

French as a foreign language in the Netherlands

An L2 or an L3? A study on crosslinguistic influences from Dutch and English

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Exposure to English is more extensive in today's society than to French. In this study we investigated crosslinguistic influences from Dutch and/or English to language performances in French as a foreign language, while controlling for language proficiency in French, English and Dutch, and exposure to English.

We tested Dutch learners of French ($n = 65$) with respect to the acceptability of reduced relative clauses and attachment preferences in full relative clauses. The results showed crosslinguistic influence in the acceptability task and the preference task from English and Dutch respectively. Furthermore, language proficiency in English seems to affect attachment preferences in French. We concluded that these findings support the Linguistic Proximity Model (Westergaard et al. 2017) and that French in Dutch secondary education might be a third language, instead of a second language.

Keywords: Transfer, L3 acquisition, French, Foreign Language Education

1. Introduction

From a psycholinguistic perspective, second languages (L2) have been shown to be affected by the transfer of the first language's (L1) linguistic characteristics. Within such a context, transfer has been defined as a psychological process in which L2 learners incorporate L1 features into the L2 (Kellerman 1977). Recent studies on transfer showed that foreign languages such as French, are not always L2's in secondary education (Stadt et al. 2018; Stadt 2019). These studies focused on Dutch learners of French who were enrolled in a Dutch-English bilingual program. In such a program, the quantity of exposure to English as a foreign lan-

guage is very high as compared to the exposure to French. In this population of language learners, Stadt et al. (2018) found crosslinguistic influences from both Dutch and English to French and that exposure to English affects crosslinguistic influence from English to French. Based on these findings, French may be taken as a third language (L3) in Dutch-English bilingual education, while English may be taken as an L2. For regular secondary education there are also indications that both Dutch and English are sources of transfer in the acquisition of French (e.g., Stadt et al. 2016). In this study students enrolled in a Dutch-English bilingual program and regular students were compared with respect to their knowledge of verb movement constructions in L3 French. The results did not reveal significant differences between both groups when it comes to transfer from English. The authors explained this surprising finding by the fact that English is ubiquitous in everyday life. Consequently, regular students are highly exposed to English as compared to French. Results reported in Stadt (2019) revealed that transfer from background languages is affected by the amount of exposure received (and not language proficiency), the type of education (regular vs. bilingual education) and the learners' developmental stage in L3 acquisition.

Based on these indications, we may predict that French as a foreign language is also an L3 in regular secondary education in the Netherlands. The aim of this paper is to test this prediction by focusing on Dutch learners of French enrolled in a regular program of secondary education.

In L3 acquisition literature the source of transfer is under debate. The L1 Transfer Scenario (Ranong & Leung 2009; Hermas 2010) claims that only the L1 can be the source of transfer in L3 acquisition, while the L2 Status Factor (Bardel & Falk 2007) claims that the L2 is the preferred language (over the L1) as a source of transfer in L3 acquisition since the L2 and the L3 have the same foreign language status. In addition, the Linguistic Proximity Model (LPM) (Westergaard et al. 2017) claims that both the L1 and L2 can be a source of transfer in L3 acquisition, but that the selection of L1 or L2 depends upon the structural similarities between the L3 and previously acquired languages.

In this paper we investigate the source of transfer (i.e., Dutch as an L1 and/or English as an L2) by focusing on attachment preferences in full relative clauses and the acceptability of reduced relative clauses in French as a foreign language. We will control for exposure to English, and proficiency in English, Dutch and French.

2. Source of transfer in L3 acquisition

Evidence for the L1 Transfer Scenario has been described in Ranong & Leung (2009) and Hermas (2010) among others. Ranong & Leung (2009) tested L3 learners of Mandarin, with Thais as their L1 and English as their L2, by means of an interpretation task focusing on the interpretation of null objects in Mandarin. The results showed that the interpretation of null objects in L3 Mandarin were significantly more influenced by the learners' L1. In a similar vein, Hermas (2010) tested L3 learners of English, with Arabic as their L1 and French as their L2, by means of an acceptability task and a preference task. These tasks focused on the syntactic phenomenon of verb raising which exists in French and Arabic, but not in English. The results showed that Arabic affected the task performances in English more than French.

