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SYNTACTIC ACQUISITION IN BILINGUAL CHILDREN

Autonomous or Interdependent?

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Recent research on pragmatic and syntactic development in bilingual 2-year-olds has shown that these children have differentiated language systems. However, it remains to be shown whether their grammars develop autonomously or interdependently from 2 years onward. The present study investigates the potential interference between the grammars of French-English bilingual children, aged 2–3 years. We examined their acquisition of functional categories, specifically the properties of INFL (finiteness and agreement) and negation, as these grammatical properties differ in both adult French and English and child French and English. Our results indicate that the bilingual children show no evidence of transfer, acceleration, or delay in acquisition, and support the hypothesis that their grammars are acquired autonomously. Some implications of these findings for the debate on continuity in the emergence of functional categories are discussed.

Differentiation and Autonomy

For the past two decades the issue of language differentiation has been prominent in research on children acquiring two or more languages simultaneously. Arnberg (1987), Leopold (1994/1970), Redlinger and Park (1980), Swain (1972), Taeschner (1983), Toribio and Brown (1994), Volterra and Taeschner (1978), and Vihman (1982, 1985), for example, have argued that bilingual children begin the acquisition process with one language system, which later separates, or differentiates, into two

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systems, usually between the ages of 2 and 3 years (except Vihman, 1985, who posits 2 years of age). Their hypothesis is based mainly on the presence of intra- and interutterance code-mixing in the children's speech (except Swain, 1972). Genesee (1989) dubs this the Unitary Language System (ULS) hypothesis.

The ULS hypothesis has been challenged on both methodological and empirical grounds. First, it is questionable whether code-mixing is a valid measure of an underlying unitary system. The presence or absence of code-mixing in a bilingual's speech is governed by pragmatic or sociolinguistic competence, which should be distinguished from grammatical competence (De Houwer, 1990; Meisel, 1989, 1994a; Nicoladis, 1994). Lack of separation at the pragmatic level is not necessarily an indication of fusion at the level of grammatical representation. Second, Genesee (1989) pointed out that there is a circularity in the reasoning linking the ULS hypothesis and code-mixing—namely, that code-mixing is used as evidence for the ULS hypothesis, whereas the ULS hypothesis is used as an explanation for code-mixing. In addition, Genesee (1989) criticized much of the research supporting the ULS hypothesis for only providing anecdotal examples of code-mixing and for not systematically studying the children's language use in context. Incomplete reports on the presence of code-mixing do not provide a meaningful account of the child's linguistic performance as a whole (cf. De Houwer, 1995).

Contrary to the ULS hypothesis, there is evidence that even bilingual 2-year-olds do not code-mix profusely within utterances (Bergman, 1976; Genesee, Nicoladis, & Paradis, in press; Goodz, 1989, 1994; Lindholm & Padilla, 1978; Nicoladis, 1994; Padilla & Liebman, 1975). Furthermore, although 2-year-old bilingual children do code-mix between utterances, overall they can use the appropriate language most of the time (Genesee et al., 1995; Köppe & Meisel, in press; Lanza, 1992; Nicoladis, 1994; Quay, 1992). In sum, there is evidence that young bilinguals can separate their languages at the pragmatic level. Whereas pragmatic separation does not provide direct evidence for differentiation of the underlying representation, it would be difficult to explain how bilingual children could achieve pragmatic separation without differentiated representations of their languages.

Bilingual children have also been shown to possess early language differentiation at the syntactic level. From the emergence of functional categories, around 2 years of age, French-German bilingual children have separate verb placement, agreement, and tense and case marking in their two languages (Kaiser, 1994; Meisel, 1989, 1990; Parodi, 1990). These findings not only cast doubt on the ULS hypothesis as a whole, but they also are particularly inconsistent with Volterra and Taeschner's (1978) proposal that bilingual children go through a unified stage in their syntactic development after they have achieved differentiation between the two lexicons.

If we accept that by 2 years of age bilingual children have differentiated linguistic systems, this still leaves open the question of whether these systems interact over the course of acquisition. It is possible that the two grammars do not interact at all, in which case a bilingual child's syntactic development resembles that of two monolinguals. However, it is also possible that the two grammars interact with each other during acquisition, causing a bilingual child to look different from monolingual children acquiring each language.[1] These divergent outcomes can be referred to as

autonomous and interdependent development, respectively. Interdependence has also been called interference (Bergman, 1976) or intrusion (Vihman & McLaughlin, 1982). More precisely, we define interdependence as being the systemic influence of the grammar of one language on the grammar of the other language during acquisition, causing differences in a bilingual's patterns and rates of development in comparison with a monolingual's. Note that the notions of autonomy and interdependence presuppose the existence of two linguistic representations.

That the influence of one grammar on the other must be systemic is a key aspect of our definition of interdependence. By systemic, we mean influence at the level of representation or competence, sustained over a period of time. As already mentioned, one shortcoming of some research supporting the ULS hypothesis is the use of episodic code-mixing as evidence for the child's linguistic representation as a whole. In this kind of code-mixing, the items that are mixed, the structures they appear in, and the frequency of appearance all vary. In our view, this kind of code-mixing indicates an "on-line" interaction between the two languages in performance and does not necessarily indicate systemic interaction at the level of competence.

In contrast with code-mixing, we identify three potential manifestations of interdependence: transfer, acceleration, and delay. Transfer consists of the incorporation of a grammatical property into one language from the other. Transfer is most likely to occur if the child has reached a more advanced level of syntactic complexity in one language than in the other. Such a discrepancy could occur because it is typical in the monolingual acquisition of the two languages, or because the bilingual child is more dominant in one of his or her languages. Bubenik (1978), Imedaze (1967), Swain and Wesche (1975), and Vihman (1982) have reported instances of transfer. However, they do not indicate how systematic and frequent the constructions with transferred elements were, nor do they provide information on the alternation of these mixed constructions with single-language constructions of similar meaning where the transferred element was not present. In the absence of this information, there is no way to determine whether such cases are examples of episodic interference or code-mixing or examples of interdependence. In contrast, De Houwer (1990) systematically examined morphosyntactic separation in a Dutch-English bilingual 3-year-old and found no instances of transfer. However, it is still unknown whether interdependent development takes place prior to the age De Houwer studied and whether her findings are generalizable to more than one child.

Interdependent development could also accelerate the acquisition of certain properties in one of a bilingual's languages. Acceleration means that a certain property emerges in the grammar earlier than would be the norm in monolingual acquisition. As with transfer, we consider this form of interdependence to be principally motivated by the child having achieved a more advanced level of syntactic complexity in one language than in the other. As discussed in detail in the following subsection, finiteness appears earlier in child French than in child English. It might be expected that a French-English bilingual's acquisition of finiteness in English would be accelerated due to the influence of French. While we have found no instances reported of this kind of interdependence, a related phenomenon has been reported. Gawlitzek-

Maiwald and Tracy (1994) studied a German-English bilingual child whose code-mixing regularly consisted of German functional elements in English utterances. The period of this kind of code-mixing followed the emergence of functional elements in German and preceded the emergence of functional elements in English. They suggested that this child "pools her resources, taking and combining what is available to her" (p. 25). It is possible that acceleration is a similar form of pooling resources.

