The non-omission of nonfinite *be*[*]

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1. Introduction

It has long been known that children learning English optionally omit finite forms of the verb *be* (both copula and auxiliary), as schematized in (1). Table 1 summarizes some of the detailed quantitative findings by Becker (2000, p.c.) concerning how often *be* is omitted; these children are all mentioned again below.

(1) a. Mommy tired
b. You singing loud

Table 1
Be omissions in five children acquiring English

Child	Files	Ages	Overt *be*	Omitted *be*	Omission rate
Nina	7–13	2;0.24–2;2.6	231	267	54%
Peter	6–11	2;0.10–2;3.24	579	286	33%
Naomi	35–62	2;0.2–2;5.8	350	189	35%
Eve	15–20	2;1.0–2;3.0	157	418	73%
Adam	10–20[1]	2;7.0–3;0.10	101	261	72%

What makes *be* omissions possible?

An obvious candidate answer that has long been entertained is simply this: *be* is semantically empty, hence a good choice to omit under performance-related pressures (cf. Brown & Fraser 1963). This would make *be*-omission expected in all child languages. What would this hypothesis lead us to expect about the infinitive form of *be*? In terms of semantic vacuity, nonfinite *be* is an even better choice for omission than finite *be*, since it does not carry tense or agreement information (as noted by Brown 1973)—most such deletions would be completely recoverable, as can be seen in (2), which consists of invented examples illustrating a range of relevant environments.

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[1] Becker counted only Adam's files 10, 15, 18, and 20.

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(2) a. Gonna ~~be~~ careful
b. He better ~~be~~ nice
c. She'll ~~be~~ dancing next
d. I wanna ~~be~~ the cowboy
e. Daddy hafta ~~be~~ home soon

Furthermore, all else equal, an utterance with nonfinite *be* will be longer than one with finite *be* (because it could contain a finite auxiliary in addition to the word "be"), hence higher in processing load and more prone to deletion. Thus, the *semantic vacuity hypothesis* would lead us to expect omission of nonfinite *be* to be at least as frequent as omission of finite *be*, for a given child at a given age. Is that how things really are?

The semantic vacuity hypothesis can be contrasted with the suggestion that *be* omission should be incorporated into theories of the optionality of finiteness, i.e. the Root/Optional Infinitive (OI) phenomenon (Rizzi 1994, Wexler 1994, etc.). In particular, the observation that there is a stage of development when both finite *be* forms and inflection on main verbs are apparently optional has led to the suggestion that these two phenomena should be attributed to the same underlying cause. As detailed below, this *finiteness hypothesis* makes different predictions from the semantic vacuity hypothesis, both with respect to the distribution of finite *be* omission and with respect to the relative rate of nonfinite *be* omission; the latter point is the focus of this paper.

2. Method

The question of how common it is for nonfinite *be* to be omitted is most interesting at a developmental stage that has the following two properties:

1) the word "be" has been spontaneously produced at least once, so that we can be assured that its omission could not be due to a lexical gap; all the counts reported below take this into consideration;

2) omissions of finite *be* forms are happening concurrently, i.e. there is reason to think that whatever process induces those omissions is still operative in the child's grammar; see below for how this has been handled.

The data come from corpora in the CHILDES database (MacWhinney 2000), from files meeting the two criteria just mentioned. Two children's data were counted in full detail by hand for a small range of files. A further two children were treated by a semi-automated procedure that allowed a much larger set of files to be examined. For the hand counts, after identifying files with a reasonably high concentration of environments for nonfinite *be*, a count was made of each occurrence of the following: a finite form of *be* (auxiliary, copula, or other), an omission of an obligatory form, an occur-

rence of the nonfinite form "be," or an omission of an obligatory "be." Imitations, self-repetitions, and very frequent formulas like *be right back* were excluded, as were omissions of *be* that would be grammatical for an adult. Positive imperatives like *Be careful!* were excluded from the nonfinite counts because omission of *be* in this environment would generally yield an acceptable adult utterance, *Careful!*, in which there is no evidence of an omitted verb. Thus, including the overt imperatives would have artificially inflated the frequency of overt "be"; it is also not self-evident that imperative *be* is nonfinite. Negative imperatives were included in the counts, however, since they do not share the detectability problem: *Don't be rude!* versus **Don't rude!*

