

The dative alternation in L2 German? Conceptualization transfer from L1 Dutch

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Abstract

In Dutch, a ditransitive verb can take two alternating patterns (“the dative alternation”): the Double Object Construction (DOC) (‘Jan geeft het meisje een boek’) and the prepositional construction (POC) (‘Jan geeft een boek aan het meisje’). The choice of one of both constructions is associated with multiple discourse-pragmatic factors. In German, however, the POC is ungrammatical with a verb such as *geben*, ‘to give’: ‘Jan gibt ein Buch *[an das Mädchen]’. This article reports on two sentence rating experiments (acceptability judgments) to test whether Dutch learners of German transfer their preferences about the dative alternation to the ditransitive construction in German. If no transfer were involved, (proficient) learners of L2 German are expected to consistently rate the DOC as the only possible choice in German. We found, however, a positive correlation between the sentence ratings of Dutch native speakers and learners of German. Our results further indicated that the DOC construction was consistently rated higher in German than in Dutch. Taken together, these findings suggest that although the German learners seem to be aware that the DOC is the default order in German, their choice is nonetheless associated with their L1-intuitions about the dative alternation. We discuss these results in the context of Slobin’s Thinking-for-Speaking Hypothesis and Jarvis’ Conceptual Transfer Hypothesis (more specifically, Conceptualization Transfer). We argue more specifically that the conceptualization of the dative alternation in the L1 Dutch is the blueprint, i.e. the thinking-for-speaking, for the structures in L2.

Keywords: Foreign Language Acquisition, Cross-Linguistic Influence, Dative alternation, Dutch/German, Acceptability Judgments.

Zusammenfassung

Ditransitive Verben können im Niederländischen in zwei Mustern gebraucht werden, die miteinander alternieren, der sog. Doppel-Objektkonstruktion (DOK)

(‘Jan geeft het meisje een boek’) und der präpositionalen Konstruktion (POK) (‘Jan geeft een boek aan het meisje’). Die Wahl hängt mit diskurspragmatischen Faktoren zusammen. Im Deutschen ist die POK bei einem Verb wie *geben* dagegen ungrammatisch: ‘*Jan gibt ein Buch an das Mädchen’. In diesem Artikel werden die Ergebnisse von zwei Satz-Rating-Experimenten vorgestellt, die aufgrund von Akzeptabilitätsurteilen ermittelt wurden. Getestet wurde, ob niederländischsprachige Deutschlerner ihre muttersprachlichen Präferenzen hinsichtlich DOK und POK auf deutsche ditransitive Sätze übertragen. Die Experimente zeigen einerseits, dass die Akzeptabilitätsurteile positiv miteinander korrelieren, d.h. wenn die Präferenzen hinsichtlich POK bzw. DOK im Niederländischen zunehmen, dann nehmen sie auch im Deutschen zu. Andererseits wird die DOK im Deutschen immer höher bewertet als im Niederländischen. Diese Befunde legen nahe, dass die L1-Intuitionen niederländischsprachiger Deutschlerner über DOK und POK auf die L2 übertragen werden, obwohl sie sich dessen bewusst sind, dass die DOK die übliche ditransitive Konstruktion im Deutschen ist. Die Ergebnisse werden vor dem Hintergrund von D. Slobins *Thinking-for-Speaking*-Hypothese und der *Conceptual-Transfer*-Hypothese von S. Jarvis diskutiert. Daraus geht hervor, dass die Verarbeitung der Alternierung im Niederländischen (L1) als der Bauplan für die Strukturen in der L2 betrachtet werden kann.

Stichwörter: Fremdsprachenerwerb, Transfer, Dativobjekt/präpositionale Konstruktion, Niederländisch/Deutsch; Akzeptabilitätsurteile

1. Introduction

The role of the first language (L1) in the acquisition of the second language (L2) has been much debated in the field of second language acquisition (SLA). Most SLA researchers now acknowledge that learners are influenced by their native language (Gass & Selinker, 1983; Odlin, 1989; White, 1989; Schwartz & Sprouse, 1996; Jarvis, 1998; Jarvis & Pavlenko, 2008). For instance, there is convincing evidence that transfer takes place through similarities and differences between the structural properties of the L1 and the L2. However, it remains unclear to what extent cross-linguistic influence (CLI) also involves the mental transference of underlying *conceptual representations* from one linguistic system to another (Jarvis & Pavlenko, 2008). The goal of the present study is therefore to explore and expand on some recent developments in transfer, more particularly the Conceptual Transfer Hypothesis (CTH) (Jarvis, 2007; Jarvis & Pavlenko, 2008) and the partly related Thinking-for-Speaking Hypothesis (TFSH) (Slobin, 1996). In the current study we relate these hypotheses to the dative alternation in Dutch and its susceptibility of being transferred to L2 German.

The language pair Dutch-German is particularly interesting because the two languages are typologically very similar and thus meet Kellerman's (1983) psychotypology and transferability constraint, which implies that transfer is likely to occur. However, the two languages differ with respect to the dative alternation, a syntactic phenomenon that is observed in Dutch but not in German. The language pair thus makes an excellent testing ground to examine the incidence and the effect of transfer.

The dative alternation refers to the possibility of using a ditransitive verb (*give, offer, send, bring, tell, etc.*) with two alternating constructions, either a Double Object Construction (DOC), with an indirect object as in (1) and (2), or the Prepositional Object Construction (POC), as in (3) and (4).

- (1) The girl gave the cat milk. (DOC)
- (2) Het meisje gaf de kat melk. (DOC)
- (3) The girl gave milk to the cat. (POC)
- (4) Het meisje gaf melk aan de cat. (POC)

German only allows for the DOC, as in (5). The POC, illustrated in (6) is ungrammatical.¹ The DOC with the opposite object ordering as in (5) is grammatically possible, but is very marked and restricted to contrastive contexts, cf. (7).

- (5) Das Mädchen gibt der Katze Milch.
- (6) *Das Mädchen gibt Milch an die Katze.
- (7) Das Mädchen gibt Milch der Katze [und nicht dem Hund].

We hypothesize that Dutch-speaking learners of German will transfer their preferences with respect to the alternatives associated with the Dutch dative alternation to the L2 German ditransitive construction. To test this hypothesis, we performed two grammaticality judgment experiments, one for each language. Our results show that the judgments by the Dutch and German speakers are correlated, which suggests that there is indeed transfer from Dutch to German. We believe that these findings bear on the Conceptual Transfer Hypothesis and the Thinking-for-Speaking Hypothesis.

1 It should be noted, however, that variation between dative objects and prepositional objects with *an + acc.* sometimes appears to exist. Verbs, such as *weitergeben* 'to pass on' and *schreiben* 'to write', etc., allow for a wider distribution: e.g. *ich gebe es weiter an das Kabinett des Präsidenten, ich gebe es den Kindern weiter ; Ich schreibe einen Brief an meine Mutter, ich schreibe meiner Mutter einen Brief.* To the best of our knowledge, this kind of variation has barely been given attention in the syntactic literature on German. In any case, the dative alternation in German is restricted and does (in absence of literature on the matter) not seem to vary along the discourse-pragmatic factors (established for Dutch and English). In a future corpus study, we will examine to what extent German allows for an alternation.

