

Implications of child errors for the syntax of negation in Korean*

ABSTRACT

Children around age 2 acquiring Korean as a first language are well-known for producing an error in which VP-internal material intervenes between the negator *an* and the verb, an order which is strictly ungrammatical in adult Korean. Children at the same age acquiring other languages make errors with subject case and with tense or agreement inflections on the verb, which has been analyzed by Wexler (1998) as stemming from a constraint on child grammars that prevents the subject from moving to two functional projections. The proposal here is that the child Korean errors result from the same constraint. This leads to an analysis of negation in adult Korean under which the VP material is base generated between the negator *an* and the verb, moving leftward in adult Korean. The child errors are then a result of omitting object-related functional projections that would drive this movement, paralleling Wexler's analysis of Optional Infinitives in other languages. The analysis presented here not only offers an explanation of the child errors but also constrains the possible analyses for negation in adult Korean in ways that are not obvious from the adult data alone.

The structure of negation in Korean has been the subject of much research in theoretical syntax,¹ but in general data from first-language acquisition has been considered only cursorily if at all. We will see that by taking the implications of this evidence seriously in conjunction with cross-linguistic evidence from child

acquisition of syntax, we can reach quite striking conclusions about the structure of negation in the adult language.

In this paper we will be reviewing the existing record pertaining to the acquisition of negation in Korean and juxtaposing it with current research in crosslinguistic child language acquisition. While no new data is reported here, the analysis we will arrive at leads to a number of intricate predictions that go beyond the existing reported data.

1. Negation in adult Korean

As is well known, there are two distinct ways a negative sentence can be formed in adult Korean. The “short form negation” (SFN) is illustrated in (2) and the “long form negation” (LFN) is illustrated in (3), to be compared with the affirmative sentence in (1).²

(1) Chelswu-ka ppang-ul mek-ess-ta. *Affirmative*
 Chelswu-nom bread-acc eat-past-decl
 ‘Chelswu ate the bread.’

(2) Chelswu-ka ppang-ul an mek-ess-ta. *Short Form Negation*
 Chelswu-nom bread-acc neg eat-past-decl
 ‘Chelswu did not eat the bread.’

- (3) Chelswu-ka ppang-ul mek-ci anh-ass-ta. *Long Form Negation*
 Chelswu-nom bread-acc eat-ci neg.do-past-decl
 ‘Chelswu did not eat the bread.’

In SFN, the negative morpheme *an* can only be placed immediately preverbally. In LFN, the verb appears with a suffix *-ci* and the negative morpheme follows the verb. The form of the negative morpheme *anh-* in LFN is presumed to be a contraction of the more literary *ani ha-*, which involves the dummy verb *ha-* ‘do’.

2. Negation in child Korean

Several researchers have observed two important facts about the production of negation by children acquiring Korean as their first language. The first is that children start to use SFN much earlier than LFN. While utterances containing SFN occur around the age 1;7, children don’t generally begin to use LFN until almost two years later, around age 3;5 (Choi & Zubin 1985, Han & Park 1995, Kim 1997).

Interestingly, even children too young to produce LFN can nevertheless comprehend it. Cho & Hong (1988) performed a repetition experiment with three 2-year olds, and report that the children could repeat negative sentences, but would invariably substitute SFN for LFN (also observed by Hahn 1981). Cho & Hong (1988) give the example in (4), where the child substitutes SFN *an ollaka-* ‘neg climb’ in place of LFN *ollaka-ci anh-* ‘climb-*ci* neg.do-’.³

- (4) a. namu-ey ollaka-ci anh-a (adult)
 tree-loc climb-ci neg.decl
 ‘(He) does not climb trees.’
- b. namu-ui-ey an ollaka (C&H:33 [2;2-6])
 tree-loc neg climb
 ‘(He) does not climb trees.’

The second important fact is that children in the pre-LFN stage often “misplace” the negative morpheme (Cho & Hong 1988, Kim 1997). Whereas in adult Korean, the negative morpheme *an* is invariably immediately preverbal, in the speech of children around age 2, *an* will sometimes appear earlier in the sentence, away from the verb. Some examples are given below. In (5) are some reported cases where an object intervenes between the negator (*an* ‘neg’ or *mos* ‘cannot’) and the verb.⁴ Further cases are given in the Appendix. The “‡” mark indicates a sentence that is attested in child utterances, but is ungrammatical in adult speech.

- (5) a. ‡ Rubin-un an nappun ayki -ya (C&H:34 [2;2-6])
 Rubin-top neg bad baby -be
 ‘(Rubin is not a bad baby.)’
- b. ‡ na an pap mek-e (C&H:34 [2;2-6])
 I neg rice eat-decl
 ‘(I do not eat rice.)’

- c. † na mos pap hay (H:130 [Y 3;0])
 I inability.neg rice do.decl
 ('I cannot cook rice.')

In (6) are similar examples but where *an* and the verb are separated not by an object, but by an adverbial element.

- (6) a. † an mak ule (C&H:35 [2;2-6])
 neg much cry
 ('(I) do not cry much.')

- b. † na an cal hay (C&H:35 [2;2-6])
 I neg well do
 ('I do not do well.')

- c. † an Gemco ka (C&H:35 [2;2-6])
 neg Gemco go
 ('(I) do not go to Gemco.')

Kim (1997) observes that *an* in child utterances will sometimes precede the subject of an unaccusative predicate (7), although it never precedes the subject of transitive or unergative predicates. This meshes well with prior observations made by Cho & Hong (1988) and Hahn (1981:208-9), although these were not stated

explicitly in terms of the unaccusative/unergative distinction.⁵ The generally accepted hypothesis about unaccusative subjects is that they are base-generated as the complement of the verb (Perlmutter 1978).

- (7) a. † an kol na-ss-e? (K:377 [P 1;11])
 neg anger move-past-decl
 ('Aren't you angry?')
- b. † an ippal ssek-e (H:204 [Y 3;4])
 neg teeth rot-decl
 ('(I) won't have a cavity.')
- c. † an pay kopha (H:206 [Y 3;5])
 neg stomach hungry
 ('(I am) not hungry.')

We see that the material that can intervene between *an* and the verb includes deep objects (both objects of transitives and unaccusative subjects) as well as adverbs. Thus, the generalization seems to be basically (8), a paraphrase of that provided by Cho & Hong (1988):

(8) *Generalization about child errors with SFN in Korean*

VP-internal material is privileged in its ability to occur between *an* and the verb in child errors.

To summarize, we have the following facts to account for in the acquisition of Korean negation: (a) the delay of LFN until around age 3, (b) the misplacement of *an* in SFN around age 2, which can appear before VP-internal material but not before subjects of either transitive or unergative verbs. In this paper, we will concentrate primarily on (b), returning to consider (a) at a fairly speculative level in section 7.

3. Syntactic development and optionality

I will be assuming a picture of syntactic acquisition essentially as outlined by Wexler (1998), which will only be briefly reviewed here. In particular, I will assume that throughout acquisition children have access to the full range of functional projections available in the adult language, and that the computational system used in constructing linguistic representations is complete. Evidence for this view has been collected in Wexler (1996, 1998, 1999) (and references cited therein), who argues that (at least) by the time children begin to produce multi-word utterances, they not only know and obey the principles of Universal Grammar but also the particular parameter settings for their native language. The explanation for the differences between adult and child grammars (in the tense/agreement domain) is that children have a specific limitation (the UCC, defined in section 4) on their computational system that ceases to apply in the adult grammar. This constraint is in effect until it is rendered inactive, following a maturational schedule (Borer & Wexler 1987).

A child who misplaces *an* when producing SFN constructions will also, at the same age, place *an* correctly. Preliminary indications are that about a third of the negative utterances at the relevant stage of acquisition show the *an* misplacement error.⁶ Importantly, there is a significant number both of correct and incorrect utterances at a single age. That is, there is an appearance of optionality in the child's productions between correct and incorrect placements for *an*.