The procedure for the semi-automated counts was as follows. First a computer search for all instances of "be" was conducted. This was used to construct a preliminary list of obligatory environments detectable by a particular word that introduces them. This was augmented with possibilities deducible from the adult grammar and with other relevant auxiliary-like elements found in other children's early English (cf. Stromswold 1990), including contracted and other nonadult forms, e.g. *hafta,* and early verbs taking verbal or clausal complements, e.g. *let me V*. The complete list of the searched strings (modulo variations in punctuation) is as follows:

Modals: *can, could, may, might, must, shall, should, would, will*
Negative modals: *can't, cannot, couldn't, mayn't, mightn't, mustn't, shan't, shouldn't, wouldn't, won't*
Contracted modals: *'d, 'll*
Auxiliaries: *do/did/does, don't/didn't/doesn't, has/had/have, hasn't/hadn't/haven't*
Quasi-auxiliaries: *better, hasta/hafta, never, gotta, supposed, sposta, 'pose(d), used, usta, gon/goin/going/gonna, need, needn't*
Verbs with nonfinite complements: *want/wants/wanted/wanna/wan, liketa, tryna, let/le/let's/lemme, watch*
Infinitival morphemes: *to, ta*

A computer search was then conducted for all utterances containing one of these introducers, and the hits were searched by hand for uses and omissions of "be." The vast majority of nonfinite *be* contexts are identified by this procedure. Rates of finite *be* omission for these children were estimated from another source; see below for details.

3. Data

Tables 2–4 contain data from three stages of Sarah's (Brown 1973) language production; following each table is a sample of the utterances that comprised it. We can observe that in each sample, omission of finite *be* is at-

tested, use of nonfinite *be* is attested, but there are no instances of omission of nonfinite *be*.

Table 2
Distribution of *be* forms: Sarah, File 66 (3;6.23)

	Form	
Context	Overt	Omitted
Finite	30	14 (32%)
Nonfinite	5	**0**

(3) a. that the roast cutter
b. I puttin(g) supper on the table
c. this is salad roll

In Table 2, two of the uses of the word "be" could conceivably have been OIs; for example, *I always be the mummy* might correspond to the target *I always am/was the mummy*, although it just as plausibly corresponds to *I will/can/should always be the mummy*. There were no such cases in the data from Tables 3 and 4.

Table 3
Distribution of *be* forms: Sarah, File 89 (4;0.28)

	Form	
Context	Overt	Omitted
Finite	59	12 (17%)
Nonfinite	3	**0**

(4) a. you lazy
b. you're makin(g) one awful
c. this is soft

Table 4
Distribution of *be* forms: Sarah, Files 109–111 (4;5.14– 4;5.29)

	Form	
Context	Overt	Omitted
Finite	104	15 (13%)
Nonfinite	15	**0**

(5) a. I not gonna tell you
b. dis can be a poodle
c. it was breakin(g)

Table 5 and example (6) present the same sort of data from Ross (MacWhinney 2000), with the same outcome: nonfinite *be* is never omitted.

Table 5
Distribution of *be* forms: Ross, File 24 (2;8.16)

	Form	
Context	Overt	Omitted
Finite	53	8 (13%)
Nonfinite	10	**0**

(6) a. Marky crying
b. I'll be the alligator
c. you're riding it

Of the 10 uses of the word "be", there is at most one that might have been an OI: *Doctor David Banner take his shirt off and be the # be the Hulk.* The intended meaning seems to be that Dr. Banner will take his shirt off and then (will) be the Hulk, or that the Doctor habitually takes his shirt off and becomes the Hulk. In order for this to actually be an OI syntactically, the target would have to have been *Dr. Banner takes his shirt off and (then) (he)* ***is*** *the Hulk*, or its counterpart in the past tense.

Table 6 presents similar data for Nina (Suppes 1974), though the data for finite contexts are estimates.[2]

Table 6
Distribution of *be* forms: Nina, Files 17–30 (2;3.14–2;5.27)

	Form	
Context	Overt	Omitted
Finite	78%	22%
Nonfinite	17	**0**

The fact that in 17 nonfinite contexts there are no omissions supports the pattern seen in Sarah and Ross.