The third potential manifestation of interdependence involves the overall rate of acquisition. It is possible that the burden of acquiring two languages could slow down the acquisition process in bilinguals, causing them to be behind monolinguals in their overall progress in grammatical development. There is no consensus among researchers on this issue. Bubenik (1978), Murrell (1966), Swain (1972), and Vihman (1982) have argued that bilingual children's development of morphology and syntax is delayed. In contrast, Padilla and Liebman (1975), Nicoladis (1994), and De Houwer (1990) have concluded that the bilingual children they studied fell within the range of grammatical development that is considered normal for monolinguals in each language. Certain shortcomings are apparent in some of this research, such as the lack of adequate monolingual comparison data (Bubenik, 1978; Murrell, 1966; Vihman, 1982), the use of anecdotal examples only (Padilla & Liebman, 1975), and the absence of in-depth grammatical analyses (Nicoladis, 1994; Padilla & Liebman, 1975). Therefore, it is worthwhile to further investigate the rates of grammatical development in bilingual children, addressing these shortcomings.

In sum, the purpose of the present study was to examine autonomy in the syntactic acquisition of French-English bilinguals from the ages of 2–3 years. In particular, we looked at the emergence of functional elements in the grammars of French-English bilingual children in order to determine whether transfer, acceleration, or delay was occurring.

Some Differences Between English and French Child Language

To investigate whether bilingual children's languages develop separately and autonomously, it is necessary to look at aspects of their languages that differ, because aspects that are the same would be ambiguous with regard to a unified or differentiated representation. Most important, these aspects must differ in the child's version of the language because what appears to be transfer could be a typical stage in the monolingual acquisition of the language (cf. Meisel, 1989, 1990; Vihman & McLaughlin, 1982). For example, Meisel and Müller (1992) identified a structure that appeared to be an instance of transfer from French into German; however, they concluded that transfer was an unlikely explanation because a similar phenomenon could be found in the monolingual acquisition of German (see also Bubenik, 1978; De Houwer, 1995).

Accordingly, the present study drew on recent research on French and English child language by Déprez and Pierce (1993, 1994) and Pierce (1989, 1992). French and English child language differs in the emergence and use of finite verbs, the developmental stages of negation, and the distribution of pronominal subjects. Employing the principles and parameters theory of syntax, following Chomsky (1981) and subsequent work, Déprez and Pierce and Pierce offer an analysis in which these differences are shown to be interrelated and attributable to abstract grammatical

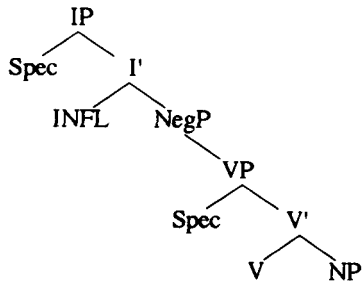

Figure 1. English and French D-Structure (based on Déprez & Pierce, 1994).

properties of each language. In this section, we examine each difference between child French and English, along with the theoretical explanation of that difference, in sequence.

French-speaking children as young as 2 produce many, if not a majority of, utterances with inflected or finite verbs. In contrast, finite verbs emerge later in child English and, in fact, until about 3 years of age, the majority of English-speaking children's utterances have uninflected or nonfinite main verbs. The examples in (1)a and (1)b are nonfinite utterances and (1)c and (1)d are finite utterances from French-speaking children approximately 2 years old. Examples of nonfinite English utterances from 2-year-olds are given in (1)e and (1)f. These examples illustrate that at this stage finite and nonfinite utterances are in alternation in child French, but finiteness is absent in child English. Data sources are summarized in Pierce (1989, 1992). Criteria for determining finiteness are discussed in the Method section.

(1) a. *La poupée dormir.* (Nathalie, 2;1) "The doll sleeping."
b. *Moi dessiner la mer.* (Daniel, 1;10) "Me drawing the sea."
c. *Elle tombe.* (Philippe, 2;2) "She is falling."
d. *Poupée doit faire dodo.* (Nathalie, 2;2) "Doll has to go to sleep."
e. I going down and see Fraser. (Eve, 2;0)
f. He bite my fingers. (Nina, 2;0)

Déprez and Pierce (1993, 1994) and Pierce (1989, 1992) argue that this discrepancy in the use of finiteness in the children's utterances is a result of differences in verb movement between French and English. According to current versions of syntactic theory (see Pierce, 1992, for a review), inflectional affixation, like tense and agreement, is a process that occurs in the syntax via movement. Movement must take place in order for the verb to attach affixes for tense and agreement, which are part of the constituent INFL (inflection). In French all verbs raise to INFL, whereas in English the affixes in INFL lower onto main verbs, the verbs *have* and *be* raise to INFL, and modals are base-generated in INFL. Figure 1 illustrates the D-Structure of a sentence in French or English. The COMP projection CP, which dominates IP, is omitted because it is not relevant to our discussion.

Déprez and Pierce and Pierce assume that there is no movement in the initial state of child syntax. The nonfinite verbs in both child French and child English are the result of a lack of verb-raising or affix-lowering. Because mastery of the nonfinite–finite distinction is not instantaneous, children go through a stage in which utterances with both finite and nonfinite verbs are coextensive in their speech. Pierce (1992) invokes two possible reasons for why finite verbs emerge earlier and are used more frequently in child French than in English. First, verb-raising is less derivationally complex than affix-lowering. According to the "condition of least effort," properties that are more derivationally complex will be acquired later in development (Pierce, 1992, p. 12). Second, the late emergence of affix-lowering may be due to the impoverished nature of verbal inflections in English. Pierce suggests that verbal inflections are part of the core in a language like French but part of the periphery in a language like English. Because peripheral parts of the grammar are considered to be acquired late, the process that enables inflections to appear, affix-lowering, is acquired late.

The developmental stages of negation also differ in French and English child language. The earliest negatives in child French are formed with the negator, *pas*, in the preverbal position, as shown in (2)a. In (2)b, where the verb is finite, the negator is in the postverbal position, as in adult French. In contrast, the negative markers in child English always appear preverbally. The earliest negative utterances are formed with sentence-initial negators, as in (2)c. This stage is followed by one in which the negator is positioned after the subject of the sentence, shown in (2)d. Note that in both (2)c and (2)d the verb is nonfinite in English, and neither utterance is adultlike. Data sources are summarized in Déprez and Pierce (1993, 1994) and Pierce (1992).