The paper is organized as follows. Section 2 discusses the notion of conceptual transfer and the Thinking-for-Speaking Hypothesis. Section 3 provides a theoretical background on the dative alternation, while section 4 presents a brief overview of previous studies on the acquisition of the dative alternation, of which remarkably none have dealt with transfer. In section 5, we explain the methodology of our study and present our results. We conclude with a discussion of those results in section 6.

2. Developments in CLI research

The most important recent development in transfer research is perhaps the rehabilitation of linguistic relativity or the Sapir-Whorf hypothesis (Odlin, 2005; Jarvis & Pavlenko, 2008). Briefly put, the idea is that differences in thought processes will somehow have an effect on a person's acquisition of a second language. This idea squares with the so-called weak relativist position, which maintains that language may influence cognition (e.g., Lucy, 1992a, 1992b; Levinson, 1997). It should perhaps be stressed here that this neo-Whorfian approach in transfer research should not be taken as a strong relativist position, which claims that language *determines* cognition in an absolute way (i.e., linguistic determinism). Furthermore, the recent transfer research does not actually concentrate on linguistic relativity per se, but rather on the effects of L1 on the verbalization of thoughts in the L2. The difference is aptly explicated by Jarvis and Pavlenko (2008: 115), who state that "linguistic relativity begins with language and ends with cognition", while the neo-Whorfian approach in transfer research "begins with language and ends, via cognition, with language."

Related to the rehabilitation of linguistic relativity is the differentiation of a number of cognitive levels at which cross-linguistic influence can take place (Jarvis & Pavlenko, 2008: 23ff.). As was hinted at in the introduction, CLI studies have typically and traditionally focused on the structural properties of the L1 and the L2 to explain transfer, most notably in the domains of syntax, semantics, phonetics, and discourse. Well-researched topics are, for example, word order, relativization, negation, lexical semantics, segmental phonology, and speech acts, such as requests and apologies. A synthesis of this research can be found in Odlin (1989).

From the 1990s onwards, the understanding grew, however, that transfer can also take place on the conceptual level, in addition to the linguistic level. The work of Jarvis and Pavlenko (Jarvis, 1998, 2000a, 2000b; Pavlenko, 1999, 2002, 2003; Pavlenko & Jarvis, 2001, 2002) is exemplary in this respect. Although they were not the first ones to suggest the idea of conceptual transfer (see, e.g., Graham & Belnap, 1986; Ijaz, 1986; Kellerman, 1978, 1986, 1995), they were the first to put the issue on a proper and systematic scholarly footing, as appears from their book-length discussion of the matter (Jarvis & Pavlenko, 2008).

Jarvis and Pavlenko (2008: 115) differentiate between language-mediated concepts on the one hand and conceptualization on the other. The former refers to the conceptual knowledge or the inventory of learners, which is either linked to lexicalized concepts (i.e., words) or grammaticized concepts (i.e., morphosyntactic categories, such as gender, number, etc.). The latter refers to the processing of that knowledge, which is linked to the linguistic organization of information in discourse. According to Jarvis and Pavlenko, cross-linguistic influence can originate from either conceptual knowledge or processing. Jarvis (2007) refers to these types of transfer as the Conceptual Transfer Hypothesis (CTH); he distinguishes two

Table 1. Two types of conceptual transfer (taken from Jarvis, 2007: 53)

Concept transfer	Transfer arising from cross-linguistic differences in the conceptual categories stored in the L2 users' long-term memory
Conceptualization transfer	Transfer arising from cross-linguistic differences in the ways L2 users process conceptual knowledge and form temporary representations in their working memory

In their overview, Jarvis and Pavlenko (2008) focused on lexicalized and grammaticized concept transfer, because these are the two areas in which most research has been conducted. Remarkably, in contrast to concept transfer, little work has been conducted to examine conceptualization transfer. For this reason we will focus this article to the transfer of conceptualization, most notably the relationship between the conceptualization and the eventual linguistic organization.

In using the term “conceptualization”, we follow Levelt’s (1989) model of language generation, which comprises the process of language production from its intention towards its articulation. The model consists of a number of processing components, each with their own kind of input and output. Obviously, the output of one processing component constitutes the input of another component. The three processing components are the *Conceptualizer*, the *Formulator* and the *Articulator*.

The Conceptualizer is the point of departure for the generation of messages. It is within this processing component that the speaker conceives his (language-specific!) preverbal message, which then forms the input information for the Formulator. Before it passes to the Formulator, however, the preverbal message already consists of a certain number of information strings. For example, messages are composed of elements representing persons, objects, events, actions, states, times, places, directions and

manners (Levelt, 1989: 74). These categories can be combined; e.g. a PERSON (*Peter*) and an ACTION (*drop the milk*) can be combined into an EVENT (*Peter dropped the milk*). More importantly, however, these categories can be conceived as argument structures, of which the arguments then represent a limited set of abstract roles, such as the theme, source, goal, agent, actor, patient, recipient, experiencer and instrument (Levelt, 1989: 96). For the Formulator to accept a certain argument structure as input, however, the preverbal message should incorporate additional information. The message should indicate a particular perspective (e.g. what is the topic?, what is the focus?, what is given?, or what is new?). Furthermore, the appropriate mood (i.e. declarative, imperative or interrogative) as well as aspectual properties and deictic references to persons, space and time should be expressed in the preverbal message (Levelt, 1989: 96-103). Only when the language, the register and the speech act of the preverbal message are finally selected, the process of formulating can be initiated. The output of the Conceptualizer, which in the spirit of incremental language processing actually consists of fragments of messages, triggers the Formulator to ‘translate’ the preverbal message into a linguistic formal structure.

Important with reference to the conceptualization transfer hypothesis is that the preverbal message, according to Levelt (1989: 145), contains language-specific information. This means that in the spirit of Slobin (1987, 1996), children, when learning their mother tongue, acquire particular ways of “thinking for speaking”, i.e. thinking generated according to the language-specific requirements. As a consequence, it is likely that patterns that have been, so to speak, rehearsed from early childhood, and have as such become cognitively entrenched, are likely to be transferred to a second language. This idea is proposed in Slobin’s Thinking-for-Speaking Hypothesis, which is closely related to the second transfer type in Jarvis’ (2007) CTH, i.e., conceptualization transfer (but see Jarvis 2007 for a discussion of similarities and differences).

“Each native language has trained its speakers to pay different kinds of attention to events and experiences when talking about them. This training is carried out in childhood and is exceptionally resistant to restructuring in adult second-language acquisition” (Slobin, 1996: 86).

In other words, the L2 learner already has a mature system of thinking for speaking, i.e., a language-specific system for verbalizing one’s conceptualization of experience in a particular way.

The concept of thinking-for-speaking has excited growing interest among both SLA researchers (see e.g., Inagaki, 2001; Cadierno & Ruiz, 2006; Cadierno, 2008; Han & Cadierno, 2010) and researchers of bilingualism (see e.g., Hickmann & Hendriks,

2006; Hohenstein et al, 2006; Daller et al, 2011). One of the more examined events (in the sense of Levelt) concerns the expression of MOTION, including components such as PATH and MANNER. In events of this kind, motion refers to an entity that is moved with respect to another entity, while path refers to the direction, and manner to the specific way the entity is moved. Consider a classical example taken from Talmy (1985: 61):

- (8) The pencil *rolled* *off* the table
 Motion Path
 Manner

In this event motion and manner are conflated in the verb ‘rolled’, and the path is expressed by the preposition ‘off’. Naturally, languages differ in the way they express motion events, both lexically and grammatically (see Berman & Slobin, 1994). Talmy (1991) differentiated, for instance, between satellite-framed languages (such as English and German) and verb-framed languages (such as Spanish and Turkish). The former tend to express, such as in the example above, manner in the main verb and path in a satellite of the verb, e.g. by means of particles. The latter, however, encode path in the main verb. The cited studies above have demonstrated the presence of conceptualization transfer, in that both L2 learners and bilinguals are susceptible to transfer the patterns from their L1 or dominant language, respectively (for a detailed overview of further studies in the field see Odlin (2008) and Han & Cadierno (2010)).

