Language influence in the acquisition of English by two Italian-speaking children: 
a case study

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Abstract
Does the process of first language (L1) acquisition differ from the process of second language (L2) acquisition? It seems that the answer is ‘yes,’ since a L2 learner already has knowledge of language, which is not the case in L1 acquisition. There is much research that L1 -- and other existing linguistic knowledge -- does indeed affect L2 acquisition. This influence, called language transfer, can work both positively and negatively on the acquisition of L2 (Odlin 1989, Ellis 1994, and others). In this paper, I analyze my own data of two Italian-speaking children at different stages of acquiring English. I perform an error analysis to compare their development of English to that of children acquiring English as their L1 and attempt to account for the differences in terms of language transfer. I find that the subjects’ development of English is noticeably influenced by their previous linguistic knowledge, particularly in areas relating to syntax and lexical items, but less so in areas relating to morphology and semantics.

1: INTRODUCTION

How does second language acquisition differ from first language acquisition, if at all? In order to answer this question, we must first define what first languages and second languages are. A generally accepted definition for one’s first language (L1) is the language that one has acquired from birth (Bloomfield 1994). This is often also a person’s native language, the language with which they are most comfortable and which they use most frequently. The process of L1 acquisition is stimulated by L1 input from the surrounding environments, aided by the principles of the innately known universal grammar (UG) that allows the child to gradually make sense of L1 input (Fernández and Cairns 2011). There is a generally held notion of a critical period after which language acquisition is very difficult if not impossible. There is no consensus on the details

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of such a period, but most researchers agree that L1 acquisition optimally occurs before the early teens (Fernandez and Cairns 2011).

The definition of a second language (L2) is a bit less clear. It can mean any language acquired after one’s L1. L2s acquired after the L1 critical period are often explicitly taught rather than absorbed though immersion as L1 is. But regardless of how the language is learned, is there a certain age of onset after which one cannot reach native-level proficiency in a new language? Proponents of the critical period hypothesis argue that there is. Hyltenstam (1992) points to the age of six or seven as a cut-off point after which L2 learners could get near-native-like proficiency but would always have enough errors to set them apart from the L1 group. Later, Hyltenstam and Abrahamsson 2003 modified this argument, saying that after childhood, in general, acquiring native-like proficiency becomes more difficult (although the acquisition process may be comparatively faster), but that there is no one particular cut-off point. This has become the general consensus in second language acquisition research (Larsen-Freeman and Long 1991).

Regardless of whether or not a critical period for L2 acquisition exists, the fact remains that in L1 acquisition, a learner can only draw on UG to interpret L1 input, while in L2 acquisition, a learner can draw on L1 knowledge as well as UG to interpret L2 input. The final result of L1 acquisition seems more similar to early L2 acquisition than to later acquisition, but the consequences of the differing components in terms of developmental trajectory remain to be seen.

Bearing this in mind, I turn toward the goals of this thesis. My analysis centers on a case study of two native Italian speakers under the age of seven acquiring English. Although they began learning English after already having acquired Italian as their first language, I will still be analyzing and comparing their acquisition of English with first language acquisition. I am using this methodology because they are learning English in a natural manner (i.e. not through explicit
instruction) and they are within even the earliest postulations of a critical period. Starting at such young ages makes the subjects much more likely to achieve native-like proficiency in English, so they make better comparisons to L1 English development than older L2 learners would. I am interested in knowing whether these children are developing English in the same way children develop it as a first language, or if their past language experience influences them. I also intend to investigate the nature of this influence, if it exists.

Such influence is known as language transfer, although there is some debate over the extent and nature of it. Knowledge of the target language, previous languages, and UG principles all contribute to what Larry Selinker has termed ‘interlanguage.’ Interlanguage can be thought of as a continuum between the native language and the target language along which all L2 learners travel. At all points along the continuum, it is a systematic and rule-governed language (Larsen-Freeman and Long 1991). Ellis (1994) explains that comprehensible L2 input (with the help if L1) contributes to hypothesis construction regarding the grammar of L2. The hypotheses are tested and revised by the general reception of the learners’ L2 output. In terms of language transfer, many case studies have been done, finding word order rigidity, relative clause branching, and formal dimensions of negation to be possible transferrable properties (Odlin 1989). Noting that these are mainly syntactic features, I extend this generalization to the present case study and claim that the area most influenced by the subjects’ previous linguistic knowledge is syntactic structure (closely followed by the more obvious influence of differing lexicons). I further claim that the morphological and semantic components of English are generally acquired by the subjects just as they might be by a native English speaking child.

The Center for Applied Linguistics (CAL) states that “most bilingual children will reach age-level proficiency in their dominant language given adequate exposure” (10/16/13). I interpret
this to mean that, when children are immersed in a language, they eventually learn to speak it at a level appropriate for their age (as opposed to a one-year-old’s level after one year of exposure, a two-year-old’s level after two years, and so on). I bear this in mind as I conduct an error analysis of the case study, comparing the errors of the subjects to those made by L1 English speakers near the same ages. Throughout this paper I will refer to unconventional outputs as ‘errors,’ but it is important to note that when such outputs occur systematically, they cannot be considered errors from the child’s viewpoint. They fit within the child’s own system for evaluating an utterance, although the child’s system may not match the conventional grammar.

In the following section, I describe the nature of the case study, including the characteristics and linguistic backgrounds of the subjects and the methods of data collection. The observations focus on ungrammatical and unconventional English constructions.

In section three, I present selected pieces of data from the case study, separated into subsections for different types of errors. The error types highlighted in this thesis involve past tense marking of irregular verbs, negative constructions, interrogative constructions, copula use, reflexive personal pronouns, possessive/genitive constructions, subject doubling, general word order, and semantic misuse. I contextualize these errors within the research on typical acquisition of English as a first language, showing some errors to be typical of L1 learners and others not. Of the non-typical errors, many are related to syntax rather than morphology, although some relate to lexical issues as well.

Following the presentation of the case study data, I conclude by summarizing my findings and making general statements about the subjects’ development of English and how it compares to typical L1 development of English. I then critique the method of my investigation and suggest
that the atypical errors found in my data should become the focus of more rigorous studies of
language transfer in child language acquisition.

2: THE CASE STUDY

This section briefly describes the subjects of the study, their linguistic backgrounds, and the nature
of my data collection and analysis. The subjects were two of the three children of an Italian-
speaking family. The parents were born and raised in northern Italy and generally spoke Italian at
home but could also speak English and French (having learned these languages in school). The
family traveled often because of the nature of the father’s work, but summers were usually spent
in Italy visiting the children’s grandparents. When the first two children were born, the family
was living in China. By the time the third child was born, the family had moved to the United
States, where the older two children attended school and spoke English. After a year and a half,
the family moved to Switzerland for a year, where the older two children attended school and
spoke French, but did not have much occasion to speak English. My observation of the children
lasted ten weeks during the summer of 2013. I stayed with the family in their home in Switzerland
and traveled with them to Italy, speaking English with all three of the family’s children and
recording their notable utterances.

The oldest was a girl six-and-a-half years of age. She will henceforth be referred to as
subject F. According to her mother, she tended to pick up new languages quickly whenever the
family moved to a new country, and often preferred to speak the ambient language at home, rather
than Italian. The middle child was a boy who turned five during the observation period. He will
be referred to as subject S. He was not as quick to pick up new languages, his mother said, and he
struggled with the articulation of some phonemes even in his native language of Italian.
The youngest was a girl of two and a half years. She was very verbal in Italian, but never had much exposure to English (or any other languages) since she did not attend school and stayed at home with her Italian-speaking parents. She is excluded from analysis, since she had acquired so little English that most of the errors discussed in this case study did not involve her.

