

The syntax-pragmatics interface as a probable cause of crosslinguistic influence in young bilingual children

A discussion

若いバイリンガル子供の言語間影響の考えられる原因としての
統語論—語用論インターフェース
一つの議論

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Focusing on crosslinguistic influence in the field of syntax, this article discusses Hulk and Müller's (2000) syntax-pragmatics hypothesis. I review definitions for the term crosslinguistic influence (also called transfer), and the term young bilingual children. I summarize two studies examining target-deviance in certain constructions in young bilingual children. I consider alternative explanations for target-deviance in these constructions. I conclude that the syntax-pragmatics interface is a probable cause of crosslinguistic influence in young bilingual children, but that further research is needed.

Keywords: crosslinguistic influence, syntax-pragmatics hypothesis, syntax-pragmatics interface, transfer, syntax, young bilingual children

本稿では、構文の分野における言語間の影響に焦点を当て、Hulk & Müller (2000)の統語論—語用論仮説について論じる。言語間影響（トランスファーとも呼ばれる）という用語と、若いバイリンガル子供という用語の定義を要約する。若いバイリンガル子供の特定の構成におけるターゲット逸脱を調べた2つの研究について要約する。これらの構造における目標逸脱の別の解釈を検討します。統語論—語用論インターフェースが、若いバイリンガル子供の言語間影響の原因である可能性が高いが、さらなる研究が必要と結論付ける。

キーワード：言語間影響、構文語用論仮説、統語論—語用論インターフェース、トランスファー、構文、若いバイリンガル子供

1. Introduction

This essay starts by attempting to define the term crosslinguistic influence (also called transfer), and the term young bilingual children. Focusing on crosslinguistic influence in the domain of syntax, the essay moves on to introduce Hulk and Müller's (2000) formalization that is here termed the syntax-pragmatics hypothesis. An exploration of two studies examining target-deviance in certain constructions in young bilingual children follows. The essay then discusses alternative explanations for the target-deviance in these constructions. The concluding position is that the syntax-pragmatics interface is a probable cause of crosslinguistic influence in young bilingual children, but that more research is needed.

2. Definitions

Here I review definitions for key terms. First, I attempt to characterize the term crosslinguistic influence, which has also been known as transfer. Then I move on to the term young bilingual children.

2.1 Crosslinguistic influence

Sharwood Smith (1994) defined crosslinguistic influence as the influence of a learner's first language on their development of, and performance in, a target language. Without regard to first or second language, this essay defines crosslinguistic influence as influence of one or more languages on another language's development and performance. This essay focuses on crosslinguistic influence in the domain of syntax, but it should be noted that morphological (Nicoladis, 2002) and phonological (Paradis, 2001) crosslinguistic influence has also been reported.

2.2 Young bilingual children

Definitions for young bilingual children differ in terms of what ages count as young, and what exposure to more than one language counts as bilingualism. In line with Bialystok, Barac, Blaye, and Poulin-Dubois (2010), and Verhoeven (2007), among others, this essay assigns an upper age limit of five years to the term young bilingual children. Given this early cut-off, it is assumed that these children are learning their languages simultaneously.

3. Syntax-pragmatics hypothesis

This section discusses Hulk and Müller's (2000) syntax-pragmatics hypothesis. I provide some background context first, before examining their hypothesis.

3.1 Background

Research has demonstrated that young bilingual children develop distinct language systems for each of the languages that they learn (De Houwer, 1990; Deuchar & Quay, 2000; Paradis & Genesee, 1996; Pearson, Fernández, & Oller, 1995). The children's languages are held to develop broadly separately in their minds. Despite this presumption of separation, studies have shown that various forms of crosslinguistic influence occur (Hulk & Müller, 2000; Paradis & Navarro, 2003; Serratrice, 2007; Sorace & Serratrice, 2009).