(2) a. *Pas chercher les voitures.* (Philippe, 2;1) "No look for the cars."
b. *Ça tourne pas.* (Philippe, 2;1) "That isn't turning."
c. No Leila have a turn. (Nina, 2;1)
d. Me no go home. (Peter, 2;1)

Déprez and Pierce and Pierce argue that the preceding patterns can be explained through two kinds of movement. The first kind is verb movement, in which the verb raises to INFL over the NegP, as in (2)b. Thus, in (2)a, the verb is in the VP. The second kind of movement is subject-raising. These researchers assume that subject NPs originate in [Spec, VP] at D-Structure and must move to [Spec, IP] at S-Structure, over the NegP, for reasons of case assignment (see Déprez & Pierce, 1993, 1994, for a review of these theoretical proposals). In English, a negator appears in initial position with an unraised, VP-internal subject (e.g., (2)c) and in second position if the subject has raised to [Spec, IP] (e.g., (2)d). In the case of an unraised subject and an unraised verb in French, the negator appears in initial position. We have no examples of utterances like these in our data, but such forms have been attested (see, e.g., Déprez & Pierce, 1993, 1994). Finally, null subject utterances are considered to contain a pro subject in a VP-internal position and, thus, are similar in structure to an utterance with an overt, unmoved NP subject. Pierce (1992) found that unraised subjects with finite main verbs are not common in child English, possibly because

subject-raising emerges earlier than affix-lowering. A correlation between the decline in null and unraised subjects and the increased use of verbal inflection has been found by other researchers (see Hyams & Wexler, 1993, for review).

In addition to the development of finite and negative utterances, French child language and English child language also differ in the distribution of pronominal subjects. In French, there are two kinds of pronouns: weak pronouns (*je, tu, il, elle, on, nous, vous, ils, elles*) and strong pronouns (*moi, toi, lui, elle, eux, elles*). In child French, there is a contingency between the appearance of weak pronouns and finite verbs, whereas strong pronouns can appear with both finite and nonfinite verbs. There is no weak–strong distinction in English, and there are no restrictions on pronominal subjects and nonfinite verbs. The utterances in (3)a and (3)b illustrate how in child French a weak pronoun may only appear with a finite verb. The examples in (3)c and (3)d show that there is no such restriction on strong pronouns in French. The utterances in (3)e and (3)f demonstrate how either nominative or accusative pronouns can appear with nonfinite verbs in English (see Vainikka, 1993/1994, for the acquisition of case and pronominal subjects in English). Data sources for (3) are summarized in Pierce (1992).

(3) a.	*Elle dort.* (Daniel, 1;8)	"She is sleeping."
b.	**Il manger.*[2]	"He eating."
c.	*Moi pousser.* (Daniel, 1;9)	"Me pushing."
d.	*Moi fais tout seul moi.* (Grégoire, 2;1)	"Me is doing it all by myself."
e.	I washing. (Naomi, 1;10)	
f.	Her holding a balloon. (Nina, 2;0)	

The distributional restriction on weak pronouns in French is explained by assuming that these pronouns are agreement clitics, part of INFL, and not NPs (see Pierce, 1992, for a review of this analysis of weak pronouns). In contrast, English pronouns, whether nominative or accusative, are NPs, as are the French strong pronouns. The contingency between the presence of a weak pronoun and a finite verb in French is due to the fact that an unraised verb cannot attach clitics, as in (3)b. Because English pronouns and French strong pronouns are not located in INFL, they can appear with nonfinite verbs.

Predicting and Determining Interdependence

These three contrasting properties of child English and child French can be summed up by stating that French children acquire the properties of INFL earlier than English children do. This makes the combination of French and English a powerful test for examining autonomous development between the two languages of a bilingual child. Other language combinations are less informative. For example, in French and German, functional categories emerge at roughly the same time in monolinguals (Meisel, 1994b). Research on the syntactic acquisition of French-German bilinguals implicitly supports the autonomy hypothesis, as no significant influence of one language on the other is reported (Kaiser, 1994; Meisel, 1989, 1990, 1994b; Meisel &

Müller, 1992). However, the motivation for transfer or acceleration of acquisition may not exist between French and German as it does between French and English.

Potential causes and manifestations of interdependent development in French-English bilingual children are as follows. The early appearance and pervasiveness of verb-raising in French, together with the evidence of verb-raising for *be* and *have* in English, could result in the temporary transfer of verb-raising for English main verbs.[3] Children could assume that all verbs raise in both languages or that raising is at least an option in English for all verbs (cf. White, 1990/1991). Such transfer has been attested in childhood L2 acquisition of English by francophones (White, 1990/1991, 1991). Evidence of the transfer of verb-raising in our data takes two forms: (a) the production of a greater number of finite utterances in English than would be found in monolingual agemates, in close parallel to the production of finite verbs in French, and (b) the presence of postverbal negators in both English and French. Examples of postverbal negators have been attested in French–English bilinguals (Swain & Wesche, 1975), but no indication is given of how systematic these constructions were in the children's speech. Interdependence may not involve the transfer of verb-raising but instead the transfer of the knowledge of the finite–nonfinite distinction. Thus, the presence of French might accelerate the emergence and use of affix-lowering in English, the mechanism for marking this distinction. As with transfer of verb-raising, evidence of such an influence could be found in the earlier and more pervasive use of finite verbs in the children's English in tandem with their French. Transfer in the form of miscategorization might also occur for pronominal subjects. The status of strong pronouns in French and all pronouns in English as NPs may influence the children to treat French clitic pronouns similarly, resulting in their appearance with nonfinite verbs in French. Finally, if the entire acquisition process is delayed by the bilingual experience, then we would expect all aspects of the children's grammars involving movement and INFL to emerge later than they would in monolinguals' grammars.

Further Implications

The implications of evidence for autonomous development reach beyond issues concerning bilinguals alone. If their acquisition is autonomous, bilingual children make excellent subjects for cross-linguistic research because they eliminate between-subject variation (De Houwer, 1990, 1995; Meisel, 1990). In particular, bilingual language acquisition has implications for aspects of acquisition considered to be universal across languages.

In the theoretical framework assumed in this study, linguistic knowledge is considered to be an innate, domain-specific capacity referred to as Universal Grammar (UG). UG is comprised of principles that hold in all languages and parameters that are highly constrained options on which languages can vary. In this view, the acquisition process consists mainly of the selection of the appropriate parameters for the target language. Thus, language acquisition is selective and not instructive in that experience with language input selects or triggers a priori knowledge rather than instructing a modifiable system (Lightfoot, 1989). An item that is learned by selection or

triggering can be acquired with less frequency of input than an item that is learned in the conventional sense of novel encoding (Carroll, 1989). It seems reasonable to conjecture that bilingual children have their input space divided, so their frequency of exposure to each language at any given time is smaller than that of monolinguals acquiring each language. Therefore, if bilingual children demonstrate the same rate of syntactic development as monolinguals, this could argue for a process of development through selection or triggering, as opposed to learning.

Furthermore, the simultaneous acquisition of English and French by young children has implications for the current debate on the ontological development of functional categories. Based on the phenomenon of telegraphic speech, it has been proposed that functional categories are universally absent from children's early grammars, and the ability to project functional categories matures at approximately 2;0 to 2;6 (Guilfoyle & Noonan, 1992; Meisel, 1994a, 1994b; Meisel & Müller, 1992; Platzack, 1990; Radford, 1988, 1990; Wakefield & Wilcox, 1994). In this perspective, it is assumed that a lexical category grammar emerges first, upon which a functional layer is built.

