as it can be argued to license and identify empty VP under the Generalized [Government Transparency Corollary]" (p. 154). She provides the data in (18) as evidence; Potsdam furthers the case with subjunctive examples like (19), a minimal pair where *not* must be what saves the ellipsis.

(18) a. *John is leaving and Mary's *e* too.

b. John is leaving but Mary's not *e*.

(19) a. *It's OK if Mary doesn't eat anything before the show, but it's important that Bill ~~eat something~~.

b. It's OK if Mary eats something before the show, but it's important that Bill not ~~eat anything~~.

A second head-like behaviour of *not* is its ability to raise to C along with a modal (in certain registers), as in (20), when a heavy subject would otherwise intervene.

(20) a. Should not the power of a totalitarian government to psychologically mutilate a child despite any objection by the child's parent be deemed a sufficient reason for an evidentiary hearing into what would be in the child's best interests?

b. Have not the tens of thousands of words we have written on city planning sunk in?

[examples from the Web]

The second property of standard accounts of English auxiliaries that I was attempting to dispense with in earlier work was the need to posit affix-lowering/hopping in the PF branch to get inflection onto main verbs, because this process has to have a very syntactic-looking restriction on it, namely that it is blocked by intervening heads (Σ heads including Neg, as elaborated below) but not other overt material (e.g. adverbs), as in the minimal pair **John not runs* vs. *John never runs*. At the same time, the fact that this process involves lowering looks very un-syntactic. Furthermore, in this system finite main verbs are inflected by one method (PF affix lowering), finite auxiliaries by a different method (overt syntactic head raising), and yet this distinction does not correlate with any morphological property; indeed the very same word can be formed both ways (e.g. main vs. auxiliary *has, had*).

A lexicalist theory such as in Chomsky (1993) (where finite forms can be drawn complete from the lexicon and spelt out before their tense features have been checked) allows both overt and covert feature checking and obliterates these problems, but it still fails to address the differing effects that Neg has on main verbs versus auxiliaries. More importantly, however, the lexicalist system seems to make wrong empirical predictions. As Bobaljik (1994) points out, on a standard view where VP-ellipsis is PF-nonpronunciation, it is surprising for Chomsky that VP-ellipsis triggers *do*-support. This is because main verbs in English are pronounced as inflected by virtue of their own phi-features, which are checked against the phi-features of INFL at LF; the word form itself emerges complete from the lexicon. The phi-features in INFL are never pronounced in a sentence with a finite main verb, otherwise we would say **John does (always) runs*. Marking the VP as unpronounced should have no effect on INFL, so those features should remain unpronounced after VP-ellipsis, and there should be

no trigger for *do*-support. It should be fine to say **Mary doesn't like beer, but John ~~likes beer~~*.

2.2. Proposal: English finite main verbs raise to T

In light of the problems just discussed, I propose instead a naively straightforward scheme, and argue that its prima facie unviability is only apparent. The idea is that English main verbs combine with INFL morphemes by overt head raising of the verb, as has been assumed for languages like French, and there is no INFL lowering or other PF rearrangement process needed to unite verbs with inflections in English. There already is abundant evidence that English main verbs undergo some amount of overt raising (e.g., Pesetsky, 1989; Costa, 1996; Johnson, 1991; Runner, 1995; Bowers, 1993; Koizumi, 1993; Lasnik, 1999; Harley and Noyer, 1998; Blight, 1997, 1999). However, a trio of problems stem from the fact that English does not behave like French in the following respects.

• First, main verbs do not inflect under sentential negation in English. I propose that this is because Neg is not a clitic of the appropriate type in English and therefore blocks raising of the verb to T(ense), necessitating *do*-support. Crucially, blocking V raising from below does not exclude Neg from itself raising to a higher position to undergo SAI, as is regularly possible with *n't* and under special circumstances even with *not*, e.g. in (20). In French, the Neg morpheme (*ne*) is a clitic that can be picked up as V moves through Neg to T, so raising is not blocked.[7] Thus, the vital difference between English and French Neg is that English Neg does not allow a verb to raise to it.

• Second, inflected main verbs in English appear to be lower than their French counterparts, on the basis of ordering with respect to adverbs like *often*/*souvent* (Emonds, 1976; Pollock, 1989). I assume that this is true, but it does not show that English main verbs fail to move to T, it simply shows that French main verbs move higher than those in English. There may be a large number of functional heads between VP and CP (cf. Cinque, 1999), several of which could be above TP; French finite verb raising could target one of the latter.

• Third, inflected main verbs do not undergo SAI in English while they do in French, e.g. **Goes he?* vs. *Va-t-il?* I take this to mean that the head that must move to C in SAI is not T but some higher head, which I will refer to as M, for reasons soon to become apparent. Of course,

the verbs that do undergo SAI in English bear tense marking; that is because T itself has raised to M prior to M's raising to C in those cases. But the sequence of operations V-to-T followed by T-to-M and then M-to-C must be ruled out in English. This is accomplished as follows. The movement of certain heads must be driven by the need for an affix to have a host, whether that affix is the moving head or the target of movement. In this instance, a Tense affix can raise to M in order to find a host, or a V can raise to T in order for T to have a host. But once V+T has been formed, the resulting complex head contains no affix seeking a host. If M itself is never an affix in English, then the movement that we are seeking to ban, namely V+T raising to M, has no affixation requirement to motivate it. This makes it impossible. French differs because M is an affix in French.