Since most bilingual children reach age-level proficiency in a language given sufficient exposure (CAL 2013), I compare the utterances of these subjects to those of English L1 children close to their ages. However, it is important to note that the subjects (at least the older two) acquired English while living in the United States a year before my observation, and that they did not have the opportunity to continue using it the following year. It is reasonable to suspect that their level of English proficiency did not progress in the year after leaving the United States; in fact, it likely regressed a bit. For this reason, I will not consider these subjects’ development of English significantly delayed unless it places them at an age-level more than two years below their own age.

It is also important to keep in mind the sorts of factors that might mediate the influence of previous linguistic knowledge on the development of English. In addition to linguistic factors such as language difference and markedness, there are psycholinguistic factors, sociolinguistic factors, socio-psychological factors, developmental factors, frequency of input, and individual differences (Yi 2012). Many of these should be more or less the same across subjects in this study, but they are not generalizable to all children learning English as their L2. Individual differences also come into play; for example, the subject S has a known lisp, which is not something typically seen in English L1 children his age. However, this should be not be attributed to the influence of Italian; it is an individual issue. I attempt to bear these factors in mind in my analysis of the
following data and do not propose that the results of this case study are wholly generalizable to all cases. I merely attempt to bring a few more insights to the body of work surrounding the topic.

In the next section, I compare certain errors made by the subjects of the case study to those made near the same age acquiring English as a first language. This reveals certain asymmetries that suggest influence from previous linguistic experience, generally in relation to syntactic structure and lexical items.

3: DATA AND ERROR ANALYSIS

This section examines a selection of error types exhibited by the subjects of the case study. In general, I focus on the older two subjects because the youngest was not able to produce complete sentences and thus most of the errors did not apply to her. I will evaluate her linguistic development based on her word inventory. For each error type, I answer the following questions: (1) Does this error appear in typical L1 development of English? (2) If so, does this error appear at roughly the same age in typical L1 English development as it does in the case study? (3) If not, could it be that the subjects' previous linguistic knowledge influences their development of English?

Ages are noted as (years; months). For example, (4;11) denotes four years and eleven months. All data are recorded from the subjects of the case study unless otherwise noted.

3.1: Past Tense Marking of Irregular Verbs

Tense marking is a form of inflectional morphology. According to Clark 2009, children make two kinds of inflectional errors: omission (in which inflections are not produced at all) and commission (in which regular inflections are applied to irregular stems). At first, children may produce bare
stems without inflection, but gradually learn how to use inflectional morphology. Clark 2009 presents four stages (based on Cazden 1968) through which children progress as they acquire knowledge of the past tense morpheme –ed in English.

In the first stage, children occasionally use irregular past tense forms (e.g., went, broke), but it is unclear whether the children connect these forms to the stem words or even with past tense meaning. It is possible that children at this stage simply identify irregular forms as simple verb stems. Indeed, some children add inflections to such forms as if they were stems (e.g., broked, wenting). They do not make use of the regular –ed past tense morpheme until the second stage, at which point they begin attaching said morpheme to some regular verb stems but not all. The third stage is fraught with commission errors: the –ed morpheme becomes widely used and is attached to regular and irregular stems alike (e.g., bringed, goed). While Clark 2009 does not specify ages for these stages, she notes that the greatest –ed-overregularization tends to appear between ages 2;0 and 3;6. Bit by bit, though, children reach the fourth stage by learning the conventional forms of past tense irregular verbs over the course of several years.

Again, these four stages are not given specified age ranges in Clark 2009, so we must look to other sources to shed more light on the developmental timeline of this process of inflection acquisition. Jean Berko, in her 1958 dissertation, notes that a group of preschool children aged one-and-a-half to five years failed to produce the irregular past tense form rang, while a group of first-graders of five-and-a-half years and older were significantly better at producing this form (25% did so correctly). Another study by Bybee and Slobin (1982) also note preschoolers (aged four to five) failing to produce irregular past tense forms. Instead, they attached the –ed suffix to the verb stems, unless the stems ended in /t/ or /d/, in which case the preschoolers did nothing to mark tense. These data suggest that the stage of –ed-overregularization continues at least up to age five,
although the frequency of overregularization fades out gradually. Bybee and Slobin (1982) not only find evidence that English irregular verbs are rote-learned and stored in the lexicon, but also that speakers make generalizations about at least some of these forms based on phonological classes called schemas. This notion of rote learning is consistent with the point Clark 2009 mentions about young children identifying irregular verb forms as simple stems, and the notion of schemas relates to the various regularizations children make as they refine their knowledge of past tense morphology.

Clark 2009 presents a list of fourteen grammatical morphemes (Table 1) in the order in which they are acquired, as posited by Brown (1973). This table may prove useful for making inferences about the development of tense marking and other linguistic areas in relation to the subjects of the present case study.

Clark 2009 states that the plural morpheme –s is generally acquired between 1;6 and 2;3, and we have already noted that the use of the regular past tense morpheme –ed can begin as early as 2;0 but is generally not mastered until after 5;0. This leaves a fairly wide age range between the acquisition of these two morphemes, but since irregular past tense verb forms are listed as appearing shortly after the plural morpheme, we can estimate that the first stage of past tense acquisition occurs roughly around age 2. Granted, this is a very rough generalization, since all children learn at different paces, but for the purpose of evaluating linguistic development in the case study, it is helpful to have a basis for comparison.

Table 1: Order of acquisition for fourteen grammatical morphemes for three children acquiring English
<table>
<thead>
<tr>
<th>Rank order</th>
<th>Meaning</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. -ing</td>
<td>ongoing process</td>
<td>He’s sitting down.</td>
</tr>
<tr>
<td>2. in</td>
<td>containment</td>
<td>It’s in the box.</td>
</tr>
<tr>
<td>3. on</td>
<td>support</td>
<td>It’s on the chair.</td>
</tr>
<tr>
<td>4. -s (PL)</td>
<td>number</td>
<td>The dog’s bark.</td>
</tr>
<tr>
<td>5. irreg. past, e.g., went</td>
<td>earlier in time</td>
<td>He went home.</td>
</tr>
<tr>
<td>6. -’s (poss)</td>
<td>possession</td>
<td>The girl’s dog ran away.</td>
</tr>
<tr>
<td>7. uncontractible copula (was, are, as in questions)</td>
<td>number, earlier in time</td>
<td>Are they boys?</td>
</tr>
<tr>
<td>8. a, the (articles)</td>
<td>nonspecific/specific</td>
<td>Jan has a book.</td>
</tr>
<tr>
<td>9. -ed (reg. past)</td>
<td>earlier in time</td>
<td>He jumped the stream.</td>
</tr>
<tr>
<td>10. -s (3p sg reg.)</td>
<td>number; earlier in time</td>
<td>She runs fast.</td>
</tr>
<tr>
<td>11. 3p irreg. (has, does)</td>
<td>number; earlier in time</td>
<td>Does that dog bark?</td>
</tr>
<tr>
<td>12. uncontractible auxiliary verb (is, were)</td>
<td>number; earlier in time (ongoing process)</td>
<td>Is he coming?</td>
</tr>
<tr>
<td>13. contractible copula verb</td>
<td>number; earlier in time</td>
<td>That’s a spaniel.</td>
</tr>
<tr>
<td>14. contractible auxiliary verb</td>
<td>number; earlier in time (ongoing process)</td>
<td>They’re running fast.</td>
</tr>
</tbody>
</table>

In subject S’s utterances, I did not record any instances of the use of the regular past tense morpheme –ed. He sporadically uses irregular past tense forms correctly, as in (1):

(1) s (5;1): *I broke me the arm.

OBSERVER: You broke your arm?

s: I broke my arm.

However, he also uses irregular past tense forms in contexts in which past tense marking was not grammatical. In (2) and (3), the past tense verb found is used where the uninflected find is necessary.

(2) s (5;0): *Let’s go found shells.

(3) s (5;1): *I’m gonna found the pillows.
This phenomenon was not recorded in the use of any other verbs, and it seems that subject S identified *found* as a simple verb stem and used it as such. Because of his sporadic use of irregular forms and lack of use of the *-ed* suffix, I place him in the first stage of acquisition of past tense morphology.