Similarly, Table 7 estimates the finite data for Adam (Brown 1973),[3] but reports precise counts of the nonfinite environments, of which there are 11 or 12.

[2] The finite percentages in Table 6 are based on Nina's files 16–31. They are computed from the data of Wilson (2003, p.c.), pooling auxiliary and copular uses of *be*. The raw numbers are 845 overt and 242 omitted cases.

[3] The finite percentages in Table 7 are based on Adam's files 10–18. They are computed from the data of Wilson (2003, p.c.), pooling auxiliary and copular uses of *be*. The raw numbers are 94 overt and 219 omitted cases.

Table 7
Distribution of *be* forms: Adam, Files 10–20 (2;7.14–3;0.11)

	Form	
Context	Overt	Omitted
Finite	30%	70%
Nonfinite	11	**0**
	(12?)	(1?)

The 12th case, if nonfinite *be* was the target, would be the only instance I have found of omission of nonfinite *be*; the utterance was *I going big helper*. This would be an omission of nonfinite *be* if the target was something like *I('m) going (to) ~~be~~ (a/the) big helper*, but there are other possibilities, such as *I'm going to see/get the big helper*. Even on the former interpretation, one could argue that what has really been ungrammatically omitted is infinitival *to*, the element that would require or license nonfinite *be*, so this would still not represent a genuine case of "be" being omissible in and of itself.[4]

It would be tempting to say that Table 7 is more compelling than the previous tables because the rate of finite omission is so much higher, so that *ceteris paribus* the expected number of finite *be* omissions, given 11 or 12 overt uses, is over 25. However, some have speculated that Adam's elevated rate of finite *be* omission might be related to the possibility that he was exposed to Black English (Dickey & Jackson n.d.); see also below.

4. Discussion

We have seen that the infinitive form "be" is essentially never omitted, contra the prediction of the semantic vacuity hypothesis. This suggests that the omission of ***finite*** *be* forms depends crucially on their involvement with Tense as well as on their lack of semantics; that is, the finiteness hypothesis of section 1 seems plausible.

[4] There certainly are utterances, in Adam's and other children's data, that are transcribed as omissions of infinitival *to*. However, there are two reasons to question whether this really provides a priori plausibility for the analysis of *I going big helper* as *I'm going to be a big helper*. First, the large majority of such omissions follow verbs that very commonly contract with *to*, e.g. *gonna, wanna*. We must therefore rely on the transcribers to have distinctly heard and consistently coded the potentially subtle differences among, e.g., *want sing*, *wanna sing*, and *want to sing*. Second, the reason we can identify omissions of *to* in the first place is because the following verb is *not* omitted, unlike what is suggested for Adam's utterance. For example, *I want to eat soup* with deletion of *to* and the following verb would come out as *I want soup*, with no evidence to suggest there was an infinitival clause in the utterance to begin with.

We have also seen that the use of infinitive *be* in a ***finite*** context, that is, "be" as an OI (*Look, doggie be over there*), is extremely rare (for children learning Standard English). This is consistent with previous literature, for example the counts from Becker's (2000) analysis of selected files from four CHILDES transcripts, summarized in (7). (Here again, Adam looks exceptional, perhaps for the same reason mentioned above.)

(7) Number of nonfinite forms (i.e. "be") out of total ***finite*** *be* contexts:

Nina:	0/231
Peter (Bloom 1970):	0/577
Naomi (Sachs 1983):	1/338
Adam:	8/299

Consequently, the theory of *be* (non)omissions that we develop had better not predict the use of "be" as an OI.

Pursuing the finiteness hypothesis, there is independent evidence that clauses where *be* has been omitted differ from those containing overt (finite) *be* in that *be*-omission correlates with featural underspecification of INFL. It is shown in Schütze (1997) that utterances with omitted (finite) *be* systematically show higher rates of non-nominative subjects than those with overt (finite) *be*, the latter typically being zero.[5] Relevant data are summarized in the tables below, including three of the children whose *be*-drop was examined above.[6]

[5] Due to the way the original coding was carried out, the data in Tables 8–11 exclude finite past tense forms of *be*, and may spuriously include a few instances of auxiliary *have*, which was pooled with *be* under the heading "auxiliary"; however, the use of the perfect auxiliary is very sparse at this age, so the data is not substantially changed by this.

