

Crosslinguistic influence: What happens across modality?

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Goal

Kids of Deaf Adults (KODAs) are bimodal bilinguals (they master a spoken and a sign language). This bimodality allows them to produce both languages simultaneously, they code-blend (Emmorey, 2005). Thus, they differ with respect to unimodal bilinguals in terms of the processing load associated with suppression/inhibition. Does this difference impact the pattern of crosslinguistic influences (CLI) observable across modality? We shall address this question focusing on the distribution of subject realization in prodrop-non prodrop language pairs in bimodal bilingualism compared to unimodal bilingualism.

Background

1. French Sign Language (LSF) allows null subjects (NS)

	Chinese	Italian	Finnish	German	French	LSF
<i>Subject omissibility</i>	yes	yes	Partial	Partial	no	yes
<i>Null expletives</i>	yes	yes	yes	yes	no	yes
<i>NS linked to rich inflection</i>	no	yes	yes & no	no	no	no
<i>Object omissibility</i>	yes	no	no	no	no	yes
<i>Availability of sloppy reading</i>	yes	no	yes	no	no	yes

⇒ LSF is a radical prodrop language

3. How to explain CLI?

Qualitative differences between monolinguals and bilinguals grammatical representations.

Prediction:

Bimodals  Unimodals

Processing overload due to the interfering structures of one language.

Prediction:

Bimodals  Unimodals

2. Crosslinguistic influence: the overlapping analysis

Bilinguals develop two independent linguistic systems but some areas are sensitive to CLI, like subject realization [8,9,10].

Italian
Overt Subjects > Monolinguals

English
Overt subject = Monolinguals

Hulk & Müller (2001): When a structure is possible in language A and obligatory in language B, children will harmonize by producing the same structure in the two languages.

⇒ Unidirectional CLI from the non prodrop to the prodrop language

4. Subject realization in bimodal bilingualism

Koulidobrova (2012) studied subject realization in two **American Sign Language (ASL)- English** bilinguals (from 1;11 to 4;11).

