Is bilingual language development different from monolingual?
Evidence from the use of ellipsis in narrative

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Abstract

The research literature comparing the language acquisition trajectory of monolingual and bilingual speakers has been inconclusive. Some studies have emphasised similarities between mono- and bilinguals. Others have argued for qualitative differences due to bilingual transfer from their participants’ other language. Some studies have even claimed that bilinguals’ weaker language may not develop fully despite initial similarities. This study revisits these fundamental questions of bilingualism by testing the use of ellipsis in monolingual and bilingual Japanese speakers. Experimental data were gathered by eliciting oral narratives based on a wordless picture book called ‘Frog, Where are You?’ from five groups of participants: Japanese monolingual and Japanese-English bilingual children aged 4–5 and 8–9-years-old, and Japanese monolingual adults who formed a control group. The results of this study suggest that the fundamental difference, at least in term of ellipsis usage, between mono- and bilinguals is quantitative rather than qualitative, and that this difference was found at an early stage of acquisition rather than only in the older age group.

Keywords: Japanese, ellipsis, bilingual first language acquisition, child language, narrative

1. Introduction

Simultaneous bilingual acquisition is often seen as the same as or similar to monolingual language acquisition; however, differences between monolinguals and bilinguals have also been reported. This study explores the question of how similar or dissimilar Japanese-English bilingual language acquisition is from monolingual Japanese language acquisition, by examining the use of subject ellipsis in referential tracking in Japanese. The use of ellipsis is a quantitative difference between English and Japanese, as the English use of ellipsis is much more syntactically restricted. Ellipsis is also found more frequently in young children’s discourse as a natural developmental pathway (Clancy, 1992). Thus, it would be expected that children gradually learn how to use ellipsis as a factor in either syntactic or pragmatic requirements, or for special functions.

In this paper, the use of subject ellipsis in referent introduction, continuity and re-introduction within narrative is investigated in order to compare the Japanese language development of Japanese-English simultaneous bilingual children in Australia with their monolingual counterparts in Japan.

This study poses the following questions:

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a. What, if any, are the differences between bilingual and monolingual Japanese children (of the same age groups), in terms of the use of subject ellipsis in referential tracking?

b. What are the possible reasons for the usage or avoidance of ellipsis by bilingual and monolingual Japanese children?

1.1 Childhood bilinguals; Are they the same as monolinguals?

Previous studies have concluded that bilinguals who have regular and consistent input in both languages from birth are most likely to become monolingual-like in both languages (Bohnacker, 2016; Serratrice, 2007; Serratrice, Sorace, & Paoli, 2004). There are also reports that bilingual language acquisition is in some cases slower than monolingual (August, Dressler, & Snow, 2005; August & Shanahan, 2006; Hoff & Elledge, 2005; Manis, Lindsey, & Bailey, 2004; Oriyama, 2002; Uccelli & Páez, 2007). The research therefore indicates that bilinguals are qualitatively similar to monolinguals, except for a slower acquisition speed. Moreover, other reports (Kupersmitt, 2004; Oriyama, 2002; Verhoeven, 1990, 1991) indicate that any differences found between mono- and bilinguals tend to occur at a later stage of language acquisition despite initial similarities, these investigators have also claimed that some qualitative differences are to be expected. If these findings are also applicable to the frequency of subject ellipsis, it can be hypothesised that there should be little difference exhibited between the mono- and bilinguals in the 4–5-year-old group. In contrast, more conspicuous differences should be observable between the 8–9-year-old mono- and bilinguals. The bilinguals in this group would be expected to be using more ellipsis than their monolingual counterparts, or possibly even using different forms such as pronouns.

1.2 The Japanese referential system and the use of ellipsis

The Japanese referential system is characterised by the combination of the use of grammatical particles following a common noun and ellipsis (Hinds, 1984; Kuno, 1973; Maynard, 1990; Minami, 1996, 2008, 2011). The most basic rules for referential introduction and maintenance in narratives can be summarised using the following sequence (Hinds, 1984);

1. First mention: a common noun plus the particle ga (new information marker);
2. Second mention: a common noun plus the particle wa (old information marker); and;

Therefore, it is expected that ellipsis will be used to maintain referent continuity. The grammatical particles required for the first and second mentions are reported to be acquired by the age of three (Okubo, 1967; Yokoyama, 1998), although the mastery of wa tends to occur after ga (Hatano, 1979; Iwata & Inaba, 1987; Tahara & Ito, 1985). However, other outcomes such as a proper noun or first person pronouns are also possible (Clancy, 1980). Nevertheless, the initial introduction of referents is also influenced by environment, circumstances, and previous mutual knowledge,
as well as whether both speaker and listener share visual information (Wigglesworth, 1992).

Subject ellipsis occurs in both Japanese and English; however, the use of ellipsis is considerably different between them. In formal English, ellipsis can appear in the subject position of the non-initial clause of a compound sentence, whereas in Japanese more frequent use of ellipsis in the subject position is observed (e.g. frequent use of ellipsis in the initial clause of a compound sentence or even in simple sentences). In English, the introduction or first mention of a protagonist cannot be achieved by ellipsis, while in Japanese, it may be syntactically possible, that is, ellipsis could appear in the first clause of a compound sentence, where the subject appears in the final clause.