2.3. Proposal: Finite auxiliaries are inserted high

Another important distinction among the heads and positions in the functional structure of the clause that we will need to refer to is made with respect to the head in which sentential negation *not* is generated (Gleitman, 1965; Laka, 1990). I follow common practice in referring to this head as Σ, and situate it (rather standardly) just below T. In addition to *not*/*n't*, Σ can host overt expressions of positive polarity, as in *John does TOO/SO know Arabic*, and a segmentally empty morpheme that induces prosodic emphasis, call it $Ø_{emph}$, as in *Mary DOES like pineapple!* All these items trigger *do*-support in English; the only value of Σ that does not is nonemphatic positive polarity, $Ø_{pos}$. I assume that this last element is a clitic, analogous to French *ne*, that can be picked up by a verb on its way to a higher position.

I can now state the second important departure I take from standard accounts of English INFL, which follows a proposal developed by Ouhalla (1990, 1991). He suggests that rather than moving to a high position (by crossing Σ), finite *be* and auxiliary *have* are inserted/generated/merged above Σ to begin with. (Lobeck (1999) also appeals to this idea.) In this subsection I argue that VP ellipsis provides independent support for this claim, using data from Warner (1985), discussed by Lasnik (1995), though he draws a different conclusion from them; see also Potsdam (1997).

In VP ellipsis in English, the surface form of the elided verb and its antecedent need not be identical; in particular, a tensed main verb in the full clause can license ellipsis of a bare verb in the elided clause, and vice versa:

(21) a. John *left* early, and Mary will ~~*leave* early~~ too.

b. Although Susan rarely *leaves* early, I think today she did ~~*leave* early~~.

c. At first, John seemed to be *winning* the race, but now it's clear that Mary will ~~*win* the race.~~

Such mismatches can be elegantly accounted for by assuming that what is required is true identity of underlying structures prior to their morphological combination into words. Thus, the examples in (21) would get the analyses in (22), wherein the VPs are strictly identical:

(22) a. $[_{MP}$ John $Ø_{indic}$ $[_{TP}$ PAST $[_{\Sigma P}$ $Ø_{pos}$ $[_{VP}$ leave early]]]], and
$[_{MP}$ Mary will $[_{TP}$ PRES $[_{\Sigma P}$ $Ø_{pos}$ $[_{VP}$ leave early]]]] too.

b. … $[_{MP}$ Susan rarely $Ø_{indic}$ $[_{TP}$ PRES $[_{\Sigma P}$ $Ø_{pos}$ $[_{VP}$ leave early]]]],
…today $[_{MP}$ she $Ø_{indic}$ $[_{TP}$ PAST $[_{\Sigma P}$ $Ø_{pos}$ $[_{VP}$ leave early]]]].

c. John seemed to be $[_{PartP}$ -ing $[_{VP}$ win the race]], but now it's clear that
Mary will $[_{VP}$ win the race].

In (22b), the stranded past tense morpheme will trigger the spell-out of M as *do*, creating *did*.

The facts for *be* and *have* are subtly but crucially different. First we note that there is no problem with elided nonfinite forms of *be* and *have* in general: in (23), with an identical (nonfinite) antecedent, ellipsis is perfect.

(23) a. Mary should [be paid better], and Pam should [~~be paid better~~] too.

b. Pam has [been eating chocolate], and Mary has [~~been eating chocolate~~] too.

c. Doug will [have finished his main course by the time we get there], but maybe Fred won't [~~have finished his main course~~…]

In striking contrast, examples parallel to (21) with a finite *be* or *have* trying to antecede ellipsis of its nonfinite counterpart are entirely ungrammatical.

(24) a. *John was hassled, and soon Mary will ~~be hassled~~ too.

b. *A few people are already staring at us, and if you keep screaming, soon everyone will ~~be staring at us.~~

c. *Mary has never been to France, but John might ~~have been to France.~~

d. *John was just harassed, and in the last week several others have ~~been harassed~~ too.

If finite *be* and *have* were generated low like regular verbs and then raised to T, these antecedent clauses should contain underlying VPs [*be hassled*], [*be staring*], etc., and the impossibility of ellipsis would be mysterious. If instead *be* and *have* are generated high, then the badness of (24) is explained because there is no antecedent identical with the elided material. The posited structure of (24a) is (25), ignoring eventual T-to-M raising.

(25) John $[_{MP}\ Ø_{indic}\ [_{TP}$ be+PAST $[_{\Sigma P}\ Ø_{pos}\ [_{PartP}$ hassled]]]],

…Mary $[_{MP}$ will $[_{TP}$ PRES $[_{\Sigma P}\ Ø_{pos}\ [_{VP}$ be $[_{PartP}$ hassled]]]]] too.

The critical part of (25) is the absence in the antecedent of a VP immediately dominating the projection of the passive participle.

