Intuitions about the non-inverted V3 word order in native speakers of Dutch: a forced-choice approach

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1. Abstract

All modern Germanic languages except for English share the Verb Second (V2) property. This property dictates that the finite verb should be in second position in all declarative main clauses. Recently though, a particular deviation from this pattern – known as non-inverted Verb Third (V3) – has seemingly been gaining ground. Data from different Germanic languages show that non-inverted V3 word orders are often associated with a preference for pronominal subjects. This preference was suspected to be related to the morphosyntactic weight of the subject, or to its information status. The recurring pattern found in different language varieties may suggest that Germanic languages share a grammatical property which allows for non-inverted V3 sentences to occur in certain contexts. The present study aims to find out whether such a preference also exists in native speakers of (Netherlandic) Dutch, a Germanic language which does not currently allow the non-inverted V3 word order. Utilizing a forced-choice task, sentences with pronominal subjects were compared to sentences with given nominal subjects. The study failed to provide evidence that Dutch native speakers preferred pronominal subjects in non-inverted V3 sentences. At the same time, an exploratory part of the study compared given nominal subjects to semi-given nominal subjects, in order to see whether information status played a role in this matter. The expectation was that Dutch native speakers would prefer given nominal subjects in non-inverted V3 sentences, in line with the given-before-new principle. The results did not provide evidence for this expectation. A number of factors that could have caused this null result are explored, among which are the relatively small number of items and participants, the variance in preferences between items and participants, and a possible tendency towards chance level. Future research on similar topics could improve on this study by including more items and participants, or by using a different task, such as a grammaticality judgement task.

2. Introduction

Verb Second (V2) word orders have long been the standard in declarative main clauses in all modern Germanic languages except for English. In these word orders, the finite verb is always in second position, regardless of the element that precedes it. However, recent research has shown that an increasing number of language varieties allow violations of the V2 property. In these cases, two elements are able to precede the finite verb, which leads to a word order referred to as non-inverted Verb Third (V3). This word order has been attested in two different dialects of Norwegian (Westergaard & Vangsnes, 2005), in the German urban dialect Kiezdeutsch (Te Velde, 2017; Walkden, 2017), in urban vernaculars of Danish, Norwegian and Swedish (Walkden, 2017), and in West Flemish (Haegeman & Greco, 2018). In the literature concerning these varieties, non-inverted V3 is regularly associated with a preference for pronominal subjects, compared to nominal subjects. Two different factors were suspected to be involved in this preference: the morphosyntactic weight of the subject – since pronominal subjects are lighter than nominal subjects –, and the information status of the subject – since pronominal subjects are more likely to refer to given elements than nominal subjects. The recurring pattern found across different languages may suggest that Germanic languages share some grammatical property which allows for non-inverted V3 word orders in certain contexts. If this is the case, then it might be possible to observe intuitions about the non-inverted V3 word order in a Germanic language that does not currently allow this word order. Previous work by Barbiers, Bennis and Dros-Hendriks (2018), Freriksen (2019) and Wilms (2019) suggests that language users may have intuitions about structures that are not realized in their own language varieties.

The present study aims to answer the following question: to what extent do native speakers of (Netherlandic) Dutch show intuitions about the non-inverted V3 word order, in line with the patterns found in other Germanic languages that currently allow this word order? To investigate this question, a forced-choice task will be used, in which Dutch native speakers will be asked to choose between two sentences that are identical apart from their subjects. In one condition, participants will choose between a sentence with a given nominal subject and one with a pronominal subject. The expectation is that participants will prefer pronominal subjects over nominal subjects in non-inverted V3 sentences. This expectation is based on the observations from the literature concerning other Germanic language varieties. In another condition, participants will be asked to choose between a given nominal and a semi-given nominal subject. The expectation here is that participants will prefer given nominal subjects

over semi-given nominal subjects in non-inverted V3 sentences. This expectation is based on the given-before-new principle, which states that given elements are more likely to appear near the beginning of the sentence than new elements.

This study aims to provide some new insights into the role that the subject type plays in non-inverted V3 word orders in Germanic languages. The relationship between word order, subject weight and subject information status is of particular interest in this regard. This study also contributes to the research regarding intuitions about structures that are not realized in the speaker's own language variety.

Section 3 will provide the background for the present study, including a more detailed overview of the literature on V2 and V3 word orders in Germanic languages, as well as a short summary of previous research on intuitions about structures outside of the own language variety. In section 4, the research question and the expectations will be discussed, followed by a brief overview of the present study's methodology. Section 5 reports on this study's pretest, including the methods, results and discussion. Section 6 reports on the final test, once again including the methods, results and discussion. In section 7, the results from the pretest and the final test will be discussed in more detail. Finally, in section 8, some general conclusions will be drawn about the present study, culminating in suggestions for future research on this topic.

3. Background

In this background section, an overview of the most relevant literature will be provided. In section 3.1, the V2 property as found in most modern Germanic languages will be introduced. In section 3.2, the V2 violation known as non-inverted V3 will be discussed. In section 3.3, two accounts for the emergence of non-inverted V3 will be summarized. Section 3.4 will concern previous research on intuitions about structures that are not found in the speaker's own variety.

3.1 The V2 property in Germanic languages

All Germanic languages except for modern English share a certain remarkable property: in main clauses, the finite verb is always in second position (Holmberg, 2013). This property is referred to as Verb Second or V2. Since the finite verb is in second position, it is always preceded by exactly one constituent. This first position can be taken by the subject, but it can also be taken by many other types of constituents, such as adverbials. Examples (1a) and (1b)

are correct Dutch sentences with the first position being taken by the subject and the adverbial, respectively.

1a) Ik zag Marie gisteren.
I saw Marie yesterday
I saw Marie yesterday.

1b) Gisteren zag ik Marie.
yesterday saw I Marie
Yesterday, I saw Marie.

Notice that in both of these examples, the finite verb "zag" is in second position. This means that when the adverbial is placed in first position, the subject and the finite verb switch places in the surface word order, as seen in (1b). This process is referred to as subject-verb inversion and it is a prerequisite for V2 in sentences with a non-subject element in first position. Subject-verb inversion does not take place in this context in modern English, as can be seen in the translation provided in (1b). This is because modern English does not have the V2 property in all declarative main clauses.

Some languages with the V2 property, such as German and Dutch, are assumed to have an underlying word order which places the finite verb at or towards the end of the sentence. The surface word order is achieved through a leftward movement of the finite verb and – crucially – another constituent, which directly precedes it (see Den Besten, 1983). The part of the sentence structure where the first constituent and the verb end up is referred to as the CP, the C domain or the left periphery.

In the next few sections, a specific violation of the V2 property, referred to as non-inverted V3, will be discussed. This deviant pattern is currently found in variants of several different Germanic languages. Section 3.2 consists of a synchronic overview of non-inverted V3 in Germanic languages. Data from different languages will be discussed, in order to review the constraints and tendencies associated with non-inverted V3 across the Germanic language family. Section 3.3 consists of a brief summary of research on diachronic variation that has led to the rise of non-inverted V3. Throughout these sections, special attention will be paid to the interaction of syntax, pragmatics and morphosyntactic weight that is explored in several publications regarding this topic. Section 3.4 serves as the background for the specific method that was used in the empirical part of this thesis.

3.2 Synchronic variation regarding V2 in Germanic languages

Although V2 is widespread among Germanic language varieties, exceptions to this pattern are also found in many varieties and in many contexts. There are certain situations in which V2 is traditionally violated in different languages. For example, resumptive elements may appear between an initial constituent and the finite verb in all modern Germanic V2 languages (Salvesen, 2020). This type of pattern is not of particular interest for this thesis. The present study concerns a specific type of V2 violation, which will be referred to as non-inverted V3 (following Haegeman & Greco, 2018). "Non-inverted" refers to the fact that subject-verb inversion has seemingly not taken place. The resulting pattern, in which the finite verb is in third position (V3), resembles the word order of modern English main clauses with adverbials in first (or second) position. Examples (2a) and (2b) use the same word order for modern English and Dutch, with the asterisk indicating that this word order is not acceptable in Standard Dutch.

(2a) Yesterday, I saw Marie.

(2b) *Gisteren ik zag Marie.
yesterday I saw Marie

Recently, non-inverted V3 has seemingly been gaining ground in different contexts. A growing corpus of literature describes its emergence in regional varieties and urban vernaculars across the Germanic language area. In the remainder of this section, data concerning non-inverted V3 from different Germanic languages will be considered, along with some interpretations that have been provided by researchers.

Westergaard and Vangsnes (2005) identify two different dialects of Norwegian (which are referred to as NOR-2 and NOR-3) which allow non-inverted V3 in *wh*-questions, even though standard Norwegian requires V2 in all main clauses. The conditions under which this divergent pattern may occur differ between the two dialects. NOR-3 allows non-inverted V3 in all *wh*-questions, but NOR-2 has an additional prerequisite: the *wh*-word has to be short (monosyllabic). The fact that the length of the *wh*-word modulates the possibility of V3 may be seen as a clue that morphosyntactic weight plays a role in this case of non-inverted V3. The main focus of this study is not on the *wh*-words in V2 and V3 sentences, but on the

subjects and finite verbs in these sentences. As we will repeatedly see in this literature discussion, the subject plays an important role in the alternation between V2 and V3. Based on a corpus collected by Westergaard (2003), Westergaard and Vangsnes (2005) claim that "V2 word order tends to occur when the subject is a full DP and the verb is a semantically light verb, most often *være* 'be', while the V3 structure is preferred when the subject is a pronoun or an expletive and the verb is not *være*" (p. 125). However, even when one word order is generally preferred, the other word order is not actually ungrammatical. This means that this pattern of results cannot be explained by syntactic constraints, since syntactic constraints are assumed to separate grammatical utterances from ungrammatical utterances, leaving no middle ground. Westergaard and Vangsnes (2005) make the case that the word order variation in *wh*-questions in NOR-2 and NOR-3 is linked to the information status of the subject. Full DPs are often used to refer to new information, while pronouns are generally used to refer to information that was previously given in the discourse. For example, "a man" can be used to introduce an individual into the discourse, whereas the use of "he" presumes that the man has already been introduced. Since the V3 word order is preferred when the subject is a pronoun, it can be concluded that non-inverted V3 is more likely to occur when the subject refers to given information. Conversely, the V2 word order is more likely to occur when the subject refers to new information. This way, the word order variation is not explained by a syntactic constraint, but by the pragmatic concept of information status.

Te Velde (2017) discusses Kiezdeutsch, a relatively new variety of German which originated in multi-ethnic communities in Berlin. According to Te Velde (2017), the occurrence of non-inverted V3 is a distinguishing property of this variety. To be specific, Kiezdeutsch allows the finite verb to be preceded by both a temporal adverb and the subject in main clauses. It is suggested that this phenomenon is not caused by the import of foreign properties, but can be generated from within the West Germanic grammar. Crucially, this implies that other West Germanic languages would also have the option for the same non-inverted V3 pattern. Te Velde (2017) also claims that syntax alone cannot explain the variation, arguing that "the V2-effect (…) can be understood only if the integration of the syntactic with the pragmatic and particularly, the prosodic properties can be made more precise" (p. 303). He proposes an analysis in which the temporal adverbials in non-inverted V3 sentences in Kiezdeutsch are merged late, after the transformation that leads to Verb Second has taken place. These adverbials are relevant for the pragmatics of the utterance, but are ignored by the syntax. It is also observed that initial temporal adverbials cannot have pitch accent in non-inverted V3 sentences. Te Velde (2017) hypothesizes that the two constituents

(the temporal adverbial and the subject) which precede the finite verb are treated as a single prosodic phrase because there is no pitch accent on either of them. Although the article contains no numbers regarding the occurrence of different subject types, Te Velde (2017) explicitly associates V3 word order with pronominal subjects, because they are less likely to be the focus of the sentence, and thus less likely to carry pitch accent.

Walkden (2017) also discusses the occurrence of non-inverted V3 in Kiezdeutsch, and additionally in urban vernaculars of Danish, Norwegian and Swedish. The data show that non-inverted V3 is usually allowed, except in: (1) object-initial sentences; (2) *wh*-interrogatives; and (3) subordinate clauses. For these languages specifically, Walkden (2017) splits the CP into two constituents: CP1 and CP2. This splitting of the CP was suggested by Rizzi (1997) and is used here to create one extra position in front of the finite verb. CP2 is associated with scene setting or topicalization, and this is where the first constituent of a V3 sentence is placed. CP1 is associated with given information, and this is where the subject resides. Once again, the subject in a non-inverted V3 sentence is assumed to be given. Walkden (2017) also mentions that subjects in these sentences are often pronominal, but calls it "a strong tendency rather than a requirement" (p. 56). From this perspective, the prevalence of temporal adverbials in V3 sentences is explained by the high scene-setting potential of these elements.

A somewhat different approach is used by Haegeman and Greco (2018) to analyse non-inverted V3 in West Flemish, a language closely related to standard Dutch. In West Flemish, non-inverted V3 often occurs with initial temporal or conditional clauses, but non-clausal adjuncts may also appear in first position. Just like in Kiezdeutsch and the Scandinavian urban vernaculars, initial arguments, *wh*-adjuncts and embedded clauses block the possibility of non-inverted V3. It is also observed that non-inverted V3 is compatible with different subject types, although "the majority of the anecdotally collected attestations have a pronominal subject" (Haegeman & Greco, 2018, p. 14). The proposal made by Haegeman and Greco (2018) is that the adjunct in the first position of V3 sentences is main clause-external. This means that a V3 sentence is a combination of a fully-fledged V2 sentences and an extra-sentential adjunct, which serves to set a frame "which anchors the main clause proposition" (Haegeman & Greco, 2018, p. 18). A prosodic break might occur after the initial constituent, but this is also the case for many V2 sentences. An important argument for this proposal is related to the interpretation of V3 sentences: in West Flemish non-inverted V3 sentences, the initial adjunct is not syntactically integrated and can thus not be reconstructed to a lower domain of the clause. This means that the initial adjunct always modifies the meaning of the whole sentence, and not that of a specific element such as a subordinate clause. The analysis

presented here is somewhat similar to Te Velde's (2017), who attributed the lack of subject-verb inversion to a late merge of the temporal adverbial in first position. The framing function discussed here may be comparable to the scene-setting function of Walkden's (2017) CP2. However, Haegeman and Greco (2018) deviate from all the previous analyses discussed here by placing the initial constituent outside of the CP, and thus outside of the clause as a whole.

Table 1 summarizes the characteristics of the non-inverted V3 patterns that have been attested in different Germanic languages.

Table 1

Summary of the characteristics of non-inverted V3 sentences in different Germanic languages

Publication	Language	First constituent	Subject	Other
Westergaard & Vangsnes (2005)	Norwegian dialects NOR-2 and NOR-3	*Wh*-words	Pronominal or expletive (preferred)	Only possible with a short *wh*-word in NOR-2
Te Velde (2017)	Kiezdeutsch	Temporal adverbials	Pronominal (not explicitly supported by data)	No pitch accent on any of the first two constituents
Walkden (2017)	Kiezdeutsch and urban vernaculars of Danish, Norwegian and Swedish	Non-*wh*-adjuncts, associated with a scene setting or topicalization function	Given, pronominal (tendency)	In rare cases, the second constituent is not the subject
Haegeman & Greco (2018)	West Flemish	Non-*wh*-adjuncts	Pronominal (majority of attestations)	

The previous discussion shows that researchers studying different Germanic languages associate non-inverted V3 patterns with pronominal subjects. This observation suggests that the variation regarding V2 in Germanic languages may have to do with two factors. The first factor has to do with the weight of elements: nominal subjects are morphosyntactically

heavier than pronominal subjects, which makes them less likely to move leftwards. This is because nominal subjects have more internal structure than pronominal subjects. The second factor is pragmatics: different subject types may correspond with different types of information structure, as suggested by Westergaard and Vangsnes (2005). In particular, the distinction between pronominal and nominal subjects suggests a possible connection with the left-right principle or the related given-before-new principle. The left-right principle suggests that the informatively important elements are often closer to the start of the sentence than the informatively less important elements (Haeseryn, Romijn, Geerts, De Rooij, & Van den Toorn, 1997). The given-before-new principle is a variation on this idea, suggesting that elements that have already been mentioned in the discourse are often closer to the start of the sentence than elements that are newly introduced in the discourse (see for example Schumacher & Hung, 2012). The given-before-new principle may influence the pragmatic felicity of certain types of subjects in certain word orders, since nominal subjects are able to carry both given and new information, whereas pronominal subjects are normally only used to carry given information.