The maturation hypothesis has been opposed by researchers arguing that there is evidence for functional categories in early syntax, in spite of the instances of "telegraphese." Proponents of strong continuity (cf. Pinker, 1984) argue that the full complement of functional categories, or at least an IP projection, is universally present in children's grammars from the onset of syntactic acquisition (Déprez & Pierce, 1993, 1994; Ferdinand, 1994; Hyams, 1994; Poeppel & Wexler, 1993; Toribio & Brown, 1994; Wexler, 1994). According to this hypothesis, if certain inflections appear to be partially or fully absent from children's productions, this is due to other factors, such as the lack of knowledge of the grammatical feature tense (Wexler, 1994) or phonological constraints on output (Demuth, 1994; Gerken, 1994; Gerken & McIntosh, 1993).

An intermediate position known as weak continuity has also been proposed (Clahsen, 1990/1991; Clahsen, Eisenbeiss, & Penke, 1994; Clahsen, Eisenbeiss, & Vainikka, 1994; Vainikka, 1993/1994). Like the maturational perspective, weak continuity is a structure-building approach to grammatical acquisition. Unlike the maturational perspective, weak continuity does not assume that there is a stage at which functional categories are biologically unavailable to developing grammars. Instead, it is thought that children project structure based on the lexical properties of the elements they have acquired. For example, children will not project CP until they have acquired complementizers and *wh*-elements (Clahsen, Eisenbeiss, & Vainikka, 1994). Acquisition of phrase structure, including phrases with functional heads, is gradual and is based on the interaction of UG and language-specific input. Note that an early grammar based on purely lexical maximal projections is not impossible in this view; it is the maturation of principles of UG that is not compatible with this view.

Each of the three positions makes different predictions concerning language-specific differences in the emergence of functional categories. In the maturation view, they are universally unavailable in all languages, then universally available. In the strong continuity view, they are always present, even covertly, regardless of the

language being acquired. In the weak continuity view, their appearance in the grammar varies depending on the particular language being acquired. Data from bilingual children could be informative in the determination of the language-specific and language-universal properties of early functional category acquisition.

METHOD

Subjects

We studied three children who each had an English-speaking mother and a French-speaking father. All three fathers are native speakers of Quebec French. The families resided in Montreal, Canada, which is a majority francophone city with a large anglophone minority and many bilingual neighborhoods. The families claimed to be using the so-called rule of Grammont, the "one parent, one language" style of presentation. Our observations of each family confirmed their claims in general, but it was observed that the parents occasionally spoke their nonnative language to the child and code-switched intrasententially.

Each of the children in the study was different with respect to exposure to each language. William was exposed to more English than French. He spent weekdays at home with his mother and only received input in French from his father during evenings and on weekends. Gene was exposed to both languages relatively equally, with slightly more exposure to French. His parents shared most of the child care between themselves, but occasionally Gene had a French-speaking babysitter. Olivier's exposure pattern changed over the course of the study. At intervals 1 and 2, he attended a French daycare center on weekdays and was equally exposed to French and English at home during evenings and on weekends. At this time, he received more French input. At interval 3, Olivier had begun to stay home with his English-speaking mother during the day because she was on maternity leave.

Procedure

We filmed the children in their homes in hour-long naturalistic play sessions with their parents. There were three play sessions: with the mother alone, the father alone, and both parents together. All three sessions made up one interval. The study consisted of three intervals across the children's 3rd year of life, roughly corresponding to the ages 2;0, 2;6, and 3;0. We were not always able to film the child at exactly the desired age due to difficulties arising from family commitments, child illnesses, and so forth. We transcribed 20 minutes of each hour-long session, except that in William's case the entire hour was transcribed because he was not very talkative. All transcripts were coded in accordance with the CHAT system (MacWhinney, 1991). The data used for our analysis are taken from these transcripts. Information about the children's ages, the number of utterances in the sample, and the children's MLUs in each language is shown in Table 1. MLUs were calculated as an average utterance length for the three sessions combined. We only counted morphemes that were used productively, which could result in an underestimation

Table 1. Sample information: Age, number of utterances, MLU

Child	Age	Utterances[a]	French MLU	English MLU
Interval 1				
William	2;2	314	1.26	1.29
Gene	1;11	351	1.92	2.04
Olivier	1;11	261	2.32	1.55
Interval 2				
William	2;10	557	1.35	1.54
Gene	2;7	528	2.12	2.17
Olivier	2;6	424	2.59	2.18
Interval 3				
William	3;3	960	1.60	2.19
Gene	3;1	598	2.36	2.44
Olivier	2;10	676	2.40	2.31

[a]Numbers are averaged over the three sessions. The number of utterances equals the total number of French, English, and mixed utterances.

of the children's MLUs. The child William was slower in his language development than Gene and Olivier. He has consistently lower MLUs and a smaller vocabulary in each language (vocabulary data not reported here). However, we have included him in the study because his acquisition of functional categories displays the same patterns as the others. Note that William is 3 months older than the other children at each interval.

Analysis

We selected a subset of utterances for analysis from the corpora at each interval. We only included utterances with verbs. From this set of utterances, we excluded imperatives on the grounds that they might inflate the numbers of nonfinite, null subject utterances (cf. Pierce, 1992, and Poeppel & Wexler, 1993). We also excluded repetitions of adult utterances and self-repetitions because the former would not represent the child's grammar and the latter would inflate the data set. In addition, we excluded mixed utterances, except utterances in which the mixed element was peripheral to the part of the sentence we were concerned with. For instance, an English sentence with the French discourse marker mixed at the end, "Truck go brmmbrmm, *là*," was included in the set of English utterances. Such utterances comprise 3% of the data for this study. For the negative utterances, only nonanaphoric negatives were included. Anaphoric negatives are utterances with an initial negative marker such as *no*, which refers to a previous utterance in the discourse—for example, "No, I want apple juice" in response to the question "Do you want some orange juice?" After these selection procedures, our data set consisted of 902 utterances, 416 in English and 486 in French.

In the first phase of our analysis, the utterances were classified as finite or nonfinite. Our classification was based on morphological, contextual, and syntactic criteria. Morphologically, nonfinite French verbs are those forms that appear to be either

past participles or infinitives.[4] Syntactically, they are produced without a tensed auxiliary and to the right of a negative marker. Contextually, they are often adjectival in meaning with no consistent time reference (for similar classification, see Grondin & White, in press; Pierce, 1992; White, 1996). In contrast, finite verbs are adultlike in morphological form, appearing to the left of a negator and with a tensed auxiliary if in the past. In English, morphosyntactic criteria delineate two principal forms of nonfinite verbs: (a) verbs in the present continuous form (verb-*ing*)[5] without a tensed auxiliary and (b) verbs in the present simple, without the obligatory *-s* for third person. Also, verbs that appear in the root form in a context where the present continuous was required were classified as nonfinite. Other than in the third person singular, the present simple is identical to the root form, and context is essential to determining finiteness in this case (cf. Pierce, 1989, 1992).