In a recent study on German-Turkish bilinguals, Daller et al (2011) found evidence for conceptualization transfer with regard to the expression of path in German-Turkish bilinguals. In addition, however, they included the aspect of linearization, since “no studies have so far addressed the possibility that the planning of the linear order of clauses in a sentence might also be subject to transfer” (Daller et al, 2011: 103). To examine the possible transfer of linearization patterns, Daller et al (2011) looked at action-goal sequences, which differ in German (action-goal) and Turkish (goal-action) (examples taken from Daller et al, 2011: 104).

- (9) Der Vater steigt in den Gully [um den Ball zu holen].
The father climbs into the manhole [to fetch the ball].
- (10) [Top-u al-mak için] baba-sı iniyor
Ball-Acc fetch-Nom to father-Poss descend-Prog
‘To fetch the ball, his father descends.’

Discussing the rationale behind this research question, Daller et al (2011) refer to the work of Von Stutterheim et al (2002) and Von Stutterheim and Nüse (2003), which

showed that speakers of various languages also differ in the way they structure and linearize the information they select for verbalization. Importantly, this structuring as well as linearization is said to proceed in the Conceptualizer (Levelt, 1989). Potentially observed cross-linguistic influences in the speech of second language learners or bilinguals would therefore be considered a case of conceptualization transfer or thinking-for-speaking. The results of Daller et al (2011) showed that bilinguals are sensitive to the typological characteristics of both languages in their expression of path. More specifically, it appears that the Turkish-German bilinguals take a middle position compared to the German and Turkish monolinguals, respectively.

With regard to the linearization issue, Daller et al's (2011) results showed that the German monolinguals exclusively used action-goal sequences whereas the Turkish monolinguals mainly (i.e., 92%) used goal-action sequences. Again, the bilinguals were found to take a middle position. However, the Turkish-German bilinguals, who have returned to Turkey, approximated the pattern found among monolingual Turks. So it seems that it is the Turkish-German bilinguals living in Germany who take the middle position. This implies that the dominant language of the environment interacts with cross-linguistic influence.

In our article we follow up on the issue of linearization and structuring of linguistic items, embedded, of course, in the larger picture of conceptualization transfer. More particularly, we focus on the dative alternation in Dutch and the German ditransitive construction. We hypothesize that Dutch-speaking learners of German will transfer their "knowledge" of the Dutch dative alternation to their use of the German ditransitive construction, which would indicate that the conceptualization, or rather the processing of the dative alternation in the L1 Dutch is the blueprint, i.e. the thinking-for-speaking, for the structures in L2 German. This would further support Daller et al's (2011: 100) hypothesis that L1 blueprints are "cognitively entrenched, which makes it difficult to learn a new way of thinking-for-speaking, and that L2 learners use L1 blueprints in building structures in L2."

3. The Dutch dative alternation

The Dutch dative alternation refers to the possibility of a ditransitive verb to occur with two alternating constructions, either with the double object construction, as in (11), or with the prepositional dative construction, as in (12) (examples taken from Coleman, 2011).²

² Ditransitive verbs can of course occur in other constructions than the DOC and the POC, for example, in intransitive use or in constructions with single objects.

- (11) Jan geeft/verkoopt/overhandigt/schenkt/belooft/... Piet een boek.
(12) Jan geeft/verkoopt/overhandigt/schenkt/belooft/... een boek aan Piet.
'Jan gives/sells/hands over/donates/promises/ ... a book to Pete/Pete a book.'

The dative alternation is perhaps one of the most debated topics in Dutch linguistic research (Colleman 2012: 1). A (non-exhaustive) list of studies includes: Balk (1968), Kooij (1975), Janssen (1976, 1997), Hoekstra (1978), Kirsner et al (1987), Schermer-Vermeer (1991, 2001), De Schutter (1993), Van Belle & Van Langendonck (1996), Van Langendonck (2000), Duinhoven (2003), Van der Beek (2004), Colleman (2006, 2009) and Poß (2010). Three research questions have driven the research: (i) which verbs allow for the dative alternation, (ii) if not, why do certain verbs prefer one over the other construction and (iii) what motivates the speakers to use one of both constructions?

In this study, we are only interested in verbs that allow for the dative alternation. It would certainly be interesting to examine possible transfer effects for non-alternating ditransitive verbs. Yet, we believe that this is best dealt with in a separate study. There is a broad consensus on the list of verb that allow for the Dutch dative alternation (for an exhaustive list see Colleman, 2006: 533).

It is further generally agreed that the speakers' choice of dative construction is motivated by multiple factors, which are largely the same as those that influence the English dative alternation (Colleman, 2012; De Cuypere & Colleman, in prep.). One factor is the verb itself. While certain verbs appear to favor the DOC (e.g., *opleveren* 'yield', *verwijten* 'blame', *leren* 'teach', *bezorgen* 'deliver', and *kosten* 'cost'), others prefer the POC (*overlaten* 'leave', *verkopen* 'sell', *leveren* 'deliver', *brengen* 'bring', and *overdragen* 'transfer').

Other factors that are known to influence the choice of dative construction are features associated with the two objects involved in each dative construction. These factors include: pronominality, definiteness, animacy, discourse status and length of the two objects (i.e., the direct and the indirect/prepositional object). The overall tendency associated with these factors may be summarized as follows: all else being equal, animate, pronominal, definite, discourse given and short objects tend to precede inanimate, nominal, indefinite, discourse new and longer ones. Thus, given the features of the objects in (13), it is more likely that a Dutch speaker will use a DOC than a POC. Conversely, a POC is more likely in (14), given the object features (note that *the gold* referred to a given referent, while *your children* was introduced as a new referent).

- (13) Er werd [ons]_{IO} op de terugweg [een rondvaart door de stad]_{DO} beloofd.
There was us on the way back a tour around de city promised
'We were promised a tour around the city.'

- (14) Ik schenk [het goud]_{DOC} [aan je kinderen]_{PREPO}
 I donate the gold to your children
 'I donate the gold to your children.'

Another issue concerns semantic difference between the DOC and the POC. There is a wealth of literature dealing with this difference with respect to the English dative alternation. Several semantic differences have been suggested in the literature. For instance, one strand of authors argues that the DOC emphasizes the Recipient, while the to-dative construction the Theme (e.g., Wierzbicka, 1986; Newman, 1996). Another interpretation is that the formal closeness between the Recipient and the verb in the DOC is a reflection of their semantic closeness; the teaching would thus have been more effective in *John taught Harry Greek* than in *John taught Greek to Harry* (e.g., Lakoff & Johnson, 1980; Rohdenburg, 2003). Another third interpretation says that the to-dative construction emphasizes the path followed by the Theme, whereas the DOC the completion thereof (e.g., Goldberg, 1995; Langacker, 1995).

