Language Acquisition and Syntactic Theory

A Comparative Analysis of French and English Child Grammars

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1.1 INTRODUCTION

It is obvious even to the untrained observer that the mastery of spoken language proceeds without much strain on the part of the child, and without explicit instruction. Research on linguistic development has established that the human infant is indeed predisposed to learn language. Language and language growth, however, are not typically amenable to study in the biological laboratory. It is largely by unearthing uniformities in the stages of language development, across children and across languages, that the acquisition theorist contributes to the discovery of the mind's blueprints for language. This book considers data from French and English child language, focusing on the interplay between syntactic theory and language acquisition. French and English are, according to certain measures, grammatically similar. For instance, both are configurational head-first languages, with syntactic wh-movement and a relatively impoverished system for marking subject-verb agreement in the simple present tense. But there are recognized distinctions between the two grammatical systems, and the acquisition facts I present highlight these as well as other, unexpected differences.

My central claim is that a large cluster of phenomena in linguistic development are largely explained by a single, independently motivated hypothesis concerning the grammar. Namely, I assume, following a number of proposals in the recent syntactic literature, that the subject of a sentence is generated internal to the verb phrase, rather than outside the verb phrase in what was commonly thought to be the base position of the subject (Kuroda, 1896; Kitagawa, 1986; Contreras, 1987 Fukui and Speas, 1987; Sportiche, 1988). On the

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basis of the VP-internal subject theory and a few auxiliary assumptions, also independently motivated, fundamental patterns in the crosslinguistic acquisition of word order, verbal inflection and negation, as well as the well-known phenomenon of null subjects in early language, are accounted for. Each of these domains of syntactic development is characterized, if you will, by an acquisition puzzle:

Word order. Although French and English are generally thought to be equivalent with respect to the underlying linear order of constituents and a lack of free inversion of the subject, there are striking differences between French and English child language in the domain of word order. While children acquiring English are known to depart from accepted sentential word order only rarely (Brown, 1973; Pinker, 1984), French two year-olds produce subject-final constructions in abundance (Lightbown, 1977; Clark, 1985). This salient difference between French and English child language has remained largely unexplored.

Inflectional affixation. Very early child language is characterized by the absence of inflectional morphology, yet there is the following developmental paradox. The English speaking child is slow to acquire the impoverished inflectional system of his language, more often than not leaving out grammatical morphemes and auxiliary verbs until about the age of three (e.g. Brown, 1973). Yet the Italian speaking child, for example, is relatively quick to learn the complex system of inflectional morphology in his language, achieving productivity in this domain before the age of two (e.g. Bates, 1976; Hyams, 1984). Since intuitive notions of complexity fail to capture the developmental facts, what notion of complexity is relevant to the acquisition of inflectional morphology in English and French?

Negation. The early negated sentences of English speaking children contain negation on the left periphery of the sentence, sometimes with an overt subject below the negative marker (e.g. *No I see truck*; *No Mommy giving baby Sarah milk*) (Klima and Bellugi, 1966; Bellugi, 1967). The result is a construction that is never attested in the adult language which serves as input to the child. What leads the English

speaking child to produce these novel constructions? For that matter, what leads the young French speaking child to produce similarly ungrammatical negatives, though to a lesser degree?

Null subjects. The phenomenon of subject omission in child language stands out as one of the most robust cases of an acquisition universal. As far as we know, no matter what language a two year-old may be learning, he will appear to treat the subject of sentences as omissible. Of course, null subjects are expected from the child learning a language, such as Spanish, in which null subjects are grammatical, as is the case in the majority of the world's languages (Gilligan, 1987). In contrast, overt subjects are assumed to be required by the grammars of English and French. Nonetheless, children acquiring these languages omit lexical subjects with striking regularity.

In what follows, I substantiate each of these phenomena with natural production data from French and English child language, and provide an account in terms of a grammatical framework which includes the VP-internal subject hypothesis. According to this framework, and perhaps as its defining characteristic, inflectional structure and basic clausal structure (i.e. the verb and its arguments) are divorced in underlying syntactic representation. Syntactic derivational processes which integrate them by moving the subject, the verb and the elements of inflection are subject to parameter setting and, in certain cases, may only be acquired after an interim of delay. In particular, I build evidence for the hypothesis that early language has VP-internal subjects unmoved. From this follows a variety of word order distinctions between child and adult language, including subject-final order in early French, auxiliary-initial order in early English and negation-initial order, to varying degrees, in the youngest sentential output of both. In addition, null subjects in French and English child language can be explained on the assumption that Infl counts as a governor and Case assigner in early grammar, licensing *pro* in VP-internal subject position when directional government holds (Adams, 1987).