In section 3.3, two diachronic accounts for the rise of non-inverted V3 structures will be discussed. This discussion will show that information status was involved in the division of labour between V2 and non-inverted V3 in Old English and Middle English.

3.3 Diachronic variation regarding V2 in Germanic languages

As mentioned earlier, modern English is the only current Germanic language that lacks the V2 property in declarative main clauses. In subject-initial main clauses, the verb can occur in second position, but subject-verb inversion does not take place when a non-subject constituent is topicalized. However, exceptions exist for *wh*-phrases and negative elements (Van Kemenade, 2012). These exceptions can be seen as remnants from earlier periods in the development of the English language, since English used to have the V2 property in many more contexts. The transition to the modern English system took place during the Middle English and Early Modern English periods. Van Kemenade (2012) identifies two different types of V2 in Old English and Middle English. In the first type, inversion of the subject is "near-categorical", as is the case with present-day Germanic V2. The second type of V2 behaves somewhat differently, since "inversion predominates with nominal subjects but is infrequent with pronominal subjects" (Van Kemenade, 2012, p. 2). This leads the author to conclude that information status played an important role in the variation between V2 and

non-inverted V3 in Old and Middle English. Syntactically, two different subject positions are assumed: a preverbal one (which is reserved for discourse-given subjects), and a postverbal one (which is reserved for non-given or new subjects). Throughout the Middle English and Early Modern English periods, non-given nominal subjects gradually started to occur more often in preverbal position. Due to this development, new speakers of English were exposed to less evidence of the existence of the postverbal subject position, leading to the loss of this type of V2. The result is a lack of inversion in the contexts that previously led to this second type of V2.

Concerning the emergence of non-inverted V3 in contemporary Germanic urban varieties, Walkden (2017) proposes a three-stage scenario, in which influence from L2 acquirers plays a key role. Firstly, L2 acquirers develop an interlanguage in which the finite verb does not move to C°. Secondly, L1 learners try to fit utterances by L2 acquirers into their own native grammar by assuming two preverbal positions, which results in a split CP. Thirdly, native Germanic speakers start to propagate the new grammar. Walkden (2017) claims that a similar process can account for the loss of V2 in English. L1 speakers of Brythonic Celtic may have failed to acquire Old English V2, after which native speakers reinterpreted their utterances to a V3 grammar. This explanation may not be sufficient for certain Germanic varieties that have been mentioned in the previous section. NOR-2, NOR-3 and West Flemish are not seen as emerging urban dialects with strong influence from L2 speakers. In these dialects, non-inverted V3 might be an older phenomenon, which has risen due to previous societal circumstances, as is the case with English.

This concludes the overview of non-inverted V3 structures in Germanic languages. Both the synchronic and the diachronic overview have shown that non-inverted V3 has often been associated with pronominal subjects, with connections to pragmatics, weight and prosody sometimes being suggested. Based on the recurring patterns seen in different Germanic languages, it seems likely that the Germanic languages share some grammatical property that allows for non-inverted V3 word orders to emerge. If this is the case, then intuitions about the relationship between subject and word order could also exist in languages where non-inverted V3 has not yet been attested, such as (Netherlandic) Dutch. In the present study, such intuitions will be investigated. Section 3.4 discusses recent research projects that have focussed on intuitions about structures that are not realized in the speaker's own language variety. These studies provided the research paradigm that was employed in the empirical part of this thesis.

3.4 Intuitions about structures outside of the own language variety

The present study seeks to investigate intuitions that native speakers of Dutch may have about a structure that has emerged in other Germanic languages, but is mostly unrealized in Dutch. The idea that intuitions about unrealized structures could reveal knowledge of the underlying grammar of a language is mainly based on a study performed by Barbiers et al. (2018), which focusses on verb clusters in Dutch. Verb clusters consist of one main verb and one or more modal or auxiliary verbs which are all located at the end of the sentence. An example of verb cluster consisting of three verbs is shown below:

3) Ik vind dat iedereen $_1$**moet** $_2$**kunnen** $_3$**zwemmen.**
I think that everyone $_1$***must*** $_2$***can*** $_3$***swim.***
I think that everyone should be able to swim.

Verbs in a verb cluster have a certain hierarchy, in which each verb dominates the verbs below it. This hierarchy is represented in the above example by the numbers in front of the verbs. A verb cluster consisting of three verbs has six logical orders. However, Barbiers et al. (2018) claim that Dutch only has two underlying word orders for these clusters.

This has to do with the way the clusters are formed. The verbs are clustered through the Merge operation, which can only combine two elements at once. In the first step, the main verb (Verb 3) must be merged with the verb that directly dominates it (Verb 2). In the second step, Verb 1 is merged with the newly-formed cluster that contains Verbs 2 and 3. Since Verb 1 cannot penetrate the cluster from step 1, it must be placed at the start or at the end of the cluster. Barbiers et al. (2018) further assume that the linearization of a verb cluster is unidirectional. This means that verb clusters can only be generated in a fully ascending order (V1-V2-V3), or in a fully descending order (V3-V2-V1). The relative prominence of these word orders differs based on geographical location.

However, the data show that two other word orders are also realized in Dutch: V1-V3-V2 and V3-V1-V2. According to the authors, these two word orders do not truly exist. In Dutch, it is possible for participles to gain the status of an adjective, and for infinitives to gain the status of a noun. The occurrence of verb clusters with V1-V3-V2 or V3-V1-V2 order can be explained by assuming that one of these three seemingly verbal elements is actually an adjectival participle or a nominalized infinitive. When these elements are ignored, the cluster consists of only two verbs, which are placed in an ascending or a descending order by

definition. Now, four of the six logical orders have been accounted for. The final two logical orders, V2-V3-V1 and V2-V1-V3, are not realized in Dutch and are impossible to derive in this system.

The authors hypothesize that native speakers' judgements of different verb cluster orders should reflect the word orders' possibility according to the grammatical system. To test this hypothesis, an experiment was designed in which a large number of Dutch native speakers ranked the six logical word orders for two different example sentences. The results showed that the two word orders that were impossible to derive in the proposed system were consistently ranked the lowest. This finding could be seen as a confirmation of the hypothesis that the judgements of word orders reflect their grammatical possibility. However, a different explanation is also possible. Recall that the two word orders that were ranked lowest in the experiment are also the two word orders that are not realized in Dutch. This means that participants may have judged these word orders as the worst because they were unfamiliar with them. To test this alternative hypothesis, the results were split based on geographical areas. Production data had shown that certain word orders were exclusive to certain areas. If participants' judgements were based on familiarity, then certain word orders would be ranked higher in areas where they are actively produced than in areas where they do not naturally occur. It was found however that the rankings were very similar for each area, regardless of whether certain word orders were produced in that area.

Based on these findings, the authors conclude that the low ranking of the non-occurring (impossible) word orders must reflect implicit knowledge of the grammatical system that is present in all native speakers. This is an interesting conclusion, which implies that native speakers' language systems can generate possible structures that are not usually realized in their language or language variety. Thus, some structures may be unrealized according to production data, but may not be ungrammatical according to the grammar (see Barbiers, 2009). The rejection of the familiarity hypothesis is key in the argumentation. If speakers' judgements were found to be based on familiarity with certain word orders, then it would not be necessary to assume that the underlying grammatical principles are present in native speakers. The rejection of the hypothesis, however, requires that speakers are not exposed to significant input from language areas in which different word orders are used. If such input is present in ample amounts, this could explain why participants consistently ranked the two word orders that occur nowhere in the Dutch language area as the least acceptable. It is hard to definitively prove that this is not the case.

The innovative research paradigm introduced by Barbiers et al. (2018) was also used to examine implicit knowledge of a different linguistic phenomenon: the Northern Subject Rule (NSR), which is found in certain varieties of modern English. The Northern Subject Rule states that an –s may occur at the end of a finite verb in a third person plural context. This feature is geographically restricted and not present in Standard English. However, the addition of this –s only occurs if the subject is lexical (Type of Subject constraint) or if a pronominal subject is separated from the finite verb by an adverb (Subject Adjacency constraint). The following examples show the two constraints at work.

4a) They sing

4b) Birds sings (Type of Subject constraint)

4c) They always sings (Subject Adjacency constraint)

(adapted from De Haas & Van Kemenade, 2014)

Wilms (2019) and Freriksen (2019) conducted experiments to see whether speakers of Standard English and Dutch were sensitive to these constraints, even though the grammars of these varieties do not include the Northern Subject Rule. For this purpose, they made use of a type of forced-choice task, in which the participants had to choose between two sentences which were largely similar. The only difference between the two sentences was whether or not they violated a certain NSR-constraint. Participants' preferences were compared between a pretest (which did not use the NSR –s) and a final test (which used the NSR –s). An example of an item testing the Type of Subject constraint is presented below.

5a) Pretest item (without –s)

These men are very strong. The wrestling competition is next week.

A. The men like to fight.
B. They like to fight.

5b) Final test item (with –s)

These men are very strong. The wrestling competition is next week.

A. The men likes to fight.
B. They likes to fight.

(Wilms, 2019)

In example 5b, option A does not violate the Type of Subject constraint, whereas option B does. If speakers of Standard English or Dutch were sensitive towards the constraints of the NSR, then they would prefer the option that does not violate a constraint in the final test. The pretest allowed the authors to measure participants' preferences without the –s feature, so that potential pre-existing preferences would not determine the results. The final results for Standard English speakers indicated that they "are sensitive towards the Type of Subject-constraint, but not towards the Subject Adjacency-constraint" (Wilms, 2019, p. 3). The same pattern was found for native speakers of Dutch, who were advanced learners of English (Freriksen, 2019). These studies provide further evidence that language users can have intuitions about structures that are not usually part of their language variety, as was hypothesized by Barbiers et al. (2018).

The research conducted by Barbiers et al. (2018), Freriksen (2019) and Wilms (2019) provided the groundwork for the research question and methodology of this thesis. In section 4, the present study will be briefly introduced.

4. The present study

4.1 Research question

This thesis aims to provide an answer to the following question:

To what extent do native speakers of (Netherlandic) Dutch show intuitions about the non-inverted V3 word order, in line with the patterns found in other Germanic languages that currently allow this word order?

4.2 Methodology

In order to measure possible intuitions about non-inverted V3 sentences, a forced-choice task inspired by Barbiers et al. (2018) and Freriksen (2019) and Wilms (2019) was employed. Participants were forced to pick between two sentences, which were identical apart from their subjects. In one condition, participants had to choose between a sentence with a given nominal subject and one with a pronominal subject. This subject type distinction was directly based on observations from the literature on non-inverted V3 word order in Germanic languages, as was shown in section 3.2. In the other condition, a choice was forced between a given nominal subject and a semi-given nominal subject. This part of the experiment is of a more exploratory nature, and aims to investigate the influence that information status has on the acceptability non-inverted V3 sentences.

To establish a baseline preference for different subject types in grammatical Dutch sentences, a pretest using the V2 word order was designed. The goal of the pretest was to select a subset of items in which participants did not show a significant preference for either subject type. In the final test, the same experimental items were used, but now they were presented in the non-inverted V3 word order.

Based on the previous literature, the first expectation was that Dutch native speakers would prefer pronominal subjects over given nominal subjects in non-inverted V3 sentences. Based on the given-before-new principle, the second expectation was that Dutch native speakers would prefer given nominal subjects over semi-given nominal subjects in non-inverted V3 sentences. In section 5, the methods and results of the pretest will be discussed in more detail. Section 6 outlines the methods and results of the final test.

5. Pretest

A pretest was conducted to determine the average preference scores of the experimental items in V2 word order, before the items were converted to non-inverted V3 word order for the final test.

5.1 Method

5.1.1 Participants

Native speakers of Dutch were recruited via social media and messaging services. Since the Belgian language variety West Flemish has been shown to be more liberal with V3 than Standard Dutch (Haegeman & Greco, 2018), this study specifically focussed on speakers from the Netherlands. Participants were excluded if they had lived outside the Netherlands for more than two consecutive years at any point in their lives, since long-term immersion in a second-language-speaking environment might influence syntactic judgements in a participant's native language. Participants had to be at least 16 years old to be able to participate.

35 participants completed the survey, of which 26 identified as female and 9 identified as male. The average age of the participants was 24.3 years (SD = 6.7). The youngest participant was 19 years old and the oldest participant was 61 years old. All participants had an institute of higher education as their highest or current education level. The highest or current levels of education that were reported are as follows: MBO (1), HBO (6), and university (28).

5.1.2. Materials

For this study, simple Dutch sentences were used as test material. All target sentences were declarative main clauses with an adverbial in first position. The finite verb was presented in the present tense. In the "given nominal versus pronominal" condition, two alternatives of the same sentence were presented concurrently: one with a nominal subject and one with a pronominal subject. The nominal subjects were all first names which consisted of one syllable, so that the amount of syllables was matched between the nominal and the pronominal subjects. Each of the items had a different adverbial in first position. Participants

were forced to choose which of the two target sentence options sounded better to them. An example of such a pair of sentences is shown below.

6a) Daarom pakt **Jan** zijn paraplu.
For this reason, Jan grabs his umbrella.

6b) Daarom pakt **hij** zijn paraplu.
For this reason, he grabs his umbrella.

If these items were presented without context, a strong preference for nominal subjects is expected, since pronominal subjects usually require a discourse-given element to refer back to. For this reason, different contexts were presented ahead of each item in hopes of achieving a somewhat even split between pronominal and nominal subject preferences. For each item, two context sentences were provided. The first context sentence introduced the subject of the target sentence, which was always a monosyllabic first name. This ensured that a pronominal subject in the target sentence would have something to refer back to. The second context sentence did not refer to the target subject in any way. Instead, it contained a distractor subject, which was meant to increase the felicity of a pronominal subject in the target sentence. To avoid anaphoric ambiguity, speakers will often use a nominal subject if there is significant distance between two references to a certain element. Animate subjects were expected to cause more distraction than inanimate subjects, since animate subjects are more likely to be interpreted as the referent of the gendered personal pronoun in the target subject. In this study, half of the items had animate distractor subjects, while the other half of the items had inanimate distractor subjects. In the case of an animate distractor subject, the target subject and distractor subject differed in terms of gender or in terms of number. This was done to make sure that the pronominal target subject and the distractor subject could not be interpreted as having the same referent. The distractor sentence was between 6 and 11 words long. These factors were expected to prevent a strong preference for either pronominal or nominal subjects. This method of balancing givenness was previously used successfully by Freriksen (2019) and Wilms (2019). An example of a full set of stimuli is shown below, with the Dutch target subjects again printed in bold.

7)

Jan doet de achterdeur open. Regendruppels vallen met een tikkend geluid op het gazon.
Jan opens the back door. Raindrops are falling on the lawn with a ticking sound.

Daarom pakt **Jan** zijn paraplu.	Daarom pakt **hij** zijn paraplu.
For this reason, Jan grabs his umbrella.	*For this reason, he grabs his umbrella.*

The example given above forces a choice between a given pronominal subject and a given nominal subject. 10 such items were included in the pretest. The choice was made to use only a small number of items, since participants could not be expected to spend more than 15 minutes on the survey without receiving any compensation. A longer survey was expected to lead to significantly higher dropout rates.

A second set of experimental items was added to the pretest. The "given nominal versus pronominal" items could tell us whether Dutch speakers had intuitions regarding the relationship between pronominal subjects and non-inverted V3, but they could not clarify whether this relationship had to do with pragmatics, or with morphosyntactic weight. Nominal subjects are morphosyntactically heavier than pronominal subjects, so a preference for pronominal subjects in V3 sentences could also be explained by subject weight differences.