The syntax-pragmatics interface as a probable cause of crosslinguistic influence in young bilingual children (Lee H. Alexander)

Crosslinguistic influence complicates our understanding of the development of two language systems in young bilingual children. In order to clarify our understanding of language acquisition in young bilingual children, researchers have attempted to delimit the conditions under which crosslinguistic influence arises (Paradis & Navarro, 2003). A prominent hypothesis for these conditions is the syntax-pragmatics hypothesis associated with Hulk and Müller (2000).

3.2 Hypothesis

Hulk and Müller (2000) and Müller and Hulk (2001), refining an idea expressed by Döpke (1998), propose that the complementizer domain (C-domain) plays a role in crosslinguistic influence in young bilingual children. The C-domain is the highest structural level in a clause in which syntactic elements such as complementizers (words that mark a clause as a sentence's subject or object) and illocutionary particles (particles that communicate intention) are integrated with discourse-pragmatic projections about topic and focus (Rizzi, 1997). This syntax-discourse interface has been linked to problems in other areas of language development, including in monolingual acquisition (Avrutin, 1999; Platzack, 2001; Tsimpli, Sorace, Heycock, & Filiaci, 2004).

Müller and Hulk (2001) concern themselves with negative interference, in which a bilingual child's pattern of acquisition is delayed relative to a typical monolingual child (although research suggests that delayed acquisition is not the only manifestation of crosslinguistic influence). Müller and Hulk hypothesize that a) crosslinguistic influence is determined by the interface of syntax and discourse pragmatics at the level of the C-domain; and that b) crosslinguistic influence occurs if the structures being acquired by the bilingual child are sufficiently similar at the surface level to allow for one or other of the underlying forms to be misanalysed. If a structure in one of the child's languages can be analysed in more than one way, and a corresponding structure in the other language can be analysed in just one of those ways, the hypothesis expects the single analysis to be applied to both languages, provided that the analyses integrate both syntactic and pragmatic elements. The resultant target-deviance in C-related constructions will be termed C-related errors.

4. Research

Here I summarize two studies examining target-deviance in certain constructions in young bilingual children. In turn, I examine a longitudinal study by Müller and Hulk (2001), and Paradis and Navarro's (2003) test of Hulk and Müller's syntax-pragmatics hypothesis.

4.1 Müller and Hulk (2001)

4.1.1 Study

Müller and Hulk's (2001) longitudinal study compared object realization in young monolingual Dutch-, French-, German-, and Italian-speaking children with three young bilingual children. One of the bilingual children was learning French and German simultaneously, another Dutch and French, and the other

German and Italian. Dutch and German (both Germanic languages) permit clause-initial object omission where that object is the pragmatic topic (termed topic drop). For example (Müller & Hulk, 2001, p. 3):

- Q: ... *Kommst Du mit zur Titanic?* 'Will you come along to
the Titanic?'
Ans: ... *0 hab ich schon gesehen.* 'I've already seen it.'
have I already seen

French and Italian (Romance languages) do not allow topic drop. However, Romance object clitics precede the verb, leaving an apparent null, or missing, object after the verb. For example, in the French phrase *Jean le voit*, meaning 'John sees him,' *voit* is the verb and *le* is an object clitic (Müller & Hulk, 2001). Thus, such sentences are potentially confusable with object omission. The three bilingual children that Müller and Hulk studied were each learning a Germanic and a Romance language. The Romance absence of postverbal objects in sentences containing object clitics could lead the bilingual children to erroneously conclude that their Romance language, like their Germanic language, allows object omission. Müller and Hulk tested this hypothesis by comparing the rate of object omission in the bilingual children's Romance language to the rate of object omission in monolingual speakers of the same Romance language. They found that, for both French and Italian, the bilingual children in their study exhibited a higher rate of object omission than the monolingual children did. Müller and Hulk (2001) attribute this higher rate of object omission to crosslinguistic influence from the Germanic languages to the Romance languages.