Unlike her younger brother, subject F uses the past tense morpheme *-ed* quite frequently, applying it to both regular and irregular verbs, as in (4)-(7):

(4) F (6;8): *I stealed it.
(5) F (6;8): *And then you comed here.
(6) F (6;8): *I losed it, but then I found it again.
(7) F (6;9): I breaked -- broke it.

In (6), she demonstrates that she knows the irregular past tense form of some verbs, like *find* (the same verb that her brother can form), if not of *lose*. In (7), she corrects her use of the *-ed* morpheme to the irregular past tense form. This also suggests that she has some knowledge of irregular verb forms, but that she does not always know what to do with them. The examples below further this suggestion:

(9) F (6;8): *I stoled it.
(10) F (6;8): *You brung -- brong me on your cow and brought me to your castle.
(11) F (6;8): *Thanks for broughting it.

In (8) and (9), subject F applies the past tense morpheme *-ed* to forms that are already past tense and irregular, in the case of (9). The form in (9) cannot be written off as a verb she has identified as a simple stem, for we see in (4) that she knows the true stem form of *steal*. However, we can hypothesize that she attaches the *-ed* suffix to any verb form to mark it as past tense. This is consistent with (4)-(9), despite the correction of such an error in (7). However, in (10) and (11)
we find more evidence that subject F is beginning to get a grasp on the idea that some verbs simply do not use this suffix. In its first instance in (10), subject F correctly identifies bring as one of these verbs and tries two different ways of changing the stem to reflect past tense without the –ed suffix. (Neither is the conventional conjugation, but she knows the verb is irregular). In its second instance, she successfully produces the correct past tense form of bring. However, in (11) she overgeneralizes this form to the present progressive tense, attaching the progressive morpheme –ing.

Based on her rampant overregularization of the –ed morpheme and her occasional attempts at irregular forms, I place subject F late in the third stage of acquisition of past tense morphology. All in all, the errors in the case study relating to past tense forms of irregular verbs are indeed typical of L1 acquisition of English. Subject F, being five-and-a-half when she left the United States and six-and-a-half at the time of observation, seems to be at an age-appropriate level of past tense morphology. She is late in the third stage of acquisition, which peaks around age three in L1 English development but generally lasts for several years. Subject S, however, seems to be slightly delayed in this area. He is still in the first stage of past tense morphology acquisition, which generally occurs around age two in L1 English development and quickly shifts to the second stage, in which the –ed morpheme emerges. Having left the United States at age four and being five years old at the time of observation, this puts him more than two years behind L1 English speakers his own age. However, since his sister does not show such a delay, this problem must be attributed to some individual difference and not to his background in Italian.

Despite subject S’s delay, the errors that both subjects make in forming irregular past-tense verbs are the same as many found in typical English L1 acquisition. Overregularization of the past-tense morpheme is, by definition, a morphological error. The above finding is consistent with
my claim that the morphological and semantic components of English are acquired by the subjects just as they might be by a native English speaking child (while previous linguistic knowledge influences syntactic acquisition).

3.2: Negative Constructions

Negation appears very early in development. Even before children learn to talk, they can shake their heads and turn away to express negative meaning. Clark 2009 presents analyses that children begin with two types of negation: exclamatory negation, which rejects a previous utterance with echoic form and is marked by the English word no, and predicate negation, in which internal negative expressions such as don’t appear. The earliest linguistic form of negation in typical L1 acquisition is the use of single negative word, often no. This is the first of six stages of acquisition of negation posited by Crystal (1986).

In the second stage (around 18 months), negative words begin combining with other words in two-to-four-word utterances. The negative word falls at the beginning or end of the sentence during this stage, producing outputs like (12) and (13):

(12) *Running no.  
(13) *No mommy cut it.  

Crystal (1986)  
Clark (2009)

In the third stage, children place negative words within multi-word sentences as well as at the beginnings and ends. The inventory of negative words expands to include words like can’t and don’t, which appear before their positive counterparts. This occurs around age 2, producing outputs like (14) and (15). Children do not make errors in the placement of the internal not; it is always located directly before the main verb or predicate.

(14) *I no want to go bed.  

Crystal (1986)
In the fourth stage, children begin producing more conventional forms of negation. They replace *no* with *not*. They successfully analyze *can't* and *don't* into *can + not* and *do + not*. They begin combining *not* with more auxiliary verbs, as in (16):

(16) She isn’t going. \hfill \textit{Crystal (1986)}

However, many errors do appear at this stage. At this point (around age 3), children still do not recognize that sentence-internal negation must always be accompanied by a modal or auxiliary verb (Clark 2009). Thus, errors such as (17) and (18) occur. Children also do not have a full understanding of how auxiliary verbs work, so they may inflect more verbs than necessary, as in (19). Finally, double negation as in (20) is not uncommon at this stage.

(17) *I not crying. \hfill \textit{Clark (2009)}
(18) *I not hurt him.
(19) *I didn’t caught it.
(20) *Nobody don’t like to go in.

The fifth stage of acquisition is mainly fine-tuning the knowledge of various rules governing negation. For example, children must master *any* and other negative polarity items (Clark 2009). The sixth stage is an ability to infer a negative meaning that is not explicitly stated. Usually children master this ability by age five. The mastery of various negation-sensitive items in the fifth stage, however, may take a few years. It seems these last two stages may happen concurrently with other stages.

In general, the subjects of the case study have a solid understanding of how to express negation. They contract the internal *not* with various auxiliary and modal verbs and never place it
anywhere but in front of the main verb or predicate. However, they do commit many of the errors common in the third and fourth stages of typical L1 acquisition of negation:

(21)  s (5;0): *I no want sounds.
(22)  s (5;1): I not -- I don't want the light.
(23)  s (5;1): *No, you not did.

In (21), subject S commits an error parallel to the stage three error in (14). Similarly, (22) would have been parallel to (17) and (18) had subject S not corrected himself. Example (23) is slightly less transparent in the nature of the error. Since the conventional form would be something along the lines of No, you did not (do it), the auxiliary verb and the main verb are both do and it is impossible to say with absolute certainty which verb surfaces in (23). If it is the auxiliary verb, then it has been inverted with the negative word and thus has separated the negative word from the main verb, a structure that never occurs in typical L1 English acquisition. However, if it is the main verb, then the auxiliary verb has merely been omitted and (23) is parallel to many other stage four errors such as (17) and (18), as well as to errors subject F commits, such as (24):

(24)  F (6;8): *She not likes it.

In addition to omitting auxiliary verbs, subject F demonstrates that she does not have a full understanding of how to apply tenses when auxiliary verbs are present. She produces many sentences like (25) in which she inflects both the auxiliary and main verbs. This error also appears in the second half of (26), although in the first half she shows some ability to inflect such sentences correctly.

(25)  F (6;9): *I didn’t heard you.
(26)  F (6;9): *You didn't see me; you didn't saw anyone.
It is also notable that subject F uses *anyone* correctly in the negative context of (26). This is a step toward the fifth stage of acquisition. However, she also produces stage four errors like double negation:

(27) \( F (6;10): \) *The problem is that we don't have no more glue.*

Based on the types of negation errors that appear in the case study, it seems that the subjects are well into the fourth stage of acquisition by the end of the observation period. It is unclear how long this stage typically lasts in L1 acquisition of English, so it is difficult to say whether the subjects are delayed. The stage typically starts roughly at age three and presumably does not end promptly after starting. At age five, subject S produces errors typical of L1 English speakers less than two years younger than he. I do not consider this delayed. Since subject F is a year older, her display of such errors might be construed as a developmental delay, but she also displays some characteristics of the fifth stage of acquisition, which has a variable age range. My general impression is that she is not significantly delayed in her acquisition of English negation. It is also interesting to note that double negation such as that in (27) is completely grammatical in French, so it is possible that subject F’s background in French influenced her production of such constructions when developing her knowledge of English negation. (It is a typical L1 error, but her previous linguistic knowledge may have made her more likely to commit this error.)