To better study the way in which morphosyntactic weight and information status interact with word order, another 10 items were included. These items forced a choice between a given nominal subject and a semi-given nominal subject. In the case of semi-given nominal subjects, the target subject was not identical to the subject given in the first context sentence, but was instead a part of the set of individuals that was referred to in the first context sentence. Thus, in this condition, the two options had the same morphosyntactic weight, but had different information statuses. An example of such a set of stimuli is shown below.

8)

Vier mannen komen naar buiten. De deur van het gebouw wordt gesloten.
Four men step outside. The door of the building gets closed.

Daarna stappen **de mannen** in een auto.
After that, the men get in a car.

Daarna stappen **twee mannen** in een auto.
After that, two men get in a car.

Semi-given nominal subjects have the same morphosyntactic weight as given nominal subjects, but they are different in terms of information status, since semi-given nominal subjects add new information in the form of a number. Based on the given-before-new principle, participants were expected to show a preference for given nominal subjects in the V3 word order. These additional 10 items had the same adverbials in first position as the first 10 items. All 20 experimental items can be found in appendix A.

The 20 experimental items were accompanied by 40 filler items, so that there were twice as many filler items as there were experimental items. The filler items also consisted of two context sentences culminating in two target sentence options. However, in the filler items, the target sentences differed in ways that were unrelated to the subject type. Half of the filler items (20 items) differed in terms of their word order, with one sentence using a grammatical word order and the other using an ungrammatical one. These filler items were intended to be easy for participants. These easy filler items were included in hopes of preventing possible frustration arising from the large number of difficult items in the test. In order to divert attention away from the non-inverted V3 items that would be presented in the final test, many different ungrammatical word orders were used in these filler items. The adverbials in first position were the same ones that were used in the experimental items.

In the other half of the filler items (20 items), the target sentences differed in terms of the initial adverbial. For each item, one of the adverbials was taken from the experimental items, and the other adverbial was a (near-)synonym. In half of these items, the choice was between two grammatical sentences (10 items). In the other half of these items, the choice was between two ungrammatical sentences (10 items).

Across all filler items, the ratio between animate and inanimate distractor subjects was equal to that of the experimental items (1:1). Animate and inanimate distractor subjects were distributed equally across filler items with different distinctions. To approximate the ratio of target subject types in the experimental items, 20 of these filler items had given nominal

subjects in both target sentence options, while 10 had pronominal subjects in both target sentence options, and 10 had semi-given nominal subjects in both target sentence options. Target subject types were distributed as equally as possible across filler items with different distinctions between target sentence options, while avoiding the use of two different subject types in the same item. A fill list of the filler items used in this test can be found in appendix A.

5.1.3. Procedure

The pretest was conducted using Qualtrics. After opening the web questionnaire, participants first received some general information about the study. The template for this was provided by the ethics committee at Radboud University. Participants were also informed that participation was voluntary, that their data would be recorded anonymously for research purposes, and that they could contact the author if they had any questions. Participants then had to confirm that they had read the information, that they agreed to participate and that they were at least 16 years old. Then, participants were asked whether Dutch was their native language and whether they had ever lived outside the Netherlands for more than two years. Participants were directed to the end screen if they did not agree to participate, if Dutch was not their native language, or if they had ever lived outside the Netherlands for more than two years. All other participants were directed to the instructions after answering these questions. In the instructions, participants were informed that they would be reading short stories and that they would have to pick between two sentences at the end of each story, based on which sentence sounded best to them. To prevent participants from becoming confused or frustrated by the difficult choices, participants were informed that it would sometimes be hard to choose between two sentences, either because both sentences would sound good or because both sentences would sound bad. Since the goal of the study was to measure intuitions about ungrammatical structures, terminology related to grammaticality or prescriptive attitudes to syntax were avoided. Participants were instructed to use their intuitions and to avoid thinking about their answers for too long. At the end of the instructions, two practice items were presented to allow participants to get used to the procedure, as well as to the ungrammaticality of certain items. The first practice item consisted of one grammatical sentence and one ungrammatical sentence. The second practice item consisted of two ungrammatical sentences. The full set of instructions and practice items can be found in appendix A. An English translation of the instructions is provided in appendix C.

After the practice items, the task commenced. For each item, participants were presented with two context sentences. Below these context sentences were two slightly different target sentence options, which represented possible continuations of the context sequence. Participants were forced to choose between the two sentence options by clicking a box next to the sentence they preferred. The complete task consisted of six screens, each containing ten items. Completing every item on a screen was a prerequisite for moving on to the next one. Participants were not allowed to return to a previous screen to check or change their responses.

All items were presented in a randomized order. The order in which the two options were presented in each trial was also randomized. After participants had completed the last screen of items, the task was finished.

After the task was finished, participants were informed that they should avoid completing the final test, which was referred to as part 2 of the study, to make sure that the two tests would have different participant groups. In order to continue, participants were required to tick a box stating that they had read the information and understood it. Finally, participants were asked about their gender (male, female or other), their age, and their highest or current level of education (primary school, secondary school, MBO, HBO or university). After filling in this information, the survey was completed and the end screen was made visible.

5.1.4 Design

The subject type distinction was the only independent variable, with two levels: “given nominal versus pronominal” and “given nominal versus semi-given nominal”. This independent variable was measured within subjects. The dependent variable was the subject type preference score, which indicated the strength and direction of participants’ preferences for a certain subject type per item.

5.2 Results

Responses that indicated a preference for a sentence with a given nominal subject were coded as 1. Responses that indicated a preference for a sentence with either a pronominal subject or a semi-given nominal subject were coded as 2. For each participant, average responses were calculated across all items with a certain subject type distinction. A value of 1 was subtracted

from these averages, so that the resulting numbers would be between 0 and 1. The resulting numbers were the participant preference scores, and they represented the proportion of items in which a participant preferred a sentence with either a pronominal subject or a semi-given nominal subject. Two average preference score were calculated by averaging the participant preference scores, one for each subject type distinction.

Given nominal versus pronominal

In the pretest, the average preference score for "given nominal versus pronominal" items was 0.63. This means that participants preferred sentences with pronominal subjects over sentences with given nominal subjects in 63% of the trials. Thus, in the contexts presented here, there was a net preference for pronominal subjects when compared to given nominal subjects. To see if this net preference was significant, a one-sample t-test was conducted to compare the participant preference scores (M = 0.63, SD = 0.21) to chance level (0.5). A significant difference was found between the participant preference scores and chance level, $t(34) = 3.58$, $p = 0.001$. To improve the neutrality of the pretest, average preference scores were calculated for each item. Following Freriksen (2019), all items with an item preference score lower than 0.20 or higher than 0.80 were excluded from the analysis. This way, items with extreme scores could not influence the results. This resulted in the exclusion of two items with preference scores above 0.80 (marked with asterisks in the materials in appendix A). After the exclusion of these items, the average preference score equalled 0.56. A one-sample t-test was conducted to compare the new participant preference scores (M = 0.56, SD = 0.24) to chance level (0.5). No significant difference was found between the new participant preference scores and chance level, $t(34) = 1.51$, $p = 0.14$.

Given nominal versus semi-given nominal

In the pretest, the average preference score for "given nominal versus semi-given nominal" items was 0.34. This means that participants preferred sentences with semi-given nominal subjects over sentences with given nominal subjects in 34% of the trials. Thus, in the contexts presented here, there was a net preference for given nominal subjects when compared to semi-given nominal subjects. To see if this net preference was significant, a one-sample Wilcoxon Signed-Ranks test was conducted to compare the participant preference scores (Mdn = 0.30) to chance level (0.5). A significant difference was found between the participant preference

scores and chance level, $W = 57$, $p < 0.001$. Once more, item preference scores were calculated and items with scores lower than 0.20 or higher than 0.80 were removed. This resulted in the removal of two items with a preference score lower than 0.20. After this exclusion, the average preference score equalled 0.41. A one-sample Wilcoxon Signed-Ranks test was conducted to compare the new participant preference scores ($Mdn = 0.38$) to chance level (0.5). Again, a significant difference was found between the participant preference scores and chance level, $W = 128$, $p = 0.016$. Since the difference from chance level was still significant after removing two items, the choice was made to continue with all the items instead. If more items were removed, the number of remaining items would be very small, which would negatively affect the number of available data points and the generalizability of the results. A truly neutral pretest could not be achieved with these items. This meant that for this exploratory part of this study, a direct comparison would have to be made between the (biased) results of the pretest and the results of the final test.

5.3 Discussion

This section discusses the results from the pretest. For the "given nominal versus pronominal" items, a statistically neutral pretest was achieved. For the "given nominal versus semi-given nominal" items, a statistically neutral pretest was not achieved. In what follows, details and implications for the final test will be discussed.

Given nominal versus pronominal

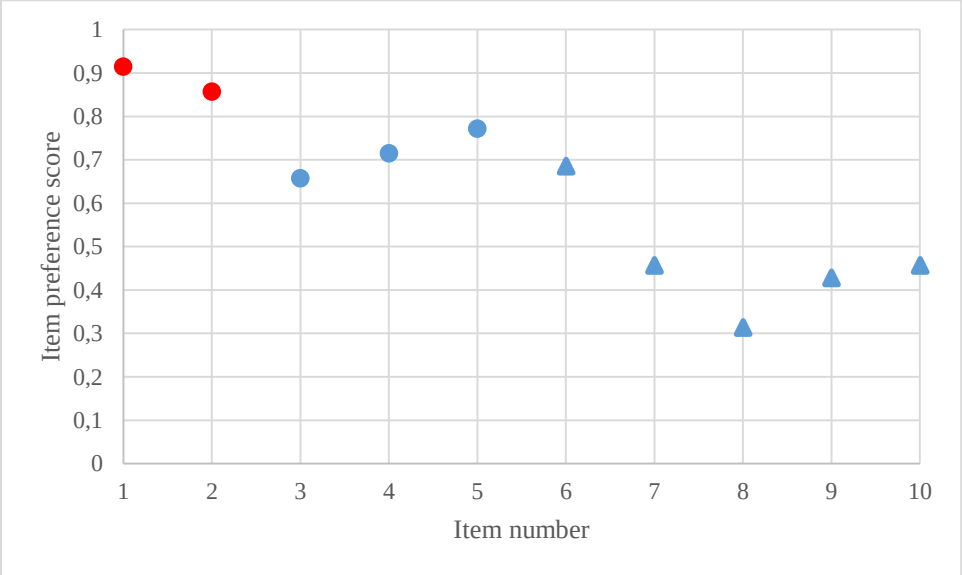
For the "given nominal versus pronominal" items, a statistically neutral pretest was achieved after removing two items with high preference scores from the analysis. However, the results also reveal two possible shortcomings of the materials used in this experiment.

First, there was still an observable difference between the average preference score (0.57) and chance level (0.5). This means that there was still a net preference for pronominal subjects across all trials, even if this difference was not statistically significant. Thus, it could be argued that the pretest for these items was still somewhat biased. The relatively low number of items (10) in this condition means that very few items could be removed from the analysis without significantly damaging the generalizability of the results. Further tweaking of the pretest, as was done by Freriksen (2019) and Wilms (2019), was not possible with this limited number of items. Second, there was a great variance in preference scores between

items and between participants. After items with preference scores below 0.20 or above 0.80 had already been removed, item preference scores still ranged from 0.31 to 0.77. The large variance in item preference scores potentially indicates that the neutrality of the average preference score largely came about through the combining of a subset of high-scoring items and a subset of low-scoring items. If the individual items cause robust, strong preferences in participants, manipulation of the word order may only have a minor effect on the responses. Figure 1 shows that the items labelled 1 through 6 are well above chance level, whereas the items labelled 7 through 10 are slightly below chance level. This distinction roughly corresponds with the distinction between inanimate and animate distractor subjects.

Figure 1

Item preference scores for "given nominal versus pronominal" items in the pretest (V2 word order condition)



Note: A preference score of 0 would indicate that all participants picked the given nominal option. A preference score of 1 would indicate that all participants picked the pronominal option. Circles indicate items with inanimate distractor subjects. Triangles indicate items with animate distractor subjects. Red marks indicate items that have been removed from the analysis.

Participants' preference scores across all included items ranged from 0.13 to 1.00, with a standard deviation of 0.24. This could be indicative of a shortcoming of the testing procedure, which forces participants to choose between two options. If too many participants have a rigid preference for a certain subject type, word order manipulations may affect their judgements only minimally.

The importance of distractor subject animacy is confirmed by the results. In section 4.1.2, it was speculated that animate distractor subjects would cause more anaphoric ambiguity than inanimate distractor subjects, which would lead to a stronger preference for nominal subjects. This influence can be clearly seen in figure 1. As expected, inanimate distractor subjects generally led to a net preference for sentences with a pronominal subjects, whereas animate distractor subjects generally led to a net preference for sentences with nominal subjects. As exploratory analyses, Wilcoxon Signed-Rank tests were performed to examine the influence of distractor subject animacy on item preference score. Significant differences between items with animate distractor subjects and items with inanimate distractor subjects were found both before ($W = 540$, $p < 0.001$) and after the removal of the two items ($W = 509$, $p < 0.001$). The fact that the average preference score was above chance level (0.5) both before (0.63) and after (0.57) the removal of two items could be explained by an asymmetry in the effect of distractor subject animacy on the item preference scores. As can be seen in figure 1, the preference scores of items with inanimate distractor subjects deviated more strongly from chance level ($M = 0.78$) than the preference scores of items with animate distractor subjects ($M = 0.47$). This asymmetry persisted after removing the two highest-scoring items with inanimate distractor subjects. The three remaining items with inanimate distractor subjects had an average preference score of 0.71.

Given nominal versus semi-given nominal

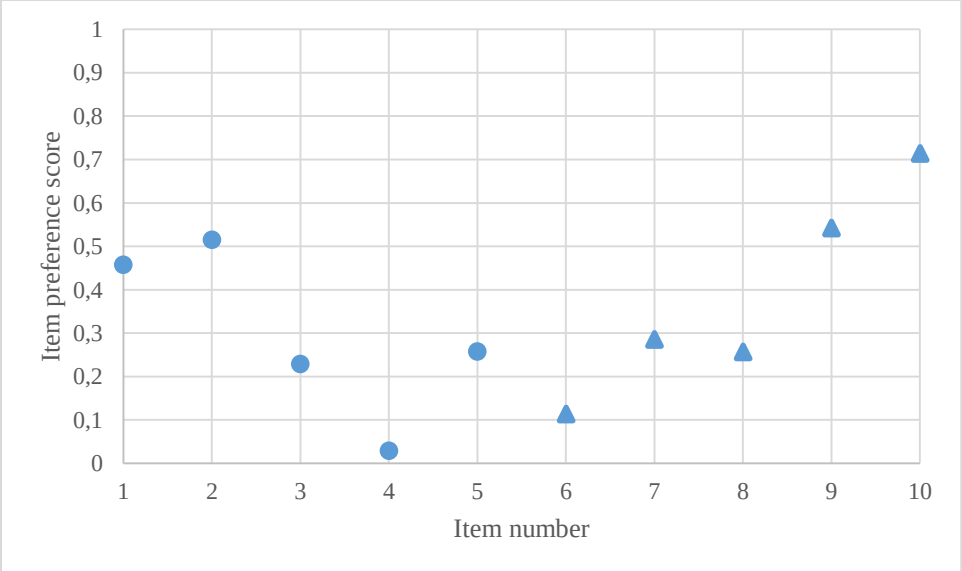
For the "given nominal versus semi-given nominal" items, a statistically neutral pretest was not achieved. The average preference scores for these items was 0.34, which indicates a net preference for given nominal items. Once more, the limited size of the pretest did not allow for the removal of many items in order to achieve neutrality. The removal of two items with preference scores lower than 0.20 did not eliminate the significant difference between the preference scores for this condition and chance level. The decision was made not to remove any more items, as this would have a negative effect on the number of available data points and thus on the generalizability of the test results. This meant that for this condition, none of

the items were ultimately removed from the analysis. It also meant that the results from the final test would have to be compared directly to those from the pretest, and could not be compared to chance level. This is not unconventional in terms of statistics, but it does mean that the contexts that were used in this part of the test were significantly biased. This affects the interpretation of a potential effect. Now, if a statistical difference in the expected direction were to be found between the pretest and the final test, we would not be able to conclude that the non-inverted V3 word order led to a net preference for semi-given nominal subjects that was not previously present. Instead, the conclusion would have to be that a previously existing net preference for given nominal subjects had increased. Thus, the lack of neutrality in the pretest for these items limits the nature and the certainty of the conclusions that could be drawn based on a potential positive result. It could also cause a ceiling effect, since the preference for given nominal subjects would have to increase beyond the point that it was at in the pretest. This could cause statistical testing to be unable to detect a difference between the pretest and the final test.