[6] The data for Adam did not appear in Schütze (1997), but were computed in the same way as those that did.

Table 8
Distribution of 1sg & 3sg subjects: Nina, Files 3–31 (1;11.29–2;5.28)

	Be form	
Subject	Overt finite	Omitted
NOM	141 (93%)	96 (57%)
NonNOM	10 (7%)	71 (43%)
Total	151	167

Table 9
Distribution of 1sg subjects: Peter, Files 04–13 (1;11.7–2;5.0)

	Be form	
Subject	Overt finite	Omitted
NOM	136 (100%)	27 (77%)
NonNOM	0	8 (23%)
Total	136	35

Table 10
Distribution of 3sg feminine subjects: Sarah, Files 26–46 (2;8.25–3;1.24)

	Be form	
Subject	Overt finite	Omitted
NOM	8 (100%)	12 (80%)
NonNOM	0	3 (20%)
Total	8	15

Table 11
Distribution of 1sg subjects: Adam, Files 15–25 (2;10.2–3;2.21)

	Be form	
Subject	Overt finite	Omitted
NOM	20 (100%)	381 (93.3%)
NonNOM	0	28 (6.7%)
Total	20	409

Under the theory of the development of case and agreement put forth in Schütze (1997) and related work, now known as the ATOM (Agreement/Tense Omission Model), a nonNOM subject must reflect missing AgrS features. (AgrS is one of two elements of INFL claimed to be optionally underspecified in the OI stage of development, Tense being the other.) Thus, our analysis will need to derive the following implications: When (finite) *be* is overt, the subject is NOM, and therefore AgrS must be fully specified; When the subject is nonNOM, and hence AgrS features are omitted, *be* can be

omitted, i.e. underspecification of AgrS is one of the circumstances that can cause *be* omission.

5. Toward an analysis

Not all theories of RIs/OIs are well-suited to capturing the generalizations just discussed. In particular, the findings are problematic for null auxiliary—especially null modal—accounts of OIs (cf. Boser et al. 1992, Ingram & Thompson 1996, Plunkett & Strömqvist 1992, Krämer 1993, Ferdinand 1996). Since children at this stage are essentially perfect in using nonfinite *be* where the adult grammar demands it, these theories would wrongly expect abundant use of infinitival *be* following a null auxiliary, e.g. *They ~~might~~ be scared, She ~~can~~ be (a) pilot*; as we have seen, such utterances are extraordinarily rare, however. These null modal theories might have tried to get around this prediction as follows: perhaps the reason we do not find utterances like *They be scared* is that not only modals but also nonfinite *be*s are omitted at this stage, yielding simply *They scared,* a common utterance type that shows no evidence of having underlyingly contained nonfinite *be*. However, since we have established that omission of nonfinite *be* is virtually unattested, this escape route is unavailable, and null modal theories are stuck with the incorrect prediction that utterances like *They be scared* should be abundant.

Other theories of OIs (e.g., Wexler 1994, Rizzi 1994, Hoekstra & Hyams 1998) do not face this immediate problem, but the facts from section 3 do not fall out immediately from any of them either. In this paper I will develop an analysis within the ATOM, based on the central claim that finite forms of *be* in (adult, and hence child) English are ***fused*** V+I heads, in the sense of fusion employed in Halle & Marantz's (1993) Distributed Morphology (DM). I first motivate that claim, then show how it facilitates the analysis of children's omissions.

5.1. Finite be forms are fused

Descriptively speaking, it is clear that the finite forms of *be* are not segmentable into a stem and an INFL affix:

(8)	pres	1sg:	am	/æm/
		3sg:	is	/ɪz/
		pl, 2sg:	are	/ɑr/
	past	1/3sg:	was	/wɑz/
		pl, 3sg:	were	/wər/

This state of affairs could be treated in one of two ways in Distributed Morphology, given its guiding assumption that V and Infl must have been sepa-

rate heads in the syntax, and that each head is a locus of vocabulary insertion. First, one could say that all of these forms consist of a stem and an affix, but the affix is in most cases zero while the stem has multiple suppletive allomorphs. The forms would be analyzed as in (9).