In summary, the errors in negation that appear in the case study are the same as typical errors that occur in L1 acquisition of English. The errors typically occur at slightly younger ages than they do in the case study, but this age difference is not great enough for me to qualify it as a significant delay. Subject F may be slightly delayed, and it is possible that this is due in part to influence from the differing negative constructions she knows in French, but this is merely a small contributing factor if anything at all. After all, subject S has a background in French as well but
he does not show a delay. In general, the subjects commit typical, age-appropriate errors in negation. These are syntactic errors that can be accounted for without reference to influence from previous linguistic knowledge. This finding does not explicitly further my claim that language transfer is more likely to influence syntactic and lexical development than morphological and semantic. However, it does not contradict the claim either.

3.3: Interrogative constructions

English has multiple types of interrogative structures. There are *wh*-questions, *yes-no* questions, and embedded versions of each. *Wh*-questions invert the subject and auxiliary verb from their order in the original declarative form (this occurs through T-to-C movement on the syntax tree). Most *yes-no* questions require subject-auxiliary inversion as well, but they can appear in shortened forms, called declarative questions or rising declaratives, which do not use such inversion (Cowan 2008). In embedded interrogatives, such inversion is ungrammatical (Tornyova and Valian 2009).

It has long been known that young children learning English as their first language commonly fail to invert the auxiliary before the subject in questions, as in (28) and (29):

(28) *Where this goes? (2;2.4)  
(29) *Which way they should go? (MLU\(^2\) 3.5)

This is not a consistent pattern. Young children produce inverted as well as non-inverted *wh*-questions at the same age. Valian et al. (1992) (as cited in Tornyova and Valian 2009) account for this inconsistent use of subject-auxiliary inversion by proposing that children apply an optional inversion rule to both *yes-no* and *wh*-questions. This erroneous optionality likely stems from

\(^2\) Mean Length of Utterance, counted in morphemes. Tends to roughly correspond to a child’s age in years (Clark 2009).
misleading evidence in English input: lack of inversion in embedded questions and apparently optional inversion in yes-no questions.

Note that, according to a 1966 study by Klima and Bellugi (cited in Pozzan 2011), there are several stages of acquisition of questions in English, although not all studies have confirmed this developmental path. The results are summarized in Table 2. Before errors such as (28) and (29) appear, children often commit errors involving omission of auxiliary verbs, both do and be. As we have seen, this pattern of errors also appears in negative constructions.

<table>
<thead>
<tr>
<th>Klima and Bellugi's period</th>
<th>MLU</th>
<th>Yes/No questions</th>
<th>Wh- questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2.0</td>
<td>Interrogative force expressed by intonation only:</td>
<td>Non-productive use of routines:</td>
</tr>
<tr>
<td>28 months</td>
<td></td>
<td>Sit here?</td>
<td>What x doing?</td>
</tr>
<tr>
<td>B</td>
<td>2.5</td>
<td>Non-productive use of don't and can't: You can't fix it?</td>
<td>More complex questions. (aux-omission):</td>
</tr>
<tr>
<td>35 months</td>
<td></td>
<td></td>
<td>Where x go?</td>
</tr>
<tr>
<td>C</td>
<td>3.5</td>
<td>Subject-auxiliary inversion: Can you help me? Does Daddy go?</td>
<td>Auxiliary verb inclusion. Failure of subject auxiliary inversion:</td>
</tr>
<tr>
<td>38 months</td>
<td></td>
<td></td>
<td>What you ate?</td>
</tr>
<tr>
<td>D-F</td>
<td>4+</td>
<td>Tag questions: That's funny, isn't it?</td>
<td>Mature system:</td>
</tr>
<tr>
<td>42-54 months</td>
<td></td>
<td></td>
<td>Why is the cat sleepy?</td>
</tr>
</tbody>
</table>

Santelmann et al 2002 present additional insights on this topic. In a study of two-to-five-year-old children learning English, they found no significant difference in type or number of errors between declarative and inverted interrogative sentences with modals or auxiliary be (such as Why she is going away? in Table 2). However, they did find a significant difference for sentences with the copular be and with main verbs requiring reconstruction of inflection through do-support (such as What you ate? in Table 2). From these results, they argue that the development of question
formation in children of this age range involves a gradual development of the English-specific inflectional system, but that they already possess a knowledge of subject-auxiliary inversion in their grammar (perhaps even from principles of UG).

These arguments do not contradict Klima and Bellugi’s 1966 findings that Pozzan 2011 presents. Although they do include data for the sorts of inversion errors that Santelmann et al 2002 dismiss as not significant (peaking between ages three-and-a-half and four), the stages in Table 2 mainly show a gradual increase in sentence complexity and verb inflection in interrogative constructions.

It is the focus on language specific verb inflection that I find most interesting about the arguments in Santelmann et al 2002, for it helps explain another phenomenon that both Pozzan 2011 and Clark 2009 point out: while developing yes-no questions in English, children occasionally commit double tense making, inflecting both the main and auxiliary verbs for tense. Consider (30) and (31) below:

(30) *Oh, did I caught it? (MLU 3.5)
(31) *Did she went there?  

These are examples of interrogative sentences requiring do-support that is not present in their declarative forms. These are exactly the sorts of sentences in which Santelmann et al 2002 noted many errors, attributing them to a not-quite-developed knowledge of the English-specific inflectional system. This stands to reason, for it is much simpler to invert an existing auxiliary verb with a subject than it is to insert a new auxiliary verb such as do in the proper place. It is more complex still to then remove tense inflection from the main verb and place it instead on the inserted auxiliary verb. Thus, despite the possibility that children may possess inherent knowledge of subject-auxiliary inversion in general, we still find that they make various inversion and
inflection errors as they develop a knowledge of the language-specific rules of English interrogatives.

Turning now to the case study data, I find that subject F does not omit auxiliary verbs in her interrogative constructions, but she does commit other common errors. For example, she fails to invert the auxiliary verb with the subject in interrogative sentences like (32). This may appear to indicate a faulty hypothesis about English interrogatives that does not include subject-auxiliary inversion at all, but errors such as (33) suggest otherwise.

(32) a. F (6;9): *How I should do this?
b. F (6;8): *Oh, where I am?

(33) F (6;9): *I don't know how old is he.

Here, subject F demonstrates a knowledge of subject-auxiliary inversion, but does not seem to have learned that English grammar does not use such inversion in embedded interrogatives. This is consistent with the analysis of Santelmann et al. 2002.

Utterances like (34) also demonstrate a knowledge of inversion, this time in a context that is grammatical in Standard English. However, (34) exhibits another type of error.

(34) F (6;9): *Did you went to the wedding?

Here, subject F commits double tense inflection, consistent with her erroneous double tense inflection in negative constructions. This suggests that, in addition to an incomplete understanding of English subject-auxiliary inversion, subject F also has an underdeveloped sense of the language-specific English inflectional system. Double tense inflection in interrogative constructions with do-support is not uncommon in L1 English learners around age four, as we see in (30) and (31).
It is not described as a short-lived stage, so it seems fair to say that subject F is not significantly delayed in this morphological aspect of English.

Subject F’s grasp of the syntax of English interrogatives is not as simple to place. At times she fails to invert the subject and auxiliary verb in obligatory contexts, which is common among L1 learners around three-and-a-half years of age. However, she also successfully performs subject-auxiliary inversion, both grammatically in yes-no questions and ungrammatically in embedded interrogatives. The former typically emerges around the age of four in L1 learners, while the latter is an error that is not included in the trajectory of interrogative acquisition shown in Table 2.

Subject S’s errors are similarly difficult to generalize. They are exemplified in (35a) and (36a), with Standard English counterparts for comparison.

(35)  a. s (5;0): *Are you see what I doing?  
     b. Do you see what I am doing?  

(36)  a. s (5;0): *Where's go F (child’s name)?  
     b. Where did F go?  
     c. Where has F gone?

