

# L2-induced changes in the L1 of Germans living in the Netherlands\*

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*This article reports on an investigation of changes in the grammatical competence of Germans living in the Netherlands. The participants (N = 52) were asked to give their judgments on the grammaticality of infinitive clauses in German. The judgments of this group were compared to those of a control group that lived in Germany and did not have contact with Dutch. The results revealed significant changes in the participants' L1, which indicate transfer from the cognate L2, Dutch. Furthermore, it could be demonstrated that L2-induced changes can occur after a relatively short period of time, at least in the case of cognate languages.*

## 1. Introduction

It has frequently been reported that speakers can undergo language attrition or language shift in their mother tongue after they have been living abroad for a considerable period of time. Most cases of language shift described in the literature (e.g. Smits, 1996; Hulsen, 2000) involve first language attrition among speakers who have moved to places that are geographically quite remote from their home country (such as German/Dutch communities in Australia or in the USA). Furthermore, these groups of immigrants generally intended to settle in their new environment and begin a new life. It is therefore not surprising that the immigrants' mother tongue (L1) has undergone changes.

In what follows, we want to discuss L1 attrition in the case of German students living in the Netherlands. This group of speakers is different from the immigrant groups referred to in the previous paragraph in a number of ways. A first striking difference with regard to most settings which have been studied in the past is that the students in our investigation generally do not intend to stay in the Netherlands for a longer period of time: in most cases, they plan to return to Germany after they have received their degree. This group is also special in that they have plenty of opportunities to travel back and forth between Germany and the Netherlands. Furthermore, they have access to the German language via the media. Another difference with respect to earlier studies is that in our case the level of education of the participants and the control group

could be held constant, since all participants are (former) university students.<sup>1</sup> Taking into account the specific background of the population investigated in this study, the question arises to which extent a speaker's mother tongue can undergo changes under the circumstances described here.

Language attrition generally occurs in situations where a formerly competent speaker is deprived of linguistic input in his L1 while the amount of input in a second language steadily increases, i.e. within an immigration context. Researchers have approached first language attrition from different angles, including the perspectives of regression, simplification, interlanguage and universal grammar (see Köpke and Schmid, 2004 for an overview). This paper proceeds from an interlanguage point of view: we discuss the changes that occur in the speaker's mother tongue due to interference from the second language (L2). This perspective on language attrition is inspired by Sharwood Smith (1983), who assumes that transfer is one of the most prominent sources for language attrition. Seliger (1991: 237) suggested that the L2 could serve as a source of "indirect positive evidence" for the bilingual individual, causing more complex and more narrowly distributed rules of the L1 to be replaced by less complex and more widely distributed L2 rules.

The language pair German and Dutch provides interesting ground for research on cross-linguistic transfer. Research from the 1980s and 1990s (Andersen, 1984; Odlin, 1989; Kellermann, 1995) suggests that learners are more likely to experience transfer from their

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<sup>1</sup> As it is not yet clear what the effect of education is on language attrition (Köpke and Schmid, 2004), it is important to keep this factor constant.

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mother tongue to the L2 when these two are closely related than when they are less related. It is reasonable to assume that this also holds for transfer from the L2 to the L1.

Our study is based on earlier work by Brons-Albert (1992, 1994). On the basis of analyses of spontaneous conversations and an experimental study, Brons-Albert showed that the two cognate languages were strongly interwoven in her German participants who had resided in the Netherlands for a period of time varying between 0.5 and 25 years. Brons-Albert found interference effects from L2 Dutch on L1 German in virtually all linguistic domains after periods of time as short as 6 months. About two-thirds of the mistakes occurred in the lexical domain. This can be either information that is believed to be stored in the lexicon itself (e.g. idioms) or, following Levelt (1989), syntactic information that is activated via the lexicon. However, the core elements of lexical information (gender, case and inflection) were not influenced. The most common mistake Brons-Albert found in her corpus concerned the overgeneralization of the German complementizer *um* as a result of influence from Dutch *om*, which fulfills the same function but is used in more contexts than its German equivalent (see section 2 below).