As for what permits a verb to be inserted so high in the clause, I assume that it must lack semantic content altogether (Scholten, 1988; Emonds, 1994), and therefore have no c-selection or thematic projection requirements, which would otherwise interfere with high insertion.[8] Consequently, there can actually be only one completely contentless verb—if there were two, there would be no way to distinguish them. For semantic emptiness to be true of both *be* and *have*, then, the properties that separate them must be located elsewhere in the structure—effectively, *have* is a morphosyntactically conditioned allomorph of *be*. What actually triggers this insertion of empty V when it happens, I have argued elsewhere (Schütze, 2002), is a "V Requirement" on many clause types (including finite indicatives, subjunctives, *to*-infinitives) that, independent of the need to morphologically support Tense affixes, demands the presence of a Verb—meant in a very narrow sense that excludes participles, modals, and dummy *do* (cf. Rapoport, 1987). Here we can assume that this V Requirement is enforced by M, perhaps by virtue of its projecting an operator that must bind an (event?) variable of a sort introduced (only) by verbs. A clause that does not otherwise contain a verb (e.g., one whose main predicate is nominal or participial) will have to be supplemented with a dummy V before M is merged into the tree, in order that this requirement may be satisfied. For this and other reasons, it is important to my account that finite as well as nonfinite forms of *be* be genuine verbs, contra Becker (2002; this issue).

Here I can offer only very brief support of this view (see Schütze 2002). Let us ask why (26a) is ungrammatical, in contrast to (26b and c)? Obviously the problem has nothing to do with Tense, whose status is identical in all three sentences. So *be dancing* and *dance* must share a property lacked by *dancing*, a property that (at least finite) clauses in English demand. The simplest way to derive (26) is to posit that such clauses need a verb, i.e. something of precisely the category V. The participle in (26a) is, by virtue of the suffixation of *-ing*, no longer purely a verb, but something closer to an adjective; *be* and *dance* are verbs.

(26) a. *Ora will dancing.

b. Ora will be dancing.

c. Ora will dance.

(27) Ora is dancing.

Now consider (27). For this sentence to be grammatical, it must by hypothesis satisfy the V Requirement just proposed. But *dancing* cannot be the V element of (27), as established based on (26a). The only remaining possibility is that *is* satisfies the verb requirement, which means it is of category V.

2.4. Relationship between Tense and Mood

The clause structure I am proposing is as in (28), factoring out finite *be*/*have*; there may well be additional intervening categories but they will not be relevant.

(28) [CP [MP [TP [ΣP [VP

In section 3 it will become critical what material is generated under T versus under M. So far all I have said about M is that it is the target of the SAI process, now characterized as M-to-C movement. I propose that the only elements generated under T are tense affixes.[9] M is the locus for merging modals, and it is also the head that is pronounced as (the stem) *do* in *do*-support. M stands for Mood, which ranges over (at least) the values Indicative, Subjunctive, and Modal (the latter perhaps a mere cover term for Necessity, Obligation, Possibility, Ability, etc.). In English, the Subjunctive M is always $Ø_{subjunc}$, while the Indicative has allomorphs $Ø_{indic}$ and *do*.

For reasons that I do not explore here, we observe that modals and dummy *do* are always tensed in English, the former at least in the sense that in their presence no other element may bear tense inflection:

(29) *John will runs.

Thus, Tense features are compatible with modals and generally expressed on them as Ø in present tense and *-d* accompanied by a stem change in past tense, e.g. in sequence-of-tense contexts or sentences like *Yesterday she couldn't talk but today she can*. In my formulation we need to ensure that overt M in English is always part of the same complex head as (a suitably valued) T. In other words, *will, can, must*, etc., and dummy *do* select for a T affix, without which they are not well-formed; $Ø_{indic}$ M, on the other hand, has no such requirement. Thus, (29) is bad because *will* is missing a (silent) obligatory inflection, which has been attached to the main verb instead.

2.5. **Do** *is a Mood*

The fact that *do* is under M, and not under T as is commonly assumed, is vital to the account in section 3.1, so I shall take some pains to defend this claim. Looking at *do*/*does*/*did*, we see that dummy *do* is composed of a stem, which shows three allomorphs differing in their vowel ([du]/[dʌ]/[dɪ]), and the regular tense suffixes [-Ø], [-z] and [-d]. Taking this at face value, the *do* stem must then realize some head distinct from Tense. To identify that head, we look at a wider range of clause types and discover that *do* patterns with modals while *be* and *have* are different. This will lead to the conclusion that *be* and *have* are verbs but *do* is not; tense inflections can appear on either kind of element.[10] In particular, modals (32) and *do* (33) are not found in *to-* and bare infinitives (a and b), mandative subjunctives (c), or gerunds (d), while *be* (30) and *have* (31) are found in those contexts:

(30) a. I want to be skiing by next week.

b. The director said, "We'll have John be sitting down when Mary enters."

c. It is critical that Mary be doing her homework by 8pm.

d. Not being ready for school is a bad idea.

(31) a. I want to have visited five different continents before I'm 30.

b. The director said, "We'll let John have finished his coffee when Mary enters."

c. It is critical that Mary have finished her homework before Sue arrives.

d. Not having done your homework is a bad idea.

(32) a. *I want to can ski by next week.

b. *The director said, “We’ll have John can hear Mary from the next room.”

c. ?It is critical that Mary can get here by 9am. (≠ It is critical that Mary be able to get here by 9am.)

d. *{Not canning/Canning not} tie your shoes is embarrassing.

(33) a. I want to (*do) not think about that for a while.

b. The director said, “We’ll have John (*do) not answer the door until the second ring.”

c. It is critical that Mary (*do) not be late for rehearsal.

d. *{Not doing/Doing not} respect your teacher is a bad idea.

I take this as evidence that *do* is of the same category as the modals, and that this category is not V (contra Déchaine, 1993, whose system is otherwise similar to mine).