There are some verbs in English that are ambiguous with regard to finiteness, even in context. For example, *want* in "I want juice" is ambiguous because the verb never takes the present continuous form, and no inflections are attached to the root for the first person. Also, an utterance such as "I don't know" is ambiguous because it could be an unanalyzed chunk. We have considered examples like these to be finite, in spite of the ambiguity, in order to make our test for autonomy more difficult. As shown in the following section, to test for autonomy we looked for a discrepancy in the number of finite utterances in each language. Allowing the set of finite utterances in English to be as large as possible diminished this discrepancy. We indicated where ambiguous utterances form a significant proportion of a child's finite utterances in English. After classifying utterances as finite or nonfinite, we carried out our main analysis, the details of which are presented here.

RESULTS

Finiteness

We calculated the percentage of finite utterances in each language, based on the total number of utterances with verbs in each language, for each time interval. Additional calculation was done for English in order to see whether it is the finite–nonfinite distinction that is acquired more slowly in English or simply affix-lowering. We recalculated the percentage of finite utterances in English using finite main verbs only, excluding utterances with *have, be,* and modals. The results of both calculations are presented in Figure 2.

For each child, the proportion of finite utterances is greater in French at each interval. For both Gene and William, all finite English utterances at interval 1 are ambiguous, as defined in the previous section, so it is possible that none of the children produced genuine finite utterances in English at that point. Comparing the proportion of finite utterances in English with all verbs and main verbs only (English-M), it is clear that the proportions are identical or English-M is slightly lower. It might have been expected that the English-M proportions would be substantially lower, because verb-raising emerges earlier than affix-lowering. Is it possible that these finite main verbs are finite via verb-raising, indicating transfer? This is unlikely because the proportion of finite verbs in English is too low to suggest the pervasive

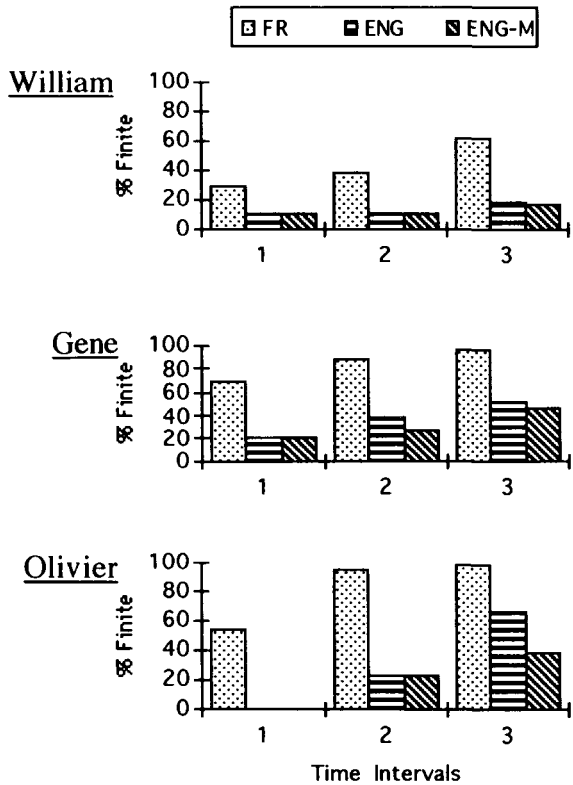

Figure 2. Percentage of finite utterances out of the number of utterances with verbs in each language, at interval 1, interval 2, and interval 3. English-M represents the percentage of finite utterances in English with main verbs only.

Table 2. Mean percentage of French and English finite utterances at each time interval

Language	Interval 1	Interval 2	Interval 3
English	10%	24%	44%
French	51%	74%	85%

Note: $\chi^2 = 7.087, p < .03$.

use of verb-raising, and, as shown in the following subsection, there is no syntactic evidence for transfer of verb-raising.

The percentage of finite verbs, averaged across the three children, for each language at each time interval is given in Table 2. A chi-square analysis confirms

Table 3. Percentage of French finite utterances: Monolinguals and bilinguals

Child	Age	Finite verbs (%)[a]
Monolingual		
Grégoire	2;0	51
Nathalie	2;0	34
Daniel	1;11	78
Philippe	2;1	79
Bilingual		
William	2;3	29
Gene	1;11	69
Olivier	1;11	54

Note: Monolingual data are from Pierce (1992).
[a]Percentage is calculated out of all utterances with verbs.

that the difference between the proportion of finite verbs in English and French is significant over time, $\chi^2 = 7.087$, $p < .03$. Thus, it appears that acquiring French simultaneously with English is not accelerating the use of finiteness in English.

We next examined whether the children were acquiring finite verbs at the same rate as their monolingual counterparts, regardless of the difference between their languages. Table 3 shows the percentage of finite verbs produced around 2 years of age for the four monolingual French children Pierce (1992) studied and for our three bilingual children. The group mean for the bilinguals is lower (51% vs. 61%); however, it is doubtful that means are a meaningful comparison measure for such a small number of children, especially given that some variation between agemates is common. We believe that a comparison based on ranges of variation is more meaningful. Note that none of the bilinguals are as advanced in their production of finite verbs as Daniel or Philippe, but they are certainly comparable to Grégoire and Nathalie. It is not surprising that William's proportion is so low; as already mentioned, his overall development rate is slower than that of the other bilinguals. This comparison suggests that these bilingual children were developing along a timetable within the range of monolingual children, although not at the upper bound of that range. Pierce (1992) did not provide precise information on the proportion of finite verbs present in the speech of her English-speaking subjects.[6] Rate of acquisition for our bilingual children's English is examined in detail for the development of negatives.

Negation

The development of negative utterances has different implications regarding interdependence in French and English. In French, the position of the negator with respect to the verb is syntactic evidence of the child's use of finite verbs because it is an indication of verb-raising. In contrast, the placement of the negator to the right of a finite verb in English is syntactic evidence of transfer. Also, the position of the negator with respect to the subject is evidence for the use of subject-raising. Because the frequency of subject-raising in a bilingual child's English increases from age 2 to 3 years, it can be used as an indicator of rate of development.

We first examine the position of the negator with respect to the verb in French and English. As the children in this study did not produce a large number of negative utterances in either language, part of the data in this section is presented in example form. The utterances in (4) demonstrate that the children are using verb-raising in French, as the negator appears to the right of the finite verb. The example from William's speech includes the English noun *people,* referring to figurines, which he generally used instead of the French term *bonhommes.* The presence of this noun is not relevant to the position of the negator. Utterances like those in (4) represent 91% of the children's French negatives. Recall that Déprez and Pierce (1993, 1994) and Pierce (1992) found that there was a contingency between preverbal negators and nonfinite verbs and postverbal negators and finite verbs. We cannot assess the strength of this contingency in our data because there is only one example of a nonfinite negative utterance, although this example fits the monolingual pattern as the negator appears preverbally. The paucity of nonfinite negatives in our French data could be a result of the age of our children. Déprez and Pierce (1993, 1994) and Pierce (1992) examined data from children as young as 1;8, and most of their examples of nonfinite utterances come from the earliest speech.