The overgeneralization of the complementizer *um* reported by Brons-Albert formed the basis for our study. Our intention was to investigate whether this overgeneralization reported in spontaneous speech could also be found in tasks in which the subjects are explicitly asked about the grammaticality of constructions containing the complementizer *um*. Furthermore, we wanted to investigate whether this overgeneralization pertains to all functions of *um*. The methodology used for these purposes was a grammaticality judgment task.

## 2. Infinitival constructions in Dutch and German

There is both variation and overlap in the use of German and Dutch infinitival constructions. The German complementizer is used in a subset of the cases where the Dutch complementizer is used. In both languages, the complementizer must obligatorily be used when the clause introduced by the complementizer expresses the purpose or goal of the proposition in the main clause (see examples (1) and (2)).

- (1) Markus treibt Sport, um fit zu bleiben. (German)  
Markus plays sports COMP fit to remain  
“Markus plays sports in order to remain fit.”
- (2) Hij werkt om geld te hebben. (Dutch)  
he works COMP money to have  
“He works in order to have money.”

Furthermore, the complementizer can occasionally be used in so-called “prospective” constructions in both Dutch (3b) and German (3a). The infinitive clause is

used to describe a state of affairs that has not yet been realized. There is no reason–consequence/purpose relationship between the main and the independent clause.

- (3) a. Karl ging in die Stadt, um dort von  
b. Karel ging de stad in om daar door  
Karl went the city in COMP there by  
einem Auto überfahren zu werden. (German)  
een auto te worden overreden. (Dutch)  
a car.DAT to become overrun  
“Karl went to the city where he got run over by a car.” (Eisenberg et al., 1998, p. 637)

As this use is not accepted by all native speakers of the respective languages, this construction is not further considered in this article. Furthermore, German *um* and Dutch *om* are used obligatorily in a number of phrases such as German *um die Wahrheit zu sagen* and Dutch *om de waarheid te zeggen* “to be honest”. These uses, which coincide in the two languages, are not further dealt with in this paper.

According to the standard grammars (e.g. Eisenberg, 1998), the use of the German complementizer *um* is ungrammatical in all other cases. It should be noted, however, that *um* is sometimes used in colloquial speech when there is no strict purpose–consequence relationship between the subordinate and the main clause, such as in (4):

- (4) Ich habe keine Zeit, (um) in die Stadt zu gehen.  
I have no time COMP in the city to go  
“I don’t have time to go to the city.”

Apart from the colloquial example stated in (4), there is only one case in which *um* can be used optionally in German, namely when the infinitive clause describes the consequence of what is mentioned in the main clause (consecutive construction), as in (5):

- (5) Michael war klug genug (um) seinen Fehler  
Michael was smart enough COMP his mistake  
zuzugeben.  
to.admit  
“Michael was smart enough to admit his mistake.”  
(Ten Cate, Lodder and Kootte, 1998, p. 130)

Omitting *um* in such constructions is typically a feature of the written language. Dutch tolerates the use of *om* in a larger number of contexts, where its use is often optional, as illustrated by (6):

- (6) Ik ben blij (om) te horen dat je beter bent.  
I am glad COMP to hear that you better are  
“I am glad to hear you’re better.”  
(Klooster, 2001, p. 256)

The use of optional *om* in Dutch is not arbitrary, however. Vliegen (2001, 2004) shows that “speaker subjectivity” is the main factor driving the use of *om*.

Table 1. *The complementizer in the two languages per category.*

German	Dutch	Example
Obligatory	Obligatory	Piet nimmt die Straßenbahn, um nicht zu spät zu kommen. Piet neemt de tram om niet te laat te komen. Piet takes the tram COMP not too late to come “Piet takes the tram in order to be on time.”
Obligatory	Ungrammatical	Non-existent
Obligatory	Optional	Non-existent
Ungrammatical	Obligatory	*Das ist ein Aufsatz um zu heulen. Dat is een werkstuk om te huilen. this is a paper COMP to cry “This is a paper which could make you cry.”
Ungrammatical	Ungrammatical	Every context where the use of <i>om</i> is ungrammatical in Dutch
Ungrammatical	Optional	*Michael hat versucht um eine Doktorandenstelle zu bekommen. Michael heeft gepoogd om een promotieplaats te krijgen. Michael has tried COMP a Ph.D. stipend to get “Michael has tried to get a Ph.D. grant.”
Optional	Ungrammatical	Non-existent
Optional	Optional	Non-existent

*Note.* This overview does not include prospective use of the complementizer as well as its use in phrases. Consecutive clauses are also excluded since Dutch speakers do not agree on whether the complementizer is optional or obligatory in Dutch.