A potential empirical concern for this analysis is that the British English use of *do* exemplified in (34) presents a problem for analyzing *do* as an M, because it suggests that *do* must be relatively low in the clause, the point being that this is the only situation where we see *do* and other auxiliary elements co-occurring in the same clause.

(34) a. The Americans are reducing their defence expenditure this year. I wonder if the RUSSIANS will do too.

b. Q: Will you be attending the meeting this evening? A: I may do.

If (34) involved VP-ellipsis, the *do* would be dummy (auxiliary) *do*, however we can show using data from Quirk et al. (1985: 875) that (34) does not involve VP-ellipsis but rather a pro-VP construction (structurally similar to *do so*), and that *do* in these sentences must be the main verb *do*. One piece of evidence is that the use of *do* in (34), which Quirk et al. call “intransitive main verb *do*,” can occur in participial form, as in (35a) or, for some British English speakers, (35b).

(35) a. I didn’t touch the television set, but Percy might have done.

b. Q: Why don’t you sit quietly? A: I AM doing.

A second argument comes from the fact that intransitive main verb *do* follows negation while dummy *do* always precedes.

(36) a. You can take the train back to Madrid, but I shouldn't do until tomorrow morning.

b. Would you mind feeding the dog, if you haven't already done?

A third argument is that intransitive main verb *do* and the genuine dummy *do* can co-occur.

(37) Bob says he is going to join the Labour Party. It will be interesting to see whether he DOES do.

Thus, beyond the mere matter of terminology, it is clear that the *do* in (34)–(37) has the properties of a main verb and has no properties in common with the dummy *do* discussed heretofore.

The historical evidence also makes unifying *do* and modals plausible, because English modals took on their special properties (as distinct from verbs) around the same time that *do* started being used as dummy (rather than just a causative)—see Lightfoot (1979), Roberts (1993), Denison (1985).

Finally, my proposal is consonant with Erb's (2001) analysis of *tun* in German: she places it under a Mood head which is above Tense. More specifically, she analyzes it as a variant of an ASSERTION Mood element, one of two kinds of elements found in M, the other being an Indicative versus Subjunctive feature. She also separates out some meanings of modals that I have lumped under Mood and situates them in lower positions in the tree. My proposal may well be compatible with the finer distinctions she draws, and most German modals are more like main verbs than their English counterparts, so I consider these two analyses to be promisingly similar.

3. Analysis

3.1. Optionality of do-*support*

The behaviour of T in this system has an inherent duality that is crucial to understanding the variation we seek to account for. Descriptively, T can be marked on a main verb or on an auxiliary—the latter now taken broadly to include modals and dummy *do*. Those two options, main verb versus auxiliary, correspond to two different syntactic ways in which T can combine with the word it affixes to: either the host word raises to T from below (the main verb case) or

T raises to the host word above it (the finite auxiliary case). These two possibilities constitute the difference between *John runs* and *John does run*: in the former, V has raised to T while in the latter it has not. Consideration of the range of possible clause types with $Ø_{pos}$ (aside from spurious *do*) shows that, in general, there is no property of the partial tree formed when T is merged with ΣP that could be used to predict whether V should raise to T at that stage of the derivation or not (see next paragraph). Assuming cyclicity, the decision to raise must nonetheless be made at this point. I conclude from this that the options of raising or not raising V must both be freely available. In Minimalist technology this must be implemented by saying that the lexicon provides both the weak and the strong value of the relevant triggering feature (whose exact identity is immaterial). Some combinations of this choice with other lexical choices are ruled out on independent grounds, but no such grounds can exist for ruling out *John does run* in and of itself. Since the sentence that intuitively should block it, *John runs*, is derived from a different numeration (one with the strong value of the V-raising feature rather than the weak one), economy conditions cannot compare the two. Therefore, no blocking relationship can hold, and *John does run* must be ruled in. Based on the data in section 1.1, this is the desired result.

Let us verify how this weak/strong choice interacts with the rest of the INFL system as analyzed here. Consider some possible scenarios following on from a partial derivation in which we have merged V = *run* as the head of VP, $Σ = Ø_{pos}$, and T = [–past]. If V raises to T, and we subsequently try to merge a modal, the derivation will crash, because (cf. section 2.4) English modals demand a tense inflection. If V raises and there is no modal, we get *John runs*. If we choose not to raise V and there turns out to be a modal, T is free to raise and we get, for example, *John will run*. (These latter two cases show why both options, raising and not raising V, are needed.) If we choose not to raise V, but there is no modal or other auxiliary in the numeration, then the T affix has no host. (From the perspective of the elements in T and above, this scenario looks no different from the case *John doesn't run*: no V has raised to T.) We know that T can be saved by *do*-support in this situation. (More precisely, at Spell-Out the *do* allomorph of Indicative M will be chosen over the Ø allomorph.[11]) The system gives us no

choice but to predict that *do*-support will apply, yielding *John does run* with nonemphatic *does*.