The existence of visual materials may also affect children's introduction of a protagonist by omitting the first mention. However, it is expected that adult Japanese speakers would not use ellipsis as the first mention even when there is visual material in front of the narrator. Styles of discourse are also reported to influence referential marking, i.e. more ellipsis is expected in spoken discourse than in written (Clancy & Downing, 1987). As the methodology of this study is based on oral narratives drawn from a picture book, it was anticipated that ellipsis would appear more frequently than in written narratives. However, in comparison to uncontrolled casual speech, ellipsis may not appear as often in oral narratives, where the grammar is, in general, more formal.

1.3 Children's narratives: Age related factors

Children often display distinct referential patterns when compared to adults. Such differences in Japanese can be represented by use of deictic expressions (Bavin, 1987, 2000; Karmiloff-Smith, 1981, 1983, 1985), omission of grammatical particles attached to common nouns (Iwatate & Inaba, 1987; Miyamoto, Wexler, Aikawa, & Miyagawa, 1999; Nakamura, 1993; Tahara & Ito, 1985), and, most importantly for this study, more frequent subject ellipsis (Clancy, 1992; Nakamura, 1993).

Another commonly found strategy in children's narratives that should be noted is “thematic subject strategy”, that is young children tend to rather rigidly organise a narrative around subject pronouns denoting the main character (Bamberg, 1987; Hickmann & Hendriks, 1999; Karmiloff-Smith, 1981, 1985, 1987, 1992; Wigglesworth, 1990, 1997). In comparison, adult speakers tend to use a pronominal form for maintaining reference and nominal forms to switch reference. If this tendency is also present among Japanese-speaking children, ellipsis would be used to mark the main protagonist instead of third person pronouns as third person pronouns are uncommon in Japanese. This strategy indicates that children are sensitive to the “centeredness” of protagonists, and it would be expected for them to use different strategies for the main and other protagonists. As this study focuses on referential introduction, continuity, and re-introduction, it was instructive to see whether children really marked the main protagonist differently from the other protagonists.
Although monolinguals are reported to acquire the basics of the target language in terms of phonology, morphology, syntax and semantics by the age of 3 or 4 (Berman & Slobin, 1994; Clark, 2003; Verhoeven & Strömqvist, 2001; Weissenborn & Höhle, 2000), the use of ellipsis cannot be explained in terms of syntax. Moreover, the pragmatic aspects of ellipsis may be achieved after the age of 3 or 4 and it is not clear from the literature when children are able to handle ellipsis at an adult level.

If bilingual acquisition is fundamentally similar to monolingual, we can predict that 4–5-year-old mono- and bilinguals would be using more ellipsis than the other age groups. If the differences found between mono- and bilinguals that tend to occur at a later stage of acquisition (Kupersmitt, 2004; Oriyama, 2002; Verhoeven, 1990, 1991) are applicable to the use of ellipsis, older mono- and bilinguals may use different ellipsis patterns. That is, older monolinguals would rarely use ellipsis, while bilinguals of the same age group would use more ellipsis in a fashion similar to younger monolinguals.

However, there is another issue to consider: transfers from the other language, i.e. English. Bilinguals may be able to use their English language knowledge in a positive manner during acquisition (Cummins, 1979; Minami, Fukuda, & Fujiyama, 2002; Verhoeven, 1994). As English uses subjects more heavily than Japanese, bilinguals may transfer this usage pattern and employ less ellipsis, especially in initial introductions.

1.4 Previous studies of the Japanese referential system

Two previous works on the Japanese referential system that are directly applicable to the current study are Minami’s 2011 study using bilingual children in America and Nakamura’s 1993 study using monolingual children in Japan, which studied referential markings in narrative by using the same narrative elicitation methodology as used in this study.

Minami (2011) studied referential topic management in narrative among English-Japanese bilingual children by comparing the referential strategies used in both Japanese and English. The relevance to this study lies in the first mentions of protagonists in the children’s narratives. Minami found that the participants were predominantly using full noun phrases in both Japanese and English. There were, however, five ellipsis cases in Minami’s study; the other 37 cases were all expected full noun phrases in Japanese.

Although it is clear that the five out of 42 cases (11.9%) were ellipses to introduce a referent into the story, it was not mentioned whether the ellipsis was used by a particular age group among the 6–12-year-old participants. Moreover, although the referents were coded according to the protagonists, there was no discussion of the possibility of differences between the markings of the main and other protagonists. It is therefore the intention of this study to investigate these two aspects further to see whether there are any age-related factors affecting children’s referential introductions and whether young children mark the main protagonist differently from the other protagonists.

Nakamura’s study (1993) investigated a total of 100 monolingual participants in six age groups (3, 4, 5, 7, and 9-year-olds and adults), but it did not disclose how many participants there were in each group.
Interestingly, the results indicate that even adults use ellipsis as the first mention in narrative and children aged five or younger tended to use ellipsis to mark first mentions more frequently. A summary of these results is shown below.

Table 1

| Relationship between monolingual participants’ age and use of ellipsis in the first mention |
| Age (years) | 3 | 4 | 5 | 7 | 9 | Adults |
| Ellipsis    | 10% | 10.4% | 10.4% | 3.1% | 4.5% | 3.3% |

Based on Nakamura, 1993

The analysis did not consider the fact that the type of protagonist may influence the referential marking, either, that is, there was no mention as to whether there was a difference between referential markings for the main and other protagonists.