4.1.2 Critique

The object omission errors that Müller and Hulk (2001) reported are not unequivocally attributable to the interface of syntax and discourse pragmatics. While the researchers demonstrated a higher rate of object omission in the young bilingual children versus the monolingual children in their study, they did not control for the pragmatic acceptability of the omissions (Allen, 2001; Argyri & Sorace, 2007; Paradis & Navarro, 2003; Serratrice, Sorace, & Paoli, 2004). The null objects in the researchers' French and Italian data are semantically salient. The null objects refer to easily retrievable prior referents in the discourse. The study does not sufficiently illuminate the pragmatics side of the syntax-pragmatics hypothesis. Allen (2001) has noted that without thorough analysis of discourse-pragmatic factors affecting argument realization, it is difficult to build a persuasive case for crosslinguistic influence occurring at the syntax-pragmatics interface.

4.2 Paradis and Navarro (2003)

4.2.1 Study

Paradis and Navarro (2003) tested Hulk and Müller's syntax-pragmatics hypothesis. Their study concerned use of subjects in English and Spanish. English and Spanish are both SVO languages (sentences are usually formed in the order subject-verb-object, as in the English sentence 'I play tennis. '), but they differ

The syntax-pragmatics interface as a probable cause of crosslinguistic influence in young bilingual children (Lee H. Alexander)

in their treatment of subjects. Even where subjects are inferable from the context of the discourse, English syntax typically requires these subjects to be marked by a pronoun. Spanish is a null-subject language. It allows the canonical subject position to remain unfilled where acceptable in terms of discourse pragmatics. Use of overt subjects in Spanish is therefore a matter of the syntax-pragmatics interface, an area in which Hulk and Müller predict crosslinguistic influence will occur. Paradis and Navarro investigated overt subject use as a means to test Hulk and Müller's hypothesis.

Paradis and Navarro (2003) compared spontaneous language data of a young English-Spanish bilingual child with those of two young Spanish monolingual children, collected from the CHILDES database. They examined the ratio of overt subjects to null subjects used by the children in their study. They also looked at the discourse-pragmatic setting of the children's use of overt subjects to analyse discourse-pragmatic factors affecting argument realization, as suggested by Allen (2001). Further, Paradis and Navarro gave thought to an additional potential explanation for C-related errors; namely input. There are potential differences in the input that young bilingual children receive in each of their languages relative to the input that young monolingual children receive in the same language. If, for example, a bilingual child's parents usually use one language when they talk to each other, their native-nonnative conversation will form a part of the child's input. If the native-speaker parent has spent a long time outside their speech community, they might exhibit a contact variety of their language. The nonnative-speaker parent's language may itself contain crosslinguistic influence. Such input would not be expected in a monolingual context. Paradis and Navarro considered the possibility that C-related errors in young bilingual children could be directly caused by the input that they receive, instead of crosslinguistic influence. The researchers consequently examined the language data of the three children's parents for subject realization and discourse pragmatics in the same way that they looked at the children's data.

Paradis and Navarro (2003) found that the proportion of overt subjects used by the bilingual child was higher than the proportion used by the monolingual children, but that the difference was not great. However, their examination of the discourse pragmatics of overt subject use found a starker distinction between the bilingual child and the monolingual children. Moreover, the researchers found a clear difference between the bilingual child's parental input and the parental input of the monolingual children.

4.2.2 Critique

Paradis and Navarro's (2003) study only compared one bilingual child with two monolingual children: a total of three participants. Despite that caveat, it can be noted that Paradis and Navarro's results regarding the proportion of overt subjects support Müller and Hulk's (2001) findings. The results of Paradis and Navarro's analysis of discourse-pragmatic factors also add weight to Müller and Hulk's conclusion, shedding light on the pragmatics side of the syntax-pragmatics hypothesis. However, Paradis and Navarro's investigation of parental input opens the possibility that C-related errors are the direct result of the input that young bilingual children receive, instead of crosslinguistic influence. Therefore, Paradis and Navarro's

(2003) study only tentatively confirms Hulk and Müller's (2000) hypothesis.

5. Discussion

In this section I discuss the syntax-pragmatics interface as a probable cause of crosslinguistic influence in young bilingual children. I also consider alternative explanations for target-deviance in the examined constructions. Specifically, I discuss the role of input and processing resources.