According to Vliegen (2001, pp. 36–37), speakers use *om* (after illocutionary matrix verbs) within the “optional” contexts when they expect the contents of the infinitival construction to be realized. We will not elaborate on this proposal here; suffice it to say that the use of the Dutch complementizer is dependent not only on syntactic rules but also on pragmatic factors such as “speaker subjectivity”, whereas in German the use of *um* is dependent on syntax only.

In summary, it should be noted that the use of Dutch *om* forms a superset of the use of German *um*. Dutch furthermore has a high number of contexts where *om* can be used optionally, and this optionality is driven by the factor “speaker subjectivity”, which is in the first place dependent on the matrix verb being used. In German, on the other hand, the use of *um* is hardly ever optional. It is self-evident that it will be hard for native speakers of German to capture these opaque rules and the subtle preferences for the use of optional *om*. Table 1 provides an overview of the use of the complementizers *um* and *om* in Dutch and German respectively.

### 3. The study

#### 3.1 Research questions

Our study was led by the following research questions:

1. Can the overgeneralization of German *um* by German learners of Dutch L2 in spontaneous speech as observed by Brons-Albert also be detected in grammaticality judgments?
2. If we observe attrition in German L1 in the use of the complementizer, which functions of the complementizer are affected?

#### 3.2 The participants

The experimental group consisted of 52 Germans who had been living in the Netherlands for a time span varying between 0.7 and 11.5 years (mean 4.2, SD 2.3). All of the participants were (former) university students. Most of them came to the Netherlands to study because they had not been able to enrol at a German university to study the topic of their choice.<sup>2</sup> Although the regions of origin varied, all participants spoke standard German. All participants came to the Netherlands after puberty; the age upon arrival varied between 19 and 35 years (mean 21.73 years, SD 3.07).

The participants’ knowledge of Dutch was good. Most of them had passed the *Staatsexamen II*, the highest exam for Dutch as a second language, which is a prerequisite

<sup>2</sup> German universities impose restrictions on admission to certain degrees such as psychology, music and applied arts.

for most study programmes in the Netherlands. This exam tests all four language skills (reading, listening, speaking and writing). However, 11 of the subjects taking part in our study (8.5%) were students of music or applied arts, programmes for which no formal language test is required. In eight cases (6.2%) the students did not indicate which study they followed. As these participants did not behave significantly differently on the test, we treated them as belonging to the same group as the other participants.

This experimental group was compared to a German control group (N = 38) composed of students from the University of Cologne. Like the participants in the experimental group, the students in the control group came from various regions in Germany.

As this paper explores transfer effects from the L2 to the L1, it is important to establish whether the participants have acquired the rule for the use of the complementizer in their L2 Dutch. The research design therefore included a native Dutch control group. The Dutch control group (N = 40) was comparable to the German experimental group in age and educational background (all were students at the University of Amsterdam with a mean age of 24.7 years, SD: 4.2).

### 3.3 Test

A “grammaticality preference task”, a specific type of a grammaticality judgment task, was used to test the students’ knowledge of German. The use of grammaticality judgment tasks for language attrition research is discussed by Altenberg and Vago (2004), who point out that one of the shortcomings of grammaticality judgment tasks is that it is impossible to say with any certainty what is being measured, making it difficult to interpret the findings. The general agreement nowadays is that grammaticality judgment tasks cannot provide “a direct window into an individual’s competence alone” (Altenberg and Vago 2004, p. 107). Because of these and other shortcomings, a grammaticality judgment task should ideally be combined with other measurements (cloze tests, etc.). Despite their limitations, grammaticality judgment tasks have the advantage of testing structural properties of a linguistic phenomenon that the researcher might not be able to detect in, for example, spontaneous speech data. Furthermore, grammaticality judgments enable the researcher to get insight into structures without having to deal with avoidance strategies on the part of the participants, which is an advantage over other methodologies. Altenberg and Vago conclude that grammaticality judgment tasks can provide insights in the case of L1 attriters, if the outcomes of such tests are interpreted with caution.