Recall now (cf. section 1.3) that even in dialects where spurious *do* is very free, it does not occur with *be* or auxiliary uses of *have*; remember too that in the syntax both *have* and *be* are simply Vs with no properties. How do we rule out sentences like **John does be tired*, **John doesn't have eaten,* etc.? In particular, why is this case different from the main verb case where optionality was (correctly) allowed? The answer hinges on the fact that the choice between the two options (dummy *do* versus inflected *be*/*have*) here is *not* a choice between moving an element or not—rather, it is a choice between merging *be*/*have* earlier (below Σ) or later (above T). This is not a choice that can be governed by feature strength. I make the stronger claim that the difference is not reflected in the numeration at all. That is, *John is tired* and the structure that would be pronounced *John does be tired* derive from identical numerations, differing just in the position at which the empty V (which spells out as a form of *be*) was merged into the structure. (Space restrictions prevent showing how this can work in full detail, but an important part of the story is that *be*/*have*, being the empty V, have no selectional requirements. This makes them relatively flexible as to where in the INFL hierarchy they can appear. Similarly, I claim Σ has no c-selection requirement, a view that is virtually forced as soon as one posits that *John is tired* has no VP below Σ, as I have done.) Being derived from the same numeration, the sentences with and without *do* in this case *can* be pitted against each other with respect to economy considerations. My proposal is that, given such a competition, the syntax must merge V later rather than earlier.[12]

Naturally, we need to ensure that only one overt verb-like element per clause has even the possibility of being merged above Σ, otherwise the preference for merging high would predict impossible sequences like **John will haven't been drinking* (cf. *John won't have been drinking*).[13] This possibility is blocked in the current system by virtue of a c-selection requirement of T, namely, that it must take a ΣP complement. In the ungrammatical example, the VP headed by *have* intervenes between the base position of T and the ΣP headed by *n't*.

3.2. Variation in the extent of use of spurious **do**

Returning to the account of spurious *do*/*tun* in general, what does this mean for the relationship between English and German dialects/registers in which it is (or was) widely allowed and those in which it is allowed narrowly or not at all? If my analysis is correct, the difference cannot be parametric, indeed it cannot be a difference within the syntax at all. Rather, there must be a difference in the strength of an extrasyntactic principle of the sort suggested by Emonds (1994: 168)—"The most economic [preferred] realization of a given deep structure minimizes insertions of free morphemes. ('Use as few words as possible.')."[14] (See also Arnold, 1995, for an application of this idea to the history of periphrastic *do*.) Under the syntactic assumptions made here, this involves a transderivational comparison. Some dialects apparently care little about this edict, or they allow it to be overridden by other factors that make the use of spurious *do*/*tun* advantageous. For example, in the legalistic context exemplified in (3c), delaying the main verb may heighten its impact on the jury; see Erb (2001) for such factors in German. (The reason why *do*/*tun* with *be*/*have* is not an option in any dialect is because it is ruled out on the basis of a comparison that is more local than Emonds's, one that stays within the competitor set as envisioned in Minimalism, thus within the syntax.)

From that perspective, children's apparent (mis)use of spurious *do* could be seen in two ways. First, it could be an interface error, i.e. a failure to map correctly between a grammatically valid structure and the contexts in which it can be used. Second, it could reflect an intermittently nonadult grammar, in particular, one in which the alternative to spurious *do*, namely a structure with verb raising, is not always available. See Phillips (1995) for the suggestion that children learning languages with Root/Optional Infinitives (Rizzi, 1994; Wexler, 1994) cannot consistently execute verb raising (though in his case the consequences are rather different).

4. Conclusion

Although I have made crucial use of recent Minimalist syntactic technology in my account of *do*, my approach to syntactic microvariation in this domain has not been of the parametric kind that Chomsky (1995), following Borer (1984), has advocated, namely to encode it in formal features of lexical items. Rather, I have situated variation in choices of

different paths by which movement and vocabulary insertion can satisfy syntactic and morphological constraints. Furthermore, I have argued that what appears to be a categorical syntactic difference between dialects (16th versus 21st century English) is to be treated instead as a gradient of difference in usage, like the range of dialect variation in the extent of spurious *tun* usage documented by Erb. As a consequence, it is undesirable in my view to give a *sui generis* syntax-internal account of one of the endpoints of this continuum, namely modern standard English with dummy *do* as a last resort. Chomsky's basic insight about the 'rescuing' character of dummy *do* still has a place in this account in all the dialects, but it is implemented exclusively at the level of morphophonological Spell-Out.

Notes

[1] From Visser's discussion we can glean some of the reasons why historical linguists are confident that these uses of *do* were not emphatic. First, many contemporary grammarians listed both the simple and periphrastic forms side by side as options without indicating any difference. Second, some went so far as to note that positive affirmative *do* was sometimes used "superfluously," and proscribed such use. Third, contemporary translators would put the periphrastic construction in correspondence with a Latin sentence that gave no indication of emphasis.

[2] Contra prior claims in the literature that the *do* variant must be interpreted as habitual, and/or that the verb in that variant cannot be stative.

[3] Erb (2001) notes that some speakers find the restriction on *tun* weaker with modals and the copula than with auxiliary *sein* and auxiliary *haben*.

[4] Thanks to Alison Henry and Siobhan Cottell for all the Hiberno-English facts.

[5] The ungrammaticality of (17a) provides indirect evidence for the claim that positive imperative *be* is below Σ. More direct evidence comes from adverb placement:

(i) a. John is always careful.
    b. ?John always is careful.

(ii) a. *Be always careful!
    b. Always be careful!

[6] In this paper when I refer to "auxiliary *have*" I am using the term "auxiliary" simply as a shorthand to refer to 'the uses of *have* that surface above Σ in declaratives when finite'. This usage is not meant to prejudge the analytical question of what the syntactic category of *have* is.