Those who have addressed this apparent optionality in child Korean (e.g., Kim 1997:380, Han & Park 1995) have suggested that it reflects an optional rule in the child's grammar, allowing *an* to attach either in the correct structural position or another (incorrect) position. However, there is a conceptual reason to disprefer this interpretation, as Baek (1997) points out: If a child's grammar freely generates both structures, the child will invariably be able to generate representations that yield the word order (s)he hears in the adult utterances (all of which will of course have *an* placed correctly). As a result, the change from optional placement to obligatory preverbal placement should be unlearnable: Assuming that a change to the child's grammar is only motivated by encountering a form which the child's current grammar cannot analyze (Wexler & Culicover 1980), nothing in the environmental input will force the child to move to the correct (adult) grammar which only allows *an* immediately preverbally.⁷ As will be clarified below, the proposal we pursue here differs in that the child knows where *an* should go (thus there is no learning problem) but sometimes cannot put it there.

We assume here a grammatical system basically as outlined in Chomsky (1995 *et seq.*). The computational system is responsible for taking an array of lexical elements and arranging them into interpretable representations. These

representations provide input to other cognitive systems external to the syntactic computational system, one being the conceptual-intensional system, relating the representation to world knowledge and semantic interpretation generally. For a representation to be grammatical, the computational system must arrange the initial set of lexical elements into legible representations, able to be read/interpreted by the external systems. In particular, the representations must not contain any “uninterpretable” elements. The proposal we are considering here with respect to children is that the computational system is essentially in its adult form, and that children are producing structures that are legible for the external systems (having correctly eliminated any uninterpretable elements).

Wexler (1998) observes that arguably nothing in the *computational system* requires that a clause must have, for example, a Tense (T) element. While T is required for a well-formed sentence in the adult language, the computational system itself is able to arrange an initial array of lexical items containing no T into a legible representation. The fact that sentences need T in adult languages is instead presumed to be due to a constraint we can state descriptively as (9), perhaps necessary in order to “anchor” the utterance in the discourse (Enç 1987).

(9) REALIZE TENSE

A well-formed sentence has Tense.

Adults know and obey the constraint (9); however, strictly speaking an utterance violating (9) is not “ungrammatical,” but rather semantically or pragmatically anomalous. Similarly, we will assume that there are analogous constraints that adults

know for other functional elements in the clause not strictly required by the computational system, including a **REALIZE AGREEMENT** constraint requiring that well-formed sentences have, e.g., subject agreement (**AgrS**).⁸

Wexler's (1998) basic proposal is that the observed "optionality" in tense and agreement is due to an additional constraint (introduced in the next section) that can only be satisfied at the expense of either **REALIZE TENSE** or **REALIZE AGREEMENT**. Faced with the impossibility of satisfying all of the constraints, the child must violate one of them. The fact that the child does not always opt to violate the *same* constraint is what gives the appearance of optionality. In the next section, we will look at how this idea has been applied in the verbal domain, and then we will make the connection to Korean negation.

4. Optional Infinitives

It is well-established (see, e.g., Pierce 1989, Boser, Lust, Santelmann & Whitman 1992, Wexler 1994, Phillips 1995) that children around age 2 across a wide range of languages will sometimes produce nonfinite matrix sentences (which are ungrammatical in the adult languages). These utterances, however, co-occur with other, correctly finite sentences. Following the terminology of Wexler (1994), this stage of acquisition will be referred to as the "Optional Infinitives" (OI) stage. Of particular interest here is the fact that the *an* misplacement phenomenon in Korean occurs at about the same age that the matrix infinitives are observed in other languages. Given the hypothesis that the OI stage reflects a maturational (hence, universal) stage in language development, our goal here is to explore the possibility

that the cause of matrix infinitives in other languages is the same as the cause of *an* misplacement in Korean.

To begin, we will very briefly review the evidence for and the account of the OI stage in languages other than Korean. In English, the signs are subtle due in part to the fact that the infinitive form of a verb is in general the same as the finite (present) form (except where the subject is third person singular). The evidence from German and French is more dramatic; in both languages, all and only finite verbs move in the adult language, and children in the OI stage appear to know this, moving only finite verbs, while leaving nonfinite verbs *in situ* (Poeppel & Wexler 1993, Boser, Lust, Santelmann & Whitman 1992, Pierce 1989). This indicates that children in the OI stage know the syntactic implications of finite tense; they just sometimes omit it.

Schütze & Wexler (1996) argue, primarily from case-marking errors made by children acquiring English, that the features responsible for Case licensing on the subject (AgrS) must be distinguished from the features responsible for tense (T), and that the OI pattern is a result of omission of either one or the other from the child's representation of a sentence.

Based on these results, Wexler (1998) suggests the following explanation. The adult syntax requires the subject of a clause to move twice, once to the T projection, and once to the AgrS projection. What is "special" about children in the OI stage is that they can only move the subject once. The constraint responsible for this is given in (10).⁹

(10) UNIQUE CHECKING CONSTRAINT (UCC)

The D-feature of DP can only check against one functional category.

The way (10) is to be understood is as follows: Movement of a DP (a determiner phrase) is driven by the need to eliminate an uninterpretable feature (D) in a functional head. For example, T has an uninterpretable D feature, which must be eliminated if the resulting representation is to be legible to the conceptual-intensional system. An uninterpretable feature is eliminated by “attracting” another of the same type of feature. The subject DP has such a D feature (it being what makes the phrase a DP). Once the DP has moved to into SpecTP, the D feature on T and the D feature on DP “check,” eliminating the uninterpretable D feature on T. It is at this point that the UCC comes in; (10) says that this can only happen once. So, although in the adult syntax there are two uninterpretable D-features which the subject DP must check, one on T and one on AgrS, a child constrained by the UCC cannot eliminate both D-features with the single subject DP.¹⁰

Given this, the only way for a child to produce a sentence in compliance with the UCC is to omit one or the other of the projections to which the movement is required in the adult grammar, which in turn means that the child must violate either *REALIZE TENSE* or *REALIZE AGREEMENT*. Thus, where the child satisfies the UCC, (s)he will omit AgrS in some cases and T in other cases, despite the violations of *REALIZE TENSE* or *REALIZE AGREEMENT* that result. A third option open to the child is to violate the UCC itself, producing adult-like forms which contain both T and AgrS. Later in the child’s maturational development, the UCC will cease to govern the child’s grammar, at which point normal the child’s representations will converge to the adult

form. As Wexler points out, this means that the UCC has basically the same status as REALIZE TENSE; it is a constraint imposed on a child before a maturationally determined point, but it is violable to the same extent REALIZE TENSE is.¹¹

Concerning case assignment, the view that AgrS can be omitted in a child's structural representation requires taking the view that case on a DP is licensed by the something in the morphological neighborhood of the DP, rather than being a motivation for movement and a uninterpretable feature that must be checked (Marantz 1991, Schütze & Wexler 1996). Schütze & Wexler (1996) argue that where AgrS is missing, the default case in the language surfaces on the subject (accusative in English), and when AgrS is present, nominative case is licensed (by AgrS). Thus, the structure without AgrS is still a convergent, grammatical structure, but it violates REALIZE AGREEMENT.

In order to see how the UCC applies to the Korean SFN construction, we will first need to explore the syntax of SFN, a task that we will turn to next. To be parallel to the AgrS/Tense-omission model of optional infinitives, we must find (*a*) that Korean SFN consists of two movements, and (*b*) that both are dependent on a single D-feature. In the next two sections, we will see that a case can be made for each.