In constructing this model of early grammar, I further assume that

the affixation of verbal inflection is a syntactic process which takes different forms in French and English. While verbs raise to Infl in the syntax of French, affixes lower into the VP in the syntax of English (Emonds, 1978; Chomsky, 1988; Pollock, 1989). With the exception of *be* and auxiliary *have*, there is no verb-to-Infl movement in Modern English. Verb raising is one way in which verb-subject order in early French appears to be derived. The absence of verb-raising in English is visible in the generation of negation-initial and auxiliary-initial constructions in early speech. The failure of subjects to raise out of the VP in early grammar is in part attributable to the initial hypothesis, based on a default parameter setting, concerning the structural assignment of nominative Case.

I contend in the pages to come, therefore, that crosslinguistic data from child language converge to provide impressive confirmation of the VP-internal subject hypothesis. These data also conform to the proposed distinction between English and French in terms of inflectional-derivational processes, as well as the principled bias in Universal Grammar (UG) toward minimal (in some well-defined sense) syntactic derivations. The overall picture to emerge from these studies is that verbal inflection and the verb phrase, containing the subject, are divorced at an initial stage in S-structural representation, just as they are in the underlying syntactic structure. This is readily construed within the theoretical framework as a small window of delay in the acquisition of the derivational process of subject raising to [Spec, IP] in contexts where it is obligatory in the adult grammar. I argue in this way against recent suggestions in the acquisition literature to the effect that functional categories including Infl are absent in early child language (Guilfoyle and Noonan, 1988; Aldridge, 1988, Radford, 1990), and similarly against the claim that the Case filter or the Case module is not functional at early stages of child language (Lebeaux, 1988; Bloom, 1988). Finally, the success of this framework in accounting for aspects of syntax acquisition lends further credibility to recent enrichments of linguistic theory. I turn now to a more detailed description of these theoretical proposals.

1.2 THEORETICAL BACKGROUND

In this section, I provide some background for the studies of child language presented in chapters 2 through 6. Specifically, I outline the VP-internal subject theory, the verb raising analysis of inflectional affixation in French, and the affix lowering analysis of inflectional affixation in English (Emonds, 1976; Chomsky, 1988; Pollock, 1989). Furthermore, I bring together a group of proposals, which seemingly arose independently in the acquisition and syntactic literature, to the effect that UG is biased toward minimal derivations (Hyams, 1986a; Kitagawa, 1986; Chomsky, 1988; Borer and Wexler, 1988). These proposals conspire to suggest a rudimentary metric of grammatical complexity which constrains the course of acquisition. I assume the theory of grammatical principles and parameters set out in Chomsky (1981) and enriched in much subsequent work, including Chomsky (1986a,b;1988) as well as published and unpublished work by numerous others. I do not undertake a review of the fundamental postulates of the theory, as I am primarily concerned with the application of a few recent proposals to findings in child language. I will therefore outline only the theoretical apparatus particularly relevant to the present discussion.

1.2.1 The VP-internal subject hypothesis

A number of proposals in the syntactic literature of recent years converge on the following theme: the sentential subject in French- and English-type languages is generated within the maximal projection of the verb as the sister of an intermediate projection of the verb (Kitagawa, 1986; Contreras, 1987; Fukui, 1988; Sportiche, 1988; Koopman and Sportiche, 1988, among others). According to this hypothesis, the D-structure representation of the sentence in (1) is as in (2):

