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Overt subjects in English: evidence for the marking of person in an English-Italian bilingual child*

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ABSTRACT

Data from one English-Italian bilingual child (1;10–3;1) are presented in this study which challenge the hypothesis that the consistent realization of overt subjects in English is caused by the emergence of finite verbal morphology in the child's grammar. The argument is made for the emergence of subjects as an independent grammatical property of English, namely the marking of person deixis. Throughout the period of observation there is a significant proportion of overt subjects in the child's English utterances appearing both with finite and non-finite verb forms. Production of subjects stabilizes at 90% of obligatory contexts when no morphological correlates of finiteness have been acquired yet. While subjects are produced at significantly lower rates in Italian, we observe the consolidation of a number of inflected forms marking person agreement. The emergence of overt subjects in English on the one hand, and of subject–verb agreement in Italian on the other suggest that this bilingual child is grammaticalizing the all-important function of person deixis in language-specific ways: the same function is expressed by different forms in the child's two languages.

INTRODUCTION

Over recent years the null-subject phenomenon in English child language has attracted a considerable amount of attention from researchers in the field. Together with a host of empirical studies, an array of theoretical explanations have also flourished. Various proposals have appeared in the literature, ranging from performance limitation accounts (Bloom, 1990; Valian, 1991; Valian & Eisenberg, 1996), parameter missetting accounts (Hyams, 1986),

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topic-drop accounts (Haegeman, 1995), underspecification of number accounts (Hoekstra, Hyams & Becker, 1996; Grinstead, 2000), optional infinitive accounts (Wexler, 1994). Despite the very different assumptions underlying these approaches to the null-subject phenomenon, there is one common theme in these diverse approaches: the notion that children's grammatical abilities are deficient in one way or another.

An additional assumption shared by many child language researchers is that some sort of underspecification of functional features is the cause both of the absence of obligatory overt subjects and of non-finite verb forms in root contexts. A number of recent acquisition studies in a variety of non-null-subject languages have reported an association between overt subjects and finite forms on the one hand, and between null subjects and non-finite root forms on the other (Hyams, 1996 for English; Haegeman, 1995 for Dutch; Hamann & Plunkett, 1997, for Danish). There appears to be substantial empirical evidence for the postulation of a relationship between the production of root infinitives (RIs) in child language and the presence of null subjects in languages where null subjects in finite contexts are ungrammatical. Another common observation is that RIs are typically not found in Romance null-subject languages such as Italian, Spanish, and Catalan.[1] Examples of RIs with null subjects in English, French and Danish are given below:[2]

(1) Have drink orange. (Radford, 1990: 186)
(2) Going village.
(3) Oter tout ta. (Hamann & Plunkett, 1997: 220)
Empty-INFL all that
'I empty all that'
(4) Ikke køre traktor.
Not drive-INFL tractor
'(I, you, he) don't/doesn't drive the tractor'

In a survey of a number of previous studies of RIs and null subjects in German, Dutch, Flemish, and French, Hoekstra *et al.* (1996) however note that there is not a perfect association between finite forms and overt subjects on the one hand, and non-finite forms and null subjects on the other. Averaging across languages and children in the studies they review there is an approximate residual 17% of overt subjects with RIs. More evidence that the co-occurrence between RIs and null subjects is far from perfect is found

[1] In actual fact a small percentage of RIs is reported for Italian by Guasti (1993/94) and by Pizzuto & Caselli (1992) for six children between the ages of 1;4 and 3;0 (1·6–4%).
[2] We follow Wexler (1994) in including missing copula *be* forms and auxiliary *be* forms as instances of RIs. The function of the copula and auxiliary *be* is to spell out agreement and tense features, their omission in root contexts results in utterances which are ungrammaticality not marked for finiteness.

in a study of the use of subjects in one monolingual English-speaking child between 2;5 and 3;0 (Ingham, 1992). The author reports that at the age of 2;5 the child had already reached a 90% level of subject realization which remained remarkably stable for the five following months of the period of observation. Although Ingham does not perform an analysis of the co-occurrence of subjects with finite and non-finite forms, he argues that at the time the child had not yet acquired any of the morphological correlates of finiteness associated with the realization of overt subjects. His tentative conclusion is that the child might actually be focusing on subjects as an independent grammatical property of English acquired in its own right, rather than as a consequence of the acquisition of the obligatoriness of finiteness markers. Ingham clarifies that it is not the case that the disappearance of the optional subject phenomenon must NECESSARILY be independent of the acquisition of tense and agreement marking, but that at least for some children it may well be. This implies that, in principle, the realization of subjects could be dissociated from the emergence of finiteness. One possibility is that children's sensitivity to the statistical distribution of subjects in English triggers the realization of the obligatoriness of subjects before the use of tense and agreement markers has been mastered.

Valian (1991) reaches similar conclusions in a study of subject production in a group of American English-speaking children aged between 2;0 and 2;5, and a group of Italian-speaking children aged between 2;0 and 2;6. For the English-speaking children subject realization is significantly lower than for the MLU-matched controls learning Italian, a null-subject language where the distribution of overt subjects is not required by the need to identify a subject referent but is governed by discourse and pragmatic requirements. American children with an MLU below 2·0 morphemes used subjects an average of 69% of the time, while their Italian MLU matches expressed subjects overtly only 30% of the time. Similar findings were replicated by Valian & Eisenberg (1996) in a study of subject use in children acquiring Brazilian and European Portuguese and English. In all of the three MLU-matched groups of Portuguese-speaking children and English-speaking children, subject use was significantly different between the two languages. In group I (MLU below 2·0 morphemes) and group II (MLU between 2·0 and 2·5), the American children used subjects more than twice as often as the Portuguese-speaking children, and in group III (MLU between 2·5. and 4) more than 1·5 times as often.

The significant crosslinguistic differences observed in the provision of overt subjects by children acquiring a poorly inflected non-null-subject language like English, and by children acquiring rich agreement null-subject languages like Italian and Portuguese are likely to reflect the early sensitivity of the former to the requirement that subjects be expressed overtly in their language.

Of particular relevance to the present study are some recent findings on the use of subjects by Andreu, a child acquiring English and Catalan between 1;3 and 4;2 (Juan-Garau & Pérez-Vidal, 2000). Similarly to Italian, Catalan is a null-subject language where the realization of overt subjects is not required to identify the subject referent, verbal inflectional morphology unambiguously expresses person and number of the external argument. Juan-Garau & Pérez-Vidal report that despite the virtual absence of any finite verb forms in English, except for the use of contractible copula forms, Andreu's performance on the use of overt subjects in obligatory contexts is near ceiling from 3;2, when the first clauses are produced in English. The authors conclude that they 'cannot argue clearly in favour of the relationship between the use of subjects and the other grammatical developments which have been reported to emerge roughly at the same time' (Juan-Garau & Pérez-Vidal, 2000: 188). In Catalan, by contrast, the child uses overt subjects only 27% of the time, in line with the statistics of the language he is learning.

