A new perspective on the Northern Subject Rule: General principles that go beyond the input

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Abstract

The Northern Subject Rule consists of two restrictions on the realisation of -s in third person plural contexts, the Type of Subject constraint and the Subject Adjacency constraint. This thesis aims to see if speakers of a non-NSR variety of English show sensitivity to these constraints. The results from a grammaticality judgement test with two groups of speakers suggests that this is so. This suggests that the constraints of the Northern Subject Rule are not learned through the input, but rather are general principles that go beyond the input.

Key words: Northern Subject Rule, Type of Subject constraint, Subject Adjacency constraint, acceptability judgment test, first language acquisition, second language acquisition.

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1 Introduction

The Northern Subject Rule (NSR) is a feature of Northern English dialects, as well as some dialects that are related to Northern English dialects, like Appalachian English (Tortora & Den Dikken, 2010). These dialects differ from Standard English in that they use verbal -s in both third person singular and plural contexts, whereas Standard English only uses -s in third person singular contexts. The use of verbal -s in the plural is restricted by two constraints, namely the Type of Subject constraint and the Subject Adjacency constraint (De Haas, 2008).

The Type of Subject constraint states that the verb does not receive -s in third person plural contexts if the subject is pronominal. An example of this constraint can be seen in (1). 1a is ungrammatical, because the verb does not receive -s if the subject is pronominal. The correct sentence is thus 1b. 1c shows that the use of verbal -s is grammatical if the subject is nominal.

(1) a. *They **sleeps** in the attic.
    b. They **sleep** in the attic
    c. The boys **sleeps** in the attic.

The Subject Adjacency constraint states that the verb does not receive -s if the subject and the verb are adjacent. This results in the use of verbal -s in third person plural if the subject is not adjacent to the verb, which can be seen in the examples in (2). 2a is ungrammatical because the subject is pronominal and adjacent to the verb. 2b is grammatical, because the subject is pronominal, but not adjacent to the verb. 2c and 2d are both grammatical, because the verb is always able to receive -s if the subject is nominal.

(2) a. *They **sleeps** in the attic.
    b. They always **sleeps** in the attic.
    c. The boys **sleeps** in the attic.
    d. The boys always **sleeps** in the attic

As De Haas and Van Kemenade (2015) show, the Type of Subject constraint is more widely spread than the Subject Adjacency constraint in the historical analysis of the Northern Subject Rule. This can also be seen in the analysis of the different contemporary varieties of NSR dialects, for example Appalachian English (Tortora & Den Dikken, 2010). There are more NSR dialects that only have the Type of Subject constraint than those that have both

constraints. Similarly, a pattern can be found within the NSR, in which the Type of Subject constraint overrules the Subject adjacency constraint. The verb always receives -s in a sentence in which the subject is nominal, regardless of whether it is adjacent to the verb or not. This research deals with the question whether speakers of non-NSR dialects are also sensitive to these constraints, and whether they show the same pattern. If the sensitivity towards the constraints is derived from the input they have received, it would be illogical if speakers of non-NSR dialects have the sensitivity. Still, there is reason to believe that it would be possible. An example of speakers that show sensitivity towards elements that are not present in their own dialects can be found in Barbiers, Bennis and Hendriks (2015).

Barbiers, Bennis and Hendriks (2015) looked at the word order variation in verbal clusters in Dutch. They found that the verb cluster orderings that speakers accept or reject are only partly determined by the verb cluster orders that are part of their own variety (see section 2.2 for further details). This suggests the presence of underlying grammatical properties that go beyond what speakers have received as input. This raises the issue of the difference between rules learned through the input and the presence of underlying principles that go beyond the input.

The aim of this research is to determine whether the rules that govern the NSR are learned through the input, or whether it can be shown that such rules are also active in the grammar of a non-NSR speakers. The same method as Barbiers et al. is used, namely asking participants to rank sentences with an aspect that does not occur in their own dialect, to see if they follow the same pattern as the dialects that do have this aspect. In this case, speakers of non-NSR dialects are asked to rank sentences that follow the NSR, to see if the same pattern of variation occurs as could be found in the NSR dialects. If the speakers of non-NSR dialects follow the same pattern, it can be seen as evidence for the possibility that the rules of the NSR are related to more general grammatical principles, the construction of which does not depend on the input received

This paper is structured in the following way. Section 2 looks into the details of the Northern Subject Rule and its varieties. It addresses the link between the native speakers' intuitions and rules or principles that are active but not constructed on the basis of the input, as seen in Barbiers et al. (2015). Lastly, this section discusses an additional aspect of this research, namely the inclusion of intuitions of L2 speakers of English. Section 3 focusses on the methodology of the acceptability judgement ranking conducted in this research, followed by a description of the results in section 4. Section 5 deals with the analysis of the results, and lastly, section 6 concludes this thesis.