5. Two movements in adult Short Form Negation

One of the primary questions we are addressing in this article is what the evidence from first language acquisition tells us about the structure of negation in Korean. Recall that we learned in section 2 that in SFN constructions, the *internal* contents

If this line of reasoning is correct, this also provides us with indirect evidence for (short distance) overt verb movement. This is a welcome result; evidence which bears on the question of verb movement is notoriously hard to find in a head-final language like Korean because verb movement—even if overt—would be string-vacuous.¹⁴ However, notice that if the VP is being preposed over *an* in SFN constructions, the fact that the verb itself does not appear to the left of *an* implies that it escaped the VP.^{15,16}

In addition to the VP-movement illustrated in (12), there is also evidence (from adult Korean) for a second overt movement in SFN. This other movement happens even in affirmative sentences, as indicated below by the distribution of the adverb *cal* ‘well’. Unlike most other adverbs, *cal* has a highly restricted distribution, occurring only in immediately preverbal position (13) (J.-H. Lee 1993).

- (13) a. (pelsse) John-un (pelsse) yenge kongpwu-lul (pelsse) machi-ess-ta
 already John-TOP already English studies-ACC already finished
 ‘John has already finished his English studies.’
- b. (*cal) John-un (?*cal) sayngsenhwoi-lul (cal) mek-nun-ta
 well John-TOP well raw.fish-ACC well eats
 ‘John eats raw fish well’

Presuming that the object is underlyingly closer to the verb than adverbs like *cal*, the restrictions on the surface word order suggest that the object has moved leftward over *cal*. The fact that other adverbs do not show similar requirements indicates that

cal has a lower attachment site than other adverbs, in line with other crosslinguistic evidence (Cinque 1999, Costa 1996).

(14) ... NP_k ... [_{VP} *cal* ... t_k ... V ...

This means that the object is involved in two movements in adult SFN constructions, one as it is carried within the VP moving over *an* (as in (12b)), one independent movement (as in (14)).

It is worth observing that there must also be VP-movement in SFN even with intransitive verbs, as we see in (15a) for an unergative verb, and in (15b) for an unaccusative verb. If VP were allowed to remain *in situ*, VP-adjoined material (e.g. *cal* ‘well’) should remain between *an* and the verb, incorrectly predicting the examples in (15) to be grammatical. Thus, both movements discussed so far in SFN—the movement of the theme argument and the movement of the VP—are obligatory and overt.

(15) a. ?*Chelswu-ka an cal ttwi-ess-ta
 Chelswu-nom neg well run-past-decl
 (‘Chelswu did not run well.’)
 (cf. *Chelswu-ka cal an ttwi-ess-ta* ‘Chelswu did not run well.’)

- b. *Elum-i an cal nok-ass-ta
 Ice-nom neg well melt-past-decl
 ('The ice didn't melt well.')
- (cf. *Elum-i cal an nok-ess-ta* 'The ice didn't melt well.')

The proposal (for adult Korean) is thus that the object moves to the specifier of some projection outside VP. Then, that higher projection (including the shifted object, *cal*, and the rest of the VP) moves past *an*, to the specifier of another projection.

As for which projections are involved, I will adopt the following structure, which is one of the possibilities that would meet the requirements laid out in the previous paragraph. I will suppose that the position to which the object moves is the position standardly assumed to be the target for object shift, AgrOP, and the position to which the second movement carries the VP-internal material is an Agr phrase immediately above negation, AgrNegP.¹⁷

6. Pied-piping of AgrP in Short Form Negation

Now, we are in a position to combine the results from the previous two sections. In section 4, it was proposed that children around age 2 will sometimes omit a functional category in order to avoid violating a constraint against using a DP twice to check features (to explain the OI effects in other languages). In section 5, we established that adult SFN involves two movements, one being movement of a theme

argument, and the other being movement which takes the contents of VP to the left of *an*. In this section, we will tie together the two ideas.

It is important to establish at this point that (a) this double movement in SFN violates the UCC, and (b) omitting a functional category can solve the problem. Notice that the applicability of the UCC to this case is not entirely straightforward—the two movements, after all, are not of the argument itself (as they were in the case discussed in section 4), but rather of the theme and then of the whole projection into which the theme moved.

The UCC says that the D-feature of a DP can only be used once to “check off” a feature of a higher functional head (during the OI stage). In Korean SFN, the first movement, of the object to SpecAgrOP, checks a D-feature of AgrO (“using up” the D-feature on the object at the OI stage). The second movement is of some projection containing VP, and the shifted object, into a specifier to the left of *an*. As mentioned above, in order for the UCC to constrain this process, it must be that the *same* D-feature involved in the two movements, suggesting that the second movement is movement of the AgrOP itself.

To ensure this, we will treat this phenomenon as essentially a case of “feature percolation” (see, e.g., Ortiz de Urbina 1993 for discussion of and evidence for such a mechanism). In adult SFN, the DP moves to AgrOP, successfully checking an uninterpretable D-feature on AgrO. From there, the D-feature (not deleted, by virtue of being interpretable) is visible from the point of view of a higher functional head, but appears as a feature of AgrOP, causing the entire AgrOP to move.

Let us pause momentarily here for a short digression. The implementation of the “feature percolation” mechanism can be spelled out in various ways, but it is not intrinsically at odds with a minimalist viewpoint. If overt movement of a category is a reflex of “pied piping” of a constituent containing the feature attracted (e.g., the D-feature in this case), then “feature percolation” is essentially the name for the situation in which the smallest pied-pipe-able category is the one in whose specifier the feature is found. Under this view, the D-feature is never actually transferred to AgrOP (or AgrO°), but because the smallest constituent containing the D-feature is AgrOP, the movement affects the entire AgrOP. Specifiers seem to be privileged in their ability to cause this kind of pied-piping/percolation, e.g., in the case of English *whose book*. This phenomenon would be expected if (following Frank, Hagstrom & Vijay-Shanker 1999) a specifier itself only constitutes a constituent under special circumstances: Cases of “percolation” would be situations in which the only constituent containing the specifier is the entire AgrOP.¹⁸

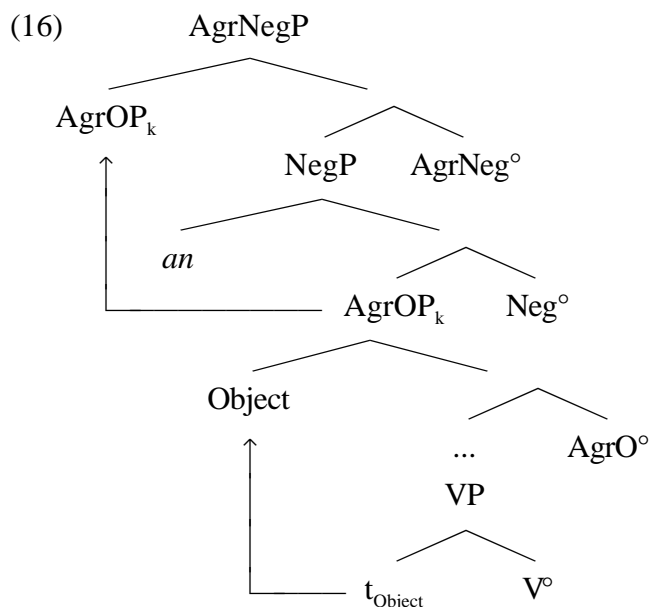
The next issue to confront is where this second movement takes the AgrOP. We suppose that there is a direct causal relation between the presence of negation and the movement of the AgrOP; that is, it is negation that is responsible for the movement (see related discussions in, e.g., Haegeman & Zanuttini 1991, Sohn 1995). The analysis we will pursue below has AgrOP moving into the specifier of an additional Agr projection immediately above NegP.

First, consider the position of the negative morpheme *an*. While I assume that the presence of this morphology implicates a NegP, the morpheme could in principle be a pronunciation of the head (Neg°) or of a specifier (SpecNegP), each of which is a crosslinguistically attested possibility (cf., Pollock 1989, Ouhalla 1990,

Laka 1990, Zanuttini 1997). Different stands have been taken on this issue with respect to Korean *an* (e.g., Yoon 1990, Cho 1994, who take *an* to head NegP, vs. Jung 1990, Park 1992, J.-H. Lee 1993, who view *an* as adverb or specifier of NegP). Here, I take the view that *an* resides in SpecNegP for a couple of different reasons. First, Korean is everywhere else a strictly head-final language. We are interpreting the “*an* misplacement” errors that children make as evidence that *an*, in its base position, precedes the VP-internal material; this is where we would expect to find a specifier in an SOV language, but not where we would expect to find a head. Another argument for treating *an* as SpecNegP comes from the (marginal) possibility of attaching the plural agreement morpheme *-tul* to *an*, as is possible with other adverbs, but which is impossible with more uncontroversial inflectional heads (see, e.g., Cho 1993).^{19,20}

Presuming that *an* is in SpecNegP, we will analyze the movement of AgrOP to the left of *an* as movement into an agreement phrase just above (and contingent on) NegP.