In sum, there is growing evidence from monolingual and bilingual acquisition that children are indeed sensitive to the distribution of overt subjects in the languages they are exposed to, and that they tend to match the adult input. More importantly, it is our belief that not only do children perform a distributional analysis of the input, but that they do so in a functionally oriented way. In other words, the function that a linguistic form serves crucially determines how this form will be acquired and used. In the case at hand, the key function of overt subjects in English, and specifically pronouns, is to mark person, while in many other languages, including Italian, person is expressed by verbal morphology. Subject, object and indirect object personal pronouns do however exist in Italian too, but unlike in English, their function is not to mark person, which is already unambiguously identified by agreement morphology.

The fact that the grammatical devices, verbal morphology and overt subjects, are present in both English and Italian does not therefore automatically imply that they will also express the same function crosslinguistically. It is indeed the case that the different extent to which verbal morphology is involved in marking person in Italian, as opposed to English, gives it a privileged role in the acquisition process. The realization of person deixis is a fundamental prerequisite for effective communication, and it is therefore to be expected that children will have to try to express it if they have to situate their utterances in a discourse context. Presumably it is also a notion that will take some time to be fully grasped and internalized, it requires perspective-taking on the part of the child, hence a certain degree of awareness that a scene can be seen from different points of view and that different participant roles will have to be identified. In the early stages of adult–child communication when conversations tend to revolve around the here and now, deixis tends to be marked exophorically rather than endophori-

cally. The discourse context largely makes up for children's initial inability to express who does what to whom, and it is only natural to expect that deictic devices such as personal subject pronouns, tense and agreement markers, and articles will be largely absent in the initial phases of children's linguistic communication.

On the subject of crosslinguistic comparisons, Pizzuto & Caselli (1994: 177) note that the relatively precocious emergence of verbal agreement morphology in Italian children has a correlate in the use of personal pronouns by English-speaking children:

> [L]earning to mark the category of person by obligatory word-alternation patterns [in Italian] is not significantly different from learning to mark these notions by obligatory lexical items – as in English.

As shown by Chiat (1986) and Valian (1991), as early as MLU Stage I, English-speaking children can use subject pronouns *I*, *you* and *we* productively, while at the same there is evidence that Italian children can use at least some of the inflections of the present tense indicative paradigm productively before the age of 3;0 (Guasti, 1993/94; Pizzuto & Caselli, 1992, 1994).

The crosslinguistic variation in the role played by verbal morphology is also well-attested in a number of psycholinguistic experiments both with adults and children. Evidence from sentence comprehension experiments with adults has highlighted how English speakers tend to rely on word order in establishing the subject of a sentence, while Italian speakers predominantly exploit agreement morphology on the verb (Bates, McNew, MacWhinney, Devescovi & Smith, 1982; MacWhinney, Bates & Kliegl, 1984). The crosslinguistically different strategies that adult native speakers use reflect the relative validity of verbal agreement and preverbal position as possible cues to identify noun phrases as subjects. Because the reliance on one or the other strategy to parse the linguistic input depends on statistical distributional properties of the different languages, there is reason to believe that children might indeed exploit the same type of information as adults to parse the incoming input. One would therefore expect Italian-speaking children to focus on the acquisition of verbal morphology, while English-speaking children should concentrate their efforts on the production of overt subjects to mark person deixis. D'Amico & Devescovi (1993) offer partial support for this hypothesis in a study of sentence comprehension in 50 monolingual Italian children between 3;6 and 9;6. Their findings show that, although it is not until age 7;0 that children behave like adults in preferring the subject–verb agreement cue, nevertheless there are indications that as early as 3;6 Italian-speaking children do use the subject–verb agreement cue to identify the subject of a sentence.

Naturalistic data on the acquisition of Italian morphology also show that children are sensitive to the presence of verb inflections in their language.

However, although most researchers agree that Italian children use verb inflections early and by and large correctly, there is disagreement as to how this empirical evidence should be interpreted. Hyams (1986) and Guasti (1993/94) argue that children's errorless production of a variety of person inflections testifies to their early mastery of subject–verb agreement. By contrast, Pizzuto & Caselli (1992, 1994) question children's early productivity and ability to use inflections contrastively. Although agreement errors are infrequent it does not necessarily follow that children must be credited with adult-like knowledge of the paradigm, it could simply be the case that they are using forms they have heard in the input in a conservative fashion. If children are merely repeating what they hear, it is likely that they will make few errors, therefore the absence of errors in itself cannot be taken as conclusive evidence of mastery. The argument for children's learning of inflections on a verb-specific basis implies that they will be unlikely to have an adult-like representation of subject–verb agreement.

The issue of productivity in the early use of morphology is indeed crucial to determine to what extent children are actually operating with abstract categories rather than simply using a small set of unanalysed rote-learned forms. Radford (1990) acknowledges the presence of 'stereotyped sentences', and 'set expressions' where apparently correct forms have not yet been properly analysed by the child and are therefore not representative examples of mastery. According to Radford (1990: 24) morphological evidence for the mastery of a given category must rely on productivity (use with a range of different types and not only with a small set of 'set expressions'), selectivity (e.g. verbal inflections must only appear on verbs and not on nouns), contrastivity (attaching a plural inflection only to plural forms and not to singular forms), and appropriate use of the inflection in question (e.g. use only when required).

Tomasello (1992) has argued for the early presence of lexically specific islands where verbs are treated as unique lexical items. Under this assumption a child would for example treat *parlo*, '(*I*) *speak*', and *dormo*, '(*I*) *sleep*', as two completely unrelated lexical entries, they would not be categorized as two instances of verbs inflected for first person singular present. Gathercole, Sebastián & Soto (1999) make a similar argument for the acquisition of verbal inflections by three Spanish-speaking children. Their conclusions, based on analyses of corpora of spontaneous speech, are that there is virtually no evidence for across-the-board knowledge of verbal inflections, on the contrary several aspects of the data indicate that acquisition is initially based on word-by-word learning. Reanalysis of inflections and application to a range of verb types proceeds gradually and in a piecemeal fashion.

In a study on the use of verb inflections by four English-speaking children, Bloom, Lifter & Hafitz (1980) reported that most of the children only ever used verbs with one variant, e.g. *fit/fits*, *play/playing*, *break/broke*. The

authors argue that ''it is possible that the children learned *fit* and *fits* and *play* and *playing* as separate lexical items … This result indicates a tendency toward word-by-word learning.'' (Bloom *et al.* 1980: 408).

Naturalistic data clearly pose a sampling problem whereby the absence of a form cannot be taken as evidence that the child does not know the form in question, the opportunity to use it may simply not have arisen. There is however an increasing body of experimental evidence suggesting that children's productivity with verb morphology is extremely limited until at least 3;0 (Olguin & Tomasello, 1993; Tomasello, Akhtar, Dodson & Rekau, 1997). These experiments have so far been conducted on English, except for a recent study investigating the productivity of Spanish-speaking children between 2;5 and 3;5 both with familiar and novel verbs (Childers, Fernandez, Echols, Tomasello, in press). Like their English-speaking peers Spanish-speaking children show considerable limitations in the understanding and use of verbal morphology before the age of 3;0 with familiar and novel verbs. In Childers *et al.*'s study, both in the sentence comprehension tasks and in the production task with familiar and novel verbs, the Spanish-speaking children showed an understanding of third person singular forms but not of third person plural forms. This finding suggests that subject–verb agreement does not hold across the paradigm but it is initially restricted to some individual inflections. In fact, much of children's morphosyntactic knowledge may revolve around a restricted set of familiar lexical items. The Spanish-speaking children in Childers *et al.*'s study were by and large unable to use third person plural inflection with novel verbs, but restricted themselves to using the third person singular inflection modelled by the experimenter.