In comparing these two studies, there was a rather clear difference in the rate of ellipsis. Minami’s study (2011) had a higher rate of the use of ellipsis (11.9% in average) for 6–12-year-old participants, while Nakamura’s study (1993) exhibited a much lower rate of the use of ellipsis for similar age groups (3.1% for 7-year-olds and 4.5% for 9-year-olds, while younger participants were using more ellipsis). As the obvious difference between these two studies is the participants’ language background (monolinguals in Nakamura’s and bilinguals in Minami’s study), it could be hypothesised from the results of these two studies that bilinguals may be using the language patterns found in younger age groups.

2. Methodology

2.1 The participants

In order to explore the fundamental question of how Japanese-English bilingual language acquisition does or does not differ from monolingual Japanese language acquisition, two different language background groups of participants were investigated in this study: mono- and bilingual speakers of Japanese. Both groups were divided into two age groups: 4–5 and 8–9-year-olds. Monolingual adults were also included as a control group, but their bilingual counterparts were not included as it is difficult to control for factors other than bilingualism. In total, there were 71 participants in this study; Table 2 shows the breakdown by age, gender and language background.

Table 2

| Participants by age and language background |
| Age group | 4–5 years | 8–9 years | Adults |
|           | male | female | male | female | male | female |
| Monolinguals | 8 | 6 | 6 | 8 | 8 | 8 |
| Bilinguals | 14 | 14 | 16 | 8 | 8 | N/A |
| Totals | 25 | 30 | 16 |
All of the children in this study were attending a kindergarten/nursery or primary school when the data collection took place. As there were reports from some Japanese mothers in Australia that their children’s Japanese usage started to decline after they started school (Takeuchi, 2006; Oriyama, 2002), 4–5-year-olds were selected in order to minimise the possible effect of Australian schooling. The monolingual participants were all recruited in Japan. The adult monolingual participants were recruited from two universities in Japan and were in the 20–22 year age group. The bilingual participants were raised in Australia and were studying the Australian school curriculum in English during the week. They were also studying Japanese in a school setting for between three and five hours per week during the school term (up to 40 weeks a year). Therefore, the 8–9 year-old bilingual participants had some Japanese literacy skills and the 4–5 year-olds were also familiar with Japanese written texts through the Japanese children’s books read to them in school and at home. All of the bilingual participants were simultaneous bilinguals, who were raised in Australia. They all reported using the ‘one person-one language’ approach at home, that is, one of their parents was a native speaker of Japanese who spoke Japanese at home, while the other parent spoke English at home. It is reported in the literature that the number of languages spoken at home makes a difference in language maintenance rate (Billings, 1990). From previous studies conducted in Australia, where the one person-one language approach was used, it was expected that the participants’ English would be stronger than Japanese, especially from their school experience (Takeuchi, 2006; Oriyama, 2002). Similarly, none of the bilingual participants in this study had received any negative comments with regard to their English competence, and all of them were active bilinguals with various levels of competence in Japanese. However, all of the bilingual participants in this study had noticeable linguistic differences from Japanese monolinguals, typically consisting of phonological, syntactic and lexical differences when speaking in Japanese.

2.2 Experimental material and procedure
In this study, a wordless picture book called ‘Frog, Where are You?’ (Mayer, 1969) was used for narrative elicitation. A procedure similar to that of Berman and Slobin (1994) was employed. Each participant was interviewed by the same investigator in a room at the participant’s kindergarten, school, or university. The interview started with mutual introductions and the participants were told that they would be recorded. The participants were asked questions about their background, such as their name, age and school year, as a warm up. For the bilingual children, an additional question about their family language use was also asked, that is, what language(s) the participants used to their parents and what language(s) their parents used when talking to them. Subsequently, the participants were asked to look through the picture book so they would be familiar with the pictures in order to tell a story. Unlike Berman and Slobin (1994), the cover page was not pointed to in order to avoid the potential establishment of common knowledge between the
interviewer and the participant, which could influence the protagonists’ initial introduction in the story (Nakamura, 1993). Additionally, the title of the book, ‘*Frog, Where are You?*’ written in English, was concealed as was also done by Berman and Slobin, so that the participants who were able to read the English title would not be influenced by it.

In Berman and Slobin’s study (1994), the investigator sat side-by-side with the participants. In the current study, however, the investigator sat opposite the participants so that she could not see the pictures that the participants were looking at, in order to avoid evoking deixis related to the protagonists (e.g. ‘this one’) and locations (e.g. ‘here’).

### 2.3 Analytic approaches

Three types of analytical approach were used in this study:

1. Analysis across age groups (comparison across age groups within the language groups);
2. Analysis between language groups (comparison of mono- and bilinguals in the same age groups); and
3. Comparison across language background and age.

Data were analysed at the clause level and the adult referential forms were used as the standard for complete acquisition of the Japanese referential system throughout this investigation.

In the Frog Story there is a single clear-cut main protagonist (a boy) and two other important, secondary protagonists that frequently appear in the storyline (a pet dog and frog), as well as other minor protagonists (other animals in a forest). The following points were employed when coding the data:

a. How protagonists were initially introduced, maintained and re-introduced, that is, the ratio of the use of ellipsis in the first mention, subsequent mentions and re-introductions; and
b. The influence of the centeredness of protagonists (the main protagonist, secondary protagonists and minor protagonists) and the ratio of the use of ellipsis as the first mention, subsequent mentions and re-introductions depending on centeredness of protagonists in the story.