(1)   The cat will eat the flower

(2)

```
                         IP
                        /  \
                     Spec   I'
                           /  \
                          I    VP
                         /    /  \
                            Spec   V'
                                  /  \
                                 V    NP
                                /    /  \
       will   [the cat]      [eat    the flower]
```
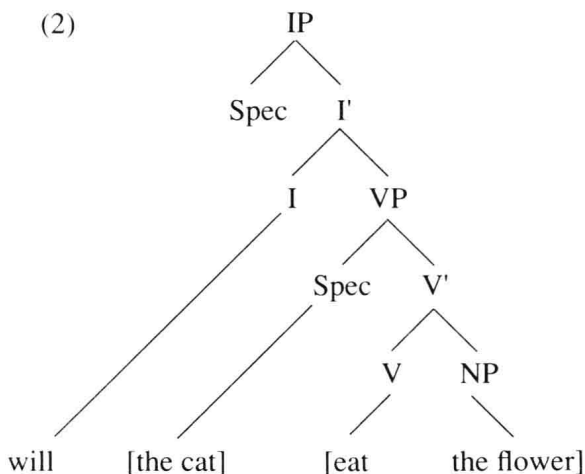
On this theory, subjects, like objects, are theta marked within the maximal projection of the verb. Generalizing over the various approaches, it is argued that subjects in English and French fail to be assigned nominative Case in the VP-internal specifier position. They must raise via move-alpha to another position, specifier of IP, where nominative Case can be assigned under Spec-Head agreement, rather than structurally. In contrast, subjects within the VP in certain other languages, for instance Spanish, may be assigned Case directly within the VP and are thus licensed to remain there. The proposals differ on the question of how constituents within the VP are ordered. According to Sportiche (1988) and Koopman and Sportiche (1988), the order of constituents within the English VP is S-V-O, as in (2). Since these authors argue that the order of constituents within the VP is not determined by X-bar theory or theta theory, presumably the underlying rigid word order of English is the result of a parametric choice specifying linear order.

According to Kitagawa (1986), on the other hand, the subject in English is generated as the right branching sister of V'. That is, English has an underlying word order of V-O-S, as in (3), where raising of the subject results in S-V-O word order at S-structure:

(3)

```
                        IP
                      /    \
                  Spec      I'
                          /    \
                        I        VP
                       /        /   \
                      /       V'     Spec
                     /       /       /   \
                    /       V       NP     \
                   /       /       /        \
               will    [eat   the flower]   [the cat]
```
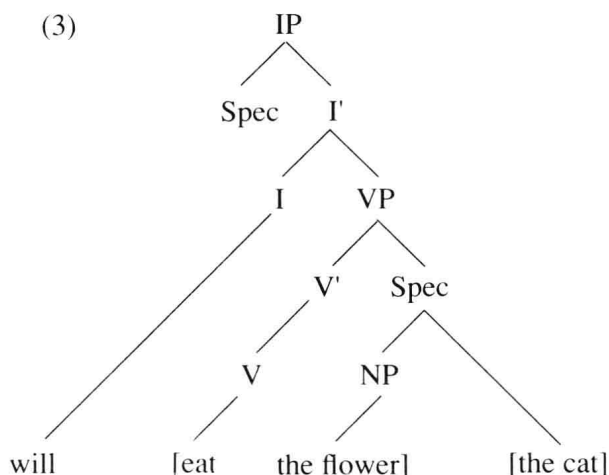
In Kitagawa's model, the subject-final property of underlying structure is critical on two counts. First, it accomplishes uni-directional head government of internal and external arguments, which has been argued for on independent grounds (e.g. Stowell, 1983; Travis, 1984). Second, Kitagawa's model is motivated to account for cases of extraposition in English, which conform directly to V-O-S order. For example, the sentence in (4) is analyzed on this approach as being a direct realization of the base V-O-S structure, with the pleonastic *it* base generated in [Spec, IP] and the sentential subject generated in [Spec, VP][1],[2]

(4)   It [$_{VP}$ bothers me [$_{spec}$ that he hasn't called us yet]]

In Contreras' (1987) account, simple sentences in English are portrayed as involving no subject raising, given affix lowering and underlying S-V order within the English VP. Furthermore, Spanish is claimed to have the option to generate the subject either to the right or to the left of the verb. Because the subject can be assigned Case in either position in Spanish on this account, the occurrence of both subject-verb and verb-subject word orders in Spanish is readily explained. Both orders are underived, in the sense that no constituent

need move.[3] As mentioned, Sportiche (1988) also maintains that the position of the subject within the VP is variable, but "only in languages that exhibit both orders overtly" (p. 445). Stylistic inversion in French is taken as evidence that in those languages the ordering of the subject and the verb within the VP is not fixed, while in English it is.