In (35), he omits an auxiliary be, which is a common error in L1 English-speaking children younger than three-and-a-half. However, when he does include auxiliary verbs (in both utterances), he inverts them, which is common among children of at least four. In (36), he also inverts the subject with both the auxiliary verb and the main verb go. This suggests that he has begun to formulate a hypothesis about inversion in interrogatives, but that he does not yet fully grasp the nuances.

Another interesting pattern is that, in both (35) and (36), subject S replaces the auxiliary do with be. This is consistent with the reported tendency for these two auxiliary verbs to give rise to more errors than others do, but it is not a common error in typical L1 English development and
it does little to place subject S along the developmental trajectory. Perhaps the fact that subject S exhibits a variety of characteristics (auxiliary omission, subject-auxiliary-verb inversion, do/be alternation) that do not seem to point to a single stage of interrogative acquisition indicates that he is not in fact following the typical L1 acquisition trajectory. Perhaps instead he is being influenced by his previous linguistic experience.

In a comparison of the English and Italian interrogatives, Guasti (1996) explains that the order $wh$-S-V is prohibited in main (not embedded) questions in Italian (I-to-C movement is employed in Italian as well as English). However, this says nothing of the placement of auxiliary verbs. If subject S were to say (36) (repeated below) in Italian, the word order would be that of (37c):

(37) a. $s(5;0)$: *Where's go $F$?  
    
    b. Where did $F$ go?/Where has $F$ gone?\(^{3}\)  
    
    c. Dove è andato $F$?  

    *Where has gone $F$*  
    Where $WH$ AUX V $S$

The word order above begins with the question word, followed by the auxiliary verb and the main verb, and places the subject in the final position. This accounts for (37a) as a direct translation from Italian rather than an English subject-verb inversion gone wrong.

A similar account can be used for (35), as well as for subject F’s ambiguous stage in mastering English interrogatives. Examples (32), (33), and (35) are repeated below with their Adult English and Italian counterparts for comparison:

(38) a. $f(6;9)$: *How I should do this?  
    
    b. How should I do this?  
    
    c. Come devo farlo?  

    *How I should do it*  
    Adult English  
    Adult Italian

\(^{3}\) My consultant confirms that both possible interpretations of the utterance would be formed the same way in Italian.
In the above examples, the Italian sentences express both the subject and the auxiliary and/or main verb in a single word. This makes it impossible to place one before the other, let alone invert that order. If the subjects are drawing on their L1 knowledge in their production of English interrogatives, it may be making them less sensitive to subject-auxiliary inversion in English and thus might interfere with their development of this particular syntactic pattern.

In summary, I find that both subjects make syntactic errors that deviate from the typical development of English interrogatives among L1 learners their age. These are syntactic errors that can be accounted for by influence from their knowledge of Italian, their L1. However, subject F’s errors relating to inflectional morphology in interrogatives does not appear to be significantly delayed. This is consistent with my overall claim that syntactic and lexical development are more susceptible to influence from previous linguistic knowledge than are morphological and semantic development.
3.4: Copular be

As we see above, subjects S has still not mastered the auxiliary use of the *be* verb. If we refer back to Table 1 for Brown’s 1973 proposed order of acquisition of early morphemes, we see that the contractible copula verb is acquired around the same time as auxiliary verbs, although Brown (as cited in Guo 2009) also noted that copular *be* tends to be acquired earlier than the auxiliary *be*. Thus we would predict that subject S would master the use of the copular *be* before mastering the auxiliary *be*, but since the two seem to be acquired near the same age, we would expect him to struggle with both for some time.

The most common struggle that L1 English learners have with the copula is omitting it in obligatory contexts. Guo 2009 explains that children take several years to master the use of the copula, often omitting it to produce utterances like (42). However, although they do not always use it in the necessary contexts, they typically use the copula correctly when they do use it, as in (43). Errors of commission, as in (44), rarely occur with the copula.

(42) *He happy.  
(43) He is happy.  
(44) *He are happy.  

Guo 2009

Subject S omits copulas early on. His utterance in (45) is analogous to Guo’s example in (42). However, as the copula begins to appear in his speech, errors of commission such as that in (46) appear as well:

(45) s (4;11): *I the dog and you the mommy.  
(46) s (4;11): *I is the dog and you is the mommy.  
(47) s (5;0): I'm the dog. You are the witch.

As we see in (47), subject S eventually manages to use the copular *be* grammatically (this was accomplished with some explicit modeling from the examiner). It can take typical L1 English
Holden 25

learners several years to master this morpheme, so he does not seem to be delayed. Nonetheless, he is not acquiring the copular *be* in the same way that L1 English learners typically do. Not only does he often omit the verb, but when he uses it, it lacks person agreement with the subject. It seems that subject S has acquired *is* as a stem verb, hypothesizing that it may be used to link a subject to a predicate, but failing to effectively hypothesize how it inflects. After more exposure to English input, he seems to learn that this hypothesis is incomplete, that it lacks agreement with the person of the subject.

The curious thing about a hypothesis such as this is that L1 English learners do not make the same one. Rather, they tend to use the copula as if it were optional until they master the different agreement features. Italian verbs have very strong agreement properties, so it seems unlikely that subject S would lack an understanding of the concept of subject-verb agreement. It is much more likely that the problem is a lexical one: the copula is highly irregular, and acquiring all of its forms is much more complex than simply learning a generalizable agreement morpheme such as the third-person singular *–s*.

Whatever the influencing factors, the result is that subject S’s acquisition of the English copula is characterized more by errors of commission, whereas that of L1 English-speaking children is characterized by errors of omission. Whatever language influence is at play is neither disadvantaging nor benefitting him; rather, his development of the English copula is simply different from that of typical L1 English learners. Nonetheless, this is a difference that must be related to an influence other than pure English input (which L1 learners receive), and this different input results in atypical lexical output. This finding is consistent with my claim that lexical and syntactic development are more susceptible to influence from previous linguistic knowledge than are morphological and semantic development.
3.5: Reflexive Pronouns

Reflexive pronouns are often characterized as “self-forms,” as they are formed by the compounding of self with another form. In Standard English, these self-forms fall into types: those based on object forms of personal pronouns (himself, herself, itself, themselves), and those based on the possessive forms (myself, yourself, ourselves, yourselves. König and Gast 2002 explain that reflexive pronouns are used to indicate co-reference with another semantic or syntactic argument of the same predicate. (This is related to the binding of a reflexive pronoun to an antecedent.) For example, in (48a), Sue and herself (also referring to Sue) are both arguments of hit, so the use of the reflexive herself as indicated is correct. However, in (48b), Mary and herself (also referring to Mary) are not arguments of the same verb, so the use of the reflexive herself as indicated is not correct; (48c) is acceptable.

(48) a. Mary made Sue hit herself.
    b. *Mary, made Sue hit herself.
    c. Mary, made Sue hit her.

Adult English

Such reflexive pronouns are to be distinguished from what König and Gast 2002 call intensifiers, which are phonologically focused and therefore stressed for the semantic effect of evoking alternatives to the reference. For example, in Mary herself hit Sue, the pronoun herself implies a presupposition that someone other than Mary might have hit Sue, but it is not a separate argument of the verb hit. Such uses of self-forms are excluded from this analysis.

In general, adult native speakers of Standard English do not make errors such as (48b), using reflexive pronouns where they are inappropriate, nor do they neglect to use reflexives where they are obligatory. Young children learning English as their L1 also rarely make these types of
errors, but such errors do appear occasionally. Bloom et al. (1994) conducted a study of three children, analyzing samples of their utterances between ages two and five for appropriate use of *myself* versus *my* in binding contexts. This seems to be the age range during which reflexive pronouns are acquired, for the earliest samples of speech generally contained proportionally fewer instances of *myself* than later samples. Examples from Bloom et al. (1994) of *myself* being used without a first-person co-referent are shown in (49), although across the entire sample, only 0.3% of the relevant utterances contained such errors. Likewise, examples of *me* being used in contexts that require *myself* are shown in (50), although across the entire sample, only 5.6% of the relevant utterances contained such errors.