However, Bardel & Falk (2007) and Stadt et al. (2016) provided evidence for the L2 Status Factor. Bardel & Falk (2007) focused on negation placements in V2 vs. non-V2 languages and tested L3 learners of Swedish or Dutch, with an L1 exhibiting V2 and an L2 as non-V2 language or an L1 as non-V2 language and an L2 exhibiting V2. The results showed that negation placements were affected by the L2, even when grammatical constructions did not show resemblances with the L3. By means of a grammaticality judgment task targeting verb movement constructions in L3 French Stadt et al. (2016) showed that more transfer from the L2 occurred in the bilingual group than transfer from the L1 and that transfer was moderated by the quantity of exposure to the L2.

Transfer from both the L1 and L2 has been demonstrated in Westergaard et al. (2017) for instance, supporting the LPM. In this study they investigated transfer effects in grammaticality judgment task performances focusing on verb-second constructions in Norwegian and subject-auxiliary constructions in English. The participants were L1 Norwegian-L2 Russian learners of L3 English and two control groups of Norwegian and Russian monolinguals. The findings showed that the Norwegian monolinguals accepted incorrect English sentences with verb-second movement more often than the bilinguals. Furthermore, the bilinguals' task accuracy was lower than that of the Russian monolinguals. These results suggested that both the L1 and the L2 influence L3 acquisition.

3. Reduced relative clauses and attachment preferences in Dutch, English and French

As the focus of this paper is on potential transfer in the acceptability of reduced relative clauses and attachment preferences in native speakers of Dutch with,

potentially, English as an L2 and French as an L3, we will present the structural differences between these linguistic aspects in Dutch, English and French.

3.1 Structural differences

The reason for selecting these grammatical aspects is that both the use of reduced relative clauses and attachment preferences are structural aspects differing between Dutch, English and French. With respect to the use of reduced relative clauses (see (1)), English and French exhibit this type of relative clauses, while Dutch does not.

- | | | |
|--------|---|---------|
| (1) a. | The ship destroyed during the war was old | English |
| b. | <i>Le navire détruit pendant la guerre était vieux</i>
The ship destroyed during the war was old | French |
| c. | * <i>Het schip vernietigd tijdens de oorlog was oud</i>
*The ship destroyed during the war was old | Dutch |

Rah & Adone (2010) showed that advanced L2 learners are sensitive to reduced relative ambiguity. They focused on judgments of morphologically ambiguous ('The brown sparrow *noticed* on an upper branch pecked at an insect', p.90) vs. morphologically non-ambiguous ('The brown sparrow *seen* by the hungry cat pecked at an insect', p.90) verbs in relative clause constructions. Whereas *seen* is a morphologically distinct form from *saw* in past tense, *noticed* is a morphologically ambiguous form targeting past and perfect tense. Based on grammaticality judgments from German learners of English, the authors found high accuracy in correct judgments of grammatical vs. ungrammatical reduced relative clauses. They also found that reduced relatives with morphologically ambiguous verbs were judged incorrectly more often than those with morphologically unambiguous verbs. These results were explained by the fact that ambiguities are often avoided in normal conversations and, thus, that they are less acceptable. Freck-Mestre (2004) argued that also transfer from the L1 affects the resolution of relative clause ambiguity. Morphologically ambiguous verbs can be interpreted as main verbs and past participles during sentence processing. Morphologically non-ambiguous verbs, however, can only be interpreted as past participles. In contrast to the garden path effects observed in Rah & Adone (2010), this study did not show any garden path effect in English learners of French regarding main clause vs. reduced relative clause sentences, when the complicated structure is similar in the learner's L1 and the L2. This means that transfer from the L1 also seems to play a role in relative clause ambiguity.

Regarding attachment preferences in full relative clauses (see (2)), L1 speakers of Dutch and French prefer to attach the relative clause to the first noun of the

NP1-NP2 construction (i.e., high attachment preference) (Brybaert & Mitchell 1996), while L1 speakers of English prefer to attach the relative clause to the second noun of the NP1-NP2 construction (i.e., low attachment preference) (Frazier & Clifton 1996).

- (2) a. He knows the therapist-NP1 of his uncle-NP2 who lives in Africa English
 b. *Il connaît le thérapeute-NP1 de son oncle-NP2 qui habite en Afrique* French
 c. *Hij kent de therapeut-NP1 van zijn oom-NP2 die in Afrika woont* Dutch

In Table 1 an overview of the structural differences and resemblances between Dutch, English and French is given.