Once more, there was a large variance in preference scores for different items and for different participants. Item preference scores ranged from 0.03 to 0.71, as can be seen in figure 2.

Figure 2

Item preference scores for "given nominal versus semi-given nominal" items in the pretest (V2 word order condition)



Note: A preference score of 0 would indicate that all participants picked the given nominal option. A preference score of 1 would indicate that all participants picked the pronominal option. Circles indicate items with inanimate distractor subjects. Triangles indicate items with animate distractor subjects.

Participants' preference scores across all included items ranged from 0.00 to 0.90, with a standard deviation of 0.20. This relatively high standard deviation could pose a problem for the statistical comparison between the pretest and the final test, since a high standard deviation leads to lower statistical power.

The unexpectedly low preference scores that were found for some items could be related to pragmatic issues interfering with the grammatical judgements. Recall that the semi-given nominal subjects used in the target sentences referred to a subset of the group of people that the first context sentence referred to. In certain cases, the option featuring a subset of the full group of people could be seen as semantically less likely than the option featuring the full group of people. The lowest scoring item from this part of the pretest is interesting to examine in this regard. This item's Dutch text and its English translation are presented below.

9)

Drie vrienden wonen samen in Nijmegen. De sfeer in het huis is altijd erg levendig.
Three friends live together in Nijmegen. The atmosphere in the house is always very lively.

Vaak zijn de vrienden tegelijkertijd thuis.
Often, the friends are home at the same time.

Vaak zijn twee vrienden tegelijkertijd thuis.
Often, two friends are home at the same time.

In this item, only one participant out of 35 picked the option that is presented second here. A pragmatic explanation of this result is possible. The second context sentence refers to a very lively atmosphere in the house. Since a larger number of friends in the house would lead to a livelier atmosphere, it is possible that participants have overwhelmingly picked the option

which puts the largest number of friends in the house, in order to make sure that the meaning of their answer corresponded well with the pragmatic features of the context.

Possibly due to this presumed pragmatic effect, the influence of distractor subject animacy on preference scores is a lot less clear for these items. A Wilcoxon Signed-Rank test showed that there was no significant difference between the preference scores of items with inanimate distractor subjects (*Mdn* = 0.20) and the preference scores of items with animate distractor subjects (*Mdn* = 0.40), $W = 324$, $p = 0.124$.

6. Final test

In the final test, the experimental items from the pretest were re-used, this time using the non-inverted V3 word order.

6.1 Method

6.1.1 Participants

The final experiment studied the same population as the pretest. Native speakers of Dutch were again recruited via social media and messaging services. Participants were excluded if they were under 16 years of age, if Dutch was not their native language, if they had ever lived outside of the Netherlands for more than two years, or if they reported that they had already completed the pretest (which was referred to as part 1 of the study).

35 participants completed the survey, of which 20 identified as female, 14 identified as male and 1 had a different gender identity. The average age of the participants was 33.8 years (*SD* = 13.3). The youngest participant was 20 years old and the oldest participant was 67 years old. The highest or current levels of education that were reported are as follows: secondary education (3), MBO (5), HBO (14), university (13).

6.1.2 Materials

In the final test, the items from the pretest were reused. The experimental items were converted to the non-inverted V3 word order. This adaptation was performed by moving the subjects from the target sentences to the left of the finite verbs. The filler items from the

pretest were included in their original forms. The full list of final test items can be found in appendix B.

6.1.3 Procedure

The experimental test was conducted using Qualtrics. The instructions, exclusion questions and practice items were identical to the pretest, apart from an extra question to exclude participants who had already completed the pretest. The task in the experimental test was identical to the one used in the pretest: participants had to indicate which of two Dutch sentences they preferred in a given context. The full instructions can be found in appendix B. An English translation of the instructions is provided in appendix C.

The complete task once again consisted of six screens, each containing ten items. Completing every item on a screen was a prerequisite for moving on to the next one. Participants were not allowed to return to a previous screen to check or change their responses. All items were presented in a randomized order. The order in which the two options were presented in each trial was also randomized. After participants had completed the last screen of items, the task was finished.

The final part of the survey was identical to that of the pretest survey, apart from the removal of the instructions to avoid the final test. Participants were asked about their gender (male, female or other), their age, and their highest or current level of education (primary school, secondary school, MBO, HBO or university). After filling in this information, the survey was completed and the end screen was made visible.

6.1.4 Design and analysis

The subject type distinction was the only independent variable, with two levels: “given nominal versus pronominal” and “given nominal versus semi-given nominal”. This independent variable was measured within subjects. The dependent variable was the subject type preference score, which indicated the strength and direction of participants’ preferences for a certain subject type per item. For the “given nominal versus pronominal” items, a comparison would be made between the participant preference scores and chance level. For the “given nominal versus semi-given nominal” items, a comparison would be made between the participant preference scores of the preteset and the final test. For these items, word order

(V2 or non-inverted V3) could be seen as an independent variable, which was measured between subjects.

6.2 Results

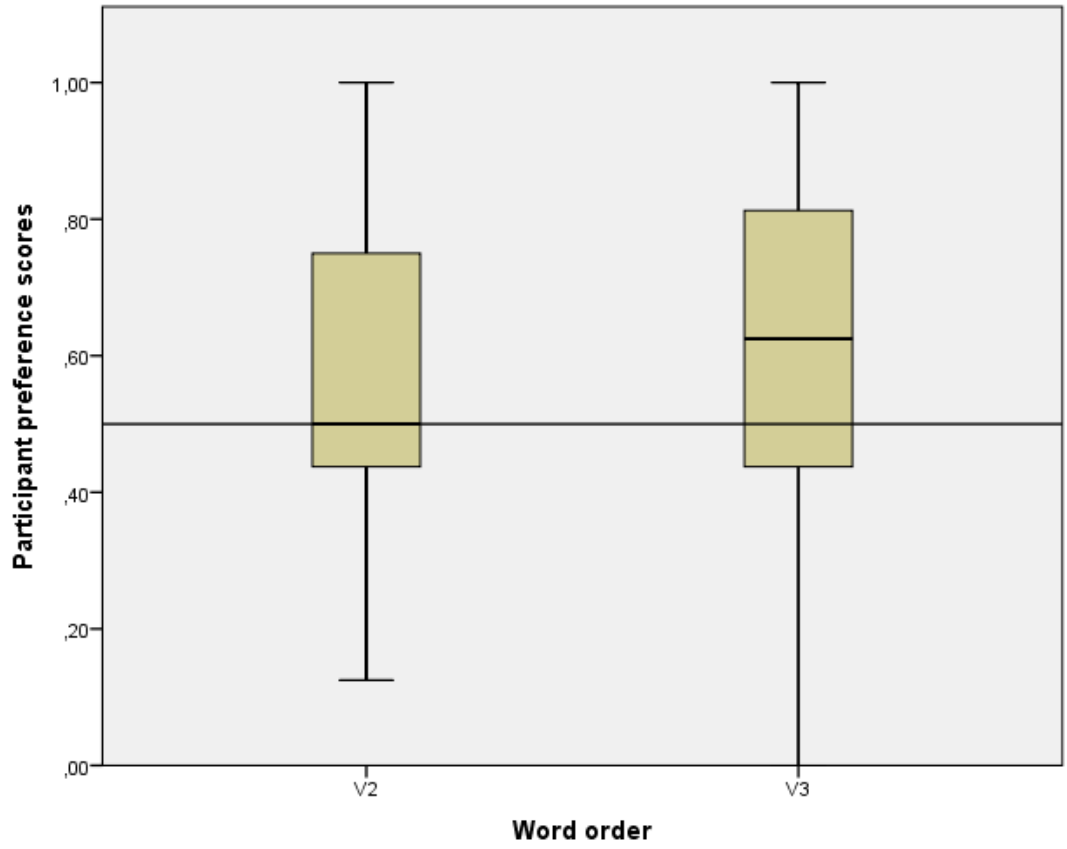
Participant preference scores and average preference scores were calculated in the same way as described in the results of the pretest (see section 5.2).

Given nominal versus pronominal

In the final test, the average preference score for "given nominal versus pronominal" items was 0.59. This number excluded two items with item preference scores above 0.80 (see section 5.2). Since the pretest for this subject type distinction did not significantly differ from chance level, the results from the final test could be compared to chance level to find out if there had been a shift in preference. A one-sample Wilcoxon Signed-Ranks Test was conducted to compare the participant preference scores ($Mdn = 0.60$) to chance level (0.5). No significant difference was found between the participant preference scores and chance level, $W = 298$, $p = 0.079$. The effect size associated with this test was $r = 0.30$. Figure 3 shows the participant preference scores in the pretest (V2 word order) and the final test (V3 word order), with the horizontal line representing chance level.

Figure 3

Participant preference scores for "given nominal versus pronominal" items in both the pretest (V2 word order condition) and the final test (V3 word order condition)



Note: Boxplots display the median, the interquartile range, the minimum and the maximum. The horizontal line represents chance level (0.5).

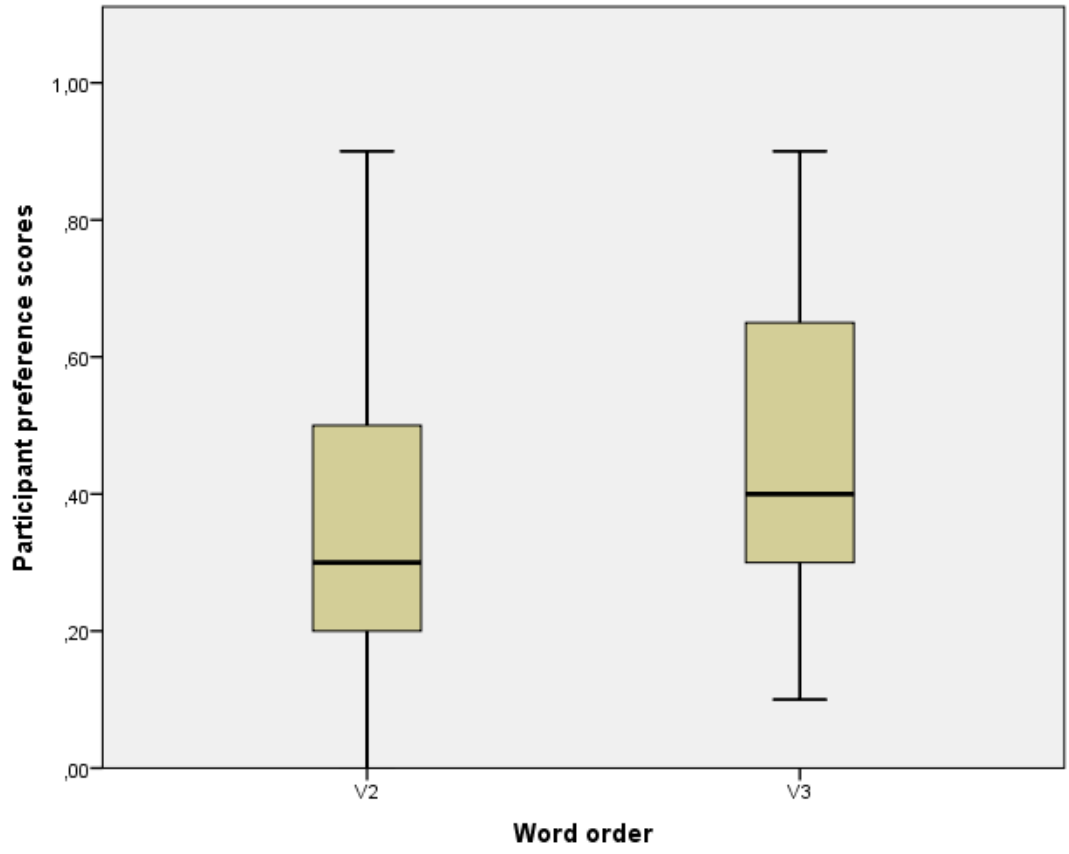
Given nominal versus semi-given nominal

In the final test, the average preference score for "given nominal versus semi-given nominal" items was 0.44. Since the pretest for this subject type distinction significantly differed from chance level, the results from the final test had to be compared directly to those from the pretest to find out if there had been a shift in preference. A Mann-Whitney U Test was conducted to compare the participant preference scores from the pretest (*Mdn* = 0.30) to those from the final test (*Mdn* = 0.40). No significant difference was found between the participant preference scores from the pretest and those from the final test, $U = 760$, $p = 0.08$. The effect

size associated with these results is $r = 0.30$. The test power was estimated to be at 47% by an online tool known as ClinCalc (Kane, 2018). Figure 4 shows the participant preference scores in the pretest (V2 word order) and the final test (V3 word order).

Figure 4

Participant preference scores for "given nominal versus semi-given nominal" items in both the pretest (V2 word order condition) and the final test (V3 word order condition)



Note: Boxplots display the median, the interquartile range, the minimum and the maximum.

6.3 Discussion

Given nominal versus pronominal

For the "given nominal versus pronominal" items, the final test results did not differ significantly from chance level. This means that participants did not significantly prefer

pronominal subjects over given nominal subjects in non-inverted V3 sentences. Thus, this expectation was not confirmed.

The average preference score for the final test (0.59) only differed very slightly from the average preference score for the pretest (0.56). The means differ in the expected direction, with the non-inverted V3 word order leading to a slightly stronger preference for pronominal subjects. Based on the item preference scores in figure 5, it could be argued that the non-inverted V3 word order did not influence the preferences for all items in the same way.

Figure 5

Item preference scores for "given nominal versus pronominal" items in both the pretest (V2 word order condition) and the final test (V3 word order condition)

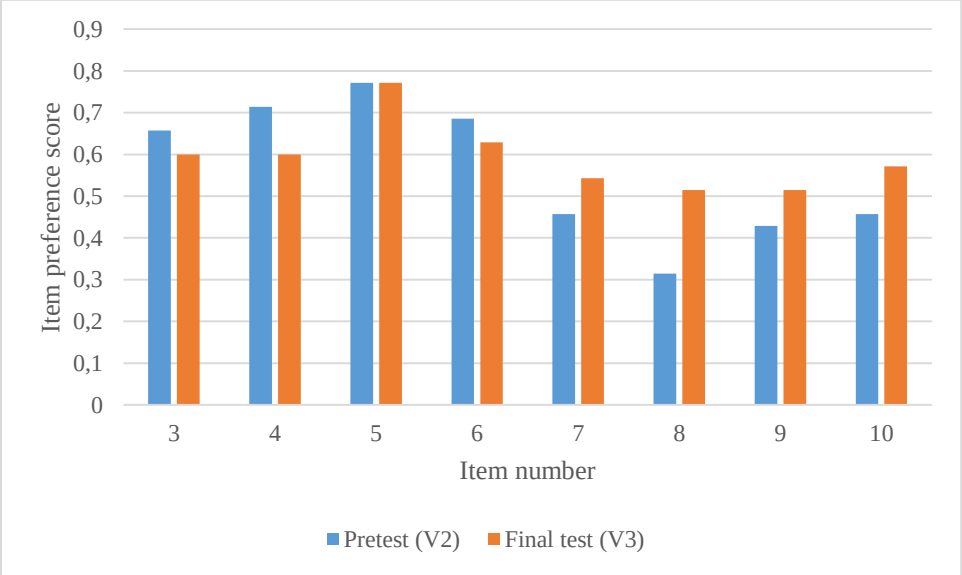


Figure 5 shows that item preference scores in the final test were slightly lower or identical for items that scored above chance level in the pretest, but were slightly higher for items that scored below chance level in the pretest. This could possibly be interpreted as a slight tendency towards chance level in the final test. It is possible that participants found it harder to make a motivated choice between the options in the final test, in which two ungrammatical sentences were provided. Based on their sense of grammaticality, participants may have judged both options as completely unacceptable, which would eliminate any potential preference. Participants would then pick an option at random to be able to continue the test. If this happened in a certain proportion of the final test trials, then that could explain the slight

preference shifts that we see between the pretest and the final test. A Wilcoxon Signed-Rank test was conducted to compare the preference scores of the set of items with inanimate distractor subjects (*Mdn = 0*.67) and the set of items with animate distractor subjects (*Mdn* = 0.40). In the final test for these items, there was no significant effect of distractor subject animacy on preference scores ($W = 202$, $p = 0.28$).