### 3. Findings

#### 3.1 The use of ellipsis in the first mention: Age and protagonist types

The norm expected of a Japanese speaker for the first mention of a protagonist is a non-ellipsis, such as a common noun plus the particle *ga* or a proper noun. However, in this study ellipsis was found in all age and language groups, which is consistent with Nakamura’s (1993) study. Table 3 shows the use of ellipsis as the first mention in the five age and language groups used in this study.
Table 3

The Use of ellipsis in the first mention

<table>
<thead>
<tr>
<th></th>
<th>4-5-year-olds</th>
<th>8-9-year-olds</th>
<th>Adults</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n = 14)</td>
<td>(n = 11)</td>
<td>(n = 14)</td>
</tr>
<tr>
<td>Main protagonist</td>
<td>42.9% (6)</td>
<td>9.1% (1)</td>
<td>7.1% (1)</td>
</tr>
<tr>
<td>Secondary protagonists</td>
<td>14.3% (2)</td>
<td>9.1% (1)</td>
<td>0</td>
</tr>
<tr>
<td>Minor protagonists</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

All the examples of ellipsis found in this study were in simple sentences, except for one sentence produced by an adult speaker. This was a compound sentence, but all the other subjects used in this sentence were also ellipses (See Example 3 below). Below are some examples of the initial introduction of protagonists using an ellipsis.

Example 1 (4–5-year-old monolingual, using ellipsis for the main protagonist)
(EL = boy) 
Kaeru mite ru.
(frog look [progressive])
(EL=A boy) is looking at a frog.

Example 2 (4–5-year-old bilingual, using ellipsis for a secondary protagonist)
(EL = frog) 
Na, nai.
(exist [negative])
(EL=A frog) is not there.

Example 3 (Adult, using ellipsis for the main protagonist)
Clause 1: 
Eto (EL = boy) kyō no hiru ma ni ano, um, today [particle] day time [particle] um tote kita kaeru o bin ni irete that (he) caught frog PAT jar PAT (he) put, and
Clause 2: 
(EL = boy) inu to issho ni ūnito, dog PAT together um [incomplete]
Clause 3: (laugh) tomaracchatta stopped
Um, (EL=a boy) put a frog that he caught during the day today into a jar, and (EL=he) . . . together with the dog, (laugh) (the story) has stopped.

There are two findings regarding the use of ellipsis as the first mention. Firstly, the use of ellipsis as an initial introduction was predominantly found in data addressing the main protagonist. A small amount of ellipsis was found in the data addressing secondary protagonists, but only in the youngest group (the 4–5-year-olds) for both the mono- and bilingual groups. There were no examples of the use of ellipsis in the data addressing minor protagonists in any age and language group, which indicates that there is a rather clear relationship between the use of ellipsis and the centeredness of
the protagonists. Therefore, young children do not use ellipsis randomly, but only use it for the more central figures in the story.

Secondly, the data indicates that the relationship between the use of ellipsis and younger age is more evident among the monolinguals. It is known that young children tend to omit various elements in a clause, thus it was expected that the 4–5-year-olds would have a higher rate of ellipsis. In fact, six out of 14 monolinguals aged 4–5 (42.9%) used an ellipsis to introduce the main protagonist, whereas their bilingual counterparts, aged 4–5, used ellipsis at as low a rate as the other older groups.

By the age of 8–9 years, both mono- and bilinguals exhibited limited use of ellipsis for the first mention, approximating adult usage. Although some previous studies have reported that differences between mono- and bilinguals tend to develop at a later stage of language acquisition, and bilingual language acquisition resembles that of younger monolinguals (Kupersmitt, 2004; Oriyama, 2002; Verhoeven, 1990, 1991), the results of this study demonstrate that this is not the case with regards to the use of ellipsis. In the case of ellipsis, the results suggest that bilinguals may acquire some aspects of language usage earlier than monolinguals and, once acquired, these aspects may not be lost at a later stage. This is probably why the 8–9-year-old bilinguals do not omit a subject at the initial introduction of a protagonist in a narrative, and the use of subject was learned earlier by bilinguals than monolinguals.

The use of Chi-square ($\chi^2$) analyses confirmed that the language background itself (mono- or bilingual) was not correlated with any statistically significant differences in the use of ellipsis for any of the protagonist types in the initial introduction. This indicates that bilingualism in general is not responsible for any differences in the use of ellipsis (i.e. main protagonist: $\chi^2 (1, N = 71) = 1.61, p = 0.205$; and secondary protagonists: $\chi^2 (1, N = 71) = 0.03, p = 0.864$). However, the combination of age and protagonist type suggested some statistically significant differences. The results illustrate that there were statistically significant differences across the age groups in the main protagonist data ($\chi^2 (2, N = 71) = 6.18, p = 0.046$), but not in the secondary protagonists’ data ($\chi^2 (2, N = 71) = 5.76, p = 0.056$), although the latter data was at an almost statistically significant level.