The evidence reviewed here from naturalistic and experimental studies on languages such as Italian and Spanish offers a mixed picture of children's acquisition of inflections and mastery of subject–verb agreement. On the one hand, children acquiring richly inflected languages appear to be no different from their English-speaking peers in terms of acquisition strategies, they too seem to be relying on gradual, piecemeal learning of lexical items. On the other hand, they clearly have a wider variety of inflected forms in their vocabulary from an early age because of the nature of the linguistic input they are exposed to: uninflected forms are simply not allowed by the phonotactics of their languages.

The claim being made here is that although Italian-speaking children do not have a clear advantage over their English-speaking peers in the mastery of subject–verb agreement as such, nevertheless there are indications that they can attend to the inflectional richness of their language and that they can use the subject–verb agreement cue to mark person to some extent.

While Italian children can benefit from the highly reliable and available cue provided by verbal agreement morphology to mark person in their

language, English-speaking children will have to look elsewhere for reliable ways to mark person. As is well-known this function is performed in the adult language by overt subjects, and specifically personal pronouns, hence in order to mark person deixis unambiguously it is necessary to express the subject overtly.[3]

In crosslinguistic studies of first language acquisition it is standard practice to compare children's performance on verbal morphology to establish when and how productive control of subject–verb agreement and tense marking is mastered. However, as noted by Pizzuto & Caselli (1992: 503) on the relevance of person-marking in English and Italian, 'appropriate cross-linguistic comparisons of rate of development cannot be limited to some observations on the number of morphemes used in each language at a given age … it seems plausible to hypothesize that an appropriate cross-linguistic comparison of the development of verb inflection in English and Italian must include … information on the development of subject pronouns as well.'

The data presented in this study on the use of subjects and on subject–verb agreement in an English-Italian bilingual child clearly show that the production of subjects in English is dissociated from the emergence of finite verb morphology. At the same time it is clear that the child is not applying a 'subject strategy' in both languages whereby overt subjects are produced obligatorily regardless of the language he is using: in Italian the production of subjects is significantly lower than in English throughout the period of observation. Moreover, at the same time as subjects begin to emerge with some consistency in English, in Italian the child starts to acquire his first meaningful person contrasts. The claim being made here is that this child is using language-specific strategies to mark person deixis and that he focuses on language-appropriate cues in the two languages: subjects in English and verbal agreement in Italian.

METHOD

The participant

The informant of this case study is Carlo (henceforth C.), a bilingual English-Italian boy born in Scotland to an American father and an Italian mother. C.'s parents are both English-Italian bilinguals, and they both learnt their non-native language as adults. From birth until the age of five months C.'s father spoke to him in English and he then switched to Italian; his

[3] Even in a non pro-drop language like English null subjects are allowed in certain pragmatically and syntactically restricted conditions. Common examples of subject drop are found in the so-called diary style where a subject clearly identified by the discourse context can be left out. These are commonly known as instances of topic-drop (see Haegeman, 1995).

mother has always spoken to him in Italian. C. has two older brothers, M. five years his senior who is a fluent bilingual English-Italian speaker, and A. ten years his senior who is essentially a monolingual English speaker with some basic proficiency in Italian as a second language; both brothers speak to C. in Italian. In addition to his immediate family C. has access to Italian through a number of Italian-speaking childminders who look after him for five hours every weekday, besides his maternal grandparents whom he sees for approximately six or seven weeks a year during family holidays. Since the age of 0;8 months C. has been attending a local crèche and then a nearby nursery for four hours a day where all the staff and the children are monolingual English speakers.

In this child's case Italian is the home language, while English is the community language that he hears mostly outside the home environment. English is also spoken in the home between his parents, between his father and his two older brothers, between his mother and A., and between the rest of the family and monolingual friends that visit the house frequently. Approximately 45% of C.'s waking time is spent in a monolingual Italian-speaking environment, 40% in an English-speaking environment, and the remaining 15% in a mixed Italian-English environment with a predominance of Italian addressed to him.

Data collection procedure

Data were collected for a period of 15 months at fortnightly intervals for both languages with a number of breaks due to illness and family holidays. See Table 1 and Table 2 for a breakdown of the recordings selected for this study:

For each language the context was kept as monolingual as possible to reflect the language separation in C.'s everyday experience. In order to do so, in each recording session C. typically interacted with one adult at a time, with the author in Italian, or one of two monolingual English-speaking adults. The author, a native speaker of Italian with near-native fluency in English, and the two monolingual English speakers involved in the English sessions were family friends well known to the child through frequent visits to the house prior to the start of the recording sessions. Each recording lasted approximately 45 minutes and the activities C. and his adult interlocutors engaged in ranged from playing with Lego, to drawing, looking at picture books, playing with jigsaw puzzles, toy telephones, and telling stories. There was no set of structured activities as such, however the adult in charge tried to choose anything that was most likely to elicit the maximum amount of speech from the child at that particular time.

All the data were subsequently transcribed in CHAT format as described in MacWhinney (1995). The data were transcribed orthographically except

TABLE 1. *Age and MLUw across the Italian sessions*

Session	Age	MLUw
1	1;10.8	1·071
2	1;10.27	1·165
3	1;11.17	1·360
4	1;11.25	1·444
5	2;0.1	1·178
6	2;0.7	1·287
7	2;0.23	1·874
8	2;1.23	1·904
9	2;2.3	1·883
10	2;2.17	2·009
11	2;3.7	2·184
12	2;4.14	2·604
13	2;5.6	2·476
14	2;5.26	2·631
15	2;9.6	2·633
16	2;10	2·465
17	2;10.18	2·735
18	2;11.12	2·873
19	3;0.3	2·690
20	3;0.17	3·306

TABLE 2. *Age and MLUw across the English sessions*

Session	Age	MLUw
1	1;10.1	1·156
2	1;10.20	1·376
3	1;11.4	1·284
4	1;11.18	1·096
5	2;0.1	1·393
6	2;0.23	1·204
7	2;2.12	1·861
8	2;2.24	1·989
9	2;4.7	2·215
10	2;4.29	1·921
11	2;7.8	2·511
12	2;9.6	2·476
13	2;10.1	2·655
14	2;10.15	2·796
15	2;10.23	2·379
16	2;10.30	2·649
17	3;0.3	2·381
18	3;0.16	2·934
19	3;1.25	2·588

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for some child forms for which a broad phonetic transcription was provided together with the corresponding adult target. In addition to the speakers' utterances on the main line, a %mor dependent tier was also generated for the morphological tagging of the English data. Computerized CLAN programs such as FREQ, KWAL, and COMBO were used to search the corpus for information to analyse.