Recent scholarship on the English dative alternation that has examined the speakers' choice of order from a more quantitative perspective suggests that this choice is largely motivated by the factors mentioned above, which further indicates that this choice is not determined by these alleged semantic differences. This approach was pioneered by Bresnan et al (2007) whose mixed-effects logistic regression model was able to correctly predict 94% of the actual choices in a corpus sample of natural spoken data. De Cuypere & Coleman (in prep.) similarly indicates that the Dutch dative alternation can also very well be accounted for in terms of the semantics and the discourse-pragmatic features associated with the objects involved rather than by the semantic differences between the two dative constructions.

We have mentioned the different views on the alleged semantic differences between the two constructions for the sake of completeness. However, as we shall see in section 5, we have retrieved our test sentences for our two experiments on the basis of the factors that are known to motivate the dative alternation. By doing so we have tried to create a list of test sentences that cover a broad range on the probability scale between on the one hand sentences whose features are strongly associated with the DOC and on the other hand sentences whose features are strongly associated with the POC. This would not have been possible if we only had taken the semantics of the two constructions into account. We further explain the design and rationale behind our study in section 5. Section 4 first presents a brief overview of the literature on the acquisition of the dative alternation.

4. The acquisition of the dative alternation

A perusal of the literature on the L2 acquisition of Dutch reveals that so far barely any empirical work has been carried out on the acquisition of the dative alternation. In fact, we have to make do with only one single reference. Coleman et al (2008) expect that foreign language learners will experience learning problems with verbs that do not alternate. A verb such as *vergeven*, 'to forgive', for example, only takes the DOC, whereas a verb such as *overleveren*, 'to surrender', only occurs with the POC. The authors argue that learners will overgeneralize one of the two structures in contexts where the verb disposition does not allow the chosen construction. The learner, in other words, is unaware of the lexical preferences of certain verbs for one of the two 'competing' grammatical constructions over the other. In expectation of empirical research, the hypothesis remains open to discussion, at least as far as Dutch is concerned.

With regard to English, the acquisition of the dative alternation has been investigated empirically by a number of researchers in both L1 and L2 acquisition (see, e.g., Baker 1979; Mazurkewich & White, 1984; Gropen et al, 1989 for first language acquisition, and Mazurkewich, 1984; Hawkins, 1987; Carroll & Swain, 1993; Hamilton, 1994 and Sawyer & Mark, 1995 for SLA). They have pointed out that the dative alternation is one of the most problematic areas for both L1 and L2 learners; the problematic issue being, again, the verb disposition. For example, verbs like *give* and *make* alternate, but verbs with very similar meanings, like *donate* and *create*, do not. The main objective of these studies was to uncover developmental (sub)stages in the acquisition of the dative alternation. A recurring finding in these studies is that L2 learners deem the prepositional *to*-dative more acceptable than the double-object-construction. The prepositional pattern is thus often overgeneralized to verbs that do not permit it.³

In recent research, the focus in the SLA field has rather shifted to what is known as Focus-on-Form instruction (FFI), which can be defined as "any planned or incidental instructional activity that is intended to induce language learners to pay attention to linguistic form" (Ellis, 2001: 1-2). FFI-research, in other words, refers to the many studies that have investigated the effectiveness of different types of instruction in different circumstances of learning. A number of studies have done this with regard to the dative alternation, which then no longer forms the goal of the study, but serves as a mean to examine FFI-research questions (e.g., Radwan, 2005; Oh & Zubizarreta, 2003, 2006; Ansarin & Arasteh, 2012). In all of these studies, the role of the L1 was barely an issue (although Hawkins (1987) briefly mentions the different patterns in French, which is the L1 of the learners in his study). The influence of different L1s,

³ Recent corpus evidence indicates, however, that more verbs can take the dative alternation than what has traditionally been maintained in the literature. See in this regard Bresnan and Nikitina (2009).

either with a similar pattern of dative alternation or without dative alternation (e.g., in language with case-marked indirect object), on the acquisition of the English dative alternation remains undecided.

To date, the opposite question, i.e., what is the influence of an L1 with dative alternation on the acquisition of an L2 without dative alternation, has never been examined. Such a study would have to deal with the recovery from L1 transfer, which means unlearning one of two interpretations that exist in the L1. The present study presents a first attempt to exactly examine this question: to what extent will Dutch learners of German rely on their L1 knowledge of the dative alternation, and thus how will their conceptualization in Dutch affect their German language use?

We hypothesize that learners will prefer the prepositional an-construction in German in sentences where the POC would also be preferred in Dutch. Analogously, we expect that L2 learners of German will prefer the DOC in German in sentences where the DOC would also be preferred in Dutch. In other words, we hypothesize that there is a correlation between the POC in Dutch and the POC in German, as well as between the DOC in Dutch and the DOC in German.

5. The study

5.1. Methodology

To examine the correlation between the use of the dative constructions in Dutch and German we performed two experiments where we had participants rate the probability of using one of both constructions both in German and in Dutch on a scale of 0 to 100. This particular test, also referred to as the 100-split task, was developed by Bresnan (2007) in the context of the English dative alternation (cf. also Ford & Bresnan, 2013). The 100-split task is a grammaticality judgment experiment that aims to capture the probabilistic preferences of speakers. In this test, participants are asked to “rate the naturalness of alternative forms as continuations of a context by distributing 100 points between the alternatives” (Ford & Bresnan, 2013: 5). As we are interested in the ordering preferences of ditransitive constructions in Dutch and German, we performed two experiments, one for each language. The design of both experiments is subsequently outlined below.

5.2. Experiment 1: 100-split task for the Dutch dative alternation

Participants: The participants were 46 first year bachelor students at Ghent University (Belgium), who were native speakers of Dutch. There were 11 male and 35 female participants, aged between 18 and 31 (mean age = 19). The participants were

all volunteers and were not paid nor received any other benefits for their participation.

Materials: We translated the German test sentences together with the context in which they appeared into Dutch. German personal and place names were replaced by Flemish ones (e.g., *Altmünster* by *Hasselt*) to ensure that the test sentences were perceived as authentic Dutch. The reason that we chose to start from German sentences was to make sure that we worked with authentic language data. Because we are native speakers of Dutch, we believe that our translation from German to Dutch is more accurate than the other way around. Figure 1 gives an example of a test sentence.

Figure 1: An example of a Dutch test sentence

Toen de jongeman een uitnodiging kreeg, voelde hij zich vereerd. Zijn leermeester had al eens vermeld, dat hij hem voorgesteld had om de opvoeding en opleiding van de faraadochter over te nemen. De jongeman vroeg zich af waarom de koning geen geleerde uitkoos. Maar hij had niet verwacht dat hij op zijn leeftijd en met zijn lage afkomst ook daadwerkelijk zou aangenomen worden.

- (A) Hij deed zijn leraar zo snel mogelijk het bericht mee.
(B) Hij deed het bericht zo snel mogelijk aan zijn leraar mee.

Daarop feliciteerde de leraar hem en zei: "Dat is toch net wat je al altijd wou".

- (A) ____
(B) ____

Procedure: The test was administered during the break of a class in English linguistics at Ghent University (Belgium). Each participant was given a booklet containing the instructions and the test sentences. The experimenter also explained the test to the full group of participants. The participants were told that they had to read the sentences and to rate the naturalness of the given alternatives on a scale of 1 to 100 so that the total score would add up to 100 (e.g., 10-90, 40-60, 50-50, 73-27, etc.). All participants performed the test individually.