Therefore, although age in itself did not provide a clear indication for when ellipsis would be used as an initial introduction; a comparison of the five groups (i.e. 4–5-year-old mono- and bilinguals, 8–9-year-old mono- and bilinguals, and adults) revealed a significant difference in the distribution of ellipsis as the initial introduction for the main protagonist ($\chi^2 (4, N = 71) = 11.99, p = 0.017$), but not the secondary protagonists ($\chi^2 (4, N = 71) = 6.17, p = 0.187$).

In summary, the use of ellipsis is more evident among the 4–5-year-old monolinguals in the case of the main protagonist’s initial introduction, but not for the other four groups. This implies that the 4–5-year-old monolinguals do not use ellipsis randomly; rather they use it when it is clear who is being referred to. This data also indicates that there was a difference between mono- and bilinguals in the 4–5 year-old group only.
3.2 The use of ellipsis in subsequent mentions

In subsequent mentions, the expected and general form of referent is ellipsis (Hinds, 1984). As younger children have a greater tendency to omit subjects, it was expected that there would not be significant differences related to age. This section compares only the data concerning main and secondary protagonists, since the number of subsequent mentions of minor protagonists was limited in comparison to those of the main and secondary protagonists.

Table 4
The use of ellipsis in subsequent mention

<table>
<thead>
<tr>
<th></th>
<th>4-5-year-olds</th>
<th>8-9-year-olds</th>
<th>Adults</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n =14)</td>
<td>(n = 11)</td>
<td>(n = 14)</td>
</tr>
<tr>
<td>Main Protagonist</td>
<td>83.3%</td>
<td>78.5%</td>
<td>88.4%</td>
</tr>
<tr>
<td>Secondary</td>
<td>60.0%</td>
<td>63.2%</td>
<td>76.7%</td>
</tr>
<tr>
<td>protagonists</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results from subsequent mentions confirmed that ellipsis was the most used form for any age/language group, but interestingly, a subject followed by other grammatical particles, *ga* and *wa*, also appeared in all age/language groups. Other patterns were rare. Two tendencies found from the subsequent mentions were:

1. Ellipsis tended to be used more for the main protagonist than for the secondary protagonists; and
2. The particle *ga* following a subject common noun tended to be used more for the secondary protagonists than for the main protagonist.

The above tendencies were not strongly related to age; instead they were associated with different types of protagonists. The first finding could be due to the fact that the main protagonist appeared throughout the story, therefore his actions tended to be maintained in a continuous manner with ellipses. Secondary protagonists tended to disappear from the story line or to be doing something off stage therefore, their actions were probably marked differently in order to ensure the clarity of narrative even in subsequent mentions, such as using the emphatic function of *ga*. As found in the example below, when the subject might be ambiguous and could be clarified, the subject may appear with the particle *wa* (old information), or *ga* with an emphasis. This type of emphatic *ga* was found among all the age/language groups. A strong tendency with the use of emphatic *ga* was that it was used when there was another protagonist. In other words, it was used to avoid confusion as shown in Example 4 below. In this example there were two protagonists in the scene. In Clause 4, the secondary protagonist was marked by *ga* although it was a subsequent mention. This was probably because the main protagonist was also present, and in order to make it clear
who the subject is, the subsequent mention referent in Clause 4 was *ga*, which emphasised the subject.

Example 4 (8–9-year-old monolingual, using ellipsis for a secondary protagonist)

Clause 1: **Inu wa nazeka kao o bin no naka ni tsukkonde imasu.**

**dog [particle] (Re-introduction)**
The dog has somehow thrust (his) face into a jar.

Clause 2: **Sono mama inu wa otoko no ko ni tsuite itte,**

**dog [particle] (subsequent mention)**
As he is (i.e. with his face in the jar), the dog followed the boy, and

Clause 3: **∅ mado e ikimashita.**

**EL (subsequent mention)**
(he) went to the window.

Clause 4: **Suru to inu ga ochite shimaimashita.**

**dog [particle] (subsequent mention)**
Thereupon, the dog fell off.

The multinomial logistic regression test confirmed that there were few statistical differences in the use of ellipsis in the case of the main protagonist. There was only one group (the 4–5-year-old bilinguals) that displayed a difference in the use of ellipsis and a subject followed by *ga*. The 4–5-year-old bilinguals had a tendency to use a subject with *ga* more than the 8–9-year-old monolinguals (*z* = 2.03, *p* = 0.043) and adults (*z* = 2.03, *p* = 0.031) which results in less use of ellipsis.

In the cases of the secondary protagonists, however, less ellipsis was used in comparison to the main protagonist, and the 4–5-year-olds (mono- and bilinguals) and the 8–9-year-old bilinguals used less ellipsis than the 8–9-year-old monolinguals and the adults.

It could be suggested that the higher subject omission rate is not simply related to their young age. When an ellipsis is the norm, it is the older or more established groups which would more strictly follow the norm by using more ellipsis. Therefore, in the case of subsequent mentions, it was the adults and the 8–9 year-old monolinguals who used ellipsis the most.

3.3 The use of ellipsis in re-introduction

A re-introduction referent is generally achieved by the use of a common noun followed by the particle *wa*, however, ellipsis was used 30.5% of the time by participants in this study. As the number of examples for minor protagonists was significantly smaller than those of the other two types of protagonist, only the main and secondary protagonists were analysed.