RESULTS

Overt subjects in English with RIs and finite verb forms

In C.'s corpus the proportion of overt subjects with non-finite forms is well above the average of 17% reported by the survey in Hoekstra *et al.* (1996). In fact the majority of C.'s RIs have an overt subject. Table 3 summarizes the proportion of overt subjects for seven different categories: RIs, third person singular simple present forms, present progressive forms, simple past tense forms, modals, copula, and others.[4] The 'others' category includes verbs which cannot unambiguously be classed as either finite or non-finite, i.e. verbs with a non-third person singular subject:

(5) (3;1.25)
*CAR: I go and close the door.

Although the utterance in (5) could be considered as a grammatical present tense utterance with a first person singular nominative subject, nevertheless, because of the confound between infinitival and non-third person singular present tense forms, it is not possible to be absolutely certain that these are truly examples of finite verb forms. They have however been included in the analysis sample because they account for a substantial number of overt subject contexts.

As shown in Table 3 the proportion of subjects in obligatory contexts reaches 100% at 2;4.7 and 2;4.29, and remains stable around or over 90% for the following seven months. Prior to 2;4.7, there is little evidence of subject use, and there is also an overall absence of obligatory contexts. As previously noted by Valian (1991), the proportion of overt subjects increases as a measure of verb use. However even before verbal predicates make their appearance in C.'s lexicon we have a number of overt subjects in constructions in which the copula is omitted:

(6) (2;2.12)
*CAR: dat a dog.
(7) (2;2.24)
*CAR: da(t) a duck.

[4] RIs include all non-finite forms of lexical verbs in root contexts (e.g. *she walk* for *she walks*, or *I go* for *I went*), and all omissions of copula *be* (e.g. *that a dog* for *that is a dog*), and auxiliary *be* (e.g. *I going home* for *I am going home*).

TABLE 3. *Distribution of English overt subjects*

	Age	RIs	3 p.s.	Past	Prog.	Modals	Copula	Other	% overt subjects
	1;10.1	—	—	—	—	—	—	—	—
	1;10.20	6/6	—	0/2	—	—	—	—	75·0
	1;11.4	10/10	—	—	—	—	2/2	—	100·0
	1;11.18	—	—	—	—	—	—	—	—
	2;0.1	—	—	—	—	—	—	—	—
	2;0.23	2/2	—	—	—	—	—	—	100·0
	2;2.12	46/51	—	—	—	—	—	—	90·2
	2;2.24	25/26	—	—	—	—	—	—	96·1
	2;4.7	11/11	—	—	—	—	10/10	2/2	100·0
	2;4.29	3/3	—	—	—	—	13/13	4/4	100·0
	2;7.8	5/5	—	—	0/1	—	19/20	9/9	94·3
	2;9.6	4/6	2/2	—	16/17	—	30/32	10/11	91·2
	2;10.1	2/2	—	—	—	19/20	3/5	25/27	90·7
	2;10.15	14/14	—	1/1	16/19	1/1	16/18	41/42	93·7
	2;10.23	5/6	—	—	18/20	3/3	13/15	9/9	90·6
	2;10.30	5/5	0/1	1/1	4/5	1/1	18/19	14/15	91·5
	3;0.3	16/19	6/6	—	5/6	1/1	12/14	3/3	87·7
	3;0.16	22/24	—	5/5	4/5	20/20	21/21	10/11	95·3
	3;1.25	8/10	3/3	3/3	4/5	13/13	18/18	22/23	94·6
	N	184/200	11/12	10/12	67/78	58/59	175/187	149/156	
	N%	92·0	91·6	83·3	85·9	98·3	93·6	95·5	

N, Total number of subjects; N%, total % of subjects.

(8) (2;2.24)
*CAR: da(t) a picture.

Utterances such as (6), (7)and (8) above are considered to be non-finite because of the omission of an appropriately inflected copula form. Such non-finite forms are counted as instances of RIs.

As reported in previous research on subject use, the highest proportion of overt subjects is found with finite forms (91·6% for third person singular present tense forms, 83·3% for past tense forms, 85·9% for progressive forms with auxiliary *be*, 98·3% for modals, and 93·6% for copula forms). However, what is surprising in C.'s data is that RIs too display a high percentage of overt subjects (92·0%), despite their non-finite status. Examples of overt subjects with finite and non-finite forms are given below:

(9) (2;9.6)
*CAR: these are frogs.

(10) (2;10.23)
*CAR: he [//] he's putting his hand right there.

(11) (2;10.30)
*CAR: I found them.

(12) (2;10.30)
*CAR: Marco give that too.

(13) (3;0.16)
*CAR: this go there.

In this bilingual child it is clear that the symmetrical association between finite verbs and overt subjects on the one hand, and between non-finite forms and null subjects on the other, does not go in the predicted direction for non-finite forms. Contrary to expectations, there is a significant proportion of overt subjects with RIs that is problematic for theoretical accounts that assume a causal relationship between the emergence of finiteness and the realization of overt subjects.Throughout the period of observation C. uses subjects in similar proportions both with finite and non-finite forms, as shown in Table 4.

Between 1;10.1 and 2;4.7 there are virtually only non-finite contexts, with the exception of two finite forms at 1;11.4 both with an overt subject, therefore no comparison of the proportion of overt subjects in finite and non-finite contexts is possible. From 2;4.7 onwards, when comparable numbers of contexts for subject use with RIs and finite verb forms are attested, a chi-square test showed a non-significant difference between the provision of subjects with RIs and with finite forms ($\chi^2 = 1{\cdot}14$, df 10, $p = 0{\cdot}287$).

The use of such a considerable proportion of overt subjects, and in particular of subjects which are person deictic markers with forms that are non-finite suggests that for C. person deixis plays an important role in

TABLE 4. *Number and proportion of overt subjects (OS) with RIs and with finite forms (FF)*

Age	Number of OS with RIs	% OS with RIs	Number of OS with FF	% OS with FF
1;10.1	—	—		
1;10.20	6/6	100·0	0/2	0·0
1;11.4	10/10	100·0	2/2	100·0
1;11.18	—	—	—	
2;0.1	—	—	—	
2;0.23	2/2	100·0	—	
2;2.12	46/51	90·2	—	
2;2.24	25/26	96·1	—	
2;4.7	11/11	100·0	12/12	100·0
2;4.29	3/3	100·0	17/17	100·0
2;7.8	5/5	100·0	28/30	93·3
2;9.6	4/6	66·6	58/62	93·5
2;10.1	2/2	100·0	47/52	90·4
2;10.15	14/14	100·0	75/81	92·6
2;10.23	5/6	83·3	43/47	91·5
2;10.30	5/5	100·0	38/42	90·5
3;0.3	16/19	84·2	27/30	90·0
3;0.16	22/24	91·6	60/63	95·2
3;1.25	8/10	80·0	63/65	96·9

constraining whether an unmarked bare form will appear with a subject or not. The suggestion being made here is that the requirement to mark person deixis is the reason why overt subjects are produced regardless of the finiteness of the verb forms.