5.2. Experiment 2: 100-split task for the German DOC

Participants: The participants were 25 first year bachelor students of German at Ghent University (Belgium), with Dutch as L1. There were 10 male and 15 female participants, all aged between 18 and 20 (mean age = 18). We did not test the German proficiency skills of the students separately, but since the test was conducted towards the end of the academic year, most participants had presumably acquired a basic to good proficiency in German. The participants were all volunteers and were not paid nor received any other benefits for their participation.

Materials: 25 ditransitive sentences were selected from DeReKo, a corpus of contemporary written German. We used specific criteria to select the sentences. First we chose 10 German verbs of which the Dutch equivalent is known to take the dative alternation (Colleman 2006: 533), including: *geben* (Dutch ‘geven’, Eng. ‘give’), *anvertrauen* (Dutch ‘toevertrouwen’, Eng. ‘entrust’), *schenken* (Dutch ‘schenken’, Eng. ‘pour’), *mitteilen* (Dutch ‘meedelen’, Eng. ‘tell’), *erklären* (Dutch ‘uitleggen’, Eng. ‘explain’), *liefern* (Dutch ‘bezorgen’, Eng. ‘deliver’), *verspreken* (Dutch ‘beloven’, Eng. ‘promise’), *erzählen* (Dutch ‘vertellen’, Eng. ‘tell’), *zeigen* (Dutch ‘tonen’, Eng. ‘show’), and *übergeven* (Dutch ‘overhandigen’, Eng. ‘transfer’). Second, we selected our sentences based on features of the direct and indirect object that are known to influence the speakers’ choice of dative construction in Dutch. As outlined in section 3, these factors include: discourse status, pronominality, animacy, definiteness and the relative length of the objects. The Dutch dative alternation is similar to the English dative alternation in that given, pronominal, animate, definite and short objects tend to be placed before new, nominal, inanimate, indefinite and longer ones (Colleman, 2006; De Cuypere & Colleman, in prep.). We aimed to design a well-balanced set of sentences that featured a mixture of all these criteria. Or, conversely, we tried to avoid creating a list of test sentences that all combined an animate, pronominal indirect object with an inanimate direct object of more than 3 words. We know that such a combination will nearly always be used with a DOC in Dutch. As the same order is used by default in German, it would not have been possible to test for possible transfer effects. As we shall see, the results of the experiment with the Dutch sentences indicate that our selection of corpus sentences fits very well with our initial selection criterion. The average scores that are given by the participants to the alternatives are varied over the range of possibilities, with one group of items being clearly preferred with the DOC and another with the prepositional *aan*-construction.

Procedure: The test was administered to the participants online through an online learning platform. The test sentences were presented in pseudo-random order. Participants who performed the test more than once or who did not complete the test were excluded from further analysis.

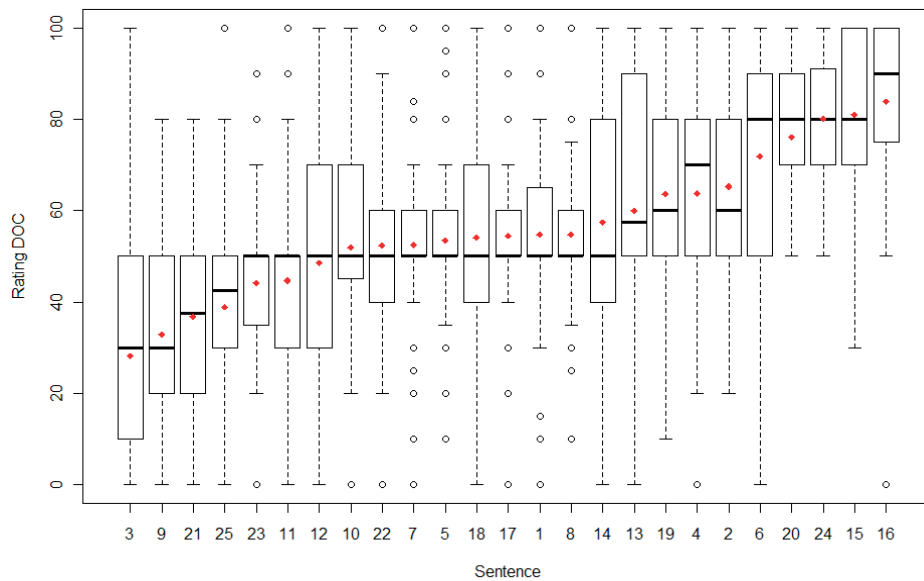
6. Results

6.1. Experiment 1

Figure 2 visualizes the participant ratings for the Dutch dative sentences, more particularly the percentages for the DOC per test sentence (recall that we have 25 sentences in our test). The boxplots associated with each item are arranged based on the mean rating for each item (represented by the red dots). An average rating of more

than 50% reflects a preference of the participants for the DOC, an average rating below 50% reflects a preference for the aan-construction.

Figure 2: Participant ratings for the DOC in Dutch, ordered by the mean rating per sentence (illustrated by the red dots).



Based on our sentence rating experiment, our data sample contains 7 sentences which are preferably used with the aan-construction and 18 sentences which preferably take a DOC. This finding corroborates our initial expectation or, better still, our aim to gather German ditransitive sentences whose Dutch equivalent could be either a DOC or an aan-construction. Note that there is a slight unbalance in the data because we have a few more DOC sentences than aan-constructional ones (based on the participant ratings). However, this is in line with the study population, as the DOC is also known to be more frequently used than the aan-construction.

We additionally aimed to retrieve sentences whose ratings would cover a broad spectrum of probabilities. Thus, we wished to retrieve sentences which would either strongly prefer the DOC or the aan-construction and sentences with a lower probability of occurring with one of both constructions. Looking at Figure 2, we can see that there are indeed sentences for which the participants give a higher preference to be used with the DOC (e.g., sentences 24, 25, and 16, which have a mean rating equal or above 80%), while there are also sentences which are preferably used with a DOC but which have nevertheless a lower mean rating (e.g., 10, 22, 7, 5, 18, 17, 1, 8, which have a rating of just above 50%).

Taking a closer look at the test items, we can see that their particular ratings are in line with what we would expect based on the known motivations behind the Dutch dative alternation. Thus, in sentence 10 (here example (15) below), both the IO/PrepO and the DO are of the same length, both are also nominal, definite, and refer to given referents. That there is no particular preference for one of both dative constructions (the mean rating is 52%) is in line with what we expected.

- (15) Hij deedde [zijn leraar]IO zo snel mogelijk [het bericht]DO mee /[[het bericht] DO zo snel mogelijk [aan zijn leraar]PrepO mee. (sentence 10)

'He told his teacher the message as soon as possible/the message as soon as possible to his teacher.'

In contrast, in sentence 16 (example (16)) the IO is pronominal, animate, definite, given and shorter than the DO, which is indefinite, inanimate, nominal and new. These particular features are strongly associated with the DOC, as is corroborated by the mean rating of 84% for the DOC.

- (16) Ik bezorg [u] (wetenschappelijke feiten) / wetenschappelijke feiten aan u. (sentence 16)

Sentences with a mean rating of less than 50% (e.g., 3, 9, 21, 25, 23, 11, 12) suggest that these sentences are preferably used with *aan*-construction. Here we can see that the mean ratings cover a smaller probability range. From 28% (cf. sentence 3, example (17)) to 48% (sentence 12, example (18)).