[7] Obviously I intend the term "clitic" in a syntactic rather than a prosodic sense, similar to Ouhalla's (1991) use of the term "affix." If desired, the reader can replace "is (not) a clitic" with "has/lacks property P," where P is a syntactic property whose consequences are that head movement into a non-P position from below is impossible, but movement of a non-P head to some higher head may be possible, whereas for P heads, both kinds of movements

are in principle possible. In the present case the idea is that if Σ, for example, is a clitic/affix, a verb can pick it up while head-moving through Σ on the way to a higher position; if Σ is not a clitic/affix, a free morpheme from below cannot head-adjoin to it, but Σ itself may raise to a higher affix/clitic head such as Tense.

[8] In Schütze (2001a) I argue that *be* can be uniformly treated in this way (cf. also Déchaine, 1993), and hint at how to treat *have*; on the latter, see also Ritter and Rosen (1997).

[9] As in Halle and Marantz (1993) and many other treatments, I assume the existence of a zero affix -*Ø* (e.g., for English present tense non-3sg) that can demand morphological support just as overt affixes can.

[10] An anonymous referee remarks on the paradox that *do* takes regular verb inflections but is claimed not to be a verb while *be* does not inflect regularly but is a verb. The contradiction is only apparent. Recognizing the T affixes as distinct from the stem of *do* is important just to motivate the claim that *does* etc. are composed of two heads, one being T, the other something else. *Be* also inflects for tense and agreement, and the fact that its forms are not regular does not bear on what category it belongs to.

[11] This treatment is conceptually close to accounts based on *do* deletion, e.g. Emonds (1970).

[12] One might try to derive this restriction as an instance of Procrastinate, but it will be tricky. Alternatively, the preference to merge V high may have to do with the fact that the head that ultimately imposes the need for V to be inserted in the first place is M, which is in the part of the tree where the V insertion preferably happens. In contrast, merging V below Σ satisfies no requirements of Σ or V, and in that sense might demand more look-ahead in order to be triggered.

In any case, this proposal apparently involves globality, i.e. transderivational comparison. Whether that should be seen as especially problematic is, I believe, an open question at this time. In this regard my account is in the same position as standard invocations of Procrastinate, which (conceptually at least) involve look-ahead to alternatives from a given point in a derivation. This might be prima facie not as powerful as transderivational comparison in the sense of comparing structures derived from different numerations, which

seems to be commonly invoked (in particular, by those who suggest that equivalent LFs are what economy metrics compare). The true impact of any sort of global comparison can be assessed only by formalizing the function to be computed and establishing a lower bound on the complexity of any possible algorithm for calculating it. I suspect that the underlying Minimalist syntax has not been worked out in sufficient detail to allow this to be done yet.

[13] Thanks to an anonymous referee for bringing up this point.

[14] An anonymous referee asks why, if this principle is what blocks (1b) for most present-day English speakers, the same principle does not also block free variation between (ia) and (ib), which is allowed for the referee and, according to him/her, in some varieties of spoken English that are claimed to be losing the distinction between simple past and present perfect.

(i) a. John has already been to the library.
    b. John already went to the library.

My preliminary observation is that (1a and b) are identical in the syntactic pieces (feature bundles, in Halle and Marantz's (1993) terminology) that they contain, with the exception of one [±strong] feature. The same cannot be said of (ia and b), because the former contains the perfect participle morpheme *-en*, which I assume to head its own functional category, and the value of the Tense feature, at least for purposes of Vocabulary Insertion, is [-past] in (ia) but [+past] in (ib). Thus, the pair in (i) are syntactically dissimilar in ways that the pair in (1) are not. My suggestion therefore is that the scope of the requirement to 'use as few words as possible' is limited in its comparison set to sentences derived from sufficiently similar syntactic representations, and (ia and b) are not sufficiently similar. The general question of comparison sets for economy principles of course far exceeds the scope of this paper.

References

Allen, Joe, 1995. "Tense" doubling in early grammars. In: Dawn MacLaughlin and Susan McEwen (eds.), Proceedings of the 19th Annual Boston University Conference on Language development, vol. 1, 48–59. Somerville, MA: Cascadilla Press.

Arnold, Mark D., 1995. Notions of economy in language change: The spread of periphrastic 'do'. In: Jill N. Beckman (ed.), Proceedings of the North East Linguistic Society 25, Volume two: Papers from the workshops on language acquisition and language change, 121–134.

Becker, Misha, 2002. English has two copulas. In: Elsi Kaiser (ed.), Current Work in Linguistics, University of Pennsylvania Working Papers in Linguistics 7(2), 1–27.

Becker, Misha, this issue. *Is* isn't *be*.

Blight, Ralph C., 1997. Verb movement and the distribution of copular *be*. In: Kiyomi Kusumoto (ed.), Proceedings of the North East Linguistic Society 27, 49–63.

Blight, Ralph C., 1999. Verb positions and the auxiliary *be*. Ms., University of Texas, Austin.

Bobaljik, Jonathan David, 1994. What does adjacency do? In: Heidi Harley and Colin Phillips (eds.), The morphology-syntax connection, MIT Working Papers in Linguistics 22, 1–31.

Bohnacker, Ute, 1999. Children, tense and auxiliary *do*. Newcastle and Durham Working Papers in Linguistics 5, 41–74.