This analysis has so far only considered the finiteness issue in connection with the appearance of overt subjects, and the results show that overt subjects do indeed appear with non-finite forms to a significant extent. It is however necessary to assess the child's mastery of finiteness more generally, and to establish what is the proportion of finite vs. non-finite forms. A recent study on the emergence of subjects in children acquiring Catalan and Spanish (Grinstead, 2000) has proposed a very strong connection between the emergence of the contrastive use of tense and number morphology and the appearance of overt subjects. Grinstead proposes two generalizations on the relationship between null subjects and the emergence of tense and agreement morphology. For null subject languages like Spanish, Catalan and Italian the onset of adult-like use of tense and agreement morphology correlates with the appearance of overt subjects in child language. For non-null-subject languages such as English and French, the emergence of tense and agreement morphology coincides with the disappearance of null subjects. The prediction for English is therefore that at a time when no finite morphology has yet appeared, the proportion of null subjects should be at its highest. Although

TABLE 5. *Distribution of English verb forms*

	Copula	Prog. w/o aux	Prog. w aux	Modals	Imp.	Lexical RIs	Simple past	Present tense	Present perfect
N	178	100	82	72	66	56	12	12	4

TABLE 6. *Distribution of present tense copula BE forms in obligatory contexts*

Age	1 p.s.	2 p.s.	3 p.s.	1 p.p.	2 p.p.	3 p.p.	% o.c.
1;10.1	—	—	0/6	—	—	—	0·0
1;10.20	—	—	0/7	—	—	—	0·0
1;11.4	—	—	2/16	—	—	—	12·5
1;11.18	—	—	0/14	—	—	—	0·0
2;0.1	—	—	0/2	—	—	—	0·0
2;0.23	—	—	0/2	—	—	—	0·0
2;2.12	—	—	0/62	—	—	—	0·0
2;2.24	—	—	0/45	—	—	—	0·0
2;4.7	—	—	7/19	—	—	0/2	33·3
2;4.29	—	—	17/20	—	—	—	85·0
2;7.8	—	—	22/32	—	—	—	68·7
2;9.6	—	—	24/26	—	—	2/2	92·8
2;10.1	—	—	5/9	—	—	—	55·5
2;10.15	—	—	15/15	—	—	1/1	100·0
2;10.23	—	—	10/16	—	—	10/10	76·9
2;10.30	—	—	8/8	—	—	10/10	100·0
3;0.3	—	—	17/23	—	—	—	73·9
3;0.16	1/1	—	15/20	—	—	—	76·2
3;1.25	—	—	12/15	—	—	1/1	81·2

there is empirical evidence from a number of studies that null subjects tend to disappear in English, French and German when finite morphology is produced consistently in a significant number of obligatory contexts (Pierce, 1989; Clahsen & Penke, 1992; Roper & Rohrbacher, 1995), very few studies have investigated to what extent overt subjects are actually produced by children at a stage when they have yet not acquired any command of tense and agreement morphology. The next section illustrates in more detail C.'s control of tensed and agreeing English verb forms. The aim of these analyses is to asses to what extent the child's target-like use of subjects correlates with target-like use of verbal morphology.

The finiteness issue

A total of 582 English verb forms are found in C.'s corpus during the period of observation (1 : 10.1–3; 1–25). Table 5 summarizes the distribution of verb forms across eight different categories: copulas, progressive forms without an auxiliary, progressive forms with an auxiliary, modals, imperatives, bare

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forms, simple past tense forms, 3 p.s. present tense forms, and present perfect forms.

If we discard imperatives, a large proportion of which is represented by the frozen form *Look at that* (32/66, 48·5%), the only finite forms that are used to any significant degree are present tense copula forms and present tense progressive forms. Nevertheless, as shown in Table 6 and Table 7, use of the

TABLE 7. *Distribution of present tense auxiliary BE forms in obligatory contexts*

Age	1 p.s.	2 p.s.	3 p.s.	1 p.p.	2 p.p.	3 p.p.	% o.c.
1;10.1	—	—	—	—	—	—	—
1;10.20	—	—	—	—	—	—	—
1;11.4	—	—	—	—	—	—	—
1;11.18	—	—	—	—	—	—	—
2;0.1	—	—	—	—	—	—	—
2;0.23	—	—	—	—	—	—	—
2;2.12	—	—	—	—	—	—	—
2;2.24	—	—	0/2	—	—	—	0·0
2;4.7	—	—	—	—	—	—	—
2;4.29	—	—	—	—	—	—	—
2;7.8	—	—	3/3	—	—	—	100·0
2;9.6	—	—	19/22	—	—	—	86·4
2;10.1	0/1	—	—	—	—	—	0·0
2;10.15	0/1	—	18/21	—	—	2/2	83·3
2;10.23	0/1	—	17/17	—	—	2/2	95·0
2;10.30	—	1/1	3/3	1/4	—	–	62·5
3;0.3	—	—	5/6	—	—	2/3	77·7
3;0.16	—	0/2	4/4	1/1	—	—	71·4
3;1.25	—	—	2/2	—	—	2/2	100·0

copula and of the auxiliary *be* is essentially restricted to 3 p.s. contexts and to a lesser extent to 3 p.p. contexts:

Moreover, out of 82 inflected forms of the aspectual auxiliary *be*, 12 (14·6%) are combined with the verb *doing* (11 of which are found in the semiformulaic question *What's* × *doing*?), and 40 (48·8%) with the verb *going*. These two verbs alone account for 63·4% of all progressive forms combined with the inflected auxiliary *be*. As for tense, there is no contrastive use of any past progressive forms at all in these data.

A category typically associated with tense that is well represented in C.'s English is that of modals (72 tokens and 4 types, *can*, *could*, *might* and *should*), but here again there is a considerable degree of lexical specificity in the way in which the child uses modals. One single modal, *can*, appears in 52·8% of all utterances containing a modal verb (38/72), and two verbs that it takes as complements (*put*, 25 tokens, and *go*, 6 tokens) account for 81·6% (31/38) of all its verbal complements, and 45·6% (31/68) of all modal complements.

Moreover, *can* is the only modal to be found until 3;1.25. In the light of these facts it is difficult to see how one could credit C. with the command of a modal category, *can* is in actual fact the only representative and it appears with an extremely limited range of complements.

As far as lexical verbs are concerned, by the end of the period of observation (3;1.25), C.'s production of finite forms is still well below the 90% cut-off point of acquisition. Because in English finiteness in the present tense is unambiguously marked only on 3 p.s. forms, these contexts were examined to investigate to what extent the child is marking finiteness in obligatory contexts. It must be noted that the number of contexts is rather low overall (44), but out of 44 obligatory contexts there are only 8 instances of inflected 3 p.s. present tense forms with only two verb types: *come* and *go*.

(14) (2;9.6)
*CAR: here comes the train.

(15) (3;1.25)
*CAR: the giraffe goes here.

The results for past tense forms also show lack of control of tense marking. Out of 30 simple past tense contexts identified in the corpus, 13 are correctly supplied (43·3%). There are 8 different verb types (*fell*, *found*, *gave*, *lost*, *said*, *stopped*, *wanted*, and *went*), only two of which are regular verbs taking *–ed* suffixation, the rest are suppletive irregular past tense forms which may well not have been learnt as forms contrasting with a present tense form at all. For *found* in particular there is good reason to believe that C. does not in fact know that it is a past tense form, since on two previous occasions he uses it as the complement of a modal where *find* would be required:

(16) (2;10.23)
*CAR: I can't found them!