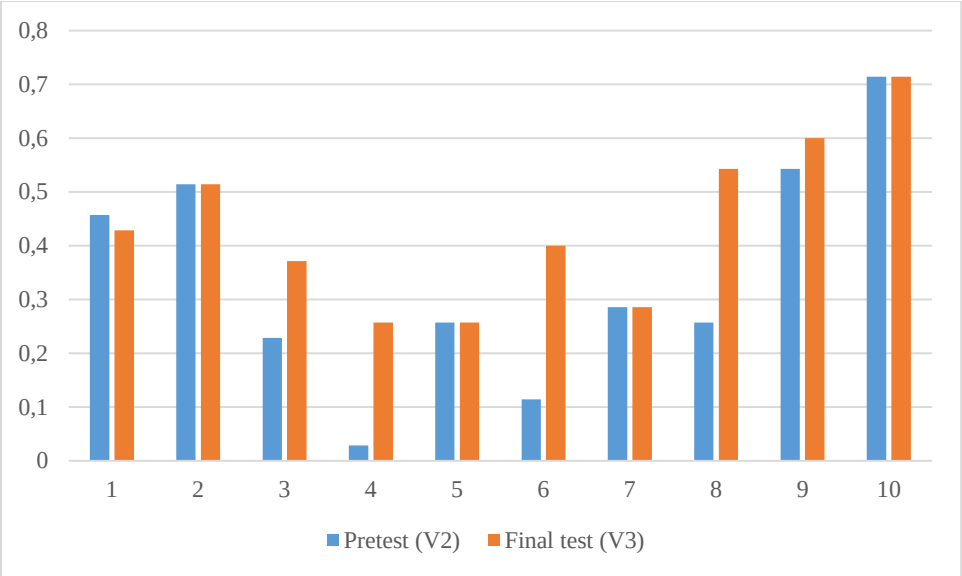
Given nominal versus semi-given nominal

For the "given nominal versus semi-given nominal" items, the final test results did not differ significantly from the pretest results. This means that participants did not prefer given nominal subjects over semi-given nominal subjects in non-inverted V3 sentences, when compared to V2 sentences. The expectation was thus not confirmed. There was a slight difference between the average preference score of the pretest (0.34) and the average preference score of the final test (0.44). The direction of the mean difference was not as expected, since semi-given nominal subjects were favoured more often in the non-inverted V3 word order than in the V2 word order. However, this difference was found to be insignificant.

Figure 6 shows the preference scores of "given nominal versus semi-given nominal" items in both the pretest and the final test.

Figure 6

Item preference scores for "given nominal versus semi-given nominal" items in both the pretest (V2 word order condition) and the final test (V3 word order condition)



Certain items seem to showcase a slight shift in preference between the pretest and the final test. A possible explanation could once again be a shift towards chance level (0.5), since the ungrammatical V3 word order may have made it more difficult for participants to choose based on intuition. Indeed, figure 6 shows that certain low-scoring pretest items trended towards chance level in the final test.

A Wilcoxon Signed-Rank test comparing the preference scores of items with inanimate distractor subjects (*Mdn* = 0.40) to the preference scores of items with animate distractor subjects (*Mdn* = 0.40) revealed a significant difference, $W = 330$, $p = 0.013$. An effect of animacy on the preference scores of these items was not found in the pretest. This finding is difficult to interpret, as it is not evident how anaphoric ambiguity regarding animate subjects could play a role in the choice between given nominal and semi-given nominal subjects.

7. General discussion

Using the results from the pretest and the final test, neither of the expectations could be confirmed. This means that no evidence was found to support the expectation that native speakers of Dutch would have intuitions regarding the acceptability of non-inverted V3 sentences with certain subject types. Freriksen (2019) and Wilms (2019) were both able to find evidence for intuitions regarding phenomena outside the participants' own language varieties, in their research regarding the constraints related to the Northern Subject Rule. However, there are a few possible explanations for the lack of significant results in the present study.

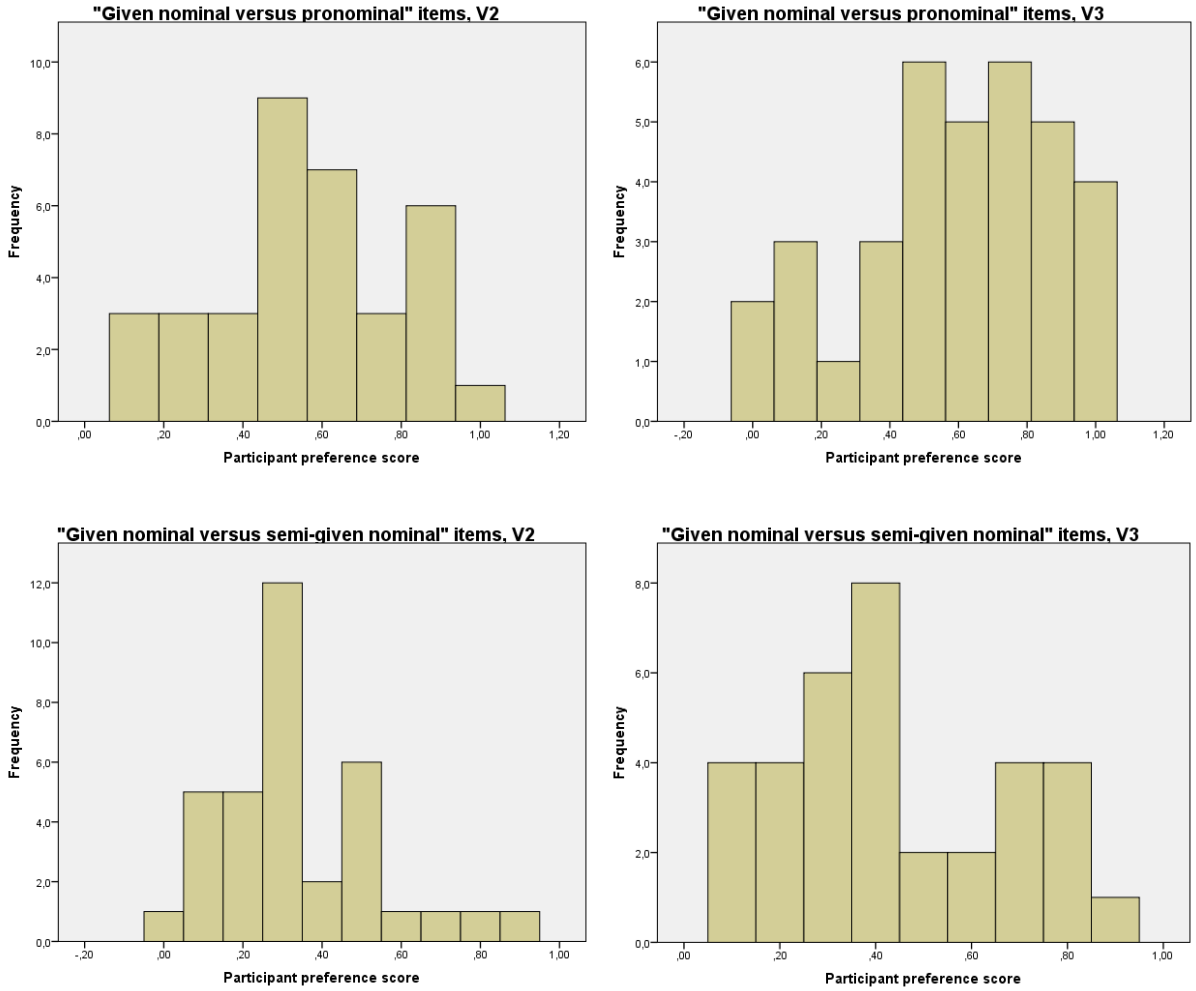
The first possible explanation has to do with the selection of items. Large variances in preference scores between items may have obscured any potential effect of the subject type on the acceptability of non-inverted V3 sentences. This is particularly relevant for the "given nominal versus pronominal" items, since the mean preferences scores of the pretest and the final test differed in the expected direction. The relatively large variances that were found within the pretest and the final test can be attributed to a number of factors. The first one is the animacy of the distractor subjects. One half of the experimental items had inanimate distractor subjects, while the other half had animate distractor subjects. Inanimate distractor subjects were expected to lead to stronger preferences for pronominal subjects, since they result in less anaphoric ambiguity when compared to animate distractor subjects. Distractor subject animacy had a significant influence on preference scores in the pretest for "given nominal versus pronominal" items, and in the final test for "given nominal versus semi-given nominal" items. When lumping data from the pretest and the final test together, two Wilcoxon Signed-Rank tests confirmed that animacy had a significant effect on preference scores for the "given nominal versus pronominal" items ($W = 431$, $p > 0.001$) and for the "given nominal versus semi-given nominal" items ($W = 1296$, $p = 0.004$). For the "given nominal versus pronominal" items, items with inanimate distractor subjects ($Mdn = 0.67$) led to a stronger preference for pronominal subjects than items with animate distractor subjects ($Mdn = 0.40$). This was expected. For the "given nominal versus semi-given nominal" items, items with inanimate distractor subjects ($Mdn = 0.20$) led to a stronger preference for given nominal subjects than items with animate distractor subjects ($Mdn = 0.40$). This was an unexpected result and it remains difficult to interpret. A second factor that may have caused some variance is the pragmatics of the items' discourse. In section 5.3, it was proposed that pragmatic content could cause participants to strongly prefer either a given nominal or a semi-

given nominal subject in certain sentences. Since these two subject types do not convey the exact same meaning, one of the options may be more in line with the context sentences provided, potentially causing the word order to have no influence on participants' choices.

Another pragmatics-related issue may serve as a second explanation for the null effects reported in this study. As seen in section 3.2, the attested relationship between subject type and non-inverted V3 is most likely non-categorical. Researchers collecting data on non-inverted V3 in other languages have used the terminology of preference (Westergaard & Vangsnes, 2005), tendency (Walkden, 2017) and majority of attestations (Haegeman & Greco, 2018) to describe this relationship. This element possibly sets this study apart from those conducted by Freriksen (2019) and Wilms (2019). A purely syntactic phenomenon like the Northern Subject Rule is defined by syntactic constraints, which do not allow exceptions, whereas the non-inverted V3 word order is merely associated with pronominal subjects, possibly through a pragmatic principle. Although violations of syntactic constraints are often evident for most native speakers and not open for debate, judgements of potential violations of pragmatic principles may differ from speaker to speaker. One speaker may be able to easily accommodate a certain utterance in the discourse, while another speaker may have trouble fitting the utterance into the context. This factor of interpersonal variation is probably especially problematic for the semi-given subjects that were used in this study. These subjects essentially contain a given element (the group of people that was previously introduced in the first context sentence) and a new element (the subset of this group that is mentioned in the target sentence). Thus, semi-given subjects provide a mix of given and new information. Assuming the given-before-new principle plays a role in non-inverted V3 structures, it is possible that some participants focussed mainly on the given element of the subject and were thus more inclined to accept an early subject position, whereas other participants focussed mainly on the new element of the subject and were thus less inclined to accept an early subject position. If this were the case, then this would most likely be visible in the distributions of participant preference scores. These distributions are visualized in figure X.

Figure 7

Distribution of participant preference scores per condition



If participants made use of two different consistent strategies to answer certain types of items, the distribution of participant preference scores would resemble a binomial distribution in the associated condition. Although the graphs in figure 7 do not strongly resemble normal distributions, they are not clearly indicative of binomial distributions either. Larger pools of items and participants would be necessary to determine whether subgroups of the population may interpret items in different ways. Still, the presumed variation in the way participants accommodate utterances into the discourse could make it more difficult to test pragmatic principles, as compared to syntactic constraints.

A final effect that may have caused preferences to shift in an unpredictable manner is a tendency towards chance level in the V3 word order condition. When presented with two ungrammatical V3 sentences, some participants may conclude that both sentences are

completely unacceptable. This would eliminate many potential preferences that may have otherwise surfaced. Participants might then choose more or less randomly, which would cause preference scores to be closer to chance level (0.5) in the V3 final test than in the V2 pretest. This effect may have occurred in both the "given nominal versus pronominal" condition and in the "given nominal versus semi-given nominal" condition, although not all items show such a tendency.

To solve problems related to variance, one would have to test a much larger participant pool, which was sadly not realistic within the timeframe of this project. A larger item pool, as was used by Freriksen (2019) and Wilms (2019) would also help, since it would allow for the removal of more items and thus to the achievement of a more neutral and more homogeneous pretest. The item pool for this study was kept small in an attempt to prevent high dropout rates from the participants – who were not compensated for their participation in this study – while still maintaining a healthy ratio between filler items and experimental items. In some other types of studies, the low number of items could have been compensated with a larger number of participants. The present study, however, presented an unexpected challenge: because of the small number of items, it was not possible to remove many items from the analysis after the pretest. This in turn meant that a statistically neutral pretest could not be achieved for the "given nominal versus semi-given nominal" items. In future research, securing compensation for participants would lead to a significant advantage, since participants would be more willing to complete a long survey containing two or three times the number of experimental items. Another way to potentially improve on this study would be to attempt to elicit intuitions related to the non-inverted V3 word order in a different way. For example, one could provide Dutch V3 sentences to native speakers, and let them rate the acceptability of these sentences on a Likert scale. This would arguably produce less artificial results, since no choices are forced between sentences that will likely both be deemed unacceptable. A tendency towards chance level in non-inverted V3 sentences would not be an issue in such an experiment. A risk that has to be addressed with such a grammaticality judgement task is that participants will consistently rate non-inverted V3 sentences very low, which would produce a floor effect that could also render a potentially existing subject type effect immeasurable.

Another issue that should be discussed is related to the differences between the two groups that were tested. The pretest group was relatively homogeneous. The average participant age was 24.3, with a standard deviation of 6.7. There were 26 females and 9 males. The majority (28 out of 35) had enjoyed some amount of university-level education. The final

test group was noticeably more heterogeneous. Here, the average participant age was 34, with a standard deviation of 13.3. There were 20 females, 14 males and one person identifying as neither male nor female. There was a roughly equal split in education level between university (13 out of 35) and HBO (14), with the remaining participants having enjoyed either MBO or secondary school as their highest education level. As it turns out, the pretest group was younger, less diverse in terms of age, more highly educated and more often female than the final test group. This is a potential source of bias in the results, since non-inverted V3 patterns have been shown to emerge over time in Germanic language varieties. If such a development were underway in the Netherlands, then younger people would most likely be more sensitive to it. The differences in age and education level may be explained by the method which was used to recruit participants. All participants were recruited through social media, specifically through posts on the author's Facebook feed and through WhatsApp messages to group chats of which the author was a member. It is likely that the pretest was initially completed mostly by individuals who were closely acquainted with the author and were thus especially willing to grant a favour. For the final test, however, a completely new group of participants had to be recruited, which meant that everyone who had completed the pretest was now ruled out as a participant. This may have led to individuals who were less closely acquainted with the author completing the final test. This is reflected in the characteristics of the two test groups: the first group closely resembles the author (a 23-year-old university student) in terms of age and education level, whereas the second group is more diverse in these regards. This is a definite downside of uncontrolled participant recruitment through social media channels. A solution to this problem would be to run the pretest and the final test concurrently as two lists of the same experiment. The software could then randomly assign each participant to one of the lists, leading to a random distribution of a diverse group of participants across the two conditions.

8. Conclusion

This thesis aimed to answer the following question: to what extent do native speakers of (Netherlandic) Dutch show intuitions about the non-inverted V3 word order, in line with the patterns found in other Germanic languages that currently allow this word order? The forced-choice task that was employed in the present study was not able to provide evidence for the existence of such intuitions.