(4) a. People *là, va pas là.* (William, 2;10) "The people don't go there."
b. *Je peux pas dire quoi.* (Gene, 2;7) "I can't say what."
c. *Je veux pas parler à Papa.* (Olivier, 2;6) "I don't want to talk to Daddy."

It is clear that the predominant pattern of French negative utterances is that with finite verbs and postverbal negatives; however, a few counterexamples occurred in our data, shown in (5). The two examples from William's corpus, (5)a and (5)b, look superficially like examples of transfer from English because he used *non* as a negative marker in a French sentence. Déprez and Pierce (1993) stated that French monolingual children never use *non* as a negative marker. As William is exposed to more English, it is possible that English is interfering with his French. However, he does produce more sentences with *pas* overall. Furthermore, William's utterances in (5) display the appropriate pattern regarding verb-raising, where a negative is placed after a finite verb, as in (5)a, and before a nonfinite verb, as in (5)b. It is more likely that (5)a and (5)b are examples of code-mixing of the negative form, rather than syntactic transfer. The examples from Gene in (5)c and (5)d appear to be lacking verb movement.[7] Could these be examples of English influence? This conclusion is unlikely for at least two reasons. First, like those of William's, the majority of Gene's negative utterances have the structure of those in (4). Second, Pierce (1992) also found a marginal number of utterances with preverbal negatives and finite verbs. These aberrant examples are most likely performance errors.

(5) a. *Y a non picots.* (William, 2;10) "There isn't a rash."
b. *Non manger!* (William, 2;3) "No eat!" (= I don't want to eat!)
c. *Il pas joue dehors.* (Gene, 1;11) "He NEG play outside."
d. *Pas il va là.* (Gene, 2;7) "NEG he go there."

Finally, although the presence of postverbal negatives attests to the use of verb-raising in French, their absence in English indicates that transfer did not occur from French to English. We found no utterances in the corpora like "I play not truck."

Table 4. Mean percentage of English utterances with sentence-initial and sentence-medial negators

Utterance Type	Intervals 1 and 2	Interval 3
Sentence-initial	12 (60%)	5 (26%)
Sentence-medial	8 (40%)	14 (74%)

Note: $\chi^2 = 4.496, p < .03$.

We now turn to the position of the subject in negative utterances in English. For the bilingual children to be acquiring negation like English monolinguals, we expect their earliest negatives to have sentence-initial negative markers, indicating an absence of subject-raising. A greater number of utterances with sentence-medial negative markers would appear in the language of children closer to 3 years of age. We calculated what proportion of the children's negative utterances contained sentence-initial and sentence-medial negative markers at each time interval. Because there were few negative examples overall, and only two examples of English negative utterances at the first interval, we have combined the data from all the children in this analysis and collapsed intervals 1 and 2. The results of this analysis are given in Table 4. It is clear that the children produced significantly more sentence-medial negatives at the third interval ($\chi^2 = 4.496, p < .03$), indicating that their acquisition patterns parallel those of monolinguals.

We next examined the rate at which our bilingual children were using subject-raising in English. We compared the proportion of sentence-medial negatives in our corpora with those from Déprez and Pierce's corpora, which overlaps with our first and second intervals. The average age of our children for intervals 1 and 2 combined is 2;5 (range = 1;11 to 2;10), and 40% of their negative utterances at this time were sentence-medial (from Table 4). Of the three monolinguals studied, the average age of the children was 2;1 (range = 1;10 to 2;4), and the percentage of sentence-medial negatives ranged from 24% to 71%, with a mean of 48% (Déprez & Pierce, 1993, p. 35). On the basis of this limited comparison, it appears that the bilingual children are not substantially delayed in their use of subject-raising in English.

Pronominal Subjects

The graphs in Figure 3 show the percentage of finite or nonfinite utterances with pronominal subjects (weak pronouns only in French) in each language for each child. The percentages represent combined data from all the time intervals. Notice that each of the children produced a similar proportion of finite and nonfinite utterances with pronominal subjects in English, but in French virtually 100% of their utterances with pronominal subjects are finite. It certainly appears that these children are aware that the French pronominal subjects are clitics and the English ones are not.

Table 5 shows the proportional distribution of utterances with pronominal subjects for the combined corpora. The results of a chi-square analysis show that the

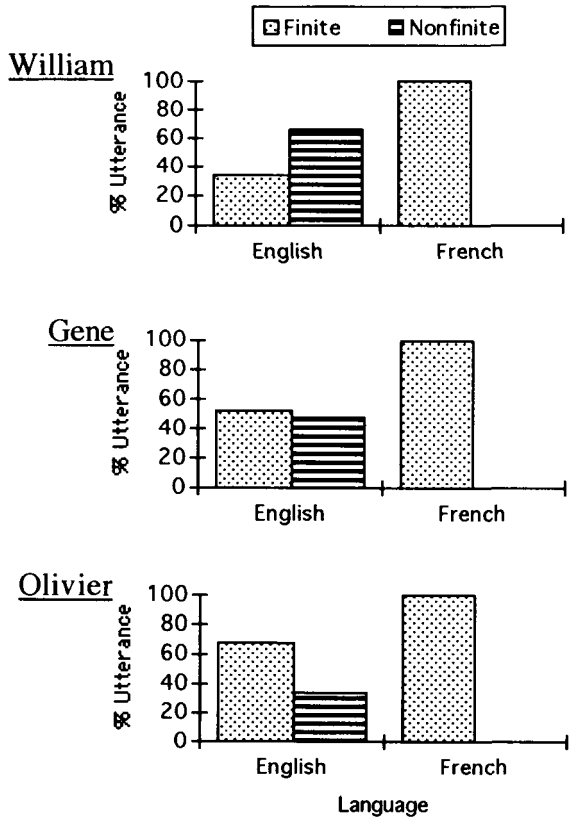

Figure 3. Percentage of utterances with pronominal subjects (weak pronouns only in French) appearing with finite or nonfinite verbs in each language, out of the total number of utterances with pronominal subjects in each language, across the three time periods.

Table 5. Percentage of finite and nonfinite utterances in English and French with pronominal subjects

Language	Finite[a]	Nonfinite
English	23.72%	20.71%
French	55.22%	0.35%

Note: $\chi^2 = 22.7, p < .005$.
[a]Percentages are calculated out of the total number of utterances with pronominal subjects in both languages from all of the children.

difference between French and English utterances with pronominal subjects is significant, $\chi^2 = 22.7$, $p < .005$. If the children had transferred the properties of English into French, we would expect to see many utterances such as *Il jouer* ("He play"), where a clitic appears with a nonfinite verb. The two examples like this in our data are most likely performance errors, as they can occur marginally in monolinguals' speech as well (Pierce, 1992). Furthermore, if the children had transferred the properties of French into English, we would see cooccurrence restrictions between subject pronouns and finite verbs in English. The nearly equal distribution of pronominal subjects in finite and nonfinite utterances in English in Figure 3 indicates that the children are not restricting their use of pronominal subjects to finite verbs in this language.