For the other past tense forms, with the exception of *lost*, which is only found in the past, and *go*, which appears inflected for number in the present tense, there are tokens of the bare form but no instances of 3 p.s., and only 2 (*fell* and *went*) also appear with progressive *–ing*. There is thus no compelling evidence that the majority of these past tense forms actually contrast with other inflected forms. *Go* is the only verb that appears in three different inflected forms: *going*, *goes* and *went*.

In sum, an overview of C.'s use of verbs in English reveals that there is no productive mechanism of verb-general marking on English verbs. The only productive morphological rule seems to be *–ing* suffixation on eventive predicates. These observations combined with evidence of a significant degree of lexical specificity clearly indicate that there is little evidence to credit this child with any productive and contrastive use of tense and agreement morphology by 3;1.25.

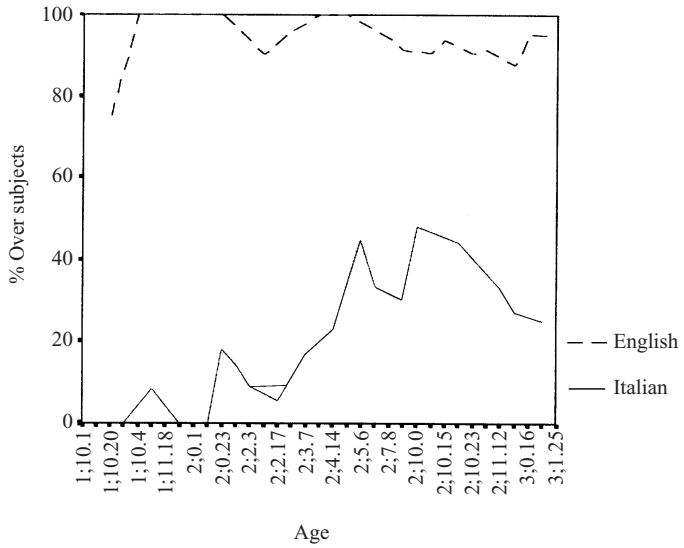

Fig. 1. The distribution of overt subjects in English and Italian between 1;10.1 and 3;1.25.

Subjects and the emergence of person marking in Italian verb

In sharp contrast to the use of subjects in English, where the overall average of overt subjects is 93·2%, in Italian C. uses overt subjects only 24·7% of the time. This is a clear indication that this bilingual child is not applying an undifferentiated overt subject strategy in both languages, but that he is sensitive to the language-specific properties of English and Italian. Figure 1 plots the distribution of overt subjects in English and Italian over time.

As shown in Figure 1 although overt subjects are significantly less frequent in Italian than in English, they do appear and reach 44·8% of all subject contexts at 2;5.6, and 48·0% at 2;10.0.[5] This sporadic increase in the use of overt subjects in Italian is essentially due to the emergence of 1 p.s. pronoun *io*, '*I*', in preverbal position which accounts for 60·4% of all overt subjects (197/326). A number of these occurrences of 1 p.s. pronoun *io* seem to be related to the marking of contrastive focus, although in adult Italian the only possible subject position for contrastive focus is the postverbal and not the preverbal one:

(17) (2;2.3)
*LUD: allora chi va a cercare Orsetto?

[5] Because Italian is a language where subjects are not obligatorily expressed, one cannot speak of obligatory contexts for subjects to the same extent as this is appropriate in English where overt subjects are required for all finite verbs. We can however note that subjects are possible with a finite verb, although they may not always be pragmatically appropriate.

%eng: so who is going to look for Orsetto?
*CAR: io lo cerco.
%eng: I look for it.

C.'s reply in (17) with a preverbal subject is pragmatically inadequate: an adult Italian speaker would have used a postverbal subject (*Lo cerco io*, '*Look for it I*') to signal contrastive focus. Because of C.'s bilingualism one might suggest that this inappropriate focus strategy is due to transfer from English where the postverbal subject position is unavailable and contrastive focus is marked by a prosodic strategy in which the preverbal subject is stressed. There are however at least two reasons to discard the transfer hypothesis. Firstly, there is no stress on the preverbal pronoun, as one would expect if the child were indeed transferring the prosodic focusing strategy from English to Italian. Secondly, in a longitudinal study of a monolingual Italian-speaking child, Camilla, Antelmi (1997) reports that the child goes through a phase around 1;10–1;11 in which *io*, '*I*', becomes productive and its presence is almost obligatory. In fact, until 2;0 null subjects account for just over 30% of subject contexts in Camilla's production. The privileged status of the 1 p.s. pronoun in C.'s Italian is thus also documented in a case study of monolingual acquisition where no crosslinguistic influence can be held accountable.

The crucial point here is that, with the exception of two peaks at 2;5.6 and 2;10.0, for which we have explained the comparatively high proportion of overt subjects, subject production is manifestly lower in Italian. A chi-square test confirms a statistically significant difference between the provision of overt subjects in the two languages ($\chi^2 = 70{\cdot}52$, df 18, $p < 0{\cdot}001$).

The following section investigates the extent to which C. exploits the verbal inflectional cue to express person.

The emergence of person verbal morphology in Italian

Italian is a person-marking language where each person/number combination is uniquely identified by an inflectional suffix. Verbs are divided into three conjugations, *-a-re*, *-e-re*, and *–i-re*, according to the thematic vowel suffixed to the stem, and unlike English verbs, Italian verbs never appear as bare stems. Typically a verb form contains four classes of elements in the following order: stem, thematic vowel, tense/aspect/mood makers/, person/number markers as exemplified in the first plural imperfect indicative of *cantare* in (18):

(18) cant+a+va+mo.
'(We) sang/were singing'

The full inflectional paradigm includes twenty-one simple and compound, finite and non-finite tenses, sixteen of which are commonly used in the

spoken language (see Vincent, 1988 for a more comprehensive review of the Italian verb system). Despite the transparency of the inflectional system it must be noted that there are a large number of irregular verbs, only four of which are found in the –a-re conjugation, the highly frequent *andare*, '*go*', *dare*, '*give*', *fare*, '*do/make*', and *stare*, '*stay*'. Compound forms require the auxiliary *essere*, '*be*', or *avere*. '*have*', and are followed by a past participle form. With *essere* the past participle form must agree in gender and number with the subject:

(19) Sono andata.
'(I) am gone-FEM/SING'

With *avere* agreement is required only if the object is pronominalized and precedes the verb, otherwise the unmarked masculine singular form of the past participle is used.

(20) Ho visto le ragazze.
'(I) have seen-MASC/SING the-FEM/PLUR girls-FEM/PLUR'
(21) Le ho viste.
'Them-FEM/PLUR (I) have seen-FEM/PLUR'

The copula *essere* is homonymous with the auxiliary and it requires gender and number agreement on postcopular adjectives:

(22) I ragazzi sono molto stanchi.
'The-MASC/PLUR boys-MASC/PLUR are very tired-MASC/PLUR'

From this very cursory overview of the Italian verb system it is clear that the task facing the language learner is at the same time more demanding and less daunting than it is in English. Although there are considerably more forms to learn, they are also remarkably more transparent than the very opaque inflectional system of the English language. In particular, as far as person-marking is concerned, there is a one-to-one correspondence between the different inflectional suffixes and the six person/number combinations.