Previous studies indicated that there is usually some degree of preference for given or pronominal subjects in non-inverted V3 sentences in different Germanic languages that allow

this word order. Based on this recurring pattern, it is possible that Germanic languages share some grammatical property, which allows for the emergence of non-inverted V3 in certain contexts. The present study investigated whether this preference for pronominal subjects in non-inverted V3 also existed in native speakers of (Netherlandic) Dutch, a language which does not currently allow this word order. Apart from that, this study also explored the possible influence of subject information status on the acceptability of this word order. A forced-choice task was designed, in which Dutch native speakers were asked to choose between two sentences that were identical apart from their subjects. One sentence contained a pronominal subject, while the other sentence contained a nominal subject. These sentences were presented along with a context that was expected to prevent strong consistent preferences for either subject type. This context consisted of two sentences. The first context sentence introduced the target subject into the discourse, whereas the second context introduced a distractor subject that was intended to divert the reader's attention away from the target subject. The expectation was that participants would prefer pronominal subjects over nominal subjects in non-inverted V3 sentences, in line with observations from previous literature on other Germanic language varieties. In an exploratory part of the study, sentences with given nominal subjects were also compared to sentences with semi-given nominal subjects. The expectation was that participants would prefer given nominal subjects over semi-given nominal subjects in non-inverted V3 sentences, in line with the given-before-new principle.

A pretest was used to establish participants' baseline preferences in regular Dutch V2 versions of the items. The goal was to select a subset of items that did not lead to a significant preference for either subject type in the V2 word order. This way, there would be no significant bias present in the items. The pretest for the "given nominal versus pronominal" items achieved a statistically neutral preference score after the removal of two items. The pretest for the "given nominal versus semi-given nominal" items did not achieve a statistically neutral preference score. For this reason, the data from the final V3 test had to be directly compared to those from the V2 pretest.

In the end, no evidence was found for the expectations that Dutch native speakers would prefer pronominal subjects over given nominal subjects in non-inverted V3 sentences. There was also no evidence that Dutch native speakers preferred semi-given nominal subjects over given nominal subjects in non-inverted V3 sentences. However, this lack of evidence does not mean that these intuitions do not exist. There are a number of factors that may have interfered with the experiment's ability to measure the expected effects. A tendency towards chance level in the V3 word order condition could explain some of the results. When forced to

choose between two ungrammatical sentences, participants may have decided that both were completely unacceptable. This may have hidden any potential preferences and led to participants selecting one of the two sentences at random, which could drive preference scores towards chance level (0.5). For certain items, this effect could explain the shifts in preferences that were found between the pretest and the final test. Since a tendency towards chance level was opposite to the expected effect in both subject type distinctions, this effect could have masked the expected effects if it were sufficiently strong.

Moving on, the relatively low number of items and participants and the relatively high levels of variance may have negatively impacted the statistical power of the tests. One source of variance was the animacy of the distractor subject that was used. Half of the experimental items used inanimate distractor subjects, while the other half used animate distractor subjects. Exploratory post-hoc tests revealed a main effect of distractor subject animacy on both "given nominal versus pronominal" and "given nominal versus semi-given nominal" items. Another potential source of variance is the fact that the pattern found in other Germanic languages is likely caused by a pragmatic principle, and not by a syntactic constraint. This means that speakers may vary in the extent to which they are able to accommodate certain utterances into the discourse. This could cause of variance between participants, especially for the "given nominal versus semi-given nominal" items. A final concern was the perceived difference between the participant groups from the pretest and the final test. Participants in the pretest were younger, more highly educated and more often female than participants in the final test. This could cause bias in the results, especially since non-inverted V3 word orders have been shown to emerge over time. Therefore, younger participants may be more receptive to these word orders than older participants. These differences between participant groups were likely caused by the recruitment method, which involved contacting people through social media such as Facebook and WhatsApp.

Despite the null effects reported in this study, the research question still deserves further investigation. Future research could improve on this thesis by utilizing a larger item pool and a larger group of participants. A larger item pool would allow researchers to remove more items from the analysis, in order to achieve a more neutral pretest. A larger group of participants would increase the number of observations, and consequently the power of any statistical testing. The recruitment method could also be improved, in order to ensure that the pretest and final test groups are more similar in terms of age and education. Another approach for future researchers could be to abandon the forced-choice paradigm and opt for a grammaticality judgement task. In such a task, participants would have to rate the

acceptability of sentences on their own, without them being directly compared to other sentences. This could arguably result in a more natural way of looking at structures, compared to the forced picking between two options that are often both unacceptable. The suspected tendency towards chance level that was discussed in this thesis would not be present in this paradigm. Another potential advantage would be the freedom to compare the acceptability of more than two subject types. Thus, a grammaticality judgement task might prove to be more suitable for measuring any possible intuitions that Dutch speakers may have about non-inverted V3 sentences.

This thesis has contributed to a relatively young tradition of research, in which researchers aim to measure intuitions about structures that are not part of a speaker's grammar. Although this study failed to provide much further insight into the variation between V2 and non-inverted V3 word orders in present-day Germanic languages, it can still serve as an inspiration for future research. Scholars seeking to provide a more definitive answer to the research question investigated here could expand on this research by using larger item and participant pools, or by employing a task other than the forced-choice task used here. Widening the scope of this line of investigation, it could also be interesting to see whether speakers of Germanic languages that currently allow non-inverted V3 word order have intuitions about given nominal and semi-given nominal subjects in this word order. Such research could provide evidence for the suspicion that subject information status plays a crucial role in the variation between V2 and V3 word orders in Germanic languages. For any of these possible future projects, the present study may provide some materials, a methodology, or simply an overview of nuances and pitfalls that may be involved in this type of research.

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10. Appendices

Appendix A: pretest survey (original version)

Item code	Description
EX-PR-XX	Experimental “given nominal versus pronominal” item
EX-SG-XX	Experimental “given nominal versus semi-given nominal” item
FL-EZ-XX	Easy filler item (one option grammatical, one option ungrammatical)
FL-GR-XX	Grammatical filler item (both sentences grammatical)
FL-UG-XX	Ungrammatical filler item (both sentences ungrammatical)

Start of survey

Start of Block: Instructions and consent

INFORMATIE EN TOESTEMMING U wordt uitgenodigd om mee te doen aan een onderzoek. In dit experiment wordt gekeken welke zinnen mensen het beste vinden klinken. Het onderzoek wordt uitgevoerd door Lex Crijns, masterstudent aan de Radboud Universiteit.

Wat wordt er van u verwacht? Meedoen aan het onderzoek houdt in dat u een online vragenlijst gaat invullen. In de vragen moet u aangeven welke zin u het beste vindt klinken. Het invullen van de vragenlijst kost ongeveer 10 tot 15 minuten.

Vrijwilligheid U doet vrijwillig mee aan dit onderzoek. Daarom kunt u op elk moment tijdens het onderzoek uw deelname stopzetten en uw toestemming intrekken. U hoeft niet aan te geven waarom u stopt. U kunt tot twee weken na deelname ook uw onderzoeksgegevens laten verwijderen. Dit kunt u doen door een mail te sturen naar [redacted].

Wat gebeurt er met mijn gegevens? De onderzoeksgegevens die we in dit onderzoek verzamelen, zullen door wetenschappers gebruikt worden voor datasets, artikelen en presentaties. De anoniem gemaakte onderzoeksgegevens zijn tenminste 10 jaar beschikbaar voor andere wetenschappers. Als we gegevens met andere onderzoekers delen, kunnen deze dus niet tot u herleid worden. We bewaren alle onderzoeksgegevens op beveiligde wijze volgens de richtlijnen van de Radboud Universiteit.

Heeft u vragen over het onderzoek? Als u meer informatie over het onderzoek wilt hebben, of als

u klachten hebt, kunt u contact opnemen met Lex Crijns (e-mail: [redacted]). Voor vragen over de verwerking van gegevens in dit onderzoek kunt u contact opnemen met: [redacted].

TOESTEMMING:

Geef hieronder uw keuze aan.
Door te klikken op de knop 'Ik ga akkoord' geeft u aan dat u:
- bovenstaande informatie heeft gelezen
- vrijwillig meedoet aan het onderzoek
- 16 jaar of ouder bent

Als u niet mee wilt doen aan het onderzoek, kunt u op de knop 'Ik wil niet meedoen' klikken

- ○ Ik ga akkoord (1)
- ○ Ik wil niet meedoen (2)

Skip To: End of Survey If TOESTEMMING: Geef hieronder uw keuze aan. Door te klikken op de knop 'Ik ga akkoord' geeft u aan... = Ik wil niet meedoen

Om aan dit onderzoek mee te doen, is het belangrijk dat Nederlands je eerste taal is. Is Nederlands je eerste taal?

- ○ Ja, Nederlands is mijn eerste taal. (1)
- ○ Nee, Nederlands is niet mijn eerste taal. (2)

Skip To: End of Survey If Om aan dit onderzoek mee te doen, is het belangrijk dat Nederlands je eerste taal is. Is Nederlan... = Nee, Nederlands is niet mijn eerste taal.

Dit onderzoek is specifiek gericht op inwoners van Nederland. Als je te lang in een ander land hebt gewoond, kun je niet meedoen. Heb je ooit langer dan twee jaar achter elkaar buiten Nederland gewoond?

- ○ Ja, ik heb ooit langer dan twee jaar achter elkaar buiten Nederland gewoond. (1)
- ○ Nee, ik heb nooit langer dan twee jaar achter elkaar buiten Nederland gewoond. (2)

Skip To: End of Survey If Dit onderzoek is specifiek gericht op inwoners van Nederland. Als je te lang in een ander land he... = Ja, ik heb ooit langer dan twee jaar achter elkaar buiten Nederland gewoond.

Zo dadelijk begint de test. Je krijgt telkens een kort verhaaltje te lezen. Aan het einde van het verhaaltje moet je kiezen tussen twee zinnen. Kies de zin die volgens jou het beste klinkt.

Page Break

Soms is de keuze tussen twee zinnen erg makkelijk en soms is de keuze erg moeilijk.

Het kan zijn dat je moet kiezen tussen twee zinnen die allebei goed klinken, of juist tussen twee zinnen die allebei slecht klinken.

Toch is het belangrijk om elke keer een keuze te maken. Ga uit van je intuïtie en probeer er niet te lang over na te denken.

Page Break

Hier volgt een voorbeeld van een makkelijke vraag. De ene zin klinkt veel beter dan de andere.

Siem woont in Den Haag. De supermarkt is om de hoek.

- ○ Vaak gaat hij er lopend naartoe. (1)
- ○ Vaak hij er lopend naartoe gaat. (2)

Page Break

Nu volgt een voorbeeld van een moeilijke vraag. Hier klinken allebei de zinnen niet zo goed.

Siem woont in Den Haag. De supermarkt is om de hoek.

- ○ Vaak hij er lopend naartoe gaat. (1)
- ○ Dikwijls hij er lopend naartoe gaat. (2)

Page Break

Dit onderzoek is zo ontworpen dat sommige zinnen beter klinken dan andere. **Als je een zin tegenkomt die raar klinkt, is dat waarschijnlijk niet vanwege een typefout.**

De test begint nu. Het onderzoek duurt ongeveer 10 tot 15 minuten.

End of Block: Instructions and consent

Start of Block: Question pool

*EX-PR-01 Jan doet de achterdeur open. Regendruppels vallen met een tikkend geluid op het gazon.

- ○ Daarom pakt Jan zijn paraplu. (1)
- ○ Daarom pakt hij zijn paraplu. (2)

---

*EX-PR-02 Floor is jarig. Het huis hangt helemaal vol met gekleurde slingers.

- ○ Waarschijnlijk krijgt Floor veel cadeaus. (1)
- ○ Waarschijnlijk krijgt ze veel cadeaus. (2)

EX-PR-03 Eef is goed in tennis. Het regionaal kampioenschap begint morgenochtend vroeg.

- ○ Misschien komt Eef in de finale. (1)
- ○ Misschien komt ze in de finale. (2)

EX-PR-04 Cas is een goede keeper. De bal komt soms erg hard op het doel af.

- ○ Telkens houdt Cas de bal tegen. (1)
- ○ Telkens houdt hij de bal tegen. (2)

EX-PR-05 Lars woont in Zweden. De nachten zijn daar 's winters vaak kouder dan in Nederland.

- Vaak moet Lars 's ochtends zijn voorruit krabben. (1)
- Vaak moet hij 's ochtends zijn voorruit krabben. (2)

EX-PR-06 Stijn ligt in de trein te slapen. Een oudere vrouw begint luidkeels te telefoneren.

- Direct schrikt Stijn wakker. (1)
- Direct schrikt hij wakker. (2)

EX-PR-07 Noor laat haar parkeerkaartje zien. De parkeerwacht opent de slagboom met een knopje.

- Daarna rijdt Noor door. (1)
- Daarna rijdt ze door. (2)

EX-PR-08 Suus zit in de bioscoop. De meeste mensen vertrekken tijdens de aftiteling.

- Toch blijft Suus nog even zitten. (1)
- Toch blijft ze nog even zitten. (2)

EX-PR-09 Mark geniet van het weekend. De kinderen zitten op de grond te spelen.

- Ondertussen kijkt Mark televisie. (1)
- Ondertussen kijkt hij televisie. (2)

EX-PR-10 Britt zit met een kapotte koelkast. De reparateur kan morgenmiddag om vier uur komen.

- ○ Helaas is Britt dan op haar werk. (1)
- ○ Helaas is ze dan op haar werk. (2)

EX-SG-01 Vier mannen zitten aan een tafeltje. Het café zit goed vol voor een woensdagavond.

- ○ Telkens halen de mannen samen een drankje. (1)
- ○ Telkens halen twee mannen samen een drankje. (2)

EX-SG-02 Twintig kinderen zitten in een klaslokaal. De bel is dit lesuur nog niet gegaan.

- ○ Toch pakken de kinderen hun tas al in. (1)
- ○ Toch pakken vijf kinderen hun tas al in. (2)

EX-SG-03 Drie fietsers staan te wachten. Een auto van rechts krijgt voorrang.

- ○ Daarna slaan de fietsers linksaf. (1)
- ○ Daarna slaan twee fietsers linksaf. (2)

EX-SG-04 Drie vrienden wonen samen in Nijmegen. De sfeer in het huis is altijd erg levendig.

- ○ Vaak zijn de vrienden tegelijkertijd thuis. (1)
- ○ Vaak zijn twee vrienden tegelijkertijd thuis. (2)

EX-SG-05 Vier mannen komen naar buiten. De deur van het gebouw wordt gesloten.

- Direct stappen de mannen in een auto. (1)
- Direct stappen twee mannen in een auto. (2)

EX-SG-06 Vijf meiden zijn iets aan het drinken. De barman roept vlak voor sluitingstijd de laatste ronde om.

- Daarom gaan de meiden nog snel een drankje halen. (1)
- Daarom gaan drie meiden nog snel een drankje halen. (2)

EX-SG-07 Drie vrouwen doen samen boodschappen. De kassamedewerker rekent twee pakken luiers af.

- Misschien hebben de vrouwen kinderen. (1)
- Misschien hebben twee vrouwen kinderen. (2)

EX-SG-08 Drie klanten lopen tegelijk een koffietent binnen. De barman zet meteen twee espresso's klaar op de bar.

- Waarschijnlijk komen de klanten hier dagelijks. (1)
- Waarschijnlijk komen twee klanten hier dagelijks. (2)

EX-SG-09 Zes studenten wonen een college bij. De docent vertelt een saai en ingewikkeld verhaal.

- ○ Ondertussen kijken de studenten naar hun telefoons. (1)
- ○ Ondertussen kijken vier studenten naar hun telefoons. (2)

EX-SG-10 Vijf basketballers willen een extra training plannen. De coach stelt volgende week woensdag voor.

- ○ Helaas kunnen de basketballers dan niet. (1)
- ○ Helaas kunnen twee basketballers dan niet. (2)

FL-EZ-01 Stef heeft trek. De bananen zijn op.