The view of adult SFN that we have arrived at has two movements driven by the need to check an uninterpretable D feature, one that moves the object into SpecAgrOP, and a second that moves AgrOP (now with the object in its specifier, after having contributed its D feature to AgrOP) into SpecAgrNegP, as in (16). For both movements, the D feature that entered the derivation as a feature of the object is crucial to perform the checking operation (it is the feature “attracted”). We will return shortly to the question of what the ellipsis above VP in (16) is standing in for.



A child constrained by the UCC will not be able to perform both movements, since the D-feature of the object can participate in only one of them. The solution in the verbal domain, as was discussed in section 4, is to omit one of the functional categories driving movement of the subject; to apply the same solution here would mean omitting either AgrO or AgrNeg.²¹

This analysis makes a number of predictions about precisely what kinds of SFN errors we should expect to find in the child data, which will be outlined below. Whether these predictions are borne out remains to be seen, since no child errors containing all of the relevant morphemes (transitive verbs with SFN and *cal*) have been reported in the existing literature that I am aware of. Such utterances would of course be quite rare in spontaneous production. Yet, in light of the fact, originally reported by Cho & Hong (1988), that children at the relevant age will repeat adult LFN utterances by substituting SFN, it should be fairly easy to set up an elicitation

experiment to study child negation errors in just this context; however, such an experiment has yet to be done.

To illustrate the full range of predictions, we will consider transitive utterances with an overt object, the adverb *cal*, and SFN. There are three possibilities: (i) to ignore the UCC, (ii) to omit AgrOP, or (iii) to omit AgrNegP.²²

Option (i) results in an adult-like utterance, *object cal an verb*.

Option (ii), where the child omits AgrNeg (retaining AgrO), results in the order *an object cal verb*, since the object will have moved over *cal* to SpecAgrOP, yet AgrOP itself will have remained below NegP. These are the observed errors.

Option (iii), where the child omits AgrO (retaining AgrNeg), results in the order *object an cal verb*. This is in a sense a surprising order (having the appearance of adult object placement with respect to *an*, but yet leaving *cal* between *an* and the verb). AgrNeg attracts a D feature, and the object has a D feature; even though the object did not move over *cal*, the object and its D feature should still be visible from the point of view of AgrNeg. Notice also that if no VP-adverb is present, this word order is indistinguishable from the adult order (and hence would not usually be detected as an error).

There is another interesting generalization about these constructions, reported by Baek (1997, 1998), Baek & Wexler (2001). In cases of *an* misplacement where an object intrudes between *an* and the verb, the object never receives accusative case marking. By comparison, correctly placed objects and objects in affirmative sentences do show (some) accusative case marking.²³

Casting this generalization in our terms, this means that in case (iii) above, where the UCC is respected and AgrNeg is omitted, the object does not surface with

accusative case marking. To make sense of this, let me now return to the ellipsis in (16). If we suppose that (16) in its entirety appears below vP in the structure (and thus that the ellipsis in (16) is actually standing in for nothing), we gain a reasonably straightforward explanation of the case facts. Moreover, since unergative and transitive subjects never occupy a position below negation, we have an explanation for why they are never involved in child *an* misplacement errors (particularly if children do sometimes omit both functional projections, see fn. 22).²⁴ If accusative case is licensed by being in the morphological neighborhood of v° , in an affirmative transitive sentence, it would be realized on the argument in the specifier of AgrOP, complement of v° . In a negative sentence, however, the AgrP that is a complement of v° is AgrNegP, and so the phrase in SpecAgrNegP is the one that would be licensed for accusative case (of course, this also makes our labeling of the AgrPs somewhat misleading, but we follow Chomsky 1993 in assuming that AgrPs only differ in their structural positions and not in feature content). Where a child omits AgrNegP, the object does not reach the neighborhood of v° , and so accusative case is not realized. Where a child omits AgrOP, the object moves to SpecAgrNegP and can receive accusative case. For an adult, or for a child violating the UCC, the AgrOP (with the object in its specifier) moves to SpecAgrNegP, and accusative case is licensed (see also the discussion of LFN in section 7).

Let me pause for a moment to comment about the interaction between the proposal here for Korean negation and the discussion from section 4 concerning OIs in other languages. We are entertaining the hypothesis that while Optional Infinitives are the reflex of the UCC in, say, German, the *an* misplacement errors are the reflex of the UCC in Korean. There do not seem to be effects on the surface in

terms of (missing) tense or case marking in child Korean that parallel those in documented OI languages. Kim and Phillips (1998) report that at this age, both tense marking and nominative case marking are very rare. They suggest that children's overuse of the mood marker *-e* might be analogous to, although quite a bit more frequent than, OIs in other languages, but there is little that can be correlated with this. In short, the child Korean structures may well lack TP or AgrSP sometimes—and should, under the view of the UCC we're pursuing—but there is not much evidence one way or the other;²⁵ the data do not seem to be inconsistent with this hypothesis, but also do not seem to provide strong support.²⁶

Having considered transitive constructions, and following Hale & Keyser's (1993) view that unergative verbs are structurally transitive, let us consider the remaining case, unaccusatives. We can presume that the primary difference between transitive and unaccusative constructions is that the “little *v*” which introduces the subject for transitives (and unergatives) is either missing or defective. Taking this to have no effect on the structure below *vP*, the same syntax applies; the argument moves to AgrOP, and then the AgrOP moves to AgrNegP (recall the discussion of (15)). What differs in unaccusative sentences is that the argument that enters the derivation at the bottom of the structure, in the VP, must also play the role of the “subject”, moving all the way up to canonical subject position. As was covered in section 4, we have evidence that moving the argument to subject position involves travelling through two additional projections, TP, and AgrSP. All told, then, the argument must move four times in an unaccusative construction, its D-feature entering checking relations at each step.²⁷

A child who is subject to the UCC, of course, cannot perform all four steps; the UCC limits the child to just one of them. Therefore, the child uttering an unaccusative must omit functional projections even more radically than in transitive constructions. In this situation, there are four possibilities (apart from not satisfying the UCC): Keep AgrO, keep AgrNeg, keep T, or keep AgrS. If the child keeps AgrO, the predicted order would be *an subject cal verb*, a detectable case of *an* misplacement. The other three options all result in the order *subject an cal verb*; without *cal*, this looks like the adult order.²⁸ As with transitives, we also predict that in cases of *an* misplacement with unaccusatives, the argument should not receive Case marking for the same reasons.²⁹

7. The structure and the late emergence of Long Form Negation

Let us now turn our attention to LFN, the other form of negation in Korean. The discussion in this section will be quite speculative; we will open the question of why LFN seems to appear in child speech so much later than SFN, and briefly explore the structural properties of LFN, compared with SFN.

One of the clearest differences between SFN and LFN on the surface is the presence of the verbal suffix *-ci* that appears in LFN. Accordingly, one might be tempted to attribute the late emergence of LFN to some difficulty children have learning this suffix. However, there is reason to think they know *-ci* before they begin to produce LFN. Kim (1997) reports that children in data she collected have productive use of negative imperatives form involving *-ci* such as (17) significantly

before their first instance of LFN. This seems to be ample reason to suppose that late acquisition of *-ci* is not the explanation for the late emergence of LFN.³⁰

- (17) twutuli-ci ma (K:372³¹)
 tap-ci neg.imp
 ‘Don’t tap it.’