In C.'s data there is evidence that at the same time as the child is focusing on the expression of overt subjects in English, he is starting to use agreement morphology in Italian. Similarly to what has been previously reported for children acquiring Italian monolingually (Pizzuto & Caselli, 1992; Guasti 1993/94; Antelmi, 1997), C.'s error rate in the use of present indicative forms is overall low at 4·5% (20/440). Nevertheless, low error rates alone cannot be taken as reliable evidence of mastery in the absence of actual productivity of inflectional forms (Rubino & Pine, 1998). Following Pizzuto & Caselli (1994) and Gathercole *et al*. (1999) we consider a given inflection to be used productively when it appears with at least two different verb types (e.g. *parlano*, '(*they*) *speak*', *disegnano* '(*they*) *draw*'), and the same verb type

TABLE 8. *The distribution of inflected forms in Italian**

	Present indicative					
	Sing.			Plur.		
Age	1	2	3	1	2	3
1;10.8	—	—	—	—	—	—
1;10.27			2			
			2			
1;11.17	4		7			
	2		4			
1;11.25	3	3	3			
	1		2			
2;0.1						
2;0.7	1		4			
	1		3			
2;0.23	2		4	1		
	2		2	1		
2;1.23			2			
			2			
2;2.3	3	1	4	3		
	2	1	1	2		
2;2.17	1	1	9	1		
	1	1	6	1		
2;3.7	1		5			
	1		4			
2;4.14	11		22			
	4		5			
2;5.6	28	1	33			3
	8	1	6			3
2;5.26	12	9	33	5		1
	5	6	6	3		1
2;9.6	15	5	24	8		
	4	3	8	2		
2;10.0	15	3	1	3		
	5	3	1	3		
2;10.18	11	4	8			5
	3	2	5			2
2;11.12	12	9	22			2
	9	4	8			1
3;0.3	15	7	23	7		15
	6	5	5	4		5
3;0.17	11	12	11	11		12
	5	4	6	2		3

*The numbers underlined represent the number of verb types, the corresponding numbers above represent the number of verb tokens.

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appears with at least two different inflections (e.g. *parlo*, '(*I*) *speak*', *parlano* '(*they*) *speak*'). Note that this productivity criterion is clearly arbitrary, and that it is very liberal in requiring a minimum of only two different inflected forms together with a minimum of two different verb types with the same inflection before the latter is considered to be used productively. However, even in the presence of such a loose definition of productivity, Pizzuto & Caselli (1992, 1994) and Gathercole *et al*. (1999) have shown that productivity of inflections is extremely limited in children acquiring Italian and Spanish, and that in this respect they are not so different from their English-speaking counterparts after all.

Table 8 reports the number of verb tokens and verb types (underlined) used by C. in the present indicative:

Note that initially there is quite frequently only one verb form per verb type, i.e. many verbs appear inflected as a one-off case. When the two criteria of productivity outlined above are applied, it is only at 2;2.17 that the 3 p.s. present indicative inflection is starting to be used productively with the verb *volere*, '*want*', appearing in three different inflected forms, *voglio*, '(*I*) *want*', *vuoi*, '(*you*) *want*', *vuole*, '(*s/he*) *wants*'.

(23) (2;2.17)
*CAR: volo [= voglio] la torta.
%eng: (I) want the cake.

(24) (2;2.17)
*CAR: vuoi il cioccolato?
%eng: do you want the chocolate?
(2;2.17)
*CAR: vuole il formaggio.
%eng: (s/he) wants the cheese.

In total there are six different verb types used with the 3 p.s. present indicative inflection at 2;2.17, and one of them, *volere*, appears in three different inflected forms, both criteria are thus satisfied to consider this inflection productive. Table 9 reports the number of verbs used productively per each inflection:

Although as early as 2;2.17 C. uses the 3 p.s. present indicative inflection productively, it is not until 2;5.26 that the first person contrast emerges with the 1 p.s. and 2 p.s. inflections. At the same time a contrast also emerges between 1 p.p. and 3 p.p. which had started to become productive at 2;5.6. A small but stable number of verb types continue to be used productively and contrastively between 2;5.26 and 3;0.17.

Although C. shows signs of some productivity in the use of person inflections in the singular half of the present indicative paradigm, and to some extent in the plural half, there are reasons to question to what extent this child is operating with knowledge that goes beyond a handful of inflected

TABLE 9. *Number of verb types used productively for each inflection*

	Present indicative					
	Sing.			Plur.		
Age	1	2	3	1	2	3
1;10.8						
1;10.27						
1;11.17						
1;11.25						
2;0.1						
2;0.7						
2;0.23						
2;1.23						
2;2.3						
2;2.17			1			
2;3.7			1			
2;4.14			1			
2;5.6			3			
2;5.26	1	4	4	3		
2;9.6	3	3	8	2		
2;10.0	3	1		3		
2;10.18	1		2			1
2;11.12	4	3	4			
3;0.3	5	4	2	3		6
3;0.17	2	4	2	1		2

TABLE 10. *Italian verb types occurring with four or more forms*

Verb type	Number of forms
fare = do/make	13
andare = go	9
prendere = take	8
mettere = put	7
giocare = play	7
mangiare = eat	6
avere = have	6
dire = say	6
dare = give	6
dovere = must	5
potere = can	5
volere = want	5
cadere = fall	4
chiudere = close	4
girare = turn	4
guardare = look	4
stare = stay	4

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verb types. A closer inspection of the data reveals that 17 out of 82 verb types occur in four or more different inflected forms.

The remaining 65 (79·3 % of the total verb lexicon) types appear with a maximum of three different forms, and of these as many as 38 types (46·4 % of the total verb lexicon) only ever appear in one form. This distribution of inflected forms with a small proportion of verbs suggests that C. is adopting a sort of verb-specific strategy whereby he concentrates on learning a relatively large number of inflected forms for a small number of verbs (*fare*, '*do/make*', 13 forms; *andare*, '*go*', 9 forms; *prendere*, '*take*', 8 forms; *mettere*, '*put*', 7 forms; *avere*, '*have*', 6 forms; *dare*, '*give*', 5 forms; *volere*, '*want*', 5 forms). Two facts concerning these verbs are also particularly interesting: firstly, most of them fit the definition of light verbs (Pinker, 1989). Such verbs are frequent, generic verbs which are cross-linguistically attested to appear early thanks to their semantic lightness, prototypical transitivity (except for '*go*'), and because they typically encode meanings that are pragmatically important to children. Secondly, almost half of them are highly irregular in the present indicative paradigm (*fare*, *andare*, *avere*, *dare*, *dovere*, *potere*, *volere*), and their very irregularity might conceivably make it more difficult for the child to extract inflectional patterns that can be extended to any new verb. The learning of the present indicative forms of a verb like *andare*, '*go*' (*vado*, '(I) go', *vai*, '(you) go', *va*, '(s/he) goes' *andiamo*, '(we) go', *andate*, '(you pl.) go', *vanno*, '(they) go') does not immediately lead to an efficient segmentation of stem and suffix which can then be applied across the board. It is therefore reasonable to speculate that although C. can use a number of inflected forms appropriately, and some command of person inflections is beginning to emerge, it is still limited to a relatively small number of specific lexical items, most of which also happen to be highly irregular and therefore not extremely useful for paradigm building.