All of the age/language groups used more ellipsis for the main protagonist than the secondary protagonists, which mirrors the results from the data in the first and subsequent mentions. As shown in Table 5, there were some differences based on age and language, and it was not only the monolingual 4–5 year-olds who used more ellipsis to mark the main protagonist (61.3%); the 8–9 year-old bilinguals also showed quite a high percentage of the use of ellipsis for the main protagonist (52.3%).
The use of ellipsis by bilinguals

Muranaka-Vuletich

Table 5
The use of ellipsis in re-introduction

<table>
<thead>
<tr>
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<th>4-5-year-olds</th>
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<tr>
<td></td>
<td>( n = 14 )</td>
<td>( n = 11 )</td>
<td>( n = 14 )</td>
</tr>
<tr>
<td>Main Protagonists</td>
<td>61.3%</td>
<td>47.1%</td>
<td>41.1%</td>
</tr>
<tr>
<td></td>
<td>(49 of 80)</td>
<td>(33 of 70)</td>
<td>(69 of 168)</td>
</tr>
<tr>
<td>Secondary</td>
<td>23.2%</td>
<td>28.3%</td>
<td>21.9%</td>
</tr>
<tr>
<td>protagonists</td>
<td>(13 of 56)</td>
<td>(13 of 41)</td>
<td>(28 of 128)</td>
</tr>
</tbody>
</table>

The use of ellipsis for re-introductions was overall much higher than for first mentions. Three reasons were found for the use of ellipsis:

1. Grammatical constraints;
2. Subject clarity; and
3. Overextension of ellipsis.

In the cases of first mentions, there were no examples of these first two reasons.

Grammatical constrains were only found among the adults. These cases were found in compound sentences, and the subject can appear in the last clause of the compound sentence, rather than the first. Therefore, an ellipsis was used in the re-introduction in Clause 3, and the actual subject appeared in Clause 4 as shown in the example below.

Example 5  **(Adult, using ellipsis for the main protagonist)**

Clause 1:  "Omae, bin o wacchatara,
            "If you break the jar,

Clause 2:  kaeru o irrarenai daroo."
            (I) can’t put the frog."

Clause 3:  Ø Soo itte,

**EL (re-introduction)**

(He) said that, and

Clause 4:  Tomu wa Jon no koto o namemashita.
            **Tom [particle] (subsequent mention)**
            Tom licked John.

Ellipsis was also frequently used when the subject was clear from the context. This tendency was found among the all the age/language groups, including the adult participants, when the subject could be identified from many possible indications, such as the context or story line, predicates, and possessives used in a previous clause.

In the following example, there is an element in the preceding clause (Clause 2) which suggests the identity of the subject in the following sentence. In this case, it is a possessive *inu no* (dog’s), which indicates the subject *inu* (dog) in Clause 3.

Example 6  **(8–9-year-old bilingual, using ellipsis for a secondary protagonist)**

Clause 1:  *De, sagashita aida ni,*
            And, while (the boy) was searching,
Clause 2:  *sono, ntno, ireteta bin ni inu no kao ga hasamatte,*

**dog [particle] (possessive)**

the dog’s face got stuck in the, um, jar (in which he) put
(the frog), and

Clause 3:  *Ø mado kara ochite,*

**EL (re-introduction)**

(the dog) fell from the window, and

Clause 4:  *sono bin ga ne, wareta no.*

the jar broke.

However, ellipsis was also used even when it was unclear who the subject
was from the context, and there were no syntactic or functional reasons to
use ellipsis. Such cases were found not only among the 4–5-year-olds, but
also among the 8–9-year-olds, monolinguals and bilinguals both. These
overextensions of the use of ellipsis often made the story line unclear.
In the example below, the subject of Clause 2, “bees”, is deprecated. As a
result, it reads as if the participant is continuing to talk about the dog’s
action in Clause 2.

**Example 7 (8–9-year-old bilingual, using ellipsis for a minor protagonist)**

Clause 1:  *De inu wa kocchi de sagashite,*

And the dog looks for (it) here, and

Clause 2:  *Ø chase shite ru no.*

**EL (re-introduction)**

(The bees) are chasing (the dog).

The results from the re-introduction data did not seem to support the
assumption that younger children simply omit more subjects than older
participants. All of the age/language groups omitted the subject more for
the main protagonist than the secondary protagonists. There was also no
indication that ellipsis was used more among the younger groups for the
secondary protagonists, except for the possibility that the 4–5 year-old
monolingual group may have used more ellipsis than any other groups in the
case of the main protagonist. The overall tendency suggests that there is a
relationship between the types of protagonists and the use of ellipsis, rather
than between participant age and the use of ellipsis.

In the case of the main protagonist, Table 5 above implies that the 4–5-year-
old monolinguals seemed to use ellipsis more than any other group, while no
such tendency was found among the same group in the case of the
secondary protagonists. In order to investigate whether this supposition was
correct, the multinomial logistic regression test was utilized in order to
compare the use of ellipsis and the particles *wa* and *ga* by the 4–5-year-olds
with their use by other age/language groups.