(49) a. Ow, you hurted myself. (2;11) 
   b. You dress myself! (2;9) 

(50) a. I see me. (2;11) 
   b. I guess I can use me. (4;3) 

Turning to the case study, we find that six-year-old subject F also occasionally makes such errors, as shown below:

(51) F(6;8): *You petted myself.
(52) F(6;8): *I cast a spell on me.
(53) F(6;8): *The curtains closed theirselves.

The use of *theirselves* in (53) seems to be a mere lexical error; the usage of the reflexive is correct, but subject F forms it as though under the assumption that this reflexive is one based on the possessive form of a pronoun, such as *ourselves*. Comparing (51) and (52) to the common semantic errors in (49) and (50), we see that subject F is making these errors at a much later age than children acquiring English as their L1 typically do. Although Matthews et al. 2009 note that L1 English speakers as old as 6;6 have been known to have trouble with judging the correct
pronoun in binding contexts, this is not the general trend, and this involves judgment errors rather than production errors. Looking at the larger trend, in which errors such as subject F’s are most common around the age of three-and-a-half, it seems reasonable to at least consider the possibility that subject F is significantly delayed in her development of English reflexive pronouns. This delay may be a result of influence from her previous linguistic knowledge.

A quick look at Italian reveals that the first-person reflexive pronoun (equivalent to the English *myself*) and the first-person personal pronoun (equivalent to the English *me*) can both be expressed by the Italian pronouns *mi* and *me*. Thus, it appears that subject F is not so much struggling with the semantic principles of binding theory and co-reference, but that (51)-(53) are all lexical errors due to the fact that English lexicon makes a distinction that her native lexicon does not. This might make subject F less sensitive to this distinction in English and thus might delay her mastery of the proper use of these words. Based on these data, it seems that one-to-many asymmetries in the lexicons of native and target languages can influence a child’s interlanguage hypotheses about the target language and thus change the way certain aspects of the target language are developed. This finding is consistent with my overall claim that influence from the subjects’ previous linguistic knowledge has primarily lexical and syntactic effects on the development of English, while the morphology and semantics of English develop in a way similar to L1 acquisition.

### 3.6: Possessive/Genitive Constructions

In English, there are two possessive or genitive constructions: the preposed and the postposed (Lyons 1986). The difference is illustrated in (54):

\[
\begin{align*}
\text{(54)} & & \text{Preposed:} & \quad \text{Postposed:} & \quad \text{Lyons (1986)}
\end{align*}
\]
Preposed constructions either use possessive pronouns or attach the possessive morpheme –'s to noun phrases, followed by the object of possession. Postposed constructions place the object of possession first, followed by the possessive preposition of and the relevant noun phrase with the –'s morpheme (or a possessive pronoun). The postposed possessive pronouns (such as mine) differ in form from their preposed counterparts (such as my).

Referring back to Table 1, we see that the possessive morpheme –'s is typically acquired fairly early, before articles and the past tense morpheme –ed, in L1 English speakers. In a study of children under five, Shulamuth Chiat (1981) finds that young children commonly apply this possessive morpheme to pronouns that do not take it, producing outputs such as theys, thems, hims, me's, and you's. In that study, none of the children generalized the –'s morpheme to all pronouns – for instance, the morpheme was never added to my/mine or your/yours. Nonetheless, overextension of this possessive morpheme is a common error in L1 English acquisition.

The subjects of the case study, however, produce errors in genitive construction unlike any of those listed above. While they do not struggle with the use of possessive pronouns, as evidenced by (55) and (56), they do not seem to have acquired the possessive morpheme –'s and rely solely on the preposition of, as seen in (57)-(59):

(55) s (5;1): I broke my arm.
(56) F (6;8): I meeted my friend.
(57) F (6;8): This is not the school of S, but it's my school.
(58) F (6;8): That's the hat of T (child's name).
(59) s (5;0): I'm the dog of the witch.
This is unusual for multiple reasons. First, this is not a common construction in typical L1 acquisition of English possession. Second, even if it were a common construction, we would expect the possessive –‘s morpheme to be acquired by now in these subjects because of the order of morpheme acquisition listed in Table 1. These children have already begun using articles and one of them uses the –ed morpheme; the use of the –‘s morpheme typically appears before these. Since this is so uncommon in the acquisition of English, perhaps this construction is common in one of the subjects’ previous languages. As it turns out, this is true. Example (60) illustrates three ways to express possession in Italian:

(60) a. Un/l’ amico di Peter  
   a/the friend of Peter  
   
   b. Un/il mio amico  
   a/the my friend  
   
   c. Un/l’amico mio  
   a/the friend mine

Conspicuously missing from (60) is a suffix corresponding to the English possessive morpheme –‘s, which would translate to ‘Peter’s.’ As we can see from (60b) and (60c), the subjects have sufficient exposure to uninflected possessive pronouns in Italian, so it is not surprising that they produce them in English without trouble. In (60a), we see that the use of the preposition of without possessive morphology on the possessor is perfectly grammatical in Italian, so it is also not surprising that this syntactic form surfaces in their English productions.

In summary, the subjects of the case study produce genitive forms in English that do not appear in typical L1 English acquisition. Rather than using the possessive morpheme –‘s, the subjects simply precede the possessor with the preposition of. While this construction has the effect of late acquisition of a certain bound morpheme, it seems to be rooted in a preferred syntactic structure. The possessive morpheme is not absent, but is merely realized in a different way.
Although these forms do not match common forms in English L1 acquisition, they do match a grammatical possessive construction in Italian, the subjects' L1. Thus, the subjects’ atypical development of genitive constructions in English can reasonably be accounted for, at least in part, by influence from the syntax of the subjects’ L1. This finding further is consistent with my claim that influence from the subjects’ previous linguistic knowledge has primarily syntactic and lexical effects on the development of English, while the morphology and semantics of English develop in a way similar to L1 acquisition.

3.7: **Subject Doubling**

One syntactic oddity observed in the case study is something that appears at first to be a reinforcement of the sentence subject by explicitly referring to it after the main verb phrase. Consider (61)-(63):

(61) \(s\) (5;1): He's up there Giorgio. \([He=Gior gio]\)
(62) \(s\) (5;0): Come with Papa you.
(63) \(s\) (5;1): Pick them you.

This sort of construction is rarely if ever observed in English. In Standard English, a subject pronoun such as *he* in (61) cannot co-occur with another subject DP, such as *Giorgio*, referring to the same entity. In imperatives such as (62) and (63), the subject is usually implied in English, but can be added for emphasis or clarification. However, since English has a fairly strict SVO word order, an emphatic subject in an imperative is typically added before the main verb phrase, as in *You come with Papa*, not at the end of the sentence.
While this sort of subject doubling is not typically observed in L1 English learners, a similar phenomenon does appear in many Romance languages. However, rather than inserting additional noun phrases, these languages insert clitics.

A clitic is a morpheme that behaves syntactically like a word, but affixes itself to an adjacent word because it cannot stand alone or bear its own stress. (The distinction separating clitics from pronouns and affixes can be difficult to define.) An example in English is the possessive –‘s marker. While at first glance it appears to be a suffix, it can attach to phrases in ways that affixes cannot. For example, in The Queen of England’s hat, the morpheme does not modify England so much as it modifies Queen, but it does not attach to Queen as a suffix would. Rather, it is placed at the end of the syntactic phrase The Queen of England just as another word would (Lowe 2013).

In some languages (notably Spanish), pronoun clitics can co-occur with the full DPs to which they refer. This is called clitic doubling, and this is the phenomenon that subject $S$ approximates in (61). There is extensive literature on the behavior of clitics in Romance languages, and there is some disagreement over whether clitics exist in Standard Italian and whether they can double. The various analyses of cliticization are beyond the scope of this thesis. However, there is compelling evidence for clitic doubling in many northern Italian dialects. Consider the following examples from Trentino Italian:

(64) a. El Gianni el magna.  
*John he eats  
‘John he eats.’