5.1 Syntax-pragmatics interface

The syntax-pragmatics hypothesis has yet to be reliably confirmed. Research has demonstrated C-related errors such as target-deviant object realization and overuse of overt subjects in young bilingual children. Yet, the occurrence of errors related to the interface of syntax and discourse pragmatics cannot be attributed solely to crosslinguistic influence. Other potential causes of C-related errors in young bilingual children exist, namely input and processing resources.

5.2 Input

As Paradis and Navarro (2003) note, the characteristics of the input to which young bilingual children are exposed is a possible cause of C-related errors in young bilingual children. The input that young bilingual children receive is not the same as the input to which typical monolingual children are exposed. The input that bilingual children are exposed to differs compared to monolingual children in terms of both quality and quantity (Sorace & Serratrice, 2009). The input itself is potentially sufficient explanation for the target-deviance that has been observed in young bilingual children's grammars. Input from a young bilingual child's environment as a potential cause of C-related errors has yet to be ruled out.

5.3 Processing resources

Sorace and Serratrice (2009) discuss on-line (real-time) processing factors as a potential source of C-related errors. They submit that integrating syntactic elements with discourse-pragmatic projections should be more resource-intensive than simply retrieving syntactic knowledge. Since a bilingual person's languages remain constantly active to some extent (Green, 1998), it could be argued that the processing resources available to the bilingual mind are more limited than in the mind of a monolingual person. This limitation on bilingual processing could explain C-related errors in young bilingual children (Sorace & Serratrice, 2009). Sorace and Serratrice suggest that bilingual processing limitations could be the cause of young bilingual children's overuse of overt subjects in Paradis and Navarro's (2003) study.

If bilingual limitations on on-line processing are a cause of C-related errors in young bilingual children, it would be expected that the children's languages would be affected whether or not the structures being acquired are sufficiently similar at the surface level to allow for one or other of the underlying forms to be misanalysed (Sorace & Serratrice, 2009). Margaza and Bel (2006) studied subject realization in the Spanish of Greek adult learners. Subject omission is a feature of both Spanish and Greek. The Greek

The syntax-pragmatics interface as a probable cause of crosslinguistic influence in young bilingual children (Lee H. Alexander)

adults in Margaza and Bel's study exhibited a higher proportion of overt subjects in Spanish than monolingual Spanish and monolingual Greek adults. Their overuse of overt subjects in Spanish cannot be attributed to crosslinguistic influence from Greek, since subject realization in Greek is similar to Spanish. There are differences between adult second-language learners and young bilingual children, but Margaza and Bel's findings suggest that C-related errors need not necessarily be interpreted as stemming from crosslinguistic influence.

6. Conclusion

The syntax-discourse interface has been linked to target-deviance in young monolingual children as well as young bilingual children. Where we expect to find a quantitative difference in young bilingual children's C-related errors, it is not always found. Unsworth (2003) did not find evidence for crosslinguistic influence in her study of root infinitives in an English-German bilingual girl, despite the syntax-pragmatics hypothesis predicting that crosslinguistic influence should occur in this environment. Where we do find a quantitative difference in young bilingual children, if this difference simply mirrors the same difference in the input relative to monolingual norms, we cannot reliably attribute the difference to crosslinguistic influence. Even where a quantitative difference in young bilingual children's C-related errors can be isolated from the input, we are not able to unequivocally ascribe those errors to crosslinguistic influence. As suggested by Margaza and Bel's (2006) findings, problems at the syntax-pragmatics interface could be attributable to processing limitations (Sorace & Serratrice, 2009). It is difficult to determine if the term C-related errors labels an observable phenomenon. Hulk and Müller's (2000) offered formalization of crosslinguistic influence in young bilingual children deserves praise for the role it has played in engendering empirical tests of crosslinguistic influence's foundations. As the body of research grows, the case grows for crosslinguistic influence in young bilingual children being caused by the interface of syntax and discourse pragmatics. Despite the above-mentioned caveats, this essay takes the position that the syntax-pragmatics interface is a probable cause of crosslinguistic influence in young bilingual children. However, more work is needed to clarify the causes of crosslinguistic influence in young bilingual children.

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