- ○ Daarom eet hij een appel. (1)
- ○ Daarom eet hij appel een. (2)

FL-EZ-02 Els kleedt zich aan. De zon schijnt buiten fel.

- ○ Toch trekt ze een warme trui aan. (1)
- ○ Toch ze een warme trui aantrekt. (2)

FL-EZ-03 Roel zit op de bank. De telefoon gaat.

- ○ Direct staat hij op. (1)
- ○ Direct opstaat hij. (2)

FL-EZ-04 Drie voetgangers staan op de stoep. Een auto komt van links voorbijrijden.

- ○ Daarna steken twee voetgangers over. (1)
- ○ Daarna steken voetgangers twee over. (2)

FL-EZ-05 Vier werknemers zijn uitgenodigd voor een overleg. Aan de kapstok hangen drie jassen.

- ○ Waarschijnlijk zijn drie werknemers al binnen. (1)
- ○ Waarschijnlijk drie werknemers al binnen zijn. (2)

FL-EZ-06 Loes loopt elke dag naar school. De route is drie kilometer lang.

- ○ Misschien heeft Loes geen fiets. (1)
- ○ Heeft misschien Loes geen fiets. (2)

FL-EZ-07 Bert speelt squash. De bal stuitert in het rond.

- ○ Telkens slaat Bert de bal terug. (1)
- ○ Telkens Bert slaat de bal terug. (2)

FL-EZ-08 Truus is op vakantie. Het hotel is van alle gemakken voorzien.

- ○ Vaak gaat Truus 's morgens zwemmen. (1)
- ○ Vaak gaat 's morgens Truus zwemmen. (2)

FL-EZ-09 Jort is bij de wasserette. Zijn auto wordt grondig gewassen.

- Ondertussen drinkt Jort een kopje thee. (1)
- Ondertussen drinkt Jort thee een kopje. (2)

FL-EZ-10 Pleun wil gaan hardlopen. Haar hardloopschoenen staan in de hal.

- Helaas heeft Pleun haar enkel bezeerd. (1)
- Helaas Pleun haar enkel heeft bezeerd. (2)

FL-EZ-11 Sam rekent het eten af. De serveerster was erg vriendelijk.

- Daarom geeft hij een flinke fooi. (1)
- Daarom hij geeft een flinke fooi. (2)

FL-EZ-12 Claire zit in het klaslokaal. De meester vertelt een boeiend verhaal.

- Toch kan ze haar aandacht er niet bij houden. (1)
- Toch kan ze er niet haar aandacht bij houden. (2)

FL-EZ-13 Zes reizigers stappen in de bus. De chauffeur sluit de deuren.

- Direct gaan vier reizigers op een stoel zitten. (1)
- Direct gaan reizigers vier op een stoel zitten. (2)

FL-EZ-14 Vier klanten wachten bij een afhaalrestaurant. Een medewerker roept twee namen.

- Daarna lopen twee klanten naar de balie. (1)
- Daarna twee klanten lopen naar de balie. (2)

FL-EZ-15 Vier gasten komen aan op het feestje. De jarige zet twee damesfietsen in zijn schuur.

- Waarschijnlijk zijn twee gasten vrouwen. (1)
- Waarschijnlijk twee gasten vrouwen zijn. (2)

FL-EZ-16 Lies loopt de supermarkt uit. De kassamedewerker roept iets.

- Misschien is Lies iets vergeten. (1)
- Misschien iets is Lies vergeten. (2)

FL-EZ-17 Ron doet mee aan een dictee. De leraar leest moeilijke woorden op.

- Telkens schrijft Ron de woorden op. (1)
- Telkens Ron opschrijft de woorden. (2)

FL-EZ-18 Maud volgt een college. De docent praat erg onduidelijk.

- Vaak kan Maud het niet precies verstaan. (1)
- Vaak kan Maud niet precies het verstaan. (2)

FL-EZ-19 Joost zit in de snackbar. Een medewerker maakt zijn friet klaar.

- Ondertussen bladert Joost door een tijdschrift. (1)
- Ondertussen Joost bladert door een tijdschrift. (2)

FL-EZ-20 Fleur is op een verjaardagsfeestje. De gastheer brengt zelfgemaakte saté rond.

- Helaas is Fleur allergisch voor pinda's. (1)
- Helaas is Fleur voor pinda's allergisch. (2)

FL-GR-01 Mike heeft dorst. Het appelsap is op.

- Daarom drinkt Mike een glas water. (1)
- Om die reden drinkt Mike een glas water. (2)

FL-GR-02 Tess staat in de hal. De lucht is bewolkt.

- Toch trekt Tess haar zomerjas aan. (1)
- Desondanks trekt Tess haar zomerjas aan. (2)

FL-GR-03 Daan zit op zijn stoel. De deurbel klinkt.

- Direct staat Daan op. (1)
- Onmiddellijk staat Daan op. (2)

FL-GR-04 Mien drukt op het liftknopje. De deur gaat open.

- ○ Daarna stapt Mien de lift binnen. (1)
- ○ Vervolgens stapt Mien de lift binnen. (2)

FL-GR-05 Ben ligt te huilen in zijn bedje. Het geluid is oorverdovend.

- ○ Waarschijnlijk heeft Ben honger. (1)
- ○ Vermoedelijk heeft Ben honger. (2)

FL-GR-06 Jill neemt de bal aan. De scheidsrechter fluit.

- ○ Misschien staat ze buitenspel. (1)
- ○ Wellicht staat ze buitenspel. (2)

FL-GR-07 Rens is aan het touwtjespringen. Laura zwaait het touw rond.

- ○ Telkens springt hij eroverheen. (1)
- ○ Steeds springt hij eroverheen. (2)

FL-GR-08 Sanne heeft een goed onderhouden tuin. De tuinman houdt het allemaal goed bij.

- ○ Vaak gaat ze op zondag door de tuin wandelen. (1)
- ○ Dikwijls gaat ze op zondag door de tuin wandelen. (2)

FL-GR-09 Tien studenten zitten in een collegezaal. De docent pakt zijn spullen uit zijn tas.

- Ondertussen zitten vier studenten te kletsen. (1)
- Tegelijkertijd zitten vier studenten te kletsen. (2)

FL-GR-10 Acht kinderen zijn op een verjaardagsfeestje. De jarige wil gaan zwemmen.

- Helaas hebben twee kinderen geen zwemkleren bij zich. (1)
- Jammer genoeg hebben twee kinderen geen zwemkleren bij zich. (2)

FL-UG-01 Jens koopt alcohol bij de supermarkt. De caissière vraagt hoe oud hij is.

- Daarom Jens zijn legitimatiebewijs laat zien. (1)
- Om die reden Jens zijn legitimatiebewijs laat zien. (2)

FL-UG-02 Bo wil gaan wandelen. De weerman voorspelt veel regen.

- Toch Bo wandelen gaat. (1)
- Desondanks Bo wandelen gaat. (2)

FL-UG-03 Joyce zingt in een koor. De dirigent wijst in haar richting.

- Direct Joyce te zingen begint. (1)
- Onmiddellijk Joyce te zingen begint. (2)

FL-UG-04 Hans wacht bij een kruispunt. De verkeersregelaar maakt een gebaar.

- ○ Daarna doorrijdt Hans. (1)
- ○ Vervolgens doorrijdt Hans. (2)

FL-UG-05 Kim laat haar fietsbel rinkelen. De andere fietsers gaan haastig aan de kant.

- ○ Waarschijnlijk Kim heeft haast. (1)
- ○ Vermoedelijk Kim heeft haast. (2)

FL-UG-06 Drie vrienden wonen samen aan de Sint Annastraat. Op tafel liggen twee wetbundels.

- ○ Misschien rechten studeren twee vrienden. (1)
- ○ Wellicht rechten studeren twee vrienden. (2)

FL-UG-07 Acht mannen houden een darttoernooi. Het dartbord hangt in de garage.

- ○ Telkens spelen mannen twee samen een potje. (1)
- ○ Steeds spelen mannen twee samen een potje. (2)

FL-UG-08 Zes vrienden gaan elke maand naar hetzelfde restaurant. Het menu is niet uitgebreid.

- ○ Vaak bestellen hetzelfde hoofdgerecht twee vrienden. (1)
- ○ Dikwijls bestellen hetzelfde hoofdgerecht twee vrienden. (2)

FL-UG-09 Jaap staat bij de bar. De barvrouw maakt een cocktail klaar.

- ○ Ondertussen hij kijkt naar zijn telefoon. (1)
- ○ Tegelijkertijd hij kijkt naar zijn telefoon. (2)

FL-UG-10 Saar heeft een vrije dag. De kinderen willen naar de dierentuin.

- ○ Helaas moet naar de tandarts ze. (1)
- ○ Jammer genoeg moet naar de tandarts ze. (2)

End of Block: Question pool

Start of Block: Post-experiment questions

Je hebt nu alle zinnen gehad. Je bent bijna klaar.

Deze vragenlijst heet 'Welke zin klinkt beter? DEEL 1'. Nu je deze vragenlijst ingevuld hebt, **mag je niet meer meedoen aan deel 2 van dit onderzoek, genaamd 'Welke zin klinkt beter? DEEL 2'.**

Als je toch later bij deel 2 van dit onderzoek uitkomt, zul je de vraag krijgen of je deel 1 al ingevuld hebt. **Hier zul je ja moeten antwoorden**, zodat je die vragenlijst niet per ongeluk ook invult.

Als je een uitnodiging krijgt om mee te doen aan een vragenlijst genaamd 'Welke zin klinkt beter? DEEL 2', dan mag je deze negeren. Omdat je deel 1 nu hebt ingevuld, mag je deel 2 dus niet meer invullen.

- ○ Ik heb de tekst hierboven gelezen en ik begrijp het. (1)

Page Break

We willen nog een aantal dingen over je weten. Nadat je deze vragen beantwoord hebt, ben je klaar met het onderzoek.

Wat is je gender?

- ○ Man (1)
- ○ Vrouw (2)
- ○ Anders (3)

Wat is je leeftijd?

_____

Wat is je hoogst genoten of huidige opleiding?

- ○ Basisschool (1)
- ○ Middelbare school (2)
- ○ MBO (3)
- ○ HBO (4)
- ○ Universiteit (5)

End of Block: Post-experiment questions

Appendix B: final test survey (original version)

Item code	Description
EX-PR-XX	Experimental “given nominal versus pronominal” item
EX-SG-XX	Experimental “given nominal versus semi-given nominal” item
FL-EZ-XX	Easy filler item (one option grammatical, one option ungrammatical)
FL-GR-XX	Grammatical filler item (both sentences grammatical)
FL-UG-XX	Ungrammatical filler item (both sentences ungrammatical)

Start of survey

Start of Block: Instructions and consent

INFORMATIE EN TOESTEMMING U wordt uitgenodigd om mee te doen aan een onderzoek. In dit experiment wordt gekeken welke zinnen mensen het beste vinden klinken. Het onderzoek wordt uitgevoerd door Lex Crijns, masterstudent aan de Radboud Universiteit.

Wat wordt er van u verwacht? Meedoen aan het onderzoek houdt in dat u een online vragenlijst gaat invullen. In de vragen moet u aangeven welke zin u het beste vindt klinken. Het invullen van de vragenlijst kost ongeveer 10 tot 15 minuten.

Vrijwilligheid U doet vrijwillig mee aan dit onderzoek. Daarom kunt u op elk moment tijdens het onderzoek uw deelname stopzetten en uw toestemming intrekken. U hoeft niet aan te geven waarom u stopt. U kunt tot twee weken na deelname ook uw onderzoeksgegevens laten verwijderen. Dit kunt u doen door een mail te sturen naar [redacted].

Wat gebeurt er met mijn gegevens? De onderzoeksgegevens die we in dit onderzoek verzamelen, zullen door wetenschappers gebruikt worden voor datasets, artikelen en presentaties. De anoniem gemaakte onderzoeksgegevens zijn tenminste 10 jaar beschikbaar voor andere wetenschappers. Als we gegevens met andere onderzoekers delen, kunnen deze dus niet tot u herleid worden. We bewaren alle onderzoeksgegevens op beveiligde wijze volgens de richtlijnen van de Radboud Universiteit.

Heeft u vragen over het onderzoek? Als u meer informatie over het onderzoek wilt hebben, of als

u klachten hebt, kunt u contact opnemen met Lex Crijns (e-mail: [redacted]). Voor vragen over de verwerking van gegevens in dit onderzoek kunt u contact opnemen met: [redacted].

TOESTEMMING:

Geef hieronder uw keuze aan.
Door te klikken op de knop 'Ik ga akkoord' geeft u aan dat u:
- bovenstaande informatie heeft gelezen
- vrijwillig meedoet aan het onderzoek
- 16 jaar of ouder bent

Als u niet mee wilt doen aan het onderzoek, kunt u op de knop 'Ik wil niet meedoen' klikken

- ○ Ik ga akkoord (1)
- ○ Ik wil niet meedoen (2)

Skip To: End of Survey If TOESTEMMING: Geef hieronder uw keuze aan. Door te klikken op de knop 'Ik ga akkoord' geeft u aan... = Ik wil niet meedoen

Deze vragenlijst heet 'Welke zin klinkt beter? DEEL 2'. Als je deel 1 van deze vragenlijst al hebt ingevuld, mag je niet meer aan dit deel meedoen.

Heb je eerder de vragenlijst 'Welke zin klinkt beter? DEEL 1' al ingevuld?

- ○ Ja, ik heb de vragenlijst 'Welke zin klinkt beter? DEEL 1' ingevuld (1)
- ○ Nee, ik heb de vragenlijst 'Welke zin klinkt beter? DEEL 1' niet ingevuld (2)

Skip To: End of Survey If Deze vragenlijst heet 'Welke zin klinkt beter? DEEL 2'. Als je deel 1 van deze vragenlijst al heb... = Ja, ik heb de vragenlijst 'Welke zin klinkt beter? DEEL 1' ingevuld

Om aan dit onderzoek mee te doen, is het belangrijk dat Nederlands je eerste taal is. Is Nederlands je eerste taal?

- ○ Ja, Nederlands is mijn eerste taal. (1)
- ○ Nee, Nederlands is niet mijn eerste taal. (2)

Skip To: End of Survey If Om aan dit onderzoek mee te doen, is het belangrijk dat Nederlands je eerste taal is. Is Nederlan... = Nee, Nederlands is niet mijn eerste taal.

Dit onderzoek is specifiek gericht op inwoners van Nederland. Als je te lang in een ander land hebt gewoond, kun je niet meedoen. Heb je ooit langer dan twee jaar achter elkaar buiten Nederland gewoond?

- ○ Ja, ik heb ooit langer dan twee jaar achter elkaar buiten Nederland gewoond. (1)
- ○ Nee, ik heb nooit langer dan twee jaar achter elkaar buiten Nederland gewoond. (2)

Skip To: End of Survey If Dit onderzoek is specifiek gericht op inwoners van Nederland. Als je te lang in een ander land he... = Ja, ik heb ooit langer dan twee jaar achter elkaar buiten Nederland gewoond.

Zo dadelijk begint de test. Je krijgt telkens een kort verhaaltje te lezen. Aan het einde van het verhaaltje moet je kiezen tussen twee zinnen. Kies de zin die volgens jou het beste klinkt.

Page Break

Soms is de keuze tussen twee zinnen erg makkelijk en soms is de keuze erg moeilijk.

Het kan zijn dat je moet kiezen tussen twee zinnen die allebei goed klinken, of juist tussen twee zinnen die allebei slecht klinken.

Toch is het belangrijk om elke keer een keuze te maken. Ga uit van je intuïtie en probeer er niet te lang over na te denken.

Page Break

Hier volgt een voorbeeld van een makkelijke vraag. De ene zin klinkt veel beter dan de andere.

Siem woont in Den Haag. De supermarkt is om de hoek.

- ○ Vaak gaat hij er lopend naartoe. (1)
- ○ Vaak hij er lopend naartoe gaat. (2)

Page Break

Nu volgt een voorbeeld van een moeilijke vraag. Hier klinken allebei de zinnen niet zo goed.

Siem woont in Den Haag. De supermarkt is om de hoek.