For the purpose of the present study, the participants were presented with a written list of sentence pairs which

were identical except for the use or omission of *um*, as illustrated by the following example:

- (7) a. Michael hat probiert um Daniela anzurufen.  
Michael has tried COMP Daniela to.call  
b. Michael hat probiert Daniela anzurufen.  
Michael has tried Daniela to.call  
“Michael has tried to call Daniela.”

The students were asked to indicate whether both sentences were correct or one or neither was correct.<sup>3</sup> It was indicated that both sentences should denote the same state of affairs. (See Appendix A for more examples from the test.)

The test items were based on the use of the complementizers in the two languages (see Table 1). The category *German ungrammatical – Dutch obligatory* was left out since there were no translation equivalents in this category.

In order to test whether the participants had acquired the Dutch rule for the use of the complementizer *om*, a test was designed which compared the experimental group to a native Dutch control group. The 58 test items, presented in writing as a list, were spread out over all possible uses of the Dutch complementizer and were presented in a similar way as the German test items (see Appendix B for more examples):

- (8) a. Meneer Bakker adviseerde mij om Duits te studeren.  
Mr. Bakker advised me COMP German to study.  
b. Meneer Bakker adviseerde mij Duits te studeren.  
Mr. Bakker advised me German to study.  
“Mr Bakker advised me to study German.”

The instructions were identical to those for the German test: the participants were asked to indicate whether both sentences were correct, or one or neither.

## 4. Results

### 4.1 Quantitative results

The participants’ answers were categorised into correct and incorrect answers according to the predictions made by the standard grammars *Duden* (German; Eisenberg et al. 1998) and *ANS* (Dutch; Haeseryn et al. 1997). Each incorrectly answered test item was scored as one point.

<sup>3</sup> There was also a “don’t know” option available. As hardly any participant chose this option, the few sentences that were indicated as “don’t know” were excluded from the results.

Table 2. Number of mistakes per group, German test.

Group	N	Mean	SD	Standard error mean
Experimental	52	6.1	4.8	.66
Control German	38	1.6	1.8	.28

Table 3. Number of mistakes per group, Dutch test.

Group	N	Mean	SD	Standard error mean
Experimental	52	5.1	4.2	.58
Control Dutch	40	3.3	3.2	.51

The experimental group was compared to the German control group by means of an independent samples t-test. Table 2 displays the group statistics. It shows that the group of Germans living in the Netherlands made more mistakes ( $M = 6.1$ ,  $SD = 4.8$ ) than the control group of Germans who had no contact with the Dutch language ( $M = 1.59$ ,  $SD = 1.75$ ). The difference between the groups was significant,  $t(68.2) = 6.3$ ,  $p < .001$ , two-tailed.<sup>4</sup>

Table 3 shows that the German research participants made more mistakes ( $M = 5.1$ ,  $SD = 4.2$ ) than the Dutch control group ( $M = 3.3$ ,  $SD = 3.2$ ). The difference between the groups was significant,  $t(90) = 2.24$ ,  $p < .05$ , two-tailed.

#### 4.2 Types of mistakes

The number of mistakes made differs per item. There were a number of items where no mistakes occurred at all, whereas other test items received a high number of non-target responses, e.g. item 20 and 33:

##### (9) a. Item 20

Der Brief enthielt die Anweisung vom Chef  
the letter contained the order of boss  
um sofort in sein Büro zu kommen.  
COMP immediately into his office to come  
“The letter contained the boss’ order to come  
immediately into his office.”

##### b. Item 33

Es gibt keinen Grund \*um darüber zu  
there is no reason COMP over.that to  
sprechen.  
speak  
“There is no reason to talk about it.”