Multinomial logistic regression revealed that greater use of ellipsis, that is,
significantly more subject omission, was found among the 4–5-year-old
monolinguals when comparing the use of *wa* and ellipsis for the main
protagonist with the adults (*z* = 3.4, *p* = 0.001) and the 8–9-year-old
monolinguals ($z = 2.46, p = 0.014$). Although Table 5 shows the highest percentage of ellipsis among the 4–5-year-old monolinguals, the multinomial logistic regression test confirmed that there were no statistically significant differences between the other two groups (4–5-year-old bilinguals and the 8–9-year-old bilinguals). These two groups also showed exactly the same tendency as the 4–5-year-old monolinguals, that is, they used significantly more ellipsis than *wa* in comparison with the 8–9-year-old monolinguals and adults. Therefore, all of the three groups (4–5-year-old mono- and bilinguals and 8–9-year-old bilinguals) were using significantly more ellipsis than *wa* when compared to the 8–9-year-old monolinguals and adults in re-introduction.

Table 6

*Comparison of the use of EL over Wa in re-introductions in the case of the main protagonist*

<table>
<thead>
<tr>
<th>Age/language groups</th>
<th>The use of more EL than <em>wa</em></th>
<th>Multinomial logistic regression parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$Z$</td>
<td>$p$</td>
</tr>
<tr>
<td>4–5 mono &gt; 8–9 mono</td>
<td>2.46</td>
<td>$= 0.014$</td>
</tr>
<tr>
<td>4–5 mono &gt; Adults</td>
<td>3.40</td>
<td>$= 0.001$</td>
</tr>
<tr>
<td>4–5 bi &gt; 8–9 mono</td>
<td>2.76</td>
<td>$= 0.006$</td>
</tr>
<tr>
<td>4–5 bi &gt; Adults</td>
<td>3.58</td>
<td>$&lt; 0.0005$</td>
</tr>
<tr>
<td>8–9 bi &gt; 8–9 mono</td>
<td>2.06</td>
<td>$= 0.039$</td>
</tr>
<tr>
<td>8–9 bi &gt; Adults</td>
<td>3.30</td>
<td>$= 0.001$</td>
</tr>
</tbody>
</table>

When comparing the use of *ga* and ellipsis, there was no tendency for young children to use more ellipsis relative to *ga* when compared with the older participants. In the case of the main protagonist, the opposite phenomenon was found, that is, the 4–5-year-old bilinguals used significantly more *ga* than ellipsis when compared with the 8–9-year-old monolinguals ($z = 2.47, p = 0.014$) and the adults ($z = 2.28, p = 0.023$). Therefore, although the 4–5-year-old monolinguals appeared to be using more ellipsis than the other groups in the case of the main protagonist, the statistical analysis confirmed that a significant difference was only found between the 4–5-year-old monolinguals and the older monolinguals (the 8–9-year-olds and adults), and not between the 4–5-year-old monolinguals and the bilingual groups (4–5 and 8–9-year-olds). This difference was only significant when considering the use of ellipsis relative to *wa*, and not ellipsis relative to *ga*. This result suggests that the fundamental difference between the more established groups (the 8–9-year-old monolinguals and the adults) and the rest of the participants could be the use of *wa*, as all the participants seem to have good control over the use of ellipsis and *ga*.

In summary, all the age/language groups showed a similar tendency in the use of ellipsis. In other words, more ellipsis was used for the more central figure, and the use of *ga* was greater for less central figures. Thus, the results confirmed that use of ellipsis did not simply reflect the participants’ ages; the 4–5-year-old bilinguals were using even less ellipsis and used more *ga* in comparison with the 8–9 year-old monolinguals and adults.
When comparing the usage of *wa* and ellipsis in the data referring to the main protagonist, however, a greater use of ellipsis was found among the youngest groups (mono- and bilingual) as well as the 8–9-year-old bilinguals. The particle *wa* is the expected form of re-introduction, and again the more established groups (adults and 8–9-year-old monolinguals) followed the norm rather than using other forms such as ellipsis.

4. **Conclusions and Discussion**

This section discusses the findings presented above with respect to the question of how similar or dissimilar Japanese-English bilingual language acquisition is from monolingual Japanese language acquisition with regard to the use of subject ellipsis in referential tracking. It goes on to discuss the possible reasons for the usage or avoidance of ellipsis by mono- and bilingual children speaking Japanese. It also considers the implications of the results for broader questions concerning bilingual language acquisition.

As for the question of the relationship between age, maturity, and the use of ellipsis, there was little evidence to suggest that young children simply use more ellipsis than older speakers, among either mono- or bilinguals. Firstly, in all the three data sets—referent introduction, subsequent mentions, and re-introductions—all the five age/language groups used more ellipsis for the main protagonist relative to the secondary protagonists. Secondly, although the 4–5-year-old monolinguals demonstrated the strongest tendency to mark the main protagonist with an ellipsis in the first mention, other data sets (subsequent mentions and re-introductions) indicated that the use of ellipsis could not be explained by the age of the speaker alone. In the subsequent mention data, it was the adults and the 8–9-year-old monolinguals who used ellipsis the most, and in the re-introduction data there were no differences in terms of the use of ellipsis over the use of *ga* in all of the five groups. However, more frequent use of ellipsis was evident relative to the use of *wa* in the 4–5-year-old groups, and 8–9-year-old bilinguals only. As the higher rate of ellipsis occurred only when one element (particle *wa*) was still lacking in the participants’ language, this could mean that ellipsis was utilised in the circumstances where *wa* was not developed sufficiently in the participants’ referential system. Therefore, in the development of speakers’ referential system, the use of ellipsis, *ga*, and *wa* are interrelated. The participants used ellipsis and *ga* more often to supplement a lack of *wa*. Therefore ellipsis was utilised in the process of mastering a complex referential system, and it cannot be fully explained from one variable such as age.