One might also consider attributing the late emergence of LFN to a delay in the use of the dummy verb *ha-* ‘do’ (as suggested by Kim 1993). However, this explanation does not seem promising for two reasons. First, Harris & Wexler (1996) show that children learning English do not have comparable difficulty with *do*-support (presumed to be a similar phenomenon), at ages earlier than the ages at which LFN finally emerges in Korean. Second, even before children learning Korean can use LFN, they are using *ha-* ‘do’ quite frequently, both as a main verb and, more importantly, in Sino-Korean forms which require *ha-* “support” after a verbal noun stem (Park 1992). For example, Hahn (1981) reports (18), which was uttered by a child whose first instance of LFN was not recorded until over a month later. What is notable about (18) is that it separates the verbal noun *kongpwu* from *ha-*, indicating that the child is not treating *kongpwuha-* as an unanalyzed verb stem. From this we can conclude that it is not an inability to use *ha-* as a light verb that is at the heart of the delayed emergence of LFN.

- (18) kongpwu an-hay (H:237 [Y 3;4])
 study neg.do
 ‘(I) won’t study.’

Turning to the acquisition literature outside of Korean, let me highlight a possible parallel to the delay in Korean LFN. Guasti, Thornton & Wexler (1995) report that in English, children who are capable of correctly forming non-subject *wh*-questions nevertheless make errors with negative non-subject *wh*-questions. Reported errors include doubling of the auxiliary (e.g., †*How can Ernie can’t sit?* or †*Why can’t she can’t go underneath?*), lack of subject-auxiliary inversion (†*What she doesn’t want...?*), or a full (uncliticized and hence uninverted) *not* (†*Why can you not eat...?*). In each case, the error ensures that negation appears below the subject. Guasti et al. hypothesize that IP-external negation (as compared to IP-internal negation) causes problems for children at this stage; the I-to-C movement (subject-auxiliary inversion) carries normal clitic negation out of IP. The ten children in Guasti et al.’s study ranged from age 3;8 to 4;7, each of whom had at least some errors with non-subject *wh*-questions. Turning back to Korean, we might attribute the late emergence of LFN to the same factor, if we suppose that LFN involves movement of negation to C°. ³² Although the English children are still having trouble with negative non-subject *wh*-questions into their mid-to-late 4’s (quite a bit later than the first appearance of Korean LFN generally), they also produce a significant number of *correct* non-subject *wh*-questions. We would expect to see an age correlation (if this is due to a maturationally-governed constraint) between the first LFN in Korean and the first correct formation of

negative non-subject *wh*-questions in English; whether beyond that point there is difficulty with LFN (corresponding to the errors Guasti et al. report from English) is harder to determine, since in Korean there is an alternative to LFN (namely, SFN).

If this explanation of the delay in LFN is on the right track, it provides indirect evidence for an analysis of LFN in which Neg° must move to C° (in this respect unlike SFN). We will return to this point briefly below.³³

As a starting point for the analysis of LFN, we will pursue the hypothesis that LFN and SFN are minimally different, both involving primarily the same morphosyntactic elements. It is suggestive in this regard that a second negative morpheme *mos* (which carries a meaning of inability) shares all of the distributional properties of *an* in *both* SFN (19a) and LFN (19b); *mos* is not limited to one or the other.

- (19) a. Chelswu-ka ppang-ul mos mek-ess-ta. SFN with *mos*
 Chelswu-nom bread-acc neg eat-past-decl
 ‘Chelswu was unable to eat the bread.’
- b. Chelswu-ka ppang-ul mek-ci mos ha-ss-ta. LFN with *mos*
 Chelswu-nom bread-acc eat-ci neg do-past-decl
 ‘Chelswu was unable to eat the bread.’

Extending the proposal for SFN, we will therefore assume that LFN also involves a NegP, with *mos/an(i)* in the specifier (cf. section 5). Recall that for SFN we concluded that the AgrOP moves leftward past SpecNegP and there was at least

short-distance verb-movement out of the VP. With that in mind, the adult word order of LFN suggests a straightforward analysis. In both forms of negation there is leftward movement of some phrase XP past SpecNegP; in LFN, however, the verb does not escape the XP (and in fact a natural candidate for XP is “*ciP*”, the phrase headed by the morpheme *-ci* that appears suffixed to the verb, whatever its category). Assuming that V° invariably moves at least as high as v° (Chomsky 1995), yet still remains within *ciP*, this leads to hypothesis that the structure of LFN is as shown in (20).



In (20), Neg° selects ciP , which selects νP . To maintain the hypothesis that this is the same Neg° in both LFN and SFN, this means that the complement of Neg° in LFN should be of the same syntactic category as the complement of Neg° in SFN (AgrOP). The function of the *-ci* morpheme in LFN is, then, to provide a complement of the correct category; *-ci* is functioning something like a “nominalizer” (a common proposal since at least Song 1971). In fact, the *-ci* phrase does have a “nominal” character, as we can see by the fact that case suffixes can appear after *-ci* as shown in (21).³⁴

- (21) Chelswu-ka ppang-ul mek-ci-lul anh-ass-ta.
 Chelswu-nom bread-acc eat-ci-acc neg.do-past-decl
 ‘Chelswu did not eat the bread.’

The analysis illustrated in (20) is silent about whether Neg° must move into C° in LFN. Such a movement would not be overtly audible, since the phonetically overt part of $\text{Neg}P$ is its specifier. Recall that there has been controversy in the literature over whether the verb moves in head-final languages such as Japanese and Korean. Moreover, even if it can be shown that the verb raises at least some distance, it is exceedingly difficult to show that verb movement proceeds all the way to C° (see, e.g., Koizumi 1995, 2000, for an argument that verbs in Japanese move to C°). However, if the explanation considered at the beginning of this section for the late emergence of LFN based on Guasti et al. (1995) is correct, it could serve as indirect evidence that the verb indeed moves into C° in Korean.

Consider a SFN sentence, in which NegP is between the vP and VP projections. In this structure, if C° attracts a verb, the v° is the closest verbal element and will move to C° . Suppose however that what C° attracts is a feature which is shared by both v° and Neg° ; Chung (1970) proposes that negation in Polynesian languages is essentially verbal, and Portner & Zanuttini (2000) observe that in Paduan, whereas the verb inverts with the subject in positive yes-no questions, the negative marker *no* inverts (instead of the verb) in negative yes-no questions. In the proposed Korean LFN structure, NegP is above both vP and VP, so if C° attracts a verb, Neg° would be attracted instead of v° . Thus, if movement of Neg° to C° is a problem for children in their 3's, we might expect LFN to emerge late.³⁵

At this point, we have little more than two consistent speculations (delay in LFN is due to trouble with negation in C° , LFN entails movement of Neg° to C°), neither able to serve as an argument for the other. Nevertheless, it gives us a way to think about the acquisition of LFN in the current context, and provides avenues for future study.³⁶

8. Summary and concluding remarks

Let us now return to review the major points of the arguments presented here. We saw that children around 2 years old sometimes “misplace” *an*, to the left of the VP-internal material rather than immediately preverbally. We took this to imply that movement of a phrase containing the VP-internal material moves leftward in the adult language and can sometimes fail to move in child language. Looking at language acquisition from a crosslinguistic perspective, we saw that this

phenomenon can be seen as an instance of a more general problem children at about this age have with double movements generally, formalized as a constraint (the UCC) prohibiting checking of a D-feature twice. Children faced with a sentence whose derivation would require using a single DP to check two D-features in the adult language are forced to choose either to violate the UCC or to omit one of the functional categories containing the feature in need of checking (in violation of conceptual-intensional interface constraints such as *REALIZE TENSE*). We investigated SFN in more detail, using facts from adult Korean, and determined that two movements are involved, one of the object into SpecAgrOP and one of AgrOP into a higher position, SpecAgrNegP, situated above *an* (in NegP). Finally, we considered LFN and speculated about why it appears almost a year after SFN in child language. The analysis of LFN closely parallels the analysis of SFN; a “nominalized” phrase (in this case containing the base position of the subject) moves leftward in LFN, just as AgrOP moves leftward in SFN.