In both of these sentences, the use of *um* is formally ungrammatical in German but optional in Dutch. Note, however, that a high number of control group subjects

<sup>4</sup> If the variances of the two samples are not equal, the statistical software package SPSS corrects this by adapting the value of  $t$  and the degrees of freedom. That is why the degrees of freedom are not whole numbers.

accepted the use of *um* in these two cases: item 20 was accepted by 35 subjects in the experimental group (67.31%) and 16 subjects in the control group (42.11%), while item 33 was accepted by 34 subjects in the experimental group (65.39%) and 9 subjects in the control group (23.68%).

Overall, most mistakes occurred in the category *German ungrammatical – Dutch optional* (see Table 4), followed by the category *German ungrammatical – Dutch ungrammatical*. There were no mistakes where both German and Dutch require the use of the complementizer. Furthermore, there were no test items in the category *German ungrammatical – Dutch obligatory*, as this contrast does not exist. It should be mentioned that there were two items where Germans without contact with Dutch also made mistakes, namely item 20 (9 mistakes in total, mean .24) and item 33 (16 mistakes in total, mean .43). These were also the items where most mistakes occurred in the experimental group. As Table 4 shows, the control group made mistakes in the same grammatical categories as the experimental group, though in fewer cases.

The category *German ungrammatical – Dutch optional* turned out to be the only category where the two groups differed significantly ( $t(65.5) = 6.4$ ,  $p < .001$ ).

A closer investigation of the data on the Dutch test indicated that the category *German ungrammatical – Dutch optional* was again the only category where the two groups differed significantly ( $t(51) = 3.3$ ,  $p < .05$ ).

Table 5 shows that the experimental subjects reject more correct sentences than the native Dutch control group. This could be an indication for the use of the German rule in the Dutch of the participants, which is more restrictive than the Dutch rule.

Note, however, that the Dutch control group also makes quite a lot of “mistakes”. This indicates that the use of the Dutch complementizer might exhibit more regional or stylistic variation than indicated by the *ANS*, the standard grammar used. Furthermore, the grammatical preference task might not be an adequate measure for capturing the subtle differences in information structure in the use of (optional) *om*. The data indicate that the German experimental participants might not have fully acquired the optional use of Dutch *om*. This, however, has to be further investigated by using different types of tests.

## 5. Discussion

The grammaticality judgments of Germans living in the Netherlands on the use of the complementizer *um* differ significantly from those of Germans who do not have contact with the Dutch language. The overgeneralization of *um*, which has been attested before in the spontaneous speech data reported by Brons-Albert, is more than a performance error. Even when asked to reflect on the

Table 4. Number of mistakes per grammatical category, German test.

Category	Group	#Mistakes	Mistakes mean	SD	Standard error mean
German/Dutch obligatory	Experimental	—	—	—	—
	Control	—	—	—	—
German/Dutch ungrammatical	Experimental	11	0.21	0.54	0.07
	Control	5.43	0.14	0.36	0.06
German ungrammatical – Dutch optional	Experimental	288	5.9	4.7	0.65
	Control	56.43	1.4	1.6	0.25

Note. Some of the numbers in the ‘#Mistakes’ column are presented in fractions. This is the result of the replacement of missing values with the group’s mean score on the item in question.

Table 5. Type of mistakes, Dutch test.

Type of mistake	Experimental group	Control group
Overgeneralization	131 (54.8%)	112 (85.5%)
Rejection of correct sentences	108 (45.2%)	19 (14.5%)
Total	239	131

use of the complementizer, as was done in this study, Germans living in the Netherlands differ significantly from Germans who do not have contact with the Dutch language. This paper provides further evidence that speakers can undergo language attrition in their first language, even if they have ample opportunity to use their mother tongue and even if immigration took place after puberty.

The transfer effects reported in this study could be due to the close typological relationship between Dutch and German. Research into second language acquisition (Andersen, 1984; Odlin, 1989; Kellermann, 1995) suggests that learners are more likely to transfer from their mother tongue to the L2 when these two are closely related than when they are less related. Psycholinguistic research (de Groot, 1993) furthermore has shown that cognates in different languages are likely to be represented differently from non-cognates, which suggests that the entire representation of closely related languages might be different from typologically distant languages. That is, a bilingual might sooner be able to treat two distant languages as two different entities than two cognate languages whose representation will probably be integrated to a large degree. Future research has to specify the role of typological distance between the two languages in contact in the degree of first language attrition.