The more fundamental question that this study has aimed to shed some light on is the difference, if any, between mono- and bilinguals. The literature has reported that bilinguals often have identical or similar language behaviours to their monolingual counterparts, at an early stage of language acquisition at least (Genesee, 2006; Paradis & Genesee, 1996; Romaine, 1995; Schlyter & Håkansson, 1994). There are also counterarguments that bilinguals diverge from monolinguals at a later stage of language acquisition (Kupersmitt, 2004; Oriyama, 2002; Verhoeven, 1990, 1991).
The results of this study provide mixed support to these contrasting claims. The claim that bilinguals follow the same developmental path as monolinguals cannot be denied in qualitative terms, as the bilinguals in this study used the same referential patterns as the monolinguals, that is, they were able to use a common noun followed by a Japanese particle or an ellipsis rather than a pronoun. However, quantitatively, there was a clear difference between mono- and bilinguals in the 4–5-year-old groups. The 4-5-year-old monolinguals had a noticeably higher rate of subject omission in the first mention in comparison with the other four groups, while the 4–5-year-old bilinguals displayed a low rate of subject omission in the first mention. None of the sentences in the data used by the monolinguals were used to create any special effect or syntactic norm, thus the reason for the use of ellipsis was either developmental or cognitive, that is, young children tend to use ellipsis more. On the other hand, the low rate of subject omission by the bilinguals could be due to positive transfer from English (Cummins, 1979) in that the subject is less likely to be omitted in that language. However, one could also argue that this was not a cross-linguistic transfer, but instead due to the earlier cognitive maturity of bilinguals as reported in some previous studies (Bialystok, 1986, 1988; Bialystok & Martin, 2004; Hakuta, 1986; Hakuta & Bialystok, 1994). There was no concrete evidence to support one hypothesis over the other from looking at the 4–5-year-olds’ data regarding first mentions, but the fact remains that the 4–5-year-old bilinguals displayed a greater degree of adult-like referential choices in comparison to their monolingual counterparts with respect to first mentions. On the other hand, the 8–9-year-old monolinguals displayed an adult-like rate of subject ellipsis throughout the study, while the bilingual group in the same age group had many more similarities with the younger monolinguals in subsequent mentions and re-introductions, that is, using more ellipsis where ellipsis is not the norm, and less ellipsis when ellipsis is the expected pattern. The 4–5-year-old bilinguals also displayed an interesting difference: the 4–5-year-old bilinguals used more subjects than the adults and the 8–9-year-old monolinguals for the main protagonist. Thus, in both the younger and older groups of participants in this study, there were some quantitative differences between mono- and bilinguals.

Kupersmitt (2004) suggested that “bilinguals follow a qualitatively different path from monolinguals in the construction of grammar” (p. 432), and also suggested that the difference was caused by language transfer. On the other hand, some previous studies reject language transfer in bilinguals (Hulk & Müller, 2000; Müller & Hulk, 2001; Serratrice, 2007; Serratrice, Sorace & Paoli, 2004). From the results of this study, it could be suggested that qualitatively, there was no evidence to suggest that the English referential system was used in the bilinguals’ Japanese (e.g. ellipsis was not replaced by a pronoun as would be done in English). Nevertheless, it is difficult to conclusively reject or accept the possibility that the difference in the quantity of ellipsis was due to transfer from English, a language that has much stricter rules of subject omission than Japanese. It also cannot be denied that the reduced use of ellipsis found among young bilinguals is related to earlier cognitive development.
In conclusion, this study argues that young children, both mono- and bilingual, do not omit subjects indiscriminately. Rather, they omit subjects in a sensitive manner with respect to the type of protagonist, in common with the usage of older speakers. This study also suggests that the greater frequency of ellipsis is not a direct result of young age. Rather, the frequency of ellipsis, either greater or less, is an indicator of the process of incomplete language development, that is, less developed speakers tend to use ellipsis more when it is not the norm and less when it is the norm. Furthermore, in relation to mono- and bilingual differences in the use of ellipsis, the differences were found with respect to quantity, rather than quality. Unlike claims in the literature, some differences were primarily found in the younger group, aged 4–5 years in this study, while differences between mono- and bilinguals in the 8–9 year-olds were also evident. This study also suggests that some elements of language development may occur earlier among bilinguals than monolinguals. As the first mention data indicates, young bilinguals were already able to use a subject, while their monolingual counterparts used a greater number of ellipsis. Whether this is due to earlier cognitive development or language transfer from English could not be determined. The results imply that bilinguals may demonstrate divergent patterns from monolinguals at different stages of language acquisition depending on what aspects of language they have been learning, and many aspects of grammar seem to be learned in an interrelated manner. With regard to ellipsis, although children tend to learn to use subjects relatively early, the presence of grammatical elements that children have not yet mastered influences the frequency of ellipsis in aggregate.

References


The use of ellipsis by bilinguals


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