By considering in detail the implications of facts from the acquisition of negation in Korean, we were able to construct detailed conclusions about the structure of negation in the adult language, as well as to formulate specific hypotheses about the course of acquisition generally. It is important to keep in mind that the analysis is in large part motivated by evidence from first-language acquisition (both within Korean and cross-linguistically). Therefore, to the extent that the present analysis proves to be a successful one, it should serve as a reminder not to forget the little people.

Appendix. *Further data for examples in the text.*

- (5) d. † kkoch-i an nolay pwulle (C&H:35 [2;2-6])
 flower-nom neg song sing
 ('The flowers do not sing a song')
- e. † Hoyeni-nun an son takk-ko siphkuna (C&H:35 [2;2-6])
 Hoyen-top neg hand wash want-to
 ('Hoyen does not want to wash hands')
- f. † an mamma mantul-e (C&H:35 [2;2-6])
 neg meal make
 ('(I) do not make meals.')
- g. † an phikul coa-hay (C&H:35 [2;2-6])
 neg pickle like
 ('(I) do not like pickles')
- h. † an chong sswa-ss-e (C&H:35 [2;2-6])
 neg gun fire-past
 ('(I) did not fire the gun.')
- i. † an wuywu ssot-ass-e (C&H:35 [2;2-6])
 neg milk spill-past
 ('(I) did not spill milk.')

- j. † an sok sanghay (K:377 [P 2;3])
 neg inside/heart get.hurt.decl
 ('(You) do not feel bad.')
- k. † salam-tul-i an papo-ta kulay (K:377 [P 2;3])
 people-pl-nom neg fool-be.decl say.decl
 ('People say (that I) am not silly.')
- l. † an papo-ya (K:377 [P 2;4], H:187 [Y 3;3])
 neg fool.be.decl
 ('(I) am not silly.')
- m. † an kkwum kkwul-ese . . . (K:377 [P 2;6])
 neg dream dream-because
 'because (I) did not dream...'
- n. † Jwunkyu-nun an kkakka mek-ko an naynnayha-n-ta
 Jwunkyu-top neg cookie eat-conj neg sleep-pres-decl
 ('J doesn't eat cookies and doesn't sleep.') (K:377[J 2;2])
- o. † an pyeng kkay-ss-e (K:378 [J 2;3])
 neg bottle break-past-decl
 ('(I) did not break the (milk) bottle.')

- p. † i-ke-nun an choloksayk-i-ci (K:378 [J 2;4])
 this-one-top neg green-be-decl
 ('This one is not green.')
- q. † an ta mek-ess-e (K:378 [J 2;4])
 neg all eat-past-decl
 ('(I) did not eat (it) all')
- r. † an ppesu tha (H:106 [Y 2;7])
 neg bus get.on
 ('Let's not take a bus.')
- s. † emma an cam on-ta (H:187 [Y 3;2])
 Mama neg sleep come-decl
 ('Mama is not sleepy.')
- t. † an ttong malye (H:146 [Y 3;0])
 neg stool want.to.let.out
 ('(I) don't want to poop.')
- u. † an kyeylan mek-e (H:207 [Y 3;4])
 neg egg eat-decl
 ('(I) won't eat (my) eggs.')

- v. ‡ an ppallay hay (H:207 [Y 3;4])
 neg wash.clothes do-decl
 ('(I) don't wash clothes.')
- (6) d. ‡ an cal hay (C&H:35, K:378[J 2;3])
 neg well do
 ('(I) do not do well.')
- e. ‡ an cal tha (C&H:35 [2;2-6])
 neg well ride
 ('(I) do not ride (a horse) well')
- f. ‡ an manhi kuly-ess-e (C&H:35 [2;2-6])
 neg many draw-past-decl
 ('(I) did not draw many pictures')
- g. ‡ an yekise hay (C&H:35 [2;2-6])
 neg here do
 ('(I) do not do that here.')
- h. ‡ an hakkyo ka (H:279 [Y 3;5])
 neg school go
 ('(I) don't go to school.')

- (7) d. † an him tul-e (K:380 [W unspecified age 1;8-2;8])
 neg strength cost-decl
 ('(It) isn't strenuous.')

Notes

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¹ The body of work on the subject is quite extensive. See, e.g., Oh (1971), Song (1971), Cho (1975), Yang (1976), Kang (1988), Suh (1989), Ahn (1991), Park (1992), Cho (1993), J.-H. Lee (1993), Park (1994), Yoon (1994), Sohn (1995), Kim (2000).

² Generally, no space is orthographically present between the SFN morpheme *an* and the following verb. I write it separately in part for clarity, since I do not take *an* to be an inflectional head like the tense/aspect/mood suffixes.

³ I have drawn on sources in the literature for examples. Most of the existing research is not reported in much statistical detail, which leaves the conclusions reached here open to the criticism that the data we rely on may not be representative; however, recent unpublished research (Baek & Wexler 2001, Kim, Sun & Song 1999) appears to generally confirm prior reports in the literature. The sources for

the child data are marked: C&H (Cho & Hong 1988), H (Hahn 1981), K (Kim 1997), L (C. Lee 1993). Page numbers and child subject and age are included in square brackets if known; e.g., “(H:279 [Y 3;5])” marks an utterance by child Y at age 3;5 reported by Hahn 1981, page 279. Cho & Hong (1988) do not indicate which child provided which utterances; the children in their experiment were 2;2, 2;4, and 2;6, and the sentences they report were primarily spontaneous utterances in a natural setting (except for (4b), which came from an elicitation study).

⁴ John Whitman (p.c.) points out that (5a) has a marked reading where *an* is a constituent negator of *nappun* ‘bad-ADN’ (i.e. ‘Rubin is a not-bad baby’). Only some of the examples listed as errors could have this kind of interpretation ((5q) in the appendix, (6a–b, d–f)), all cases of *an mak* ‘neg much’, *an manhi* ‘neg many’, *an ta* ‘neg all’, or *an cal* ‘neg well’; the others remain to be explained. Thus, the existence of a (marginal) constituent negator (cf. Ahn 1991, fn. 20) in adult Korean cannot explain the *an* misplacement facts in their entirety.

⁵ It is noteworthy that the Korean children appear to be differentiating between unaccusative and unergative verbs in light of the well-known argument (Borer & Wexler 1987, 1992) that children at this age (and beyond) misanalyze unaccusatives as unergatives due to a representational difficulty with promoting deep objects to subject position (see also Babyonyshev et al. 2001).

⁶ Kim (1997) indicates that for any child, the frequency of correct utterances is much higher than that of incorrect utterances for sentences involving SFN. This runs counter to Cho & Hong’s (1988) characterization of the errors as “predominant,” although in neither paper are actual frequencies reported. In two recent unpublished studies, Baek & Wexler (2001) found the error rate to be

(2;0–2;8) 30% in spontaneous production, and Kim, Sun & Song (1999) found rates of 48%, 28%, and 7% for three children participating in an elicitation task, ages 2;10, 3;6, and 4;10, respectively.

⁷ Of course, this depends on an independence assumption; if evidence from another part of the grammar could trigger a change resulting in obligatory preverbal placement of negation, this argument does not go through. However, the existing proposals of grammatical optionality in child Korean have analyzed the relevant properties to be very specific to negative placement (e.g., the ability to adjoin a negative adverb *an* leftward or rightward, later only allowing rightward adjunction of negation), and not easily tied to any other learnable grammatical properties.

⁸ Whereas Wexler's (1998) position that Tense is required for a sentence to be well-formed in discourse has a certain intuitive appeal, what requires the inclusion of subject agreement (AgrS) is much less clear. Whatever it is that adults know that makes them include subject agreement, that is the content of the REALIZE AGREEMENT constraint. See also fn. 11.