ASL
Overt Subjects = Monolinguals

English
Overt subject < Monolinguals

⇒ The only study on bimodals present an inverted path of influence

A case study: a French-LSF KODA

Methods

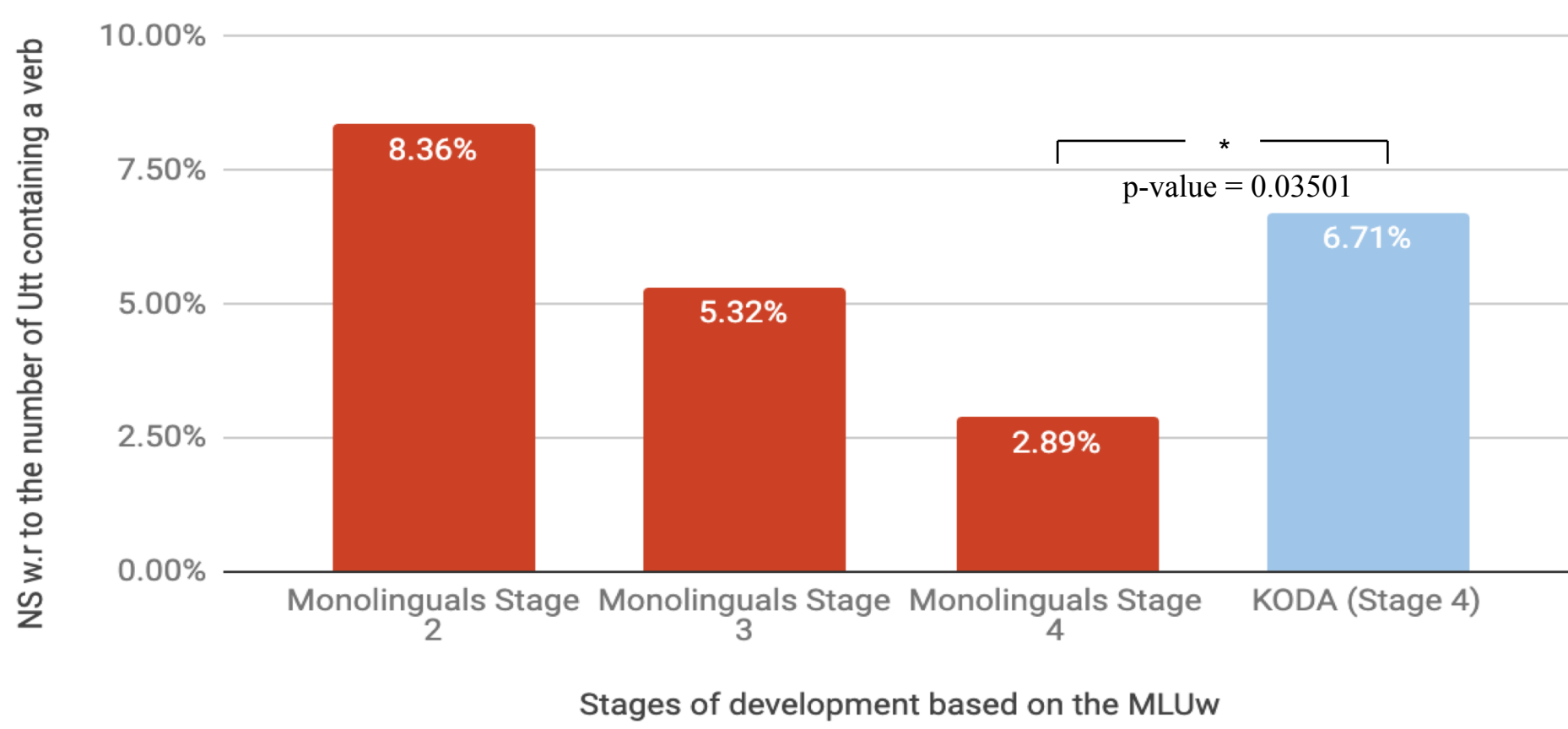
The case study

Recording of spontaneous speech of a French-LSF Koda aged 4;08 y.o.a. for an hour. We applied three Storytelling tasks, a semi-structured interview and a specific task for expletives. Finally, the data was transcribed using the software ELAN.

Control Population

Productions of 7 French monolingual children (3 girls, 4 boys) from 3 to 5 years old were extracted from the Paris corpus [6] and the Yamaguchi corpus [11]. Then, we divided them into stages of development according to the Mean Length of Utterance by word (MLU_w) [8].

Frequency of null subjects depending on linguistic developmental stages.



Qualitative differences:

- (1) mon grand frère il sait comment __ s'appelle ?
'My older brother he knows how (he) is called'
⇒ Embedded clause
- (2) comment __ s'appellent ?
'How are (they) called?'
⇒ Wh-question

NS in these contexts are marginal in monolinguals but observed in the bimodal data.

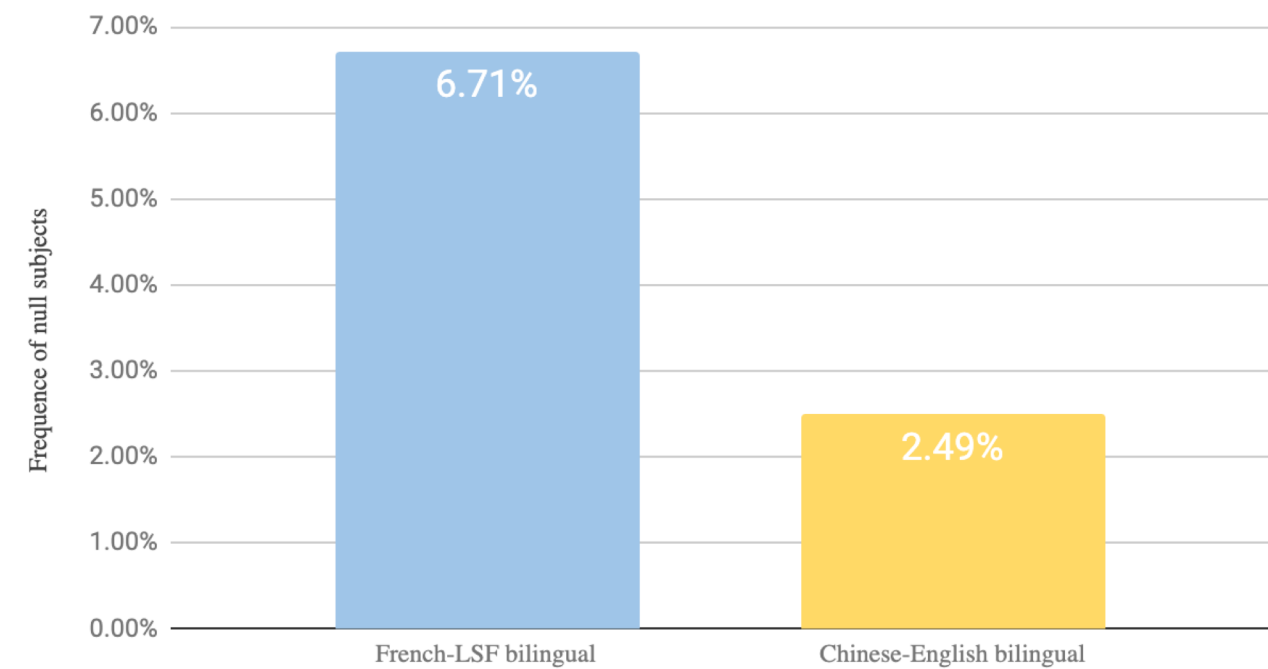
⇒ The KODA omit more subjects in French compared to paired monolinguals

Excluding some possible explanations

An effect of prodrop parameter?