- (17) Wie geeft nu [iets]_{DO} [aan een verloren gelopen soldaat]_{PREPO}? (sentence 3)

'Now who would give somethings to a lost soldier?'

- (18) Bovendien nam een moderator meestal de leiding en legde hij [de samenhangen]_{DO} [aan de toeschouwers]_{PREPO} uit. (sentence 12)

'Moreover, a moderator mostly took charge and explained the dependencies to the spectators.'

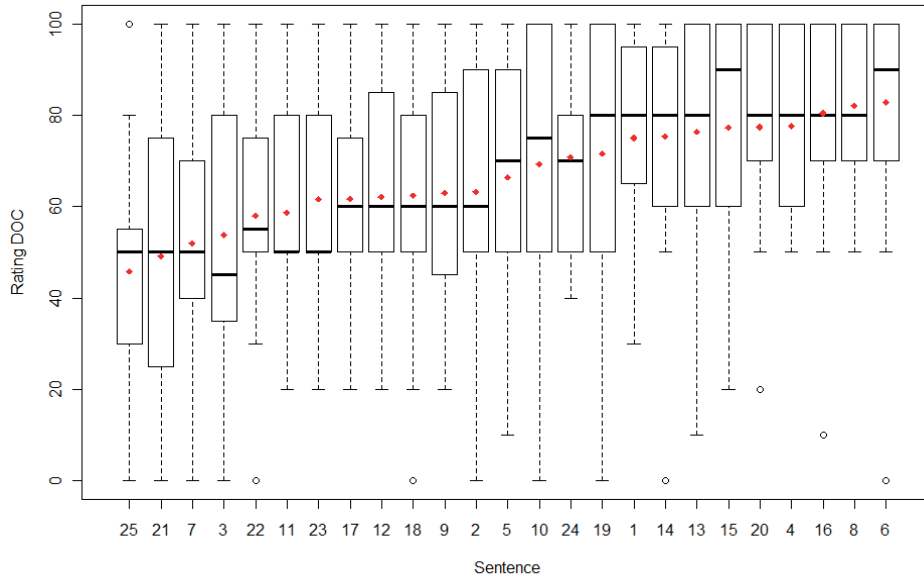
Example 3 features a PrepO that is considerably longer than the pronominal DO, which are both strong motivations to use the *aan*-construction here. In contrast, example 4 features two definite and nominal objects of almost equal length. The fact that the average DOC rating is 48% for this item is in line with our expectations.

6.2. Experiment 2

The second experiment involved a sentence rating experiment with German ditransitive sentences. Dutch learners of German were asked to rate

the possibility of using either a DOC or an an-prepositional construction for the 25 test sentences that we originally selected from the DeReKo corpus. Figure 3 summarizes the overall ratings per sentence by means of a series of boxplots, ordered on the basis of the mean DOC rating.

Figure 3: Participant ratings for the DOC in German, ordered by the mean rating per sentence (illustrated by the red dots).



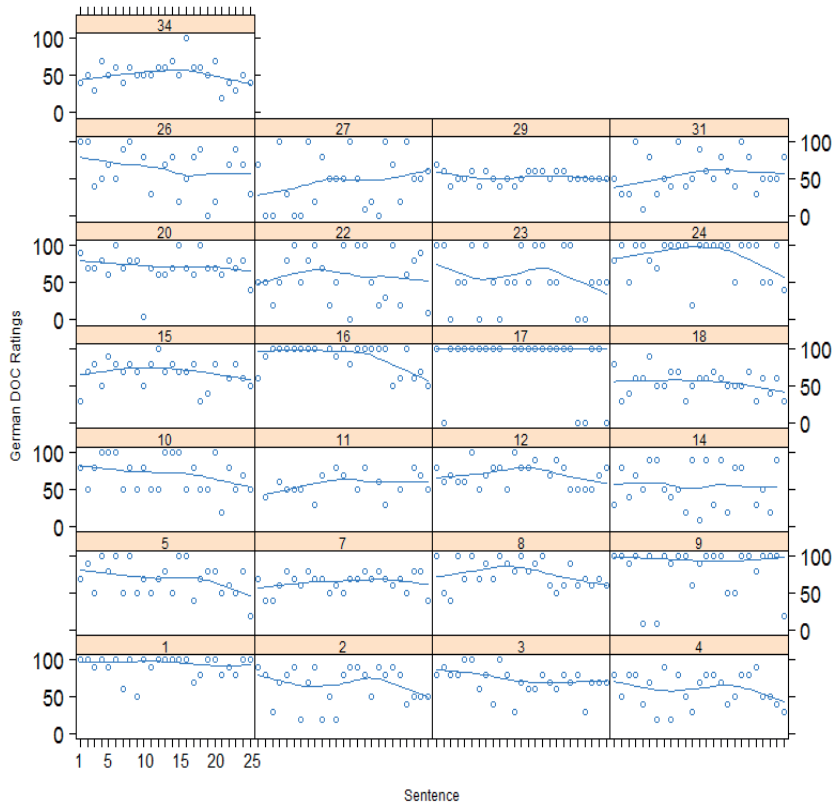
Recall that in German there is no dative alternation, so the ratings should all be constant at 100% if the learners simply applied the grammatical rule. Clearly, this is not the case here. As a matter of fact, no sentence received a rating of 100% by more than 50% of the participants. The sentences with the highest median rating (80%) are 15 and 6, which means that more than 50% of the participants rated the probability of using a DOC as 80% or more. In other words, with these two sentences, the majority of the participants was almost certain that a DOC was most natural.

A second observation based on this experiment is that even though the participants do not apply the grammatical rule, they do seem to rate the DOC as the most natural construction in nearly all the sentences. Indeed, based on the mean rating of the constructions the DOC was preferred in 23 sentences; conversely, the an-construction was preferred in only 2 sentences (and only 1 if we look at the median rating). This finding suggests that even though the participants do not seem to apply the grammatical rule, they do seem to “know” the DOC is preferred in German.

Third, even though the DOC is rated as the most natural construction with most sentences, there are still 6 sentences which have a median DOC rating of 50% or less: 25, 21, 7, 3, 11, and 23; thus, 50% of the participants rated the an-construction as the preferred construction with these sentences. We come back to these particular sentences in our discussion.

The wide variation of ratings associated with each test sentence indicate that there are considerable individual differences between the participants. Figure 4 plots the DOC ratings for the 25 sentences for each individual participant.

Figure 4: DOC ratings per participant. The x-axis covers the 25 test sentences, the Y-axis the DOC rating. The numbers on top of each scatterplot are the IDs of the participants. A loess smoother was added to indicate possible trends.



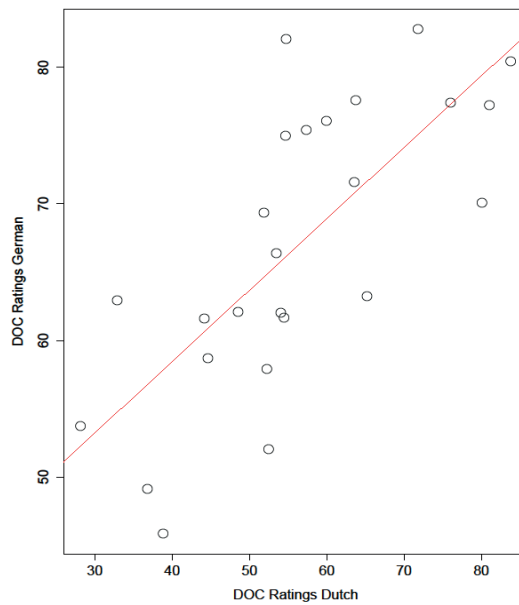
There are 5 participants that have given a 100% rating to most sentences (24, 16, 17, 9 and 1) and which therefore seem to be more proficient speakers of German.