Borer (1986a), although not arguing that all subjects are generated within the VP, accounts for postverbal subjects in Italian along the same lines. That is, she suggests that postverbal subjects are base generated, right branching sisters to a projection of the verb, as in (3). On Borer's account, the verbal projection assigns an external theta role directly to the subject in this position. Assuming that nominative Case is assigned under government by agreement (AGR) (Chomsky, 1981), and that AGR is lowered onto the verb in the syntax, then nominative Case can be assigned directly to the postverbal subject. In Borer's model, the preverbal subject position [Spec, IP] need not even be generated under these conditions, since Case assignment to the postverbal subject is accomplished without the formation of a chain.

Of these authors, Contreras (1987) makes what are perhaps the most radical claims about the structure of the simple English sentence. His approach figures importantly in my account of the acquisition of English word order, and in further speculations about the relationship between acquisition and language change. As for how nominative Case might be assigned to the VP-internal subject in child grammars, I assume that Infl canonically governs and assigns nominative Case to the VP-internal subject. Koopman and Sportiche (1988) propose a parameter according to which Infl is either an optional or obligatory subject raising category. In optional subject raising languages, both overt and empty VP-internal subjects are licensed under government by Infl. In an obligatory subject raising language like English, on the other hand, nominative Case is assigned as a rule under Spec-Head agreement, not under government. According to Koopman and Sportiche, then, the underlying VP-internal subject structure conforms to the configuration for nominative Case assignment in languages without obligatory subject raising. In their framework and elsewhere, Infl can head-govern the maximal projection of the verb and its

specifier and thereby assign Case to the VP-internal subject (Deprez, 1988; Bonet, 1989). When nominative Case is assigned under government, the subject is not forced to raise.

1.2.2 Inflectional affixation in French and English

In both the French and English systems, inflectional affixiation is a syntactic process.[4] That is, the attachment of tense and agreement affixes takes place in the syntax, rather than as part of derivational morphology (cf. Emonds, 1985). Following Emonds (1978; 1985), Chomsky (1988) and Pollock (1989), I assume that inflectional affixation is accomplished differently in French and English. According to these authors, the verb in French raises to Infl to pick up its tense and agreement morphology. In English, main verbs do not raise to Infl. Rather, inflection lowers into the verb phrase; only *be* and the auxiliary *have* undergo raising in syntax.

This formal distinction between English and French is substantiated by, among other things, the placement of negation and adverbs with respect to the verb. In French, the inflected verb regularly occurs to the left of the negative particle *pas* and VP adverbs. While auxiliary verbs in English pattern with French verbs in this respect, main verbs in English occur to the right of negation and VP adverbs:

(5)   a. Le chat chasse *souvent* les oiseaux.
        b. The cat *often* chases the birds.

(6)   a. Le chat (ne) chasse *pas* le chien.
        b. The cat does *not* chase the dog.

Assuming that the adverb is situated within the VP and that its position is fixed, examples such as (5a) indicate that the French verb has moved to some position on the left of the VP. Similarly, assuming that the position of negative *pas* within inflection is fixed, examples like (6a) show that the French verb has raised to a position above negation within the inflectional complex.

Another difference between the inflectional systems of English and French that figures in my discussion of the comparative child language

data is the fact that only English has a set of modal auxiliaries that are generated within inflection. Modal verbs in French are generated in VP and raise like other main verbs. While tense and agreement in French are always instantiated as inflectional affixes, English can realize tensed inflection in the form of a base-generated modal. This leads to an interesting class of word order errors in English child language, described in chapter 4, errors which do not arise in the acquisition of French.

Finally, I adopt the proposal that tense and agreement head separate projections, contributing to a highly detailed representation of the inflectional complex (Chomsky, 1988; Pollock, 1989). In the most articulated version of this proposal, there are two agreement projections, one below the projection of tense and one above it (Chomsky, 1988). The lower AGR functions in recent analyses of participle agreement in Romance (cf. Kayne, 1987), and of raising of nonfinite verb forms (Deprez, 1988; Pollock, 1989). The higher AGR governs and assigns nominative Case to the subject in [Spec, IP] position. I also assume the presence of a projection of negation. Following Pollock (1989), Zanuttini (1989) and others, I take it that *pas* is the French counterpart of English *not*, rendered as *no* in the speech of some young children. As in English, the French marker of negation occurs below the projection of Infl and above the VP. Accordingly, the basic negative structure for English and French is as portrayed in (7):

(7)   English/French negation