Table 1. Structural features for reduced relative clauses and attachment preferences in Dutch, English and French

	Reduced relative clause	High attachment preference	Low attachment preference
Dutch	-	+	-
English	+	-	+
French	+	+	-

3.2 Research questions and hypotheses

In this study we will address the following research questions:

1. Which language is the source of transfer in the acceptability of reduced relative clauses and attachment preferences in French as a foreign language, when controlling for exposure to English, and proficiency in English, Dutch and French?
2. What is the psycholinguistic status (L2 or L3) of French as a foreign language in regular secondary education?

We hypothesize that

- i. French as a foreign language is an L3, rather than an L2, in regular secondary education
- ii. the acceptability of reduced relative clauses with a morphologically non-ambiguous form is lower than the acceptability of reduced relative clauses with a morphologically ambiguous form if the L1 Transfer Scenario is correct
- iii. the acceptability of reduced relative clauses with a morphologically ambiguous form is lower than the acceptability of reduced relative clauses with a morphologically non-ambiguous form if either the L2 Status Factor or the LPM is correct

- iv. high attachment preferences are more frequent than low attachment preferences if either the L1 Transfer Scenario or the LPM is correct
- v. low attachment preferences are more frequent than high attachment preferences if the L2 Status Factor is correct

4. Method

4.1 Participants

The participants ($n=65$; $M_{\text{age}}=16.2$ years, $SD_{\text{age}}=1.0$) were Dutch learners of French at a mainstream secondary school for pre-university education. Forty-four women and twenty-one men participated in this study and were tested on their proficiency level in French by means of standardized reading tests of the final exam. They had a B1 or B2 level of proficiency in this language and had Dutch as their L1. All participants gave written informed consent for the experiment. In case of a minor, one of the parents co-signed the consent form. They had also to confirm that they did not have any language impairment.

4.2 Materials and Procedures

The materials consisted of an acceptability task and an attachment preference task to test the participants' acceptability of reduced relative clauses and preference for either high or low attachment of relative clauses respectively. All test items are available in the OSF repository at <https://osf.io/dgubc/>.

Acceptability task

The task was designed in line with the materials used in Rah & Adone (2010) and comprised 50 sentences with reduced relative clause constructions. These sentences were divided in two conditions: morphologically ambiguous past participle (25 sentences) and morphologically non-ambiguous past participle (25 sentences). See (3) and (4) respectively. The translation in English was added for this paper.

(3) *Le navire détruit pendant la guerre était vieux* ambiguous participle
 'The ship destroyed during the war was old'

(4) *Le navire réparé pendant la guerre était vieux* non-ambiguous participle
 'The ship repaired during the war was old'

The first noun of each sentence was a masculine singular noun to avoid past participle agreement. The reduced relative clause consisted of a past participle followed by an adverbial complement. All sentences contained 6 or 7 words which

were taken from the participants' educational materials. Furthermore, the word order was kept consistent in both conditions to avoid word-order effects on the processing difficulty of relative clauses (cf. Frenc-Mestre 2004). Since learners of French were shown to be sensitive to morphological cues in verbs (Carrasco-Ortiz & Frenc-Mestre 2014), main clause vs. reduced relative clause readings were triggered by means of ambiguous inflections and non-ambiguous inflections respectively. The participants were asked to rate the grammatical acceptability of each sentence on a scale of 1 to 10, where 1 was completely unacceptable and 10 was completely acceptable. The presentation order of test items was counterbalanced to minimize the effects of confounding factors (e.g., sequence and order effects) on the test performances, resulting in three versions of the task.

Attachment preference task

The task consisted of 30 sentences containing a nominal phrase (i.e., NP1 of NP2) followed by a full relative clause. In (5) an example of a test item is given. The glosses and translation in English have been added for this paper.

- (5) *Elle rencontre le secrétaire du patron qui est gentil*
 She meets the secretary-NP1 of the boss-NP2 who is friendly
 'She meets the secretary of the boss who is friendly'

Both the NP1 and NP2 were animate nouns in a singular context. The length of each sentence was between 8 and 10 words, and the relative clause yielded one verb and one complement since the length of relative clauses has been shown to affect attachment preferences (Swets et al. 2008). As for the acceptability task the words selected for the attachment preferences task were taken from the participants' educational materials. Participants were asked to answer the question *who is (friendly)?* in order to select the noun (NP1 or NP2) which they prefer the relative clause is attached to. Both nouns were underlined to highlight the words of interest. The presentation order of test items was counterbalanced resulting in three versions of the task.