(9)			
	pres	1sg:	/æm+Ø/
		3sg:	/ɪz+Ø/ or /ɪ+z/
		pl, 2sg:	/ɑr+Ø/
	past	1/3sg:	/wɑz+Ø/
		pl, 2sg:	/wər+Ø/

This is in essence the analysis of Halle (1997). As far as the suffixes are concerned, then, *be* does not look very irregular. Specifically, in the present tense all non-3sg suffixes are null, just as with main verbs, and in the past the tense suffix is uniformly zero, as it is for several irregular verbs, e.g. *put, hit, cut*. What to say about the 3sg present form is less obvious. Nothing prevents us from treating it just like all the other forms, with a null suffix; however, this would make it the only true verb (as opposed to the modals) in the language that does not take *-s*. On the other hand, if we split off the /z/ and treat it as the regular 3sg suffix, as Halle does,[7] we would have to accept that the remainder of the 3sg present form, the lone lax vowel /ɪ/, is large enough to be a verb stem. This would violate the general requirement that lexical words be minimally bimoraic in English, assuming as I do here that finite forms of *be* are indeed of category V and not purely functional elements (see Schütze 2001 for arguments). I do not resolve the choice of analysis for *is* here.

The second kind of approach to finite *be* that one could adopt in DM is a fusion analysis, pursuing an analogy to Bobaljik's (1995) argument for fusion of Tense and AgrS in certain Germanic languages (including English). Bobaljik's argument is based on the fact that these two inflectional features can never both be affixally marked simultaneously, which suggests that only a single slot is available for insertion of a vocabulary item to express the two features—in English, either 3sg *-s* or past *-ed*, but not both, because in DM one cannot insert more than one vocabulary item under a single head (terminal node) position. My extension of this idea is that finite forms of *be* result from a structure in which a Verb head has fused with an INFL head. That is, there is only a single locus for vocabulary insertion of entire finite

[7] Attributing the idea to a suggestion I made in class in 1993.

forms of *be*, a syntactic terminal node with values for person/number, tense, and lexical category that the entries in (10) must match.[8]

(10) *am* <—> {1sg, pres, V}
is <—> {3sg, pres, V}
are <—> {pl/2sg, pres, V}
was <—> {1/3sg, past, V}
were <—> {pl/2sg, past, V}

I return in section 6 to the matter of why only *be* and not other verbs will be insertable in this fused structure. For now, the point is that the analysis in (10) treats all the finite *be* forms as unsegmentable portmanteaux.[9] This is in contrast to the usual behavior of finite verbs, whereby the verb stem is inserted under a V node and the inflectional affix under an INFL node.

My analysis of the child omissions relies critically on the second, fusion-based analysis, so I need to argue that there is reason to prefer it. To do this I make two observations. The first is that under the zero-affixation analysis (9), the fact that this verb shows massive stem suppletion and the fact that it shows zero suffixation across the board (on one version of the analysis) are unrelated. We might expect that we could just as easily find a verb in English with five suppletive stems but regular past *-ed* suffixation, for example; not only is there no such verb, it seems intuitively doubtful that a language otherwise identical to English would have one. In (10), by contrast, the two kinds of irregularity—stem suppletion and lack of regular suffixes—are boiled down into a single vocabulary entry for each slot in the paradigm.

The second observation is that the choice between the (9) and (10) analyses involves a logical asymmetry. Any set of data that can be treated with fusion as in (10) can always trivially be reanalyzed as in (9) simply by adding null suffixes. However, many paradigms that should be analyzed as stem+suffix cannot be reanalyzed as fusion without flagrantly losing generalizations. (For example, treating a completely regular English verb as fused V+I would mean analyzing the past *-ed* suffix as if it were part of the stem.) Thus, the fusion analysis is in some sense the stronger hypothesis a priori. This might be a reason for a learner to posit it as an initial hypothesis for this kind of data set, since it is more readily falsifiable than the alternative ("falsi-

[8] For purposes of this discussion it is irrelevant that INFL in (10) was itself composed by fusion of Tense and AgrS before fusing with V.