Further evidence for the different status of pronominal subjects in English and French can be found in the code-mixed data. The mixed utterances in (6) have not appeared in our analysis so far. There is an asymmetry in the children's pattern of code-mixing with regard to pronominal subjects. The examples in (6)a–(6)f are utterances in which Gene uses an English pronoun with a finite French verb. This kind of mix is permissible because the English pronouns are NPs. The utterances in (6)g and (6)h are examples of nonfinite French verbs with English pronouns, permissible for the same reason. In (6)i–(6)k, the utterances have a French strong pronoun with a nonfinite English verb. This is permissible because French strong pronouns are NPs. The utterances in (6)l–(6)n have French subject clitics appearing with English main verbs, but notice that a French auxiliary verb appears with the pronoun. It seems as if the children have mixed an entire French inflectional complex, including tense and agreement, with an English VP. We found no utterances like (6)o, where a French subject clitic appears with a nonfinite English verb. There are two possible explanations for why utterances like (6)o were not produced. First, the analysis we have adopted so far predicts that the children would not produce such utterances. If the English verb is nonfinite, it cannot attach inflectional affixes; thus, it cannot attach a subject clitic like *je*. Second, the absence of such utterances may be due to the children's adherence to Poplack's (1980) free morpheme constraint, which prohibits a code-switch after a bound morpheme like a clitic. Both Köppe and Meisel (in press) and Meisel (1994a) have also found that French clitics were never or rarely attached to German verbs by French-German bilingual children.

(6)	a.	I *pousse là.* (Gene, 2;7)	"I am pushing there."
	b.	He *a* eyes. (Gene, 2;7)	"He has eyes."
	c.	You *mette* honey? (Gene, 3;1)	"You're putting honey?"
	d.	I *aime pas Maman!* (Gene, 3;1)	"I don't love Mommy!"
	e.	I *peux pas* wash the *cou* me. (Gene, 3;1)	"I can't wash my neck."
	f.	I *mette* bandaid *à 'tit bobo.* (Gene, 3;1)	"I'm putting a bandaid on the little booboo."
	g.	They *manger bonbon.* (William, 2;10)	"They eating candy."
	h.	He *manger.* (William, 2;10)	"He eating."
	i.	*Moi* do it this, *moi.* (William, 3;3)	
	j.	*Moi* play thing. (William, 3;3)	
	k.	*Moi* play this. (William, 3;3)	
	l.	*Il a* sitting in. . . . (Gene, 3;1)	

m. *Il a* finish. (Gene, 3;1)
n. *J'ai* sit down. (Olivier, 2;6)
o. **Je* find it.[2]

There appears to be no transfer between French and English with regard to pronouns, but do the bilingual children acquire weak pronouns in French at the same time as their monolingual counterparts? Unfortunately, Pierce (1992) does not provide figures on the proportions of clitics used in her French children's language. However, it is clear from her examples that these clitics can appear as early as 1;8. Heinen and Kadow (1990) conducted a survey of reports on the acquisition of French as a first language. Although they do not provide precise numbers, the 17 children in their study used subject clitics productively from a mean age of 2;2, the range being 1;2 to 2;11.

For comparison purposes, we calculated the percentage of utterances with subject clitics out of the total number of finite utterances in French for our three bilingual children at the first interval. The total number of finite utterances includes those with clitic, lexical, and null subjects.[8] Gene and Olivier produced 96% and 71% of their French finite utterances with subject clitics, respectively. William produced no finite utterances in French with subject clitics; however, at interval 2, 67% of his finite utterances had subject clitics. This discrepancy is not surprising because William is slower in his development than the other two boys. Notice that his later onset is still within the range displayed by the monolinguals studied by Heinen and Kadow (1990). In sum, Gene and Olivier are certainly using subject clitics productively at interval 1 and William at interval 2. There is no evidence that these children are significantly delayed as a group.

DISCUSSION

The acquisition of finiteness, negation, and pronominal subjects in these bilingual children follows the same patterns as those of monolinguals. The large gap between French and English in the use of finite utterances and the absence of English utterances with postverbal negatives indicate that the children are not transferring the verb movement parameter from French into their English grammar, nor is the presence of French accelerating their acquisition of English syntax. Similarly, the distribution of pronominal subjects in each language shows that the children have correctly classified French weak pronouns as clitics and French strong pronouns and English pronouns as NPs. We conclude that our bilingual children were acquiring French and English separately and autonomously. It is also evident from the children's use of finite main verbs in English that it is the finite–nonfinite distinction in general that is acquired more slowly in English, and not just affix-lowering.

Our conclusions are consistent with the research of De Houwer (1990), Kaiser (1994), Meisel (1989, 1990, 1994b), Meisel and Müller (1992), and Parodi (1990). More specifically, in the French of German-French bilinguals, subject clitics and finite verbs emerge productively at 2 years of age. There is a contingency between the appearance of subject clitics and finite verbs, and the negator consistently appears

to the right of finite verbs (Kaiser, 1994; Meisel, 1989, 1990, 1994b; Meisel & Müller, 1992). Early classification of French weak pronouns as clitics has also been observed in the acquisition of French as a second language by English-speaking children aged 6–8 years (Grondin & White, in press; White, 1996). Thus, the acquisition of certain aspects of French syntax follows the same pattern whether French is being acquired alone, with German, with English, or as a second language in childhood.

In addition to showing the same patterns of acquisition as monolinguals, the bilingual children in our study seemed to be acquiring these aspects of French and English syntax at a rate similar to that of monolinguals. They fell within the range of variation shown by monolinguals for the emergence and use of verb movement and other properties related to INFL, although they do not appear at the upper bound of that range. Our findings support the position that bilingual children are not consistently slower than monolinguals (De Houwer, 1990; Nicoladis, 1994; Padilla & Liebman, 1975). However, due to the small number of bilingual children in this study, and the limited aspects of syntax examined, further research is necessary in order to determine conclusively what the norms of bilingual development are.

That bilingual children do not show an appreciable delay in their syntactic development is interesting considering that they probably receive less input than monolinguals in each language. Furthermore, there is no reliable relationship between an individual child's relative exposure to each language and the particular patterns and rate of their grammatical development in those languages. For example, in spite of being exposed to more English, William used functional categories earlier and more frequently in French than in English, and within the normal range as defined by monolinguals. Also, even though Olivier's production of finite verbs in English increased when he received more input at interval 3, he still produced more finite utterances in English than William at interval 2.

These findings concerning input are predictable on the assumption that syntactic acquisition is based on triggering and not learning. The difference between triggering and learning in bilingual first language acquisition can be demonstrated by comparing our results with research on vocabulary growth, which involves the encoding of novel items. Pearson, Fernández, and Oller (1993) showed that for productive vocabulary, bilingual children have a smaller repertoire in each language when compared to monolinguals from 1;6 to 3;0. Furthermore, Pearson, Fernández, Lewedeg, and Oller (1994) noted that size of vocabulary in each language has a direct linear relationship to the proportion of input from each language. It is clear that amount of input exerts a stronger influence on vocabulary growth than on syntactic development. These differences between vocabulary and syntax suggest that the theoretical distinction between how these aspects of language are learned is psychologically real (cf. Meisel, 1994b; Pearson et al., 1994).