John eats  
‘John eats.’

c. El magna.  
He eats
He eats.’

In Trentino Italian, the subject clitic is obligatory wherever possible, almost as if to mark subject-verb agreement, although this is marked on the verb independently of the clitic (Sportiche 1999). Again, an in-depth analysis of the syntactic function of the clitic is beyond the scope of this thesis, but the fact remains that in some dialects of Italian, it can be a doubled form of a subject DP.

I do not know precisely what dialect of Italian the subjects of the case study speak natively, but I do know that both of their parents grew up in Turin, which is decidedly in northern Italy, and that the children visit the area at least annually, so it is not unlikely that they have been exposed to a dialect that employs optional clitic doubling. This would certainly help account for the subject S’s constructions above. In Italian, the agreement properties of the verb are strong enough to recover the subject even if it is silent (Sportiche 1999), although a proper noun, such as Giorgio in (62), might be included to add specificity. Depending on the dialect, a subject clitic may optionally be added. Were this structure applied to English, which has neither subject clitics nor strong agreement markers, we would predict something like (61): a sentence with a full DP and an additional pronoun indicating the subject. In (62) and (63) the subject is implied by the imperative structure, but subject S doubles it by inserting a pronoun after the verb phrase, just as he might insert a subject clitic in some dialect of Italian.

Another potential example of clitic doubling in the case study is produced by subject F below:

(65)  F (6; 8): *It’s tomorrow her birthday.

If (65) is an erroneous construction of Tomorrow is her birthday, then it and tomorrow refer to the same thing and it fills the subject position while tomorrow behaves as a doubled clitic might in Italian. However, while we know that (65) is a non-standard construction, we do not know what
its target construction is. It is quite possible that (65) is in fact an erroneous construction of (67), or even (68). If this is the case, it does not function as a clitic but as an empty pronoun without a referent serving only to fill the subject position where there is no real subject (see (66)). It functions in this way in English sentences such as *It’s raining*.

(66)  It’s her birthday.                        \textit{Adult English}
(67)  It’s her birthday (tomorrow).
(68)  (Tomorrow) it’s her birthday.

 Nonetheless, even if (65) is not an instance of clitic doubling attempted in English, it seems that subject S’s utterances in (61)-(63) may be. This is by no means a definitive account of the aforementioned utterances. A more in-depth analysis of clitic behavior and a greater understanding of subject S’s linguistic background would be necessary. However, it is an interesting hypothesis that has implications not only about the nature of language transfer, but also about the nature of clitics. Here subject S seems to translate the notion of subject clitics into English in a syntactic way, which suggests that clitics are more syntactic than morphological and more like pronouns than affixes. Examining child translation errors may help with future analyses and diagnostics of which morphemes may be classified as clitics.

These utterances reflect syntactic constructions that do not typically appear in L1 acquisition of English. They may be accounted for by a syntactic phenomenon that appears in some dialects of Italian. This further is consistent with my claim that influence from the subjects’ previous linguistic knowledge has primarily syntactic and lexical effects on their development of English, while the morphology and semantics of English develop in a way similar to L1 acquisition.
3.8: Word Order: Adjectives

While children typically produce non-standard word order in negative and interrogative constructions at some point in development, this section will examine adjective order, involving the placement of adjectives in relation to their head nouns.

With the exception of poetic contexts, in which an adjective may immediately follow a noun (e.g. *In 1492, Columbus sailed the ocean blue*), in conventional Standard English, all adjectives precede the nouns they modify. This remains true even when multiple adjectives modify the same noun and must adhere to certain ordering constraints in relation to one another (e.g. *It’s the same old story, but not It’s the old same story*); they all remain to the left of the head noun.

This pattern is summarized in below:

\[(69)\]
\[
\begin{align*}
\text{a.} & \quad \text{I want to borrow the blue book.} & \text{Adult English} \\
\text{b.} & \quad \text{*I want to borrow the book blue.}
\end{align*}
\]

\[(70)\]
\[
\begin{align*}
\text{a.} & \quad \text{Johnny is a big boy.} \\
\text{b.} & \quad \text{*Johnny is a boy big.}
\end{align*}
\]

Children acquiring English as a first language learn this pattern very early on. Errors in which an adjective is placed after the noun it modifies are rarely observed.

I observed no such errors from subject F, so it appears that she is acquiring English adjectives in a typical fashion, just as she is acquiring adverbs. However, subject S does produce errors of adjective placement as demonstrated in (71) and (72):

\[(71)\]  \(s\) (5;0): Not blue dark.
\[(72)\]  \(s\) (5;0): Oh no! F (child’s name)! A bee big!

Here, again, subject S appears to have made a faulty inference about the rules governing English grammar. In this case, his hypothesis seems to be that adjectives occur after the nouns they modify.
Again, this must be rooted in some input other than English and UG, since L1 English learners do not make such hypotheses.

A closer look at Italian (as explained in Grandgent and Wilkins 1915) reveals that it generally places adjectives after the nouns they modify, with the exceptions of the words for *good* and *pretty* and adjectives of size or quantity, which precede the nouns. Of the noun and the adjective, the one expressing the more prominent idea follows the other (which occasionally involves inversion of the typical order).

Oddly enough, if (72) were said in Italian (below), the adjective would precede the noun since it is an adjective of size.

(73)  
\begin{align*} 
\text{a. Guardate il grande ape!} & \quad \text{Adult Italian} \\
& \text{Look at the large bee} \\
\text{b. *Guardate il ape grande!} & \quad \text{Look at the bee large}
\end{align*}

Rather, the general pattern of Italian word order, not word-for-word translation, seems have an influence on subject S’s acquisition of English word order. Indeed, in many instances of second language acquisition, basic word order has been found to be a transferrable property (Odlin 1989), and this case study supports with this generalization.

These utterances reflect syntactic constructions that do not typically appear in L1 acquisition of English. They may be accounted for by influence from syntax of subject S’s L1. This is consistent with my claim that influence from the subjects’ previous linguistic knowledge has primarily syntactic and lexical effects on their development of English, while the morphology and semantics of English develop in a way similar to L1 acquisition.

3.9: Semantic Misuse
This section will examine errors that involve the use of lexical items in contexts inappropriate to their semantic meaning. This is not meant to refer to random slips of the tongue, which even native-speaking adults often commit. Rather, this section will focus on patterns that appear systematically across various individuals and situations. The first pattern I will discuss is the use of noncausative verbs as transitive causative verbs. The second pattern is the use of different sense verbs interchangeably.

3.9.1: Noncausatives as Causatives

Some English verbs, such as open and break, can be used either as transitive or intransitive verbs. There is an implicit relation between the two uses of the verb in which the transitive use has the same meaning as the intransitive use except that it also includes a causative component. For verbs like open and break, this causative component need not be explicitly marked; the transitive use need only include the agent to express causation (see (74a) and (75b)). However, other verbs do need explicit marking, usually in the form of a periphrastic verb such as make or get (see (74c) and (75c)).

(74)  
(a) The door opened.  
(b) The boy opened the door.  
(c) The boy made the door open.  

(75)  
(a) I ached.  
(b) *You ached me.  
(c) You made me ache.