⁹ Wexler (1998) makes the further proposal that the UCC might itself be derivable from a child's having, in a sense, an incomplete grasp of the properties of the syntactic category D (determiner). Specifically, Wexler proposes that, although the category feature D in the adult grammar is "interpretable" (required and visible at the interface to semantic interpretation), the child (sometimes) mistakenly takes it to be "uninterpretable" with consequences that would derive the effects of the UCC. As their pragmatic/semantic ability matures, children come to consistently treat the D feature as interpretable, essentially deactivating the constraint. Because the UCC is itself sometimes violated, it can't be that the child simply doesn't know that D is

interpretable until a certain maturational point; rather, the child must know that D is interpretable but (sometimes) does not act on this knowledge. For the purposes of this paper at least, stating the UCC in terms of interpretability of features does not buy us any additional predictive power, so it will remain as stated as in (10).

¹⁰ Some languages, e.g. Italian, do not seem to show an OI stage. Wexler (1998) observes that it appears to be specifically null-subject languages that are exempt from OIs, and proposes that AgrS in null subject languages does not have an uninterpretable D-feature to check (hence the UCC would not prevent the simultaneous presence of T and Agr).

¹¹ This is essentially the end of the story as told by Wexler (1998); as for *which* constraint the child chooses to violate and how often, it is left without comment. Legendre, Hagstrom, Vainikka & Todorova (2000) observe that the patterns of tense and agreement omission in child French have a systematic course of development (making “random choice” extremely unlikely), and propose a system which predicts the observed proportions (and their evolution through development) by analyzing the REALIZE TENSE, REALIZE AGREEMENT, and UCC constraints as partially ranked with respect to each other in an Optimality-Theoretic system (Prince & Smolensky 1993). This in fact provides a slightly more natural rendition of the UCC in the form of a markedness constraint on structure (*F², prohibiting two functional projections), which is progressively more often outranked by the faithfulness constraints (REALIZE TENSE, REALIZE AGREEMENT) as the child’s grammar develops. *F² and its unconjoined counterpart *F also provide an explanation for why children might omit both AgrSP and TP (resulting in genitive subjects, in

English), something which does not follow in any obvious way from the UCC. See also fn. 22.

¹² See, e.g., Travis (1992), Bowers (1993), Koizumi (1993), Bobaljik (1995), Harley (1995), Chomsky (1995), Collins (1997).

¹³ The structure in (11) is simplified in that it does not include the Agr projections that we will ultimately assume.

¹⁴ The existence of overt verb movement in Korean is controversial, but under the assumptions made shortly, for the purposes of (12b) we only need to assume that the verb moves as high as v^o . The debate on verb movement generally centers on movement to higher structural positions. In section 7, I will put forward a speculative suggestion that something verbal moves to C, but this would eventually need to be reconciled with the coordination facts that have been taken as evidence against verb movement in Korean.

¹⁵ There is an alternative possibility which is difficult to argue conclusively against, namely that the misplacement of *an* is due instead to a form of noun- or adverb-incorporation (of the sort discussed by Baker 1988, 1996). This alternative has a couple of counts in its favor: it would explain the lack of case on intervening objects (see section 6), and it would explain why internal arguments are privileged. It leaves a learnability issue, since the adult language does not have such an operation of incorporation and the children must eventually lose this option. Moreover, standard examples of incorporation do not involve adverbs or proper names (see Baker 1996), but both are attested in *an* misplacement errors; e.g., (6c), where *Gemco* (a city name) appears between *an* and the verb. We also saw in (5a) that the material intervening between *an* and the verb can be phrasal (though cf. fn. 4). Although it

might be possible to additionally suppose (as suggested by an anonymous reviewer) that children are overgeneralizing incorporation to allow adjunct, proper name, or phrasal incorporation, this exacerbates the learnability problem.

¹⁶ Notice that analyses (e.g. Yoon 1990, Cho 1994) deriving SFN from head-movement of *an* (there taken to be Neg°) in a head-final language offer no obvious route to an explanation for how the child errors could be derived; in particular, in what structural position could the misplaced VP-internal material be? Whether or not the head-movement failed to occur in the child grammar, the appearance of the VP material after *an* would have to be analyzed as some sort of right-dislocation performed only (and only occasionally) by children.

¹⁷ Recent theoretical developments within the Minimalist Program have moved away from positing semantically empty Agr phrases in the syntax on the grounds that they do not play any role in interpretation at the interfaces. The analysis presented here does rely on having a phrase in the position of AgrOP; however, we might conflate AgrOP with Travis' (1992) "inner aspect", at least based on its structural position. Under this interpretation, the phrase would not be semantically vacuous, and thus should not conflict with the minimalist goals. With respect to AgrNegP, not much would be lost if it were instead analyzed as a second specifier of NegP, if (contra Richards 1997) we assume that movement into a second specifier is into an outer specifier. It is also important that children are able to omit the movement triggered by negation without omitting negation itself, but this could be implemented by omitting the D feature on Neg° , rather than omitting Agr Neg° . Yet, following this path would also require conflating AgrSP and TP, which renders the UCC account of standard OIs much less transparent (for reasons that are immediately obvious).

Having noted these possibilities, however, I will not pursue this analysis further in this paper.

¹⁸ We can take this a couple of steps further, under the view of constituency put forward in Frank, Hagstrom & Vijay-Shanker (1999). What determines whether a specifier of XP is a constituent is whether it is in a mutual c-command relation with the head selecting that XP. Consider Merge of v and AgrOP; v selects AgrOP, but v also has a relation with SpecAgrOP insofar as v is responsible for providing accusative Case. We might say that, due to this relation, Merge establishes a mutual c-command relation between v and SpecAgrOP as well as establishing a mutual c-command relation between v and AgrOP. Now consider Merge of Neg° and AgrOP. While v was responsible for assigning accusative Case to the specifier of its complement, Neg° has no such responsibility; Neg° has essentially no relation to the specifier of its complement, and hence Merge does not establish a mutual c-command relation between them. What this means in the context of SFN is that when AgrNeg° attracts a D-feature, it will cause pied-piping of the entire AgrOP (containing the object in its specifier) up into SpecAgrNegP—but after that, since AgrNegP is the complement of the accusative-case-assigning head v° , a mutual c-command relation is established between v° and the object (the distinguished “attachment root” of AgrNegP, according to the algorithm from Frank, Hagstrom & Vijay-Shanker 1999), at which point the object will be a constituent on its own with respect to any further movement. There is in fact evidence that the object will move alone (without taking AgrOP with it) after AgrOP moves over *an*; in unaccusatives, AgrOP does not move into subject position as shown by the fact that VP-adverbs like *cal* ‘well’ cannot precede higher adverbs like *pelsse* ‘already’ even

in unaccusatives. Additionally, this means that whatever takes AgrOP as a complement in unaccusatives (perhaps an unaccusative v° , perhaps T°) has a selection-like relation with the specifier of its complement.

¹⁹ One possible analysis of these facts, although not one which we will pursue here, is that all languages are universally head-initial, and that head-final order is derived by leftward movement of the object (a general approach outlined by Kayne 1994, and developed in the context of Korean acquisition by Whitman 1995). In the end, the decision between the approach taken here and the SVO approach advocated by Whitman (1995) will almost certainly be made on the strength of the SVO hypothesis in the big picture. I have no reason to believe that a satisfactorily detailed account could not be worked out in an SVO framework, but here I am not adopting those assumptions. That said, let me make a couple of brief comments on the SVO analysis in Whitman (1995). First, there is nothing that I am aware of in the literature on the acquisition of Korean to indicate that children make errors in which they reverse the object and the verb early on; this means that even at the youngest (two-word) stages they must always be performing at least one movement, namely of the object over the verb. We might probe the same issue a different way: what makes the movement of VP into SpecNegP (the failure of which would be responsible for the *an* misplacement errors) different from other very similar movements required in adult Korean and *successfully* performed by the children? For example, the VP never fails to move at least as far as SpecIP, or we would expect to find child errors of the form *(an-)tense-verb*.