For the control variables (i.e., exposure to English, and proficiency in English, Dutch and French) we used a questionnaire to measure the participant's exposure to English and standardized reading tests of the final exam to measure the participant's proficiency. All tests were administered on paper, in a classroom at the participants' school and under the supervision of a teacher.

4.3 Data analysis

The scores for the acceptability task were expressed in terms of acceptability rates (1 to 10) and for the preference task in terms of dummy values (0 for low attach-

ment preference and 1 for high attachment preference). For the proficiency tests the scores were proficiency rates between 1 and 10, where 1 represented very low and 10 very high. The questionnaire's scores were expressed in minutes per week during which the participant was exposed to English. For the acceptability task and the preference task a reliability test was conducted. The cronbach's alpha for both tasks revealed to be $\alpha = .93$ and $\alpha = .71$ respectively, indicating that they were reliable (George & Mallery 2003). To test the assumption of normality for the scores of these tasks, the exposition questionnaire and the reading tests a Kolmogorov-Smirnov test was conducted. This test revealed that all test conditions of the preference task and the acceptability task were normally distributed ($p > .05$). The scores of the questionnaire and reading test in English were also normally distributed, while the scores of the reading tests in French and Dutch were not ($p < .05$). Therefore, we conducted paired samples *t*-tests to analyze differences between the acceptability of reduced relative clauses containing a morphologically ambiguous vs. morphologically non-ambiguous verb in the acceptability task and between the preference for low attachments vs. high attachments in the preference task data.

To account for potential effects of the control variables on the preference and acceptability test scores we conducted 4 bootstrapped multiple regression analyses on each test condition as a dependent variable. The independent variables were the control variables. We calculated the VIP values to test whether the assumption of multicollinearity was met. Since all VIP values were below 10, this assumption was met (Bowerman & O'Connell 1990). For all statistical analyses the level of significance was set at .05. Data and analyses are available in the OSF repository at <https://osf.io/dgubc/>.

5. Results

Table 2 lists the descriptive data for all tasks. Five parameter statistics have been reported since not all data were normally distributed.

For the acceptability task the paired samples *t*-test revealed a significant difference between the acceptability of reduced relative clauses containing a morphologically ambiguous vs. morphologically non-ambiguous verb ($t(64) = -2.21$; $p = 0.03$). Reduced relative clauses containing a morphologically non-ambiguous verb were accepted more than reduced relative clauses containing a morphologically ambiguous verb. For the attachment preference task the paired samples *t*-test revealed a significant difference between high vs. low attachment preferences ($t(64) = 3.8$; $p < 0.001$). More specifically, high attachments were preferred to low attachments.

Table 2. Five parameter statistics for acceptability task, attachment preference task, proficiency tasks for Dutch, English and French, and Exposure questionnaire

		Maximum	Upper quartile	Median	Lower quartile	Minimum
Acceptability reduced relative clauses	Morphologically ambiguous	9.0	7.6	7.0	6.3	4.7
	Morphologically non-ambiguous	10.0	7.9	7.1	6.3	5.0
Attachment preference	High attachment preference	25.0	20.0	17.0	14.0	6.0
	Low attachment preference	24.0	16.0	13.0	10.0	5.0
Proficiency English		9.4	7.5	6.8	5.9	3.8
Proficiency French		10.0	9.3	8.5	7.0	4.0
Proficiency Dutch		9.1	8.4	7.2	6.4	5.5
Exposure to English		47.8	29.1	19.8	14.4	7.8

In Table 3–6 we reported the outcomes of the bootstrapped multiple regression analyses. r represents the correlation coefficient and β represents the regression weight indicating how much the contribution of a particular variable is to the statistical model. Variables with relatively high weights contribute more to the statistical model than those with relatively low weights. The explained variance indicates the percentage of statistical variance in the model that can be explained by the set of variables included.