Borer, Hagit, 1984. Parametric syntax: Case studies in Semitic and Romance languages. Dordrecht: Foris.

Bowers, John, 1993. The syntax of predication. Linguistic Inquiry 24, 591–656.

Chomsky, Noam, 1955. The logical structure of linguistic theory. Ms., Harvard University. Revised 1956 version published in part by Plenum, New York, 1975. Reprinted by University of Chicago Press, 1985.

Chomsky, Noam, 1993. A minimalist program for linguistic theory. In: Kenneth Hale and Samuel Jay Keyser (eds.), The view from Building 20: Essays in linguistics in honor of Sylvain Bromberger, 1–52. Cambridge, MA: MIT Press.

Chomsky, Noam, 1995. The minimalist program. Cambridge, MA: MIT Press.

Cinque, Guglielmo, 1999. Adverbs and functional heads: A cross-linguistic perspective. New York: Oxford University Press.

Costa, João, 1996. Adverb positioning and V-movement in English: Some more evidence. Studia Linguistica 50, 22–34.

Déchaine, Rose-Marie, 1993. Predicates across categories. Ph.D. dissertation, University of Massachusetts at Amherst.

Denison, David, 1985. The origins of periphrastic *do*: Ellegård and Visser reconsidered. In: Roger Eaton, Olga Fischer, Willem Koopman and Frederike van der Leek (eds.), Papers from the 4th International Conference on English Historical Linguistics, Amsterdam, 10–13 April, 1985, 45–60. Amsterdam: John Benjamins.

Denison, David, 1993. English historical syntax: Verbal constructions. London: Longman.

Ellegård, Alvar, 1953. The auxiliary 'do': The establishment and regulation of its use in English. Stockholm: Almqvist & Wiksell.

Emonds, Joseph, 1970. Root and structure-preserving transformations. Unpublished Ph.D. dissertation, MIT.

Emonds, Joseph E., 1976. A transformational approach to English syntax: Root, structure-preserving, and local transformations. New York: Academic Press.

Emonds, Joseph E., 1994. Two principles of economy. In: Guglielmo Cinque, Jan Koster, Jean-Yves Pollock, Luigi Rizzi and Raffaella Zanuttini (eds.), Paths towards universal grammar: Studies in honor of Richard S. Kayne, 155–172. Washington, D.C.: Georgetown University Press.

Erb, Marie Christine, 1995. Eine Theorie expletiver Verben: Die *tun*-Periphrase im Deutschen. MA thesis, Universität Frankfurt am Main.

Erb, Marie Christine, 2001. Finite auxiliaries in German. Ph.D. dissertation, Katholieke Universiteit Brabant.

Gleitman, Lila R., 1965. Coordinating conjunctions in English. Language 41, 260–293. [Reprinted in: David A. Reibel and Sanford A. Schane (eds.) (1969), Modern studies in English: Readings in transformational grammar, 80–112. Englewood Cliffs, NJ: Prentice-Hall.]

Green, Lisa J., 1993. Topics in African American English: The verbal system analysis. Ph.D. dissertation, University of Massachusetts, Amherst.

Halle, Morris and Alec Marantz, 1993. Distributed morphology and the pieces of inflection. In: Kenneth Hale and Samuel Jay Keyser (eds.), The view from Building 20: Essays in linguistics in honor of Sylvain Bromberger, 111–167. Cambridge, MA: MIT Press.

Harley, H. and R. Noyer, 1998. Mixed nominalizations, short verb movement and object shift in English. Proceedings of NELS 28. In: Pius N. Tamanji and Kiyomi Kusumoto (eds.), Proceedings of the North East Linguistic Society 28, vol. 1: Papers from the main sessions, 143–157.

Hollebrandse, Bart and Thomas Roeper, 1996. The concept of DO-insertion and the theory of INFL in acquisition. In: Charlotte Koster and Frank Wijnen (eds.), Proceedings of the Groningen Assembly on Language Acquisition held at the University of Groningen, 7–9 September 1995, 261–271. Groningen, The Netherlands: Centre for Language and Cognition.

Johnson, Kyle, 1991. Object positions. Natural Language and Linguistic Theory 9, 577–636.

Klemola, Juhani, 1998. Semantics of *DO* in South-Western dialects of English. In: Ingrid Tieken-Boon van Ostade, Marijke van der Wal and Arjan van Leuvensteijn (eds.), *Do* in English, Dutch and German: History and present-day variation, 25–51. Münster: Nodus Publikationen.

Koizumi, Masatoshi, 1993. Object agreement phrases and the split VP hypothesis. In: Jonathan D. Bobaljik and Colin Phillips (eds.), Papers on case and agreement I, MIT Working Papers in Linguistics 18, 99–148.

Laka, Itziar, 1990. Negation in syntax: On the nature of functional categories and projections. Ph.D. dissertation, MIT. [Published as On the syntax of negation, 1994, New York: Garland.]

Lasnik, Howard, 1995. Verbal morphology: *Syntactic structures* meets the Minimalist Program. In: Héctor Campos and Paula Kempchinsky (eds.), Evolution and revolution in linguistic theory: Essays in honor of Carlos Otero, 251–275. Washington, D.C.: Georgetown University Press.

Lasnik, Howard, 1999. Minimalist analysis, Malden, MA: Blackwell.

Lightfoot, David W., 1979. Principles of diachronic syntax. Cambridge: Cambridge University Press.