There are also participants who display a large variety in their ratings in that they have often rated the an-construction as the preferred construction (cf. 2, 3, 4, 14, 22, 26, 27). Still others did not have outspoken preferences for one of both constructions (cf. 7, 29, and 34).

6.3. Comparison

To compare the ratings of the Dutch sentences with the ratings for the German ones we could simply evaluate the correlation between the mean ratings for the DOC per sentence in Dutch and the mean ratings for the DOC per sentence in German. Figure 5 visualizes this correlation by means of a scatterplot of the data. A simple linear regression of the DOC ratings in German in function of those in Dutch is added.

Figure 5: scatterplot of the ratings of the Dutch sentences in comparison with the ratings of the German ones. The red line is a linear regression of the Dutch ratings in function of the German ones.



The scatterplot indicates that the average rating of the DOC in German increases as the average rating of the DOC in Dutch increases. In other words, the use of a DOC for a German test sentence was lower when the average rating of a DOC was lower for its Dutch equivalent, but higher when the DOC was preferred in Dutch. The scatterplot further indicates that on average the use of the DOC was preferred

in German over the prepositional alternative, whereas in Dutch the prepositional construction was more often preferred (cf. the lower percentages on the x-scale in comparison with the y-scale).

The correlation between the mean DOC ratings in Dutch and German was significant at the 1% significance level (Pearson's product-moment correlation = 72%, with a 95% confidence interval from 46% to 87%, p-value = 3.842e-5). A simple linear regression with the mean German DOC ratings as the outcome variable and the mean Dutch ratings as the predictor variable further indicates that there is a significant relationship between both ratings. Table 2 gives the estimated coefficients for the linear regression⁴

Table 2: Linear regression model estimates. $R^2 = 53\%$.

	Est. Coefficient	Std. Error	t value	P-value
(intercept)	37.512	5.972	6.281	2.08e-6
Dutch mean ratings	0.523	0.103	5.078	3.84e-5

The intercept is interpretable but not applicable to our data because there is no mean Dutch rating of 0 (the intercept is the Expected German DOC rating when the Dutch rating equals zero). The estimate for the Dutch means suggests that on average the German DOC ratings increase with a factor of 0.523 with every unit increase of the Dutch mean ratings. More concretely, for every 10% increase in the DOC rating for Dutch one expects a 5.2% increase in the DOC rating for German.

We saw that there were considerable difference between the ratings of the participants of the German experiment. First, certain participants consistently rated the DOC as higher than other participants. Secondly, other participants differed in the range that they used for their ratings; while some participants had their ratings close to a particular percentage, such as participant 17, who nearly consistently gave a 100% score, others, such as participant 14, used the full range of possibilities. Both sources of variation should also be taken into account if we wish to make an accurate evaluation of the correlation between the Dutch and German ratings.

To this end, we fitted a mixed-effects linear regression model with a random intercept for each participant and a random slope to adjust for the differences between the range of possibilities. The Dutch mean DOC ratings were entered as a fixed effect as with our previous model. We fitted a mixed-effects regression model by means of the Laplace approximation implemented with the lmer function of the lme4 package in R

⁴ All standard tests of the model quality suggest a good fit.

(Bates, Maechler & Bolker, 2011) in R (2010). . Through our model building we found that the random slope did not contribute significantly to our model. The variance of the this random slope effect was merely 4.33e-3, and the *p*-value of the likelihood ratio test was estimated at 0.75, which is very high, even taking into account that the likelihood ratio test of nested mixed effects models tends to be conservative (Pinheiro & Bates 2000: 82). Our final model with only the random intercept for participant is given in Table 3:

Table 3: Mixed effects model estimates

Fixed effect	Est. Coefficient	Std. Error	t value
(intercept)	37.258	4.350	8.56
Dutch Mean Ratings	0.526	0.064	8.18
Random intercept	Variance	Std. Dev.	
Participant (n = 25)	123	11.1	

The large t-value suggests that the effect of the Dutch Mean Ratings is significant. We additionally tested the significance of the fixed effect by means of a likelihood ratio test, which further indicated that this factor is indeed highly significant (*p*-value = 1.6e-15).⁵⁵

Our mixed-effects models thus confirms that there is a significant correlation between the ratings for the DOC in Dutch and in German, even if we take into account the baseline preferences of the participants. Based on our mixed-effects model, we can also extract the following predicted intercepts associated with each participant:

1	20.8489	11	-8.5097	23	-7.5621
2	-1.4007	12	3.9151	24	14.3452
3	4.0762	14	-9.0372	26	-4.4596
4	-5.8506	15	0.2023	27	-16.8042
5	2.3647	16	17.8509	29	-12.3543
7	-1.7430	17	13.8171	31	-8.2467
8	8.1838	18	-10.3005	34	-12.3543
9	12.9760	20	3.1862		
10	3.3916	22	-6.5352		

⁵⁵ We fitted a mixed-effects model including the fixed effect using maximum likelihood and a mixed-effects model without that term using maximum likelihood. Then we compared both models using anova. This follows the advice of Douglas Bates on how to compute p-values of the fixed effects in a mixed-effects model, R-sig-mixed-models mailing list: <<https://stat.ethz.ch/pipermail/r-sig-mixed-models/2009q3/002912.html>> doa: October 31, 2013.

Higher values indicate a high baseline probability of using the DOC. For instance, participant 1 has a value of 20.8489, which means that this participant is more likely to prefer the DOC than the average participant. Note that this is in line with what we observed in Figure 4, which indicated that Participant 1 consistently rated the DOC as the preferred order; in most cases, Participant 1 gave a consistently higher rating to the DOC than most other participants. The same holds true, for instance, for participant 17. The intercept is nevertheless lower than that of participant 1 because 17 also gave a 0% score on three sentence. As a high intercept value is associated with a higher baseline for the DOC, this value may be interpreted as an indicator of the German proficiency of the Participant. In contrast, a low intercept value may be indicative of a poor knowledge of the German ditransitive order. This is, for instance, the case for participant 27, with an intercept of -16. Figure 4 shows that this participant actually more often preferred the an-construction than the DOC, which is indeed indicative of a low proficiency. The next section discusses our findings in the context of the transfer hypothesis.

7. Discussion and conclusion

The results of the present study suggest a cross-linguistic effect between Dutch and German. Given that the DOC is generally preferred by the L2 learners of German, even when the POC is preferred in the Dutch equivalent sentences, it seems that Dutch-speaking learners of German “know” that German takes only the double-object construction. However, the fact that the preferences of using the DOC in German is correlated with those of using the DOC in Dutch further indicates that the extent of this “knowledge” is influenced by their linguistic knowledge of the dative alternation in their L1. Our overall findings are hence in line with our main hypothesis, that stated that Dutch-speaking learners of German transfer their preferences regarding the Dutch dative alternation to the German ditransitive construction. The question that can be raised, then, is how this cross-linguistic effect is to be explained and how does it operate?