Table 3. Pearson correlations and standardized regression weights for the acceptability scores of morphologically ambiguous verbs and the control variables ($\alpha < .05$; two-tailed)

Dependent variable	Explained variance	Exposure English	Proficiency English	Proficiency Dutch	Proficiency French
Morph.ambiguous verb	6%				
r		.00	.20	.06	.20
β		.00	.15	.05	.15

* $p < .05$; model significance: $p = .41$

Table 4. Pearson correlations and standardized regression weights for the acceptability scores of morphologically non-ambiguous verbs and the control variables ($\alpha < .05$; two-tailed)

Dependent variable	Explained variance	Exposure English	Proficiency English	Proficiency Dutch	Proficiency French
Morph.non-ambiguous verb	6%				
<i>r</i>		.00	.16	.09	.20
β		-.02	.11	-.10	.16

* $p < .05$; model significance: $p = .45$ **Table 5.** Pearson correlations and standardized regression weights for the high attachment preference scores and the control variables ($\alpha < .05$; two-tailed)

Dependent variable	Explained variance	Exposure English	Proficiency English	Proficiency Dutch	Proficiency French
High attachment	13%				
<i>r</i>		.04	-.34	-.05	-.05
β		.09	-.39*	-.02	.10

* $p < .05$; model significance: $p = .07$ **Table 6.** Pearson correlations and standardized regression weights for the low attachment preference scores and the control variables ($\alpha < .05$; two-tailed)

Dependent variable	Explained variance	Exposure English	Proficiency English	Proficiency Dutch	Proficiency French
Low attachment	13%				
<i>r</i>		-.04	.34	.05	.05
β		-.09	.39*	.02	-.10

* $p < .05$; model significance: $p = .07$

No correlations were observed between the acceptability of reduced relative clauses and the control variables in Table 3 and 4. In Table 5 and 6 a significant correlation between attachment preferences and language proficiency in English can be observed. More precisely, more low attachments were preferred when the

participant's proficiency in English was higher. However, the regression model did not reach significance.

6. Discussion and conclusions

Regarding the acceptability of reduced relative clauses, reduced relative clauses containing a morphologically non-ambiguous verb were accepted more than reduced relative clauses containing a morphologically ambiguous verb. Based on transfer effects found in *Frenck-Mestre (2004)* and the fact that the learners' L1 does not exhibit reduced relative clauses, English can be taken as a source of transfer. In contrast to Dutch, English exhibits reduced relative clauses (with morphologically non-ambiguous verbs). In this respect, both the L2 Status Factor (*Bardel & Falk 2007*) and the LPM (*Westergaard et al. 2017*), but not the L1 Transfer Scenario (*Ranong & Leung 2009*), may explain this finding. It is noteworthy that the participants' performances may also have been influenced by other factors than transfer such as the avoidance of ambiguities in normal conversations (*Rah & Adone 2010*) or processing differences between regular and irregular verbs used in our test items (*Birdsong & Flege 2001*).

The results also showed that in Dutch learners of French high attachments were preferred to low attachments in French full relative clauses. From a transfer perspective the learners' L1 can be taken as the source of transfer. This may support both the L1 Transfer Scenario and the LPM, but not the L2 Status Factor. These results are in line with the hypotheses iv. and iii., but not with v. and ii. As English and French exhibit structural similarities regarding reduced relative clauses and, Dutch and French exhibit structural similarities when it comes to attachment preferences, the selection of the source of transfer (Dutch and English) in the acquisition of French by these particular language learners seems to be affected by structural similarities. Therefore, the LPM can best explain our results. In our study we did not control for the learners' knowledge on attachment preferences in these languages, which may have influenced the task performances.

In line with *Stadt et al. (2016)*, English seems to influence the acquisition of French as a foreign language in regular secondary education. The observation that the learners' language proficiency in English might affect attachment preferences in French supports the idea that crosslinguistic influence from English to French takes place in this population of language learners. This contrasts with the finding presented in *Stadt (2019)* that it is language exposure rather than language proficiency that affects transfer. It is important to note that the regression model for attachment preferences did not reach significance, but was near to the significance level. Therefore, the observed correlation between language profi-

ciency in English and attachment preferences in French needs to be interpreted carefully. Statistical significance being near to the significance level does, however, not mean that there is no effect, but that the potential effect did not show up in the particular study (Mulder 2020). Further research needs to be done to investigate the potential effect of language proficiency in English on the acquisition of French as a foreign language. Potential transfer effects from English to attachment preferences in the L1 may also be of interest for further research to strengthen our knowledge of transfer directions. Overall, this study demonstrates that French may be considered as an L3, rather than an L2, in regular secondary education, confirming hypothesis i. In French language education not only the learners' L1 needs to be considered as a source of transfer, but also English.

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