Most studies focus on Italian-English bilingualism. However, both ASL and LSF are radical pro-drop and should be compared to Chinese-English bilingualism. It could be that the inverted pattern is due to the type of null subject, **not**, to bimodality. Based on the CHCC corpus [4], we studied the production of one child matched in age and MLUw.

Frequency of null subjects produced by bilinguals at stage IV

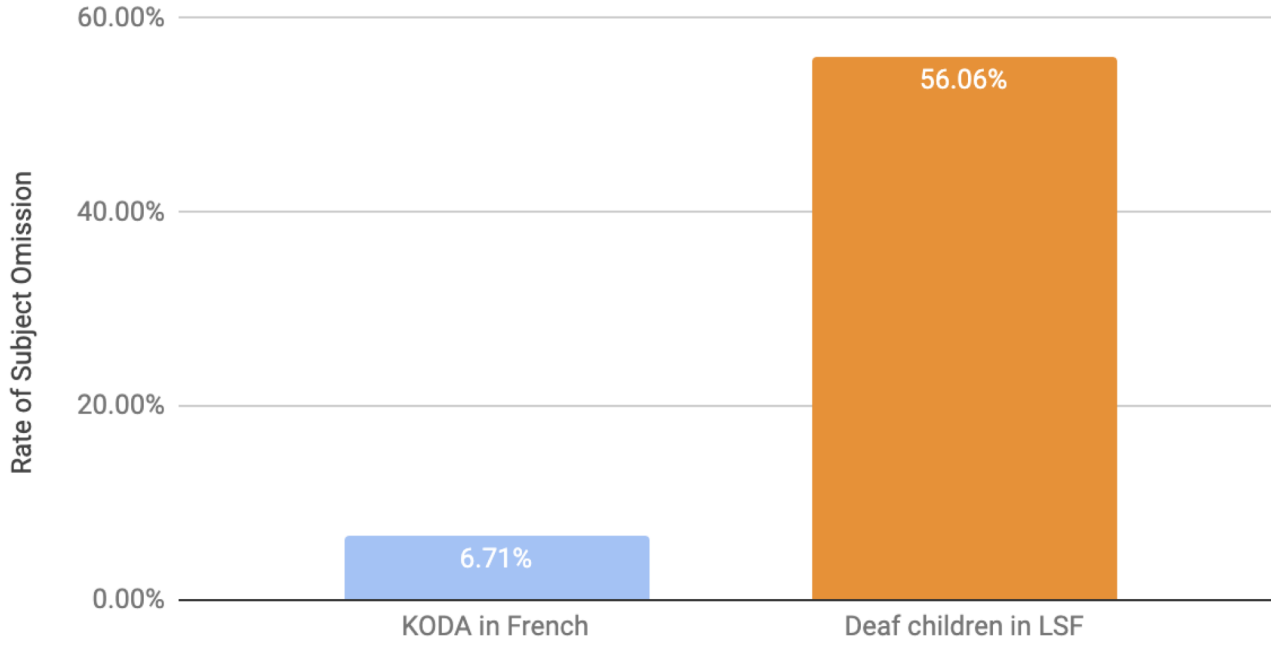


⇒ NO, very different rates of NS in the non prodrop language between the KODA and a Chinese-English bilingual.

A transfer from LSF to French?

Another possibility is that KODAs transfer the LSF rule for argument omission into French: the rate of subject omission in French should be comparable to that of LSF monolinguals. Based on the Signes en Famille corpus [1], we studied the production of two children matched in age.

Frequency of null subjects in the KODA French compared to Deaf Children in LSF



⇒ NO, there is nothing comparable between the rate of NS in the KODA's French and that of Deaf children in LSF.

Cross modality is the factor

LSF

French

Our results replicate what has been found in ASL-English bilinguals and contrast with what was observed for unimodal bilinguals.

This difference does not seem to be explainable by the type of null subject language involved, since no comparable effect is found in English-Chinese bilinguals.

⇒ Crossmodality has an effect on the direction of CLI

What if it was code blending?

Another possibility is that what we observe here is not really subject omission. Rather, capitalizing on bimodality and simultaneous availability of two separate articulatory channels, the child provides the subject in the "inhibited" language (i.e. LSF).

- (3) French: s'appelle Olaf.
LSF: POINT_{hold}
'He is called Olaf'

⇒ 15 to 20% of Null Subjects are produced with pointing.

The 'Body as the Subject Theory' (Meir et al. 2007) argues that the body of the signer systematically realizes the subject argument. If this is what happens here as well, we would expect null subjects to appear more with verbs whose equivalent in LSF is body-anchored (i.e. produced on the body).

LSF equivalent verbs	Frequency of NS
Body-anchored verbs	10.66%
Verbs in the neutral space	1.72%

⇒ Subjects are more frequently omitted when the LSF equivalent verb is body-anchored.

Crossmodality has an effect on the direction of CLI, however codeblending should also be taken into consideration: both hands/body and speech should always be observed.

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