A second general implication of our findings concerns the maturation-continuity debate with respect to the acquisition of functional categories. The discrepancy between the emergence of INFL in the children's French and English is a potential problem for the maturation hypothesis. The presence of IP at the first interval in the children's French is uncontroversial. At interval 1 (when Gene and Olivier were both 1;11), 51% of the children's utterances were finite. The correct placement of the

negator and the presence of subject clitics further attest to an INFL projection. For example, Gene used subject clitics with 96% of his finite utterances at interval 1. In contrast, there is little convincing evidence for an INFL projection at interval 1 in any of the children's English. As discussed in the Results section, the presence of any finite verbs in the children's English is dubious, and the mean frequency of 10% is low. As raised subjects reside in [Spec, IP], the use of sentence-medial negators is evidence for IP. There are two examples of negative utterances in English at interval 1, and the negators are sentence-initial, indicating a lack of subject-raising. In the English corpora examined by Déprez and Pierce (1993), only one child of the three had a substantial proportion (71%) of sentence-medial negatives by 2 years of age (p. 35). The fact that INFL is present in one language and not in the other, within the same bilingual individual, would be difficult to explain under a maturation account where biological availability and instantiation into a child's grammar are assumed to occur at the same time. In contrast, Guilfoyle and Noonan (1992) argued that maturation and implementation are not the same process and that, once the ability to project functional categories matures, the rate at which these elements will be acquired depends on the necessary triggers in the input. Such an interpretation of the maturation hypothesis makes it more compatible with our data, as it allows for some crosslinguistic variation in implementation. However, if it is shown that in languages such as French there is no purely lexical stage beyond the one word stage, then it must be assumed that the ability to project functional categories matures universally before children use multiword utterances. In this case, the maturation hypothesis would have no more explanatory value than a nonmaturational, structure-building perspective like weak continuity.

Our data appear compatible with some structure-building approach; thus, they do not appear compatible with the strong continuity hypothesis. If all functional categories are present from the onset of acquisition, why is there no evidence of an IP in the children's English at interval 1? Moreover, why is there a discrepancy in the pervasiveness of functional category use between the children's French and English, even after there is evidence for an IP in English? Proponents of strong continuity argue that first productive use indicates acquisition (see Grondin & White, in press; White, 1996) and that the instability of functional category appearance in speech is due to other, nonsyntactic factors, including phonological constraints on productions. Demuth (1994), Gerken (1994), and Gerken and McIntosh (1993) have argued that the variable production of functional categories in young children's speech is due to their tendency to omit unstressed syllables. Inflections and auxiliary verbs are typically unstressed. In this view, utterances with bare roots or bare present participles are reductions, sentences stripped of the unstressed parts.

Our data are not consistent with this explanation. First, while the children omitted unstressed functional elements in English, they easily produced the unstressed subject clitics in French. Second, our children consistently produced more utterances with *be* as a copula than present continuous utterances with *be* as an auxiliary, even though the prosodic environment is often similar. Compare the following utterances for Gene at interval 2 in (7). It appears that a grammatical explanation underlies these omissions, not a phonological one.

(7) a. That's his tail. (Gene, 2;7)
b. It's a ball! (Gene, 2;7)
c. It is mushroom. (Gene, 2;7)
d. There is Spock. (Gene, 2;7)
e. Papa's up. (Gene, 2;7)
f. Gene doing dodo? (Gene, 2;7)
g. He making a fish. (Gene, 2;7)
h. Johanne making cookie. (Gene, 2;7)
i. I sleeping! (Gene, 2;7)

Furthermore, the apparent instability of functional projections in young children's grammars is evident not only from the omission of morphological items like auxiliaries and inflections. It is also evident from the presence of movement in the syntax. A phonological account does not explain the instability of subject-raising or verb-raising, indicated by the position of the negator. Any analysis of acquisition patterns not involving abstract grammatical properties fails to provide a unified account of the three superficially distinct phenomena in child English and French examined in this study. Finally, the claim that other factors are responsible for the nonproduction of functional categories needs to take into account the consistent language-specific differences in timing of emergence and pervasiveness of use.

We consider these data to be most consistent with the weak continuity hypothesis. First, this perspective predicts language-specific differences in the timing of the emergence of functional elements, which is observable, for example, in the earlier presence of an IP in French in our data. Second, this perspective predicts gradualness of acquisition. In our data, full acquisition is gradual within each language, and differences in rate are observable between languages, for example, in the acquisition of finiteness. See Paradis and Genesee (1995) for further discussion of the maturation-continuity debate and French–English bilingual children.

In conclusion, our results support the hypothesis that bilingual children acquire their languages autonomously, following the same patterns as monolinguals. Whereas this central finding is important, we have also shown that the implications of bilingual first language acquisition go beyond the issue of linguistic separation. Bilingual children provide a sensitive test of proposed universals and language-specific differences in acquisition.

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NOTES

1. De Houwer (1995) suggested that it is theoretically possible for the acquisition errors made by bilingual children to be different from those of monolinguals and not be due to interlinguistic influence. However, she did not offer any specific examples of errors of this kind.

2. The asterisk indicates that the form is unattested in the corpus.

3. Transfer of the verb movement parameter may seem improbable because there are other properties of English in the input that would indicate to the child that English main verbs do not raise, that is, do-support and the placement of negatives and adverbs (cf. White, 1990/1991, 1991, 1992). However, in the case of bilingual first language acquisition, it is still unknown how rigidly the children separate their input and their grammars. It is precisely the purpose of this study to examine how separate or autonomous bilingual children's grammars are.

4. For the set of verbs in French whose infinitive form ends in *-er*, it is difficult to classify the children's productions as infinitives or bare past participles because the past participle is homophonous with the infinitive; for example, *dessiner* and *dessiné* are pronounced [desi'ne]. The second person plural indicative is also homophonous, but it is unlikely from context that the children were attempting this form. Whether the verb form is an infinitive or a past participle, it is still nonfinite (see Pierce, 1989).

5. Following Emonds (1985), Pierce (1992) assumed that verb-*ing* constructions are not formed in the syntax. We adopt this analysis as well.

6. The acquisition order of morphological suffixes in English has been studied extensively (Bloom, 1991; Brown, 1973; Villiers & Villiers, 1973); however, these findings are not easily rationalized with ours, because these authors were not concerned with emerging finiteness per se.

7. It is possible that (5)d is an example of short movement to AGRP (agreement phrase) (see White, 1992).

8. We have included utterances with lexical subjects because in Quebec French lexical subjects and clitics can both appear in a sentence—for example, *Jean il va là* ("John is going there") (cf. Kaiser, 1994). Utterances in the children's corpora, which had such subject-doubled constructions, were included in the numerator. Such constructions, however, were very rare in our data.

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