[9] One aspect of (10) that is crucial for the upcoming analysis requires comment for those well acquainted with DM: none of the vocabulary items in (10) are featurally underspecified. I assume this can be attributed to the unusual nature of fusing a lexical head with inflectional features.

fiable" obviously not in the simplistic sense that it would make descriptive errors). Or to put a slightly different learnability angle on it, perhaps it would be advantageous in limiting the learner's search space if we did not allow it to posit null morphemes in situations where the data allow an equally good analysis without them.

For the two reasons just given, I adopt (10) rather than (9) for the remainder of this paper.

5.2. Analysis

Recall the central claim of ATOM, which is that at the OI stage, AgrS and Tense are independently underspecifiable in children's grammars. The basic idea of the analysis is that the fused vocabulary items in (10) cannot be inserted in a syntactic structure in which INFL features have been underspecified, because of the basic principles of vocabulary insertion in DM: a vocabulary item must not be inserted into a slot if the item is specified for features that the slot is not specified for. More precisely, the features of the vocabulary item must be a (not necessarily proper) subset of the features of the node under which it is inserted; if more than one vocabulary item satisfies this requirement with respect to a given node, the vocabulary item specified for the greatest number of features is the one that must be inserted. Thus, there is no danger that a different finite form will be substituted for the appropriately agreeing one—**I is* cannot express a fused INFL+V complex when INFL's person/number features are absent, because in (10) *is* is specified for (3rd) person, (singular) number. Likewise, because the entries in (10) all make reference to the value of Tense, underspecifying the Tense value in the syntactic representation will block all of the finite forms of *be*. We can now capture the pattern in Tables 8–11, where we found that overt finite *be* always requires a NOM subject, while *be*-omission is compatible with non-NOM as well as NOM subjects. Overt *be* arises only when both AgrS and Tense are fully specified; by virtue of the AgrS specification the subject must be NOM, according to ATOM. Null *be* arises from underspecification of Tense or underspecification of AgrS (or both), which means it is compatible with NOM or nonNOM subjects.

The remaining trick now is how to ensure that the word "be" itself does not step in to fill the void in these circumstances, i.e. when none of the finite forms in (10) match the syntactic environment. Fusion is the key to ensuring this as well. Crucially, in this model the absence/underspecification of ***features*** of INFL does not entail the absence of the INFL head(s) themselves. In DM, sets of competing vocabulary items are defined by the category of the node under which they are inserted. Thus, (10) contains the vocabulary items for V+I; the items for I are *-s* (3sg present), *-ed* (past), and *-Ø* (elsewhere); the items for V are all the verb stems of English. Thus, at the

point of vocabulary insertion, even when finiteness features are underspecified, a finite *be* context is still represented as a fused V+ INFL head, which for purposes of vocabulary insertion is a distinct category from a simple Verb. The word "be," however, is just a verb, not fused with anything else. It is therefore of the wrong category to be inserted under a fused V+INFL head. Similarly, an INFL affix (such as *-s* or *-ed* from the regular paradigm) will not be insertable, because INFL is a distinct category from V+INFL. Thus, no finite and no nonfinite forms can be inserted in this environment; instead we get a default Ø, i.e. nothing. (In DM it is assumed that every paradigm contains a default/elsewhere vocabulary item, one not specified for any feature values. If no overt form fits this description, it is claimed that *Ø* is always available as a universal default.)

6. Open issues

Returning to the issue with which we began, we need to ask what this rather technical solution has to say about the underlying reason(s) for children's omission of finite *be*. We had arrived at the suggestion that it is a combination of its involvement with INFL, which independently has been shown to be optional at this stage of the acquisition of English, and the lack of content of the verb *be*. It is clear how INFL figures into the proposal in section 5, but perhaps not evident how the semantic emptiness of the verb does. So far all we have proposed is that a verb's finite forms would be omissible if they are portmanteaux with INFL, i.e. not analyzable as separate stem and affix components. Couldn't this lead to omission of the verb *gargle* just as easily as to omission of *be*?