2 The link between the Northern Subject Rule and the speakers' judgements

The Northern Subject Rule follows a pattern, directed by the Type of Subject constraint and the Subject Adjacency constraint. These two constraints determine whether a native speaker of a NSR dialect adds -s to the verb in third person plural, or not. The aim of this research is to see whether this pattern is formed by general grammatical principles, or whether it is specific for those who learned it in an area in which an NSR dialect is spoken. This section provides information that is crucial for understanding the link between the NSR and a possible underlying system that does not depend on the input. The first subsection gives more detailed information about the workings of the Northern Subject Rule and its constraints, and related subjects such as geographical variation and the origin of the phenomenon. Section 2.2 provides a detailed description of a case in which judgements are partly determined by grammatical principles that go beyond the input. The example that is discussed in this section is word order variation in verbal clusters in Dutch. Section 2.3 addresses the influence of intuitions of L1 and L2 speakers on the question whether the NSR is governed by a structure that depends on the input, or one that goes beyond the input.

2.1 The Northern Subject Rule

The Northern Subject Rule is a feature found in the Northern dialects of the British Isles, as well as several dialects of English related to these Northern dialects. These dialects are characterised by the use of verbal –s in third person subject contexts in both singular and plural, whereas Standard English only uses verbal –s in third person singular contexts. This use of verbal –s in the plural is restricted by two constraints: the Type of Subject constraint and the Subject Adjacency constraint.

The Type of Subject constraint states that the verb receives –s only if it is combined with a nominal subject, i.e. the verb does not receive –s if it is combined with a pronominal subject. This is illustrated in the following sentences, adapted from De Haas (2008:111).

(3) a. They **sing**
    b. *They **sings**
    c. The birds **sings**

The second constraint is the Subject Adjacency constraint, which is also known as the Position of Subject Constraint, and the Proximity of Subject Constraint (Pietsch, 2005). This

constraint states that the verb receives –s if the verb is not directly adjacent to the subject. This results in the following sentences, also adapted from De Haas (2008:111).

(4) a. *They **sings**
b. They only **sings**

The two constraints combined leads to the following set of grammatical and ungrammatical sentences.

(5) a. [Pron – V-Ø]
b. *[Pron – V-s]
c. [Pron – X – V-s]
d. [DP – V-Ø]
e. [DP – V-s]
f. [DP – X – V-s]

The origin of the Northern Subject Rule is still unclear, although there are two major theories that attempt to explain how the phenomenon came into being. The first is the Celtic Hypothesis, and the second is the theory of Language Internal Change.

The Celtic Hypothesis states that the English language has been influenced by Brittonic Celtic. Many scholars follow this line of research, i.a. Filppula (2008), Benskin (2011) and Hickey (2012). The NSR could be the result of language contact between Celtic and English in the North of the British Isles. The pattern of the NSR is rare among languages, but it is strikingly similar to patterns that can be found in Celtic languages like Welsh (Hickey, 2012). Although the actual morphology of Welsh looks different, the pattern remains the same, namely that the verb endings in the third person plural differ from the other plural forms. Hickey states that the NSR would have developed in an area with bilingual speakers of English and Brittonic Celtic. A point of critique on the Celtic Hypothesis is the lack of vocabulary borrowings from Celtic, which is disputed by Filppula (2008), who shows the borrowing from Celtic in other linguistic areas. A second point of critique on the Celtic Hypothesis is the discrepancy between the timing of the contact situation and the estimated origin of the NSR. The contact situation between Brittonic Celtic and English took place in the fifth and sixth century (Hickey 2012). However, there is a gap in the textual evidence of the development of the NSR, as there are no texts from the North of England remaining from

the tenth century until the end of the twelfth century. Before this gap, the NSR cannot be found in the texts, and, by the start of the thirteenth century, it is fully in place, leading to the idea that the NSR developed in the period between the tenth and thirteenth century (Cole 2012). Cole tried to resolve this discrepancy by showing that the pattern of the NSR can be found much earlier than was originally thought, bringing it closer to the contact situation between English and Brittonic Celtic. Benskin's contribution (2011) to the Celtic Hypothesis is explaining how the contact situation between Brittonic Celtic and English could have resulted in the NSR pattern.

The theory of Language Internal Change is designed by Pietsch (2005) as a response to the Celtic Hypothesis, and specifically to the discrepancy between the time period of the contact situation between Celtic and English and the development of the NSR. The aim was to find a theory in which there was no contact situation needed to spark the development of the NSR, although Pietsch does not rule it out as a possible factor contributing to the shape of the phenomenon. The theory entails that there are two important factors that led to the development of the NSR. The first is the reduction of the inflectional morphemes to –es and later to –s, which started in the North of England. The second factor is loss of inflection when the subject was adjacent to the verb, which spread from south to north. The spread of the two linguistic changes is represented in figure 1, taken from Pietsch (2005: 175).