- ○ Vaak hij er lopend naartoe gaat. (1)
- ○ Dikwijls hij er lopend naartoe gaat. (2)

Page Break

Dit onderzoek is zo ontworpen dat sommige zinnen beter klinken dan andere. **Als je een zin tegenkomt die raar klinkt, is dat waarschijnlijk niet vanwege een typefout.**

De test begint nu. Het onderzoek duurt ongeveer 10 tot 15 minuten.

End of Block: Instructions and consent

Start of Block: Question pool

*EX-PR-01 Jan doet de achterdeur open. Regendruppels vallen met een tikkend geluid op het gazon.

- ○ Daarom Jan pakt zijn paraplu. (1)
- ○ Daarom hij pakt zijn paraplu. (2)

*EX-PR-02 Floor is jarig. Het huis hangt helemaal vol met gekleurde slingers.

- ○ Waarschijnlijk Floor krijgt veel cadeaus. (1)
- ○ Waarschijnlijk ze krijgt veel cadeaus. (2)

EX-PR-03 Eef is goed in tennis. Het regionaal kampioenschap begint morgenochtend vroeg.

- Misschien Eef komt in de finale. (1)
- Misschien ze komt in de finale. (2)

EX-PR-04 Cas is een goede keeper. De bal komt soms erg hard op het doel af.

- Telkens Cas houdt de bal tegen. (1)
- Telkens hij houdt de bal tegen. (2)

EX-PR-05 Lars woont in Zweden. De nachten zijn daar 's winters vaak kouder dan in Nederland.

- Vaak Lars moet 's ochtends zijn voorruit krabben. (1)
- Vaak hij moet 's ochtends zijn voorruit krabben. (2)

EX-PR-06 Stijn ligt in de trein te slapen. Een oudere vrouw begint luidkeels te telefoneren.

- Direct Stijn schrikt wakker. (1)
- Direct hij schrikt wakker. (2)

EX-PR-07 Noor laat haar parkeerkaartje zien. De parkeerwacht opent de slagboom met een knopje.

- Daarna Noor rijdt door. (1)
- Daarna ze rijdt door. (2)

EX-PR-08 Suus zit in de bioscoop. De meeste mensen vertrekken tijdens de aftiteling.

- ○ Toch Suus blijft nog even zitten. (1)
- ○ Toch ze blijft nog even zitten. (2)

EX-PR-09 Mark geniet van het weekend. De kinderen zitten op de grond te spelen.

- ○ Ondertussen Mark kijkt televisie. (1)
- ○ Ondertussen hij kijkt televisie. (2)

EX-PR-10 Britt zit met een kapotte koelkast. De reparateur kan morgenmiddag om vier uur komen.

- ○ Helaas Britt is dan op haar werk. (1)
- ○ Helaas ze is dan op haar werk. (2)

EX-SG-01 Vier mannen zitten aan een tafeltje. Het café zit goed vol voor een woensdagavond.

- ○ Telkens de mannen halen samen een drankje. (1)
- ○ Telkens twee mannen halen samen een drankje. (2)

EX-SG-02 Twintig kinderen zitten in een klaslokaal. De bel is dit lesuur nog niet gegaan.

- ○ Toch de kinderen pakken hun tas al in. (1)
- ○ Toch vijf kinderen pakken hun tas al in. (2)

EX-SG-03 Drie fietsers staan te wachten. Een auto van rechts krijgt voorrang.

- ◯ Daarna de fietsers slaan linksaf. (1)
- ◯ Daarna twee fietsers slaan linksaf. (2)

EX-SG-04 Drie vrienden wonen samen in Nijmegen. De sfeer in het huis is altijd erg levendig.

- ◯ Vaak de vrienden zijn tegelijkertijd thuis. (1)
- ◯ Vaak twee vrienden zijn tegelijkertijd thuis. (2)

EX-SG-05 Vier mannen komen naar buiten. De deur van het gebouw wordt gesloten.

- ◯ Direct de mannen stappen in een auto. (1)
- ◯ Direct twee mannen stappen in een auto. (2)

EX-SG-06 Vijf meiden zijn iets aan het drinken. De barman roept vlak voor sluitingstijd de laatste ronde om.

- ◯ Daarom de meiden gaan nog snel een drankje halen. (1)
- ◯ Daarom drie meiden gaan nog snel een drankje halen. (2)

EX-SG-07 Drie vrouwen doen samen boodschappen. De kassamedewerker rekent twee pakken luiers af.

- ◯ Misschien de vrouwen hebben kinderen. (1)
- ◯ Misschien twee vrouwen hebben kinderen. (2)

EX-SG-08 Drie klanten lopen tegelijk een koffietent binnen. De barman zet meteen twee espresso's klaar op de bar.

- ○ Waarschijnlijk de klanten komen hier dagelijks. (1)
- ○ Waarschijnlijk twee klanten komen hier dagelijks. (2)

EX-SG-09 Zes studenten wonen een college bij. De docent vertelt een saai en ingewikkeld verhaal.

- ○ Ondertussen de studenten kijken naar hun telefoons. (1)
- ○ Ondertussen vier studenten kijken naar hun telefoons. (2)

EX-SG-10 Vijf basketballers willen een extra training plannen. De coach stelt volgende week woensdag voor.

- ○ Helaas de basketballers kunnen dan niet. (1)
- ○ Helaas twee basketballers kunnen dan niet. (2)

FL-EZ-01 Stef heeft trek. De bananen zijn op.

- ○ Daarom eet hij een appel. (1)
- ○ Daarom eet hij appel een. (2)

FL-EZ-02 Els kleedt zich aan. De zon schijnt buiten fel.

- ○ Toch trekt ze een warme trui aan. (1)
- ○ Toch ze een warme trui aantrekt. (2)

FL-EZ-03 Roel zit op de bank. De telefoon gaat.

- ○ Direct staat hij op. (1)
- ○ Direct opstaat hij. (2)

FL-EZ-04 Drie voetgangers staan op de stoep. Een auto komt van links voorbijrijden.

- ○ Daarna steken twee voetgangers over. (1)
- ○ Daarna steken voetgangers twee over. (2)

FL-EZ-05 Vier werknemers zijn uitgenodigd voor een overleg. Aan de kapstok hangen drie jassen.

- ○ Waarschijnlijk zijn drie werknemers al binnen. (1)
- ○ Waarschijnlijk drie werknemers al binnen zijn. (2)

FL-EZ-06 Loes loopt elke dag naar school. De route is drie kilometer lang.

- ○ Misschien heeft Loes geen fiets. (1)
- ○ Heeft misschien Loes geen fiets. (2)

FL-EZ-07 Bert speelt squash. De bal stuitert in het rond.

- Telkens slaat Bert de bal terug. (1)
- Telkens Bert slaat de bal terug. (2)

FL-EZ-08 Truus is op vakantie. Het hotel is van alle gemakken voorzien.

- Vaak gaat Truus 's morgens zwemmen. (1)
- Vaak gaat 's morgens Truus zwemmen. (2)

FL-EZ-09 Jort is bij de wasserette. Zijn auto wordt grondig gewassen.

- Ondertussen drinkt Jort een kopje thee. (1)
- Ondertussen drinkt Jort thee een kopje. (2)

FL-EZ-10 Pleun wil gaan hardlopen. Haar hardloopschoenen staan in de hal.

- Helaas heeft Pleun haar enkel bezeerd. (1)
- Helaas Pleun haar enkel heeft bezeerd. (2)

FL-EZ-11 Sam rekent het eten af. De serveerster was erg vriendelijk.

- Daarom geeft hij een flinke fooi. (1)
- Daarom hij geeft een flinke fooi. (2)

FL-EZ-12 Claire zit in het klaslokaal. De meester vertelt een boeiend verhaal.

- ○ Toch kan ze haar aandacht er niet bij houden. (1)
- ○ Toch kan ze er niet haar aandacht bij houden. (2)

FL-EZ-13 Zes reizigers stappen in de bus. De chauffeur sluit de deuren.

- ○ Direct gaan vier reizigers op een stoel zitten. (1)
- ○ Direct gaan reizigers vier op een stoel zitten. (2)

FL-EZ-14 Vier klanten wachten bij een afhaalrestaurant. Een medewerker roept twee namen.

- ○ Daarna lopen twee klanten naar de balie. (1)
- ○ Daarna twee klanten lopen naar de balie. (2)

FL-EZ-15 Vier gasten komen aan op het feestje. De jarige zet twee damesfietsen in zijn schuur.

- ○ Waarschijnlijk zijn twee gasten vrouwen. (1)
- ○ Waarschijnlijk twee gasten vrouwen zijn. (2)

FL-EZ-16 Lies loopt de supermarkt uit. De kassamedewerker roept iets.

- ○ Misschien is Lies iets vergeten. (1)
- ○ Misschien iets is Lies vergeten. (2)

FL-EZ-17 Ron doet mee aan een dictee. De leraar leest moeilijke woorden op.

- ○ Telkens schrijft Ron de woorden op. (1)
- ○ Telkens Ron opschrijft de woorden. (2)

FL-EZ-18 Maud volgt een college. De docent praat erg onduidelijk.

- ○ Vaak kan Maud het niet precies verstaan. (1)
- ○ Vaak kan Maud niet precies het verstaan. (2)

FL-EZ-19 Joost zit in de snackbar. Een medewerker maakt zijn friet klaar.

- ○ Ondertussen bladert Joost door een tijdschrift. (1)
- ○ Ondertussen Joost bladert door een tijdschrift. (2)

FL-EZ-20 Fleur is op een verjaardagsfeestje. De gastheer brengt zelfgemaakte saté rond.

- ○ Helaas is Fleur allergisch voor pinda's. (1)
- ○ Helaas is Fleur voor pinda's allergisch. (2)

FL-GR-01 Mike heeft dorst. Het appelsap is op.

- ○ Daarom drinkt Mike een glas water. (1)
- ○ Om die reden drinkt Mike een glas water. (2)

FL-GR-02 Tess staat in de hal. De lucht is bewolkt.

- ○ Toch trekt Tess haar zomerjas aan. (1)
- ○ Desondanks trekt Tess haar zomerjas aan. (2)

FL-GR-03 Daan zit op zijn stoel. De deurbel klinkt.

- ○ Direct staat Daan op. (1)
- ○ Onmiddellijk staat Daan op. (2)

FL-GR-04 Mien drukt op het liftknopje. De deur gaat open.

- ○ Daarna stapt Mien de lift binnen. (1)
- ○ Vervolgens stapt Mien de lift binnen. (2)

FL-GR-05 Ben ligt te huilen in zijn bedje. Het geluid is oorverdovend.

- ○ Waarschijnlijk heeft Ben honger. (1)
- ○ Vermoedelijk heeft Ben honger. (2)

FL-GR-06 Jill neemt de bal aan. De scheidsrechter fluit.

- ○ Misschien staat ze buitenspel. (1)
- ○ Wellicht staat ze buitenspel. (2)

FL-GR-07 Rens is aan het touwtjespringen. Laura zwaait het touw rond.

- ○ Telkens springt hij eroverheen. (1)
- ○ Steeds springt hij eroverheen. (2)

FL-GR-08 Sanne heeft een goed onderhouden tuin. De tuinman houdt het allemaal goed bij.

- ○ Vaak gaat ze op zondag door de tuin wandelen. (1)
- ○ Dikwijls gaat ze op zondag door de tuin wandelen. (2)

FL-GR-09 Tien studenten zitten in een collegezaal. De docent pakt zijn spullen uit zijn tas.

- ○ Ondertussen zitten vier studenten te kletsen. (1)
- ○ Tegelijkertijd zitten vier studenten te kletsen. (2)

FL-GR-10 Acht kinderen zijn op een verjaardagsfeestje. De jarige wil gaan zwemmen.

- ○ Helaas hebben twee kinderen geen zwemkleren bij zich. (1)
- ○ Jammer genoeg hebben twee kinderen geen zwemkleren bij zich. (2)

FL-UG-01 Jens koopt alcohol bij de supermarkt. De caissière vraagt hoe oud hij is.

- ○ Daarom Jens zijn legitimatiebewijs laat zien. (1)
- ○ Om die reden Jens zijn legitimatiebewijs laat zien. (2)

FL-UG-02 Bo wil gaan wandelen. De weerman voorspelt veel regen.

- ○ Toch Bo wandelen gaat. (1)
- ○ Desondanks Bo wandelen gaat. (2)

FL-UG-03 Joyce zingt in een koor. De dirigent wijst in haar richting.

- ○ Direct Joyce te zingen begint. (1)
- ○ Onmiddellijk Joyce te zingen begint. (2)

FL-UG-04 Hans wacht bij een kruispunt. De verkeersregelaar maakt een gebaar.

- ○ Daarna doorrijdt Hans. (1)
- ○ Vervolgens doorrijdt Hans. (2)

FL-UG-05 Kim laat haar fietsbel rinkelen. De andere fietsers gaan haastig aan de kant.

- ○ Waarschijnlijk Kim heeft haast. (1)
- ○ Vermoedelijk Kim heeft haast. (2)

FL-UG-06 Drie vrienden wonen samen aan de Sint Annastraat. Op tafel liggen twee wetbundels.

- ○ Misschien rechten studeren twee vrienden. (1)
- ○ Wellicht rechten studeren twee vrienden. (2)

FL-UG-07 Acht mannen houden een darttoernooi. Het dartbord hangt in de garage.

- Telkens spelen mannen twee samen een potje. (1)
- Steeds spelen mannen twee samen een potje. (2)

FL-UG-08 Zes vrienden gaan elke maand naar hetzelfde restaurant. Het menu is niet uitgebreid.

- Vaak bestellen hetzelfde hoofdgerecht twee vrienden. (1)
- Dikwijls bestellen hetzelfde hoofdgerecht twee vrienden. (2)

FL-UG-09 Jaap staat bij de bar. De barvrouw maakt een cocktail klaar.

- Ondertussen hij kijkt naar zijn telefoon. (1)
- Tegelijkertijd hij kijkt naar zijn telefoon. (2)

FL-UG-10 Saar heeft een vrije dag. De kinderen willen naar de dierentuin.

- Helaas moet naar de tandarts ze. (1)
- Jammer genoeg moet naar de tandarts ze. (2)

End of Block: Question pool

Start of Block: Post-experiment questions

We willen nog een aantal dingen over je weten. Nadat je deze vragen beantwoord hebt, ben je klaar met het onderzoek.

Wat is je gender?

- ○ Man (1)
- ○ Vrouw (2)
- ○ Anders (3)

Wat is je leeftijd?

_____

Wat is je hoogst genoten of huidige opleiding?

- ○ Basisschool (1)
- ○ Middelbare school (2)
- ○ MBO (3)
- ○ HBO (4)
- ○ Universiteit (5)

End of Block: Post-experiment questions

Appendix C: instructions (translated to English)

This appendix contains an English translation of the instructions that were provided to participants in the pretest and in the final test of this study. This English version was not used in the experiment itself. The original versions of the instructions can be found in appendices A and B.

Start of instructions

The test will begin shortly. Each time, there will be a short story for you to read. At the end of the story, you will have to choose between two sentences. Choose the sentence that sounds the best to you.

Page Break

Sometimes, the choice between the two sentences will be very easy. At other times, the choice will be very difficult.

You may have to choose between two sentences that both sound good, or between two sentences that both sound bad.

Still, it is important to make a choice each time. Use your intuition and try not to think about it for too long.

Page Break

Here is an example of an easy question. One sentence sounds a lot better than the other one.

Siem woont in Den Haag. De supermarkt is om de hoek.

- ○ Vaak gaat hij er lopend naartoe. (1)
- ○ Vaak hij er lopend naartoe gaat. (2)

Page Break

Here is an example of a difficult question. Here, neither sentence sounds very good.

Siem woont in Den Haag. De supermarkt is om de hoek.

- ○ Vaak hij er lopend naartoe gaat. (1)
- ○ Dikwijls hij er lopend naartoe gaat. (2)

Page Break

This study has been designed so that some sentences sound better than other ones. **If you come across a sentence that sounds odd, then this is most likely not because of a typo.**

The test will start now. This study will take about 10 to 15 minutes.