To prevent that undesirable consequence, I suggest that we should appeal to the way vocabulary insertion interacts with the encyclopedia in DM. In DM the choice among open class items such as verb stems for insertion into a particular syntactic slot is not governed by principles of morphological competition and blocking, unlike closed class items; rather, the choice is made in the encyclopedic component, based on intended open-class meanings. This is problematic if the morphosyntax can freely generate fused V+I heads and vocabulary insertion is late, because in order to avoid a crash,[10] we should allow the system to entertain as options for insertion only those verbs that have fused forms. However, the encyclopedia does not have access to this information, as a matter of principle. The danger is that the encyclopedia will hand us the verb *gargle*, but it will turn out not to have any fused forms, in which case there will be no way to realize the structure.

[10] I assume, following Halle and Marantz (1993) and much other work in DM, that the morphological component is purely interpretive and cannot filter the output of previous stages of the derivation.

By way of excluding this scenario, I appeal to other work (Schütze 2001) in which I have argued for a formal instantiation of the long-held intuition that *be* is the default verb, using "default" in its technical sense in DM to refer to the element in a paradigm that is inserted just in case all the more highly specified items do not have their conditions for insertion met. This captures the semantic emptiness of *be*, and virtually all of its syntactic distribution as well. Of greatest relevance here is the fact that on this analysis *be* is the only verb in English that has no representation in the encyclopedia, because it has no "real world" meaning. The avenue I would pursue would suggest that, as a result, *be* is the only candidate for a verb that can be fused with functional elements without succumbing to the look-ahead problem discussed in the previous paragraph.

There remains a technical question to be solved, namely to specify what triggers the fusion operation to begin with. In Bobaljik's (1995) model this is derived straightforwardly using syntactic feature parameters, which is possible because in that case Tns+AgrS fusion applies throughout the language. Here we need V+I fusion to apply just when the verb will turn out to be *be*, a fact not directly determinable in the syntax, due once again to late insertion. However, our problem may be reducible to another special property of *be*. We know that finite *be* is nearly unique in English in that it undergoes *overt* V-to-I raising. It remains unclear how precisely to characterize the difference between raised and unraised finite verbs, but somehow this must be possible. We might then entertain the notion that fusion is triggered obligatorily by some property of whatever forces raising to I in finite *be* clauses. Indeed, one can imagine things turning out so that fusion would be impossible without prior V-to-I, for reasons of locality.

If any of this is on the right track, then we should extend our investigation to the only other instance of overt V-to-I in English, namely nonagentive *have*, including the perfect auxiliary. Its phonological shape does not force a fusion analysis upon us, but perhaps the above considerations lead us to expect fusion anyway. It is hard to test whether auxiliary *have* is optionally omitted at the OI stage, because perfects are acquired rather late by English children.[11] However, in German, where the present perfect is the canonical expression of past events, perfect participles appear early and omission of the accompanying auxiliary (*have* or *be*) is extremely frequent (Behrens 1993, Berger-Morales & Salustri 2003). Obviously there are a great many *if*s in this line of thought, rigorous pursuit of which must be left to future work.

[11] For example, there are no clear instances of a perfect tense (with or without the auxiliary *have*) in the files represented in Table 4, around age 4;5, a total of some 1200 utterances.

One further important question not addressed in the present paper is how the analysis might extend to other child languages where *be*-drop is attested, in particular, non-OI languages that show this phenomenon, such as Italian. See Wexler (1998) for a proposal to extend ATOM for this purpose, although it seems his account treats only auxiliary *be* omission; available evidence suggests that copular omission also needs to be accounted for (Caponigro 2000).

7. Conclusion

I have shown that young children acquiring English omit finite *be* but not nonfinite *be*. I have argued that this coupling of observations constrains the range of possible explanations for finite *be* omissions to a subset of theories of Root/Optional Infinitives. The further observation that these omissions correlate with the possibility of nonNOM subjects (alongside the possibility of NOM subjects) has led to a proposal for how the underspecification of Infl triggers the omission of *be*. precise technical details have been spelt out showing how optional *be* omission can be reduced to the same underlying cause as optional omission of finiteness on main verbs, without incorrectly predicting use of infinitival *be* as an OI. To my knowledge this is the first time a formal account achieving this unification has been presented.

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