²⁰ Ahn (1991:214) suggests that *an* also exists as an emphatic adverbial negator when it bears heavy stress, giving examples like (i).

- (i) John-i AN ppalli ka-ss-ta
 John-nom NEG fast go-past-decl
 ‘John went NOT fast (i.e. he went slowly)’

I will not consider emphatic *an* further here, supposing it to be a separate phenomenon. It is a fairly marginal construction in adult Korean, and there is no evidence that the “*an* misplacement” in child utterances use it emphatically. An anonymous reviewer suggests that perhaps children overextend this usage to non-emphatic contexts, only later learning to restrict it to emphatic contexts; however, this again presents a learnability problem. Particularly since the adult use of *an* as constituent negation requires emphatic stress, there would not be any motivation for children to move to the adult analysis.

²¹ One other possibility is that the child could omit NegP itself, which would satisfy the UCC since having no NegP would presumably also mean having no AgrNegP either. Of course, it would be somewhat difficult to detect if the child has omitted NegP, since the resulting utterance would be affirmative. If we were to see that Korean children sometimes utter an affirmative sentence in a context that makes it clear that the negative version was intended, then perhaps omitting NegP is an option after all. Although I doubt that this happens, it wouldn’t undermine the discussion in the text.

²² There may also be a fourth option, namely to omit *both* AgrNeg and AgrO. Schütze & Wexler (1996) discuss an analogous situation for optional infinitives in English, which they claim results in genitive subjects. If this is an option, the next question is: why would the child omit both given that it seems to incur a needless violation of either PARSE AGREEMENT or PARSE TENSE? This clearly does not follow

from the UCC as proposed by Wexler (1998). The only solution is to posit another constraint, one which is only satisfied if *neither* T *nor* Agr are present, and whose satisfaction carries weight when making the decisions about whether to include T and Agr (e.g., *F, from Legendre, Hagstrom, Vainikka & Todorova 2000). If the child were to omit both AgrNeg and AgrO, we would expect to see the order *an cal object verb*, i.e. everything in its base order.

²³ In adult Korean, accusative case marking is often dropped, so it is not surprising that it is also often dropped in child Korean.

²⁴ See also Hagstrom (1997) for evidence that NegP in SFN is structurally low enough to be within a focused “VP” (in the *V-ki-nun* construction), which itself excludes the base position of the subject.

²⁵ We would expect that speakers of child Korean would omit AgrSP and/or TP, on the assumption that Korean is *not* an Agr-licensed null-subject language. If we were to assume Korean *is* an Agr-licensed null-subject language (like Italian) than the UCC may not constrain the projection of AgrSP and TP at all (as in Italian, see fn. 10). Certainly, Korean is a null-argument language; the issue is whether AgrS needs to check a D feature.

²⁶ In this connection, it is appropriate to comment on the presence of the *-ess-* morpheme in several of the child examples given here ((5hioq), (6f), (7a)). In adult Korean, this morpheme marks either past tense *or* perfect aspect (as in (i), example from Sohn 1994), or both (as in (ii), example from Lee 1989); see also Yoo (1993) for discussion.

- (i) Minca-nun cikum ttena-ss-ta
 Minca-top now leave-ESS-decl
 ‘Minca has just left (present perfect)’
- (ii) Hankuk-e ka-ss-ess-ta
 Korea-to go-ESS-ESS-decl
 ‘[He] had gone to Korea (and is here now)’

Aspect marking seems to appear in child speech earlier than tense, crosslinguistically (Brun et al. 1999, Wagner 1998), opening up the possibility that the child utterances with *-ess-* are not in fact tensed. It does not make much empirical difference for the majority of the utterances discussed here—except with respect to example (7a), which is an *an* misplacement error with the *-ess-* morpheme on an unaccusative verb. Given the discussion immediately below in the text, we are pretty much forced to take this as a case in which *-ess-* marks aspect.

²⁷ Perhaps the subject need only move three times, rather than four, if Korean turns out to be a null-subject language of the relevant kind that might exempt AgrSP from needing to check a D-feature (see fns. 10, 25).

²⁸ There is another possible prediction that this account makes. Because there are more candidate realizations for unaccusatives—yet only one option yields an observable error (in the absence of an adverb like *cal*)—we might expect to detect fewer *an* misplacement errors with unaccusatives. In fact, Baek & Wexler (2001) computed this measure on their data and report that unaccusatives seem to have *an* misplacement errors about a third as often as transitives.

²⁹ There is a single (but often-cited) example *an pi-ka wa* (neg rain-nom come ‘(it is) not raining’, L:45 [2;1]) that is left without any explanation under this account;

Baek & Wexler (2001), who make the same prediction as we do here with respect to case marking on unaccusative arguments in *an* misplacement errors, report finding no such utterances in their data. Given that there is only one instance of this counterexample reported in the literature to date, I am inclined to dismiss it as an unexplained anomaly.

³⁰ Kim's (1997) observation was also confirmed in recent unpublished work by Kim, Sun and Song (1999).

³¹ Kim (1997) doesn't give the details about which child provided this particular example at what age, but she is clear about the generalization she observed in her data: Children around 2;0–2;2 are already in control of the prohibitive *-ci ma(l)* construction, whereas LFN appears much later (Kim 1997:373 only reports one instance of LFN, by child C at age 3;3).

³² Thanks to Ken Wexler (p.c.) for suggesting this possibility.

³³ Another possible parallel that might come to mind is the claimed inability of young children to form A-chains (see Borer & Wexler 1987, 1992, Babyonyshev et al. 2001). However, there are two problems with attributing the late acquisition of LFN to this. First, there is a wide age discrepancy: Korean children are able to use LFN around age 3;5, whereas English children are still having difficulty with the passive at 3;6–5;5 (Fox, Grodzinsky & Crain 1995). More importantly, the errors with the English passive are errors in *comprehension*, yet Cho & Hong (1988) demonstrated that children can comprehend LFN even around age 2;2. Together, these facts lead us to prefer a different explanation. See also fn. 5.

³⁴ And, in fact, we can tell a consistent story about why accusative marking is allowed on *-ci* under the analysis described in fn. 18; if what is important for

(morphological) accusative case marking is being in a mutual c-command relation with v° , the fact that *-ci* selects vP as its complement arguably place *-ci* within the “morphological view” of the accusative-relevant features of v . Incidentally, the subject originating in $\text{Spec}vP$ c-commands vP but asymmetrically under this approach (because it is a specifier), so accusative case would not be available to the subject.

³⁵ This speculation leaves many issues unaddressed. For one, assuming the Head Movement Constraint (Travis 1984) holds, Neg° should wind up (as part of a complex head) in C° both in SFN and LFN. The generalization would then be that having Neg° without v° in the complex head is the configuration that causes children trouble (while having both, with v° higher than Neg° , is fine).

³⁶ In previous work (e.g., Hagstrom 2000), I (and many other authors) have taken as evidence the fact that a quantifier in subject position can be in the scope of negation in LFN but not in SFN. The idea was essentially that if the subject started below $\text{Neg}P$, a reading where a subject quantifier is negated would be available; hence SFN (with $\text{Neg}P$ below vP) only allows a subject quantifier to take scope over negation. Part of the trouble with this evidence is that there is a great deal of disagreement both in the literature and with informants on the scope judgments; this readings seem often to be more a matter of what can be focused. Nevertheless, let me touch on a couple of points raised by an anonymous reviewer. The review suggested that if we suppose that Neg° raises to C° , this should predict that negation should have wide scope over the entire sentence (and coordination facts show that both kinds of negation take scope lower than tense, see, e.g., Joh and Park 1993); however, I know of no convincing cases where head-movement ever changes scope relations. The

relevant element for determination of scope should in any case be the negator *an* in the specifier of NegP, which would not outscope tense. One remaining wrinkle with respect to scope, also pointed out by the anonymous reviewer, is that many speakers judge SFN to take unambiguously narrow scope with respect to object quantifiers; this fact that is not explained by anything I have proposed here.

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