Clark (2009)

Between the ages of two and two-and-a-half, children begin to recognize causation and its link to the addition of an agent. They express causation by using periphrastic verbs in causative contexts and by erroneously using noncausatives as causatives (Clark 2009). At that age, they fail
to recognize that not all verbs are as semantically flexible as open and break. In (76)-(78), Clark (2009) provides data of children using noncausatives as causatives and vice versa almost until age four:

(76) *Jump me down. [= make/let me jump down] (2;2.3)  
(77) *Who deaded my kitty cat? [= killed] (2;6)  
(78) They don’t seem to see. [= be seen] Where are they? (3;8, looking for sandals)

This type of semantic misuse also appears in the case study. In (79), subject S uses the exclusively noncausative verb go as a causative meaning make go or perhaps put:

(79) s (5;0): *I go this in here. [= put]

Example (79) is analogous to (76)-(78); subject S seems to be going through the same process of acquiring causation in English as a typical L1 English learner. The difference is that subject S produces (79) at nearly five years of age, while L1 English learners typically produce such errors at ages two and three. However, given the two year grace period I have allowed the subjects of my case study, this does not constitute a significant delay in my analysis. Based on these data, subject S is developing the semantic expression of causation in English in much the same way that L1 English learners do. This is consistent with my claim that semantic and morphological components of English are generally acquired by the subjects just as they might be by a native English speaking child, without notable influence from previous linguistic knowledge.

3.9.2: Sense Verbs

While subject S struggles with the semantics of causation, subject F has more trouble with a certain semantic cluster of words pertaining to sensation. She uses them more or less interchangeably,
sometimes matching the correct word to the situation, but other times producing utterances like (80)-(83):

\[(80)\] F (6;9): Why are you talking like that? You look like a witch. \([=sound\ like]\)

\[(81)\] F (6;9): It’s really soft. Wanna hear it? \([=feel\ it]\)

\[(82)\] F (6;9): I heard a movie… \([=saw]\)

\[(83)\] F (6;9): I can hear good pasta coming. \([=smell]\)

It is quite common for children and adults alike to select a word semantically or structurally similar to their intended word during word retrieval. However, these are speech errors that result from poor production planning rather than differences in the underlying grammar (Fernández and Cairns 2011). These types of errors are not widely discussed in the literature on L1 acquisition of English. This suggests that her faulty inference about the language must be rooted in some input other than English and UG.

On closer examination of Italian, the reason for this seems to be fairly straightforward. While English has several different verbs to describe different types of sensation, Italian has a single verb, \textit{sentire}, which can refer to hearing, feeling, tasting, smelling, and sometimes seeing. It appears that in subject F’s hypothesized version of English, the verb \textit{hear} is analogous to the verb \textit{sentire} in Italian, and she generalizes it to contexts involving various senses other than hearing. She does not generalize it to all sensory contexts; she does sometimes use the semantically appropriate verb. This is also predictable, for, while Italian does have other words for different senses, \textit{sentire} is used more frequently. Based on these data, it seems that one-to-many asymmetries in the lexicons of native and target languages can influence a child’s interlanguage hypotheses about the target language, which is consistent with my overall claim.

4: SUMMARY AND CONCLUSION
In summary, based on an error analysis of spontaneous speech, it appears that the previous linguistic knowledge of the two children in the case study significantly influences their developmental path to acquiring English. On morphological issues such as tense marking, semantic issues such as verb transitivity, and some syntactic issues, their development closely resembles that of typical children of the same ages acquiring English as their L1. The errors that seem to be influenced by the subjects' previous linguistic knowledge are influenced on lexical or syntactic levels. The data for this claim are summarized in Table 3:

<table>
<thead>
<tr>
<th>Error</th>
<th>Source</th>
<th>L1 influence?</th>
<th>Subject(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Irregular past tense marking</td>
<td>Morphology</td>
<td></td>
<td>F, S</td>
</tr>
<tr>
<td>2 Negative constructions</td>
<td>Syntax</td>
<td></td>
<td>F, S</td>
</tr>
<tr>
<td>3 Interrogative constructions</td>
<td>Syntax</td>
<td>Yes</td>
<td>F, S</td>
</tr>
<tr>
<td>4 Copular <em>be</em></td>
<td>Lexicon</td>
<td>Probably</td>
<td>S</td>
</tr>
<tr>
<td>5 Reflexive pronouns</td>
<td>Lexicon</td>
<td>Yes</td>
<td>F</td>
</tr>
<tr>
<td>6 Genitive constructions</td>
<td>Syntax</td>
<td>Yes</td>
<td>F, S</td>
</tr>
<tr>
<td>7 Clitic doubling</td>
<td>Syntax</td>
<td>Yes</td>
<td>S</td>
</tr>
<tr>
<td>8 Word order: adjectives and nouns</td>
<td>Syntax</td>
<td>Yes</td>
<td>S</td>
</tr>
<tr>
<td>9 Non-causatives as causatives</td>
<td>Semantics</td>
<td></td>
<td>S</td>
</tr>
<tr>
<td>10 Sense verbs</td>
<td>Lexicon</td>
<td>Yes</td>
<td>F</td>
</tr>
</tbody>
</table>

In general, subject F is more prone to lexical errors than subject S. As we saw in her interchangeable use of various sense verbs and inconsistent use of reflexive pronouns, the one-to-many asymmetries between her native language and the target language seem to be hindering her development of a broadly functional English vocabulary.

Subject S, on the other hand, is more likely than his sister to rely on direct translations from his native language as a crutch when forming English sentences. We saw this in his adjective placement, his attempt at clitic doubling, his questions, and his genitive constructions (the last of which subject F struggled with as well). This linguistic crutch allowed him to make impressive
Holden 41

progress over the course of the observation period, but at the cost of hindering his development of English word order.

The only error that does not seem to indicate a hindrance in English acquisition is the lack of subject agreement that subject S shows in his copula use. L1 English-speaking children typically take several years to master the copula; they use it correctly at times and completely omit it at others, but almost never fail to make it agree with the subject. His previous knowledge of Italian copula seems to help him realize that copulas are necessary linking verbs, but the consequence of this is that he uses the copula in English before learning all the irregular forms of it. In this case, the language influence does not provide much of a benefit or a disadvantage to the development of English; the development is simply different.

This case study does present some problems. First, due to the nature of an error analysis, only the negative aspects of language transfer are revealed (with the exception of the example above, which is neutral). Language transfer also has the capacity to enhance the development of some pieces of a target language. If this study were to highlight common errors among L1 English learners that the subjects surpassed, it would illuminate this beneficial aspect of language transfer. However, an analysis that focuses on the errors that the subjects do make cannot reveal such things.

Second, the case study does not make use of data from the subjects’ Italian utterances, so their proficiency in English cannot be compared with their proficiency in their native language. We have reports from their mother that subject F is relatively quick at picking up new languages, while subject S is relatively slow, but we have no evidence on which to base these assertions and no specific details to help us use these individual factors to make predictions.

Third, the case study does not compare these English learners to English learners of the same ages but with a different L1. The only way to obtain definitive evidence for language transfer
in a given domain, according to Schwartz and Sprouse (2000) is to "compare the developmental paths of L2ers whose L1s are, with respect to [that domain], typologically distinct. If one finds divergence developmental paths... one has evidence for transfer in that domain." For example, I might pair this case study with a study of children whose L1 is Japanese, since, unlike Italian, Japanese places adjectives before the noun. Without such a comparison, this case study can only yield more hypotheses about language transfer in young children.

Nonetheless, the study yields some interesting findings. It provides several possible characterizations of language transfer. While there is no conclusive evidence that such errors are actually influenced by previous linguistic knowledge, these areas of language development can become the foci of more rigorous studies of language transfer.

My overall finding is that the errors that seem to be influenced by the subjects' previous linguistic knowledge are influenced on lexical or syntactic levels, whereas morphological and semantic development closely resembles that of typical children of the same ages acquiring English as their L1. The fact that many of the affected linguistic issues are syntactic and not morphological has certain implications as well. Firstly, it suggests that there is in fact some measurable difference between morphology and syntax, a notion which is linguistically interesting in and of itself since the difference is not transparent. This notion can also be useful in the study of clitics, which generally are said to exist in the gray area between syntax and morphology, but appear to be treated as syntactic elements in the case study data. I suggest extending the analysis of child translation errors as a method of further study and diagnosis of clitics. I also suggest that more effective methods of second language instruction be designed based on the notion that syntax is comparatively vulnerable to language transfer.
5: BIBLIOGRAPHY


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