The present study has taken a closer look at the different uses of the complementizer in the two languages. Most of the mistakes made by the experimental group on the German test occurred in those instances where

the use of the complementizer was ungrammatical in German and optional in Dutch. It is not surprising that the experimental group overgeneralized in those instances where Dutch exhibits a more extended use of the corresponding complementizer *om*. This result suggests that the rules for the use of the German and the Dutch complementizer might have merged. In this case, we would expect that the German experimental group accepts the Dutch complementizer *om* in the same contexts. A first inventory of the use of the Dutch complementizer by the German subjects made within this study suggests that the German group differs significantly from the Dutch native speakers. More specifically, significant differences between the two groups emerge again only in the cases where *om* is optional in Dutch. It is not the case, however, that the Germans categorically accept the complementizer in these contexts. On the other hand, as indicated above, the large number of apparently deviant judgments made by the Dutch control group calls into question the validity of the Dutch test used in this study. The use of optional *om* might be subject to more sociolinguistic or stylistic variation among native speakers than we expected before constructing the test. Furthermore, the test might not have been adequate for an investigation of optional *om*, which is more susceptible to information-structural notions such as ‘speaker subjectivity’. Future research into the use of the Dutch complementizer by Germans living in the Netherlands should use a test that better controls for the possible influence of information structure or inter-speaker variation. We would like to emphasize that ideally different types of tests (cloze tests, grammatical judgment tasks, etc.) and spontaneous speech data should be combined in order to obtain reliable results.

This study raises further interesting questions, such as whether speakers of Dutch who live in Germany also show transfer effects from German as a second language in their use of the Dutch complementizer *om*. That is, do the transfer effects between the two languages work in both directions, or, in other words, do we also find undergeneralization of the complementizer as a result of

transfer from German? According to the subset condition (Gürel, 2002), there should be more transfer effects (from the L1 in the case of second language acquisition and from the L2 in case of language attrition) if the “influencing language” forms a superset of the “affected language” than vice versa. As the use of the Dutch complementizer *om* forms a superset of the use of German *um*, we expect to find less attrition in the use of the complementizer *om* within the Dutch native speakers living in Germany. Future research will have to determine whether or not this hypothesis can be confirmed.

## Appendix A. Examples of the test items, German test

### I. Dutch obligatory – German obligatory

- 1a. Markus treibt Sport um fit zu bleiben.
- 1b. \*Markus treibt Sport fit zu bleiben.
- 2a. Ich nehme die Straßenbahn um nicht zu spät zu kommen.
- 2b. \*Ich nehme die Straßenbahn nicht zu spät zu kommen.

### II. Dutch ungrammatical – German ungrammatical

- 3a. \*Jan scheint um krank zu sein.
- 3b. Jan scheint krank zu sein.
- 4a. \*Es beginnt um schön zu werden.
- 4b. Es beginnt schön zu werden.

### III. Dutch optional – German ungrammatical

- 5a. Michael hat probiert Daniela anzurufen.
- 5b. \*Michael hat probiert um Daniela anzurufen.
- 6a. Anna beschließt sich von Edwin zu trennen.
- 6b. \*Anna beschließt um sich von Edwin zu trennen.

## Appendix B. Examples of the test items, Dutch test

### I. Dutch obligatory – German obligatory

- 1a. Piet neemt de tram om niet te laat te komen.
- 1b. \*Piet neemt de tram niet te laat te komen.
- 2a. Hij werkt genoeg geld te hebben.
- 2b. Hij werkt om genoeg geld te hebben.

### II. Dutch ungrammatical – German ungrammatical

- 3a. \*Jan blijkt om ziek te zijn.
- 3b. Jan blijkt ziek te zijn.

- 4a. \*Je dient om naar college te komen.
- 4b. Je dient naar college te komen.

### III. Dutch optional – German ungrammatical

- 5a. Karel besluit om nooit meer naar school te gaan.
- 5b. Karel besluit nooit meer naar school te gaan.
- 6a. Meneer Bakker adviseerde mij om Duits te studeren.
- 6b. Meneer Bakker adviseerde mij Duits te studeren.

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