Lightfoot, David W., 1991. How to set parameters: Arguments from language change. Cambridge: MIT Press.

Lobeck, Anne, 1995. Ellipsis: Functional heads, licensing, and identification. New York: Oxford University Press.

Lobeck, Anne, 1999. *VP* ellipsis and the Minimalist program: Some speculations and proposals. In: Shalom Lappin and Elabbas Benmamoun (eds.), Fragments: Studies in ellipsis and gapping, 98–123. New York: Oxford University Press.

Lötscher, Andreas, 1983. Schweizerdeutsch: Geschichte, Dialekte, Gebrauch. Stuttgart: Verlag Huber Frauenfeld.

Ouhalla, Jamal, 1990. Sentential negation, relativised minimality and the aspectual status of auxiliaries. The Linguistic Review 7, 183–231.

Ouhalla, Jamal, 1991. Functional categories and parametric variation. London: Routledge.

Pesetsky, David, 1989. Language-particular processes and the earliness principle. Ms., MIT.

Phillips, Colin, 1995. Syntax at age two: Cross-linguistic differences. In: Carson T. Schütze, Jennifer Ganger and Kevin Broihier (eds.), Papers on language processing and acquisition, MIT Working Papers in Linguistics 26, 325–382.

Pollock, Jean-Yves, 1989. Verb movement, Universal Grammar, and the structure of IP. Linguistic Inquiry 20, 365–424.

Potsdam, Eric, 1997. English verbal morphology and VP ellipsis. In: Kiyomi Kusumoto (ed.), Proceedings of the North East Linguistic Society 27, 353–368.

Potsdam, Eric, 1998. Syntactic issues in the English imperative. New York: Garland. [Unrevised version of author's 1996 Ph.D. dissertation, UC Santa Cruz.]

Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech and Jan Svartvik, 1985. A comprehensive grammar of the English language. London: Longman.

Rapoport, Tova R., 1987. Copular, nominal, and small clauses: A study of Israeli Hebrew. Ph.D. dissertation, MIT. [Distributed by MIT Working Papers in Linguistics.]

Ritter, Elizabeth, and Sara Thomas Rosen, 1997. The function of *have*. Lingua 101, 295–321.

Rizzi, Luigi, 1994. Some notes on linguistic theory and language development: The case of root infinitives. Language Acquisition 3, 371–393.

Roberts, Ian G., 1985. Agreement parameters and the development of English modal auxiliaries. Natural Language and Linguistic Theory 3, 21–58.

Roberts, Ian G., 1993. Verbs and diachronic syntax: A comparative history of English and French. Dordrecht: Kluwer.

Roeper, Thomas, 1991. How a marked parameter is chosen: Adverbs and do-insertion in the IP of child grammar. In: Thomas L. Maxfield and Bernadette Plunkett (eds.), Papers in the acquisition of WH: Proceedings of the University of Massachusetts Roundtable, May 1990, University of Massachusetts Occasional Papers special edition, 175–202.

Runner, Jeffrey T., 1995. Noun phrase licensing and interpretation. Ph.D. dissertation, University of Massachusetts, Amherst. [Published as Noun phrase licensing, 1998, New York: Garland.]

Scholten, Tineka, 1988. The expletive verb *be*. In: Hagit Borer (ed.), Proceedings of the Seventh West Coast Conference on Formal Linguistics, 305–318.

Schönenberger, Manuela and Zvi Penner, 1995. Probing Swiss-German clause structure by means of the placement of verbal expletives: *Tun* "do" insertion and verb doubling. In: Zvi Penner (ed.), Topics in Swiss German syntax, 291–330. Bern: Peter Lang.

Schütze, Carson T., 1997. INFL in child and adult language: Agreement, case and licensing. Doctoral dissertation, MIT. [Distributed by MIT Working Papers in Linguistics.]

Schütze, Carson T., 2001a. Semantically empty lexical heads as last resorts. In: Norbert Corver and Henk van Riemsdijk (eds.), Semi-lexical categories: The function of content words and the content of function words, 127–187. Berlin: Mouton de Gruyter.

Schütze, Carson T., 2001b. What adjacency doesn't do. Paper presented at the 24th GLOW Colloquium, Universidade do Minho, Braga, Portugal.

Schütze, Carson T., 2002. When is a verb not a verb? Paper presented at the 19th Scandinavian Conference of Linguistics, Tromsø, Norway. To appear in *Nordlyd*.

Travis, Lisa deMena, 1984. Parameters and effects of word order variation. Ph.D. dissertation, MIT.

Visser, Fredericus Theodorus, 1969. An historical syntax of the English language. Part three, first half: Syntactical units with two verbs. Leiden: E.J. Brill.

Warner, Anthony R., 1985. The structuring of English auxiliaries: A phrase structure grammar. Bloomington: IULC.

Warner, Anthony R., 1993. English auxiliaries: Structure and history. Cambridge: Cambridge University Press.

Watanabe, Akira, 1994. The role of triggers in the Extended Split INFL hypothesis: Unlearnable parameter settings. Studia Linguistica 48, 156–178.

Wexler, Kenneth, 1994. Optional infinitives, head movement, and the economy of derivations. In: David Lightfoot and Norbert Hornstein (eds.), Verb movement, 305–350. Cambridge: Cambridge University Press.

Zukowski, Andrea, 1996. Auxiliary auxiliaries: Spare parts in early speech. Ms., Boston University.