A likely candidate to explain our results concerns an effect of frequency. In this respect, Jarvis and Pavlenko (2008: 185) mention that effects of frequency on transfer have not received much attention during the last three decades. They have to refer back to Selinker (1969) and Anderson (1983) who were among the first to make the connection between transfer and frequency. Selinker (1969), for example, found that learners tend to transfer statistical preferences (in terms of frequency of use) from L1 to L2. In other words, the frequency of a specific structure determined that structure’s candidacy for transfer. Applied to the transfer of the dative alternation, this basically means that according to the specifics of a sentence either the double-object construction will be transferred (because it would be the most frequent pattern in that

specific Dutch sentence) or the prepositional construction (because it would be the most frequent pattern in that specific Dutch sentence).

To our mind, the specific frequency effect interrelates to the processing of information that takes place in the Conceptualizer. Although it is difficult to infer the exact processing that takes place with our participants – we do not have access to processing data, but only to the judgments after processing – we believe that the syntactic frames [NP-NP] and [NP-PP], varying according to specific semantic and discourse-pragmatic factors, are entrenched through frequent usage. As a consequence, we assume that the cross-linguistic influence operates during thinking-for-speaking, that is, during the planning phase of speech production, which results in the structuring and linearization of the preverbal message. As such, our results provide evidence for Slobin's Thinking-for-Speaking, as well as for Jarvis's (2007) Conceptualization Transfer. The statistical correlations reveal the effects of language as to how speakers of a particular language conceptualize their thoughts for verbalization, and more particularly the structuring and linearization thereof. In this respect, our findings are in line with those of Daller et al (2011), who found that Turkish-German bilinguals transfer the linearization pattern of their dominant language. Our results therefore add to the evidence that entrenchment (operationalised as frequency of use) is a decisive factor in acquiring a second language; indeed, in SLA, the role of entrenchment has been accepted as one of the most decisive factors (cf. Ellis, 1994: Chapter 7).

In addition, our results can be linked to Kellerman's (1977, 1978, 1983) idea of psychotypology, which refers to the learners' perception of the language distance and the degree to which learners perceive the language structure in question to be language-specific. According to Kellerman, these kinds of learners' perceptions influence the transferability of a particular structure, which he has demonstrated vividly by means of the lexical item *breken*, '(to) break' with Dutch learners of English (Kellerman, 1977). Related to this psychotypology is Anderson's (1983) Transfer To Somewhere principle, which states that a structure will transfer when it is perceived to have a similar counterpart, i.e. a somewhere to transfer to. In other words, transfer is likely to occur when the L2 learner perceives the L1 and the L2 as being similar. This would explain why the Dutch-speaking learners in our study also judge the use of the prepositional constructions as a possible alternative: (i) similar constructions also occur in German; (ii) there is a somewhere, i.e. a 'slot' to express the indirect object, to transfer it to. Dutch and German are typologically so closely related, that small (cf. Riehl, 2004: 74) and characteristic differences, as we have shown, are hard to notice (comparable to the Ranschburg effect in Psychology).

Bringing the explanations together, we argue that both the psychotypology and the entrenchment of the prepositional pattern when accompanied by certain pragmatic

factors lead to negative transfer, in this study observed as wrong grammaticality judgments. The entrenchment of the double-object construction when accompanied by certain other pragmatic factors so to speak overrules the negative transfer and leads to correct grammaticality judgments. Of course, the influence of and the relationship between the psychotypology and the entrenchment in the Conceptualizer is expected to be dynamic, as different types of data will most likely gain different results. Indeed, as a direction for future research, Ionin and Montrul (2010) suggest to compare data elicited from different tasks. Tasks can either tap into more explicit knowledge, where the learners' attention is focused on form (such as in our grammaticality judgment task), or rather tap into more implicit, automatized knowledge, where the learners' attention is focused on meaning (such as in free written or spoken language production). In data that is elicited under time pressure, we would expect even stronger correlation patterns, as learners will simply translate the structure from their L1 (see, e.g., Kroll & Stewart, 1984), or as Ionin and Montrul (2010: 911) put it: "[L]earners are more likely to go by 'feel' rather than rule".

Indeed, in previous research on the acquisition on the German case system (Baten, 2013), it was found that Dutch-speaking learners rely more on prepositional constructions in spoken language production. Of the 271 produced ditransitive sentences with two objects, 154 included a prepositional object (e.g., (19), (20)) and 117 an indirect object. This variation (in favour of the POC) shows that these learners do not comply to the German rule in spoken language, but perhaps literally translate the structure from their L1.

- (19) Sil: der vater wollt der spielzeugzug nicht geben an das kind
the father wants.to the toy.train not give to the child
- (20) Dor: und der wollt den goldfisch verkäufen an den vater
and he wants.to the goldfish sell to the father

Whether these Dutch-speaking learners produced the favourable POC in accordance to the dative alternation in their L1 was not examined. The preference for the prepositional construction was instead linked to the notion of direct canonical mapping, which goes back a long way, in the context of both functionalist and generative language acquisition research (Bever, 1970; Slobin, 1985; Pinker, 1984), and refers to a regular relationship between thematic roles and grammatical functions. The canonical mapping of ditransitive verbs in English and Dutch looks as follows:

give <x, y, z>			
argument structure	agent	theme	recipient
functional structure	SUBJ	OBJ	OBJ _{RECIP}
constituent structure	NP _{SUBJ}	NP _{OBJ}	PP _{OBJ RECIP}
	Romeo	a rose	to Juliet

Baten (2013) argued that second language learners revert to this canonical or unmarked structure under time pressure, especially beginning learners (as was the case in his study).

Another aspect that therefore must be included in future investigations on the transfer of the dative alternation is the probable influence of (general) language proficiency (Odlin & Jarvis, 2004). The entrenchment of the two alternating constructions will most likely change over time, i.e. when learners become more proficient, they may be able to shed the Dutch-originated Thinking-for-Speaking and adapt to the German norm of using only dative objects to express the indirect object. Levelt (1989) indeed states that the preverbal messages, which is generated in the Conceptualizer, must be tuned to the target language. The first-year university students in our study revealed proficiency differences. We would expect that students at higher levels will judge prepositional indirect objects as incorrect as well as use them decreasingly. In other words, the preverbal message these learners generate for their L1 Dutch Formulator must eventually become different from the message they generate for the L2 German Formulator (Levelt, 1989: 103ff.). However, in generative approaches to SLA, it has been suggested that particularly the interface between syntax and discourse-pragmatics is prone to residual L1 effects, i.e. high-proficient (or even near-native) learners are expected to experience continued transfer in this area (Sorace, 2005, 2006). This even applies to bilingual speakers. For example, in a recent study with English-German bilingual children, Woods and Zarqane (2012) found that English-German bilinguals produce non-monolingual-like constructions in German: in 52.5% of their German ditransitive productions, these children use the POC. Analogous to our results, this result suggests transfer from the English dative alternation. Woods and Zarqane (2012) do not, however, discuss the correlation with the English dative alternation in terms of the semantic and the discourse-pragmatic motivations.

In future research, the above-mentioned issues are aspects that we would like to examine further. An additional interesting question that remains open for further study is how speakers of a case language acquire the dative alternation in Dutch (or English, for that matter). Previous research on L2 English has focused on the verb disposition in this regard (i.e., verbs either allowing the alternation or not), but never on the discourse-pragmatic motivations that underlie the use of the alternating constructions. In sum, are those learners capable of acquiring these discourse-pragmatic conditions, or would they initially transfer the blueprint of their L1 Conceptualizer?

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