Although C.'s mastery of person morphology at these early stages is still very much tied to a small number of verb types, nonetheless there is a sense in which the child is indeed attending to the central status of person morphology in Italian. We believe he uses person agreement morphology as a marker of person deixis to the same extent that he uses overt subjects in English to express the same function through an altogether difference formal device.

DISCUSSION

This study presents new evidence from an English-Italian bilingual child showing how the use of subjects in English child language can be dissociated from the activation of finite verbal morphology. At a time when no morphological correlates of finiteness are in place, C. uses overt subjects in an unexpectedly consistent fashion. This child shows remarkable sensitivity

to the distributional properties of the language he is exposed to, as has also been demonstrated for a number of other children acquiring English monolingually. Despite the fact that null subjects are a common phenomenon crosslinguistically in early language development, there are nevertheless significant differences in the extent to which children acquiring null-subject and non-null-subject languages produce overt subjects. Crosslinguistic differences have been reported showing that, although children may initially omit subjects where they are obligatorily required, nevertheless they are sensitive to their statistical distribution in the input language (Valian, 1991; Valian & Eisenberg, 1996). Moreover, the kind of distributional analyses that children perform on the input are functionally sensitive, i.e. children can pay attention to form together with function. The morphology of verb inflection is not only the formal expression of subject–verb agreement, but it also serves the pragmatic function of grammaticalizing the deictic category of person. This is clearly the case of null-subject languages with a rich person-marking verbal system like Italian. Hence acquiring person-inflected verb forms in Italian also means learning how to deal with shifting perspective and grammaticalizing participant roles. In English, in the absence of a consistent and transparent verbal person-marking system, obligatory subjects are required to grammaticalize the category of person. This being the case, the expression of overt subjects enables a child acquiring English to use a formal device whose pragmatic function overlaps with the acquisition of person-marking verbal morphology in Italian.

A sensible crosslinguistic comparison must take into account the fact that verbal morphology in Italian and English is differentially weighted according to the kind of function it grammaticalizes. The emergence of agreement morphology in Italian is more appropriately compared to the emergence of overt subjects in English, specifically pronouns, since they both grammaticalize person.

Making sure that one is comparing like with like when using crosslinguistic data has both methodological and theoretical implications. From a methodological point of view it is necessary to be careful in drawing conclusions from comparison that can be spurious. Although verbal morphology in Italian and in English marks finiteness, and therefore there is a sense in which one might want to investigate whether there are crosslinguistically different developmental schedules in the emergence of this grammatical property, nevertheless one cannot abstract from the other functions that verbal morphology may express in a given language. When investigating what kind of factors might affect the late emergence and the protracted period of optional use of verbal morphology in English-speaking children compared to their peers acquiring Italian, Spanish or Catalan, we believe it is important to consider the added variable of person deixis marking. The same logic applies to the study of subject use. Although overt subjects are available both

in null-subject languages and in non-null subject languages, the discourse and pragmatic function they serve cannot be directly compared, hence the need to be cautious when making direct comparisons between children learning typologically different languages.

From a theoretical point of view the fact that subjects as markers of person deixis might appear regardless of the finiteness status of the verb they are found with (or despite a child's general lack of productive and contrastive control of verbal morphology) has interesting implications for models of language acquisition. This creates the possibility that factors independent of the acquisition of agreement and tense features might be responsible for the realization of overt subjects, namely sensitivity to the distributional properties of the input language together with the pragmatic requirement that participant roles be grammaticalized.

The potential dissociation between subject realization and the acquisition of finiteness is clearly a problem for models of language acquisition that rely uniquely on a self-contained, encapsulated syntactic account to the exclusion of other factors such as distributional properties of the input, and function-form associations. This is however not a problematic issue for integrated models of language acquisition that allow for a multiplicity of morphological, syntactic, pragmatic, semantic cues (Bates & MacWhinney, 1989), or models that are more centred on lexical- and construction-specific learning (Tomasello, 1992; Lieven, Pine & Baldwin, 1997; Pine, Lieven & Rowland, 1998). A number of these recent studies have focused on the centrality that lexical learning and construction-based learning play in language acquisition, both in the earliest stages, when a few rote-learned multiword utterances begin to appear, and in later stages, when previously acquired phrases are juxtaposed to create novel utterances. The idea that children's language development is a piecemeal process involving the juxtaposition of item-based constructions is not new in the literature and was originally proposed by scholars like Braine (1976) and Peters (1983). Constructivist approaches to language acquisition have revived the proposal and much research has recently been carried out to explore the nature of children's early linguistic knowledge in terms of exemplar-based learning. The focus is on linguistic constructions not as an epiphenomenon of the interaction of abstract categories and linguistic principles, but as entities that have psychological reality and that play a central role in the acquisition process (Tomasello, 1998).

By this rationale, C.'s use of overt subjects in English can be accounted for in terms of a productive construction in which the preverbal slot is consistently filled by some nominal material, initially some underspecified placeholder such as *that* or *this*, and later by other nominals such as proper names, pronouns (notably the first person pronoun) and noun phrases with a determiner (e.g. *the dog*). The emergence of this construction in the child's language is not necessarily related to the finiteness of the verb but to the

presence of verbal material, whether finite or non-finite. In this respect one can credit the child with the acquisition of a nominal + verb construction where the preverbal slot is made necessary by the grammaticalization of person and is justified by the distributional evidence in the input language.

A similar explanation applies to C.'s acquisition of person contrasts on Italian verbs. There is no strong evidence in Italian that subjects are essential or even desirable in the marking of person deixis. In fact since overt subjects grammaticalize focus or topic rather than person, it is therefore to be expected that children will not realise the function of overt subjects until they are ready to appreciate such pragmatic distinctions. The cue they have to attend to for the identification of participant roles is verbal agreement, and C. shows he is sensitive to person distinctions by using inflected forms contrastively for 1 p.s., 2 p.s., 3 p.s. and 1 p.p. present indicative by 2;5, even though his acquisition of person contrasts is still restricted to a small number of verb types and as such is to be characterized in terms of a few lexically specific items, rather than as a pervasive phenomenon that spans the whole paradigm.

CONCLUSION

The simultaneous acquisition of two languages from birth in this bilingual child has allowed us to observe the emergence of the same function in two languages where its grammaticalization requires different formal devices. Methodological and theoretical implications deriving from the crosslinguistic difference in the role that such devices as overt subjects and agreement markers play in English and in Italian have been explored.

In conclusion the results from this case study show the language-specific realization of person deixis, and provide evidence for functionally-oriented distributional analyses in the language acquisition process.

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