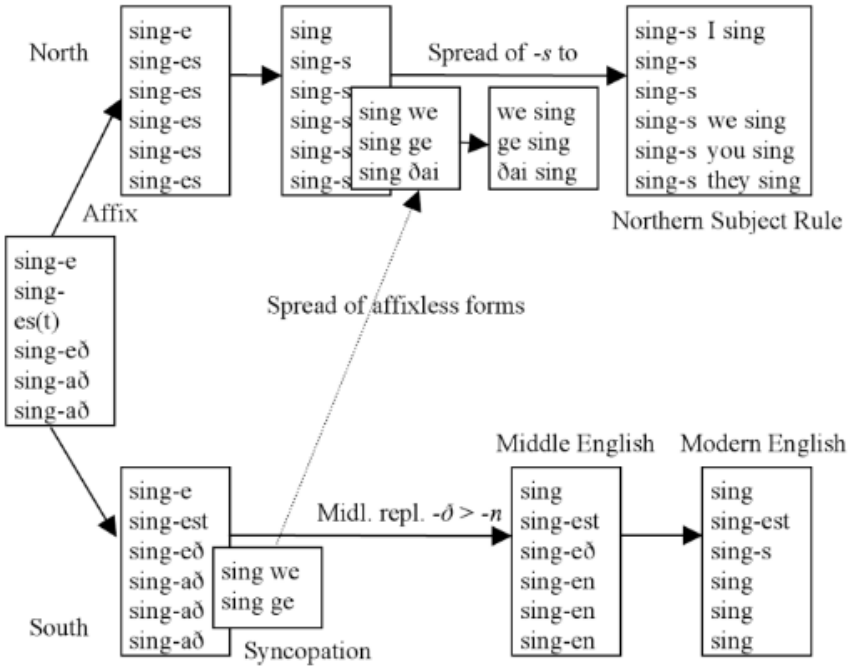


Figure 1: The development of the agreement paradigms of Old and Middle English. This figure shows the reduction of the inflection system from Old to Middle English,

as well as the loss of the verbal inflection (affixless forms) if the subject was adjacent to the verb.

The diagram shows that the reduction of the inflection was already in place in the Northern dialects, can be seen in the frames in the top left corner. Later the adjacency factor was added to the verb chart in the top middle, showing that the inflection was lost when the subject and verb were adjacent. According to Pietsch (2005), these two factors, reduction to -s and loss of inflection in case of adjacency, led to the pattern of the NSR.

The two constraints form the core of the NSR, although they are not equally robust in all varieties of the NSR. The existence of two constraints would imply four possible language varieties, namely one in which both constraints are active, one in which only the Type of Subject constraint is active, one in which only the Subject Adjacency is active, and one in which neither of the constraints is active. However, literature shows that only three of these possibilities are indeed attested. The variety in which neither of the constraints is active is Standard English, as the verb never receives –s in third person plural contexts, no matter the subject type or adjacency. The variety in which both constraints are active is the core area of the NSR (De Haas & Van Kemenade, 2015), limited to the North of England and Scotland. The dialects located further away from this core area only showed the effects of the Type of Subject constraint. Other varieties in which only the Type of Subject constraint include Appalachian English (Tortora & Den Dikken, 2010) and Northern Irish English (McCafferty, 2003, 2004). A language or dialect in which only the Subject Adjacency constraint is active, and the Type of Subject constraint is not, is not found in the literature. This is interesting, because this implies a subset relation, in which the varieties with both constraints form the superset for the varieties with only the Type of Subject constraint.

2.2 Speakers' intuitions and verbal cluster variation in Dutch

The aim of this paper is to attempt to find an underlying principle that goes beyond the input in the rules of the NSR, as opposed to the rules being learned through the input. An example of such a principle that goes beyond the input is found by Barbiers et al. (2015), who looked at verb cluster variation in Dutch. In Dutch, word order variation is relatively infrequent. However, word order variation is quite common in embedded clauses in which the main verb is accompanied by two other verbs, like modal verbs or auxiliaries, and where this verb cluster is situated at the end of the sentence. All combinations of these three verbs are logically possible, resulting in the following six logical orders, in which V3 is the main verb.

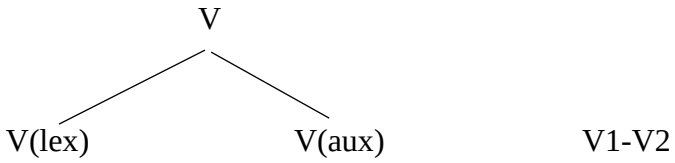
(6) a. V1-V2-V3
b. V1-V3-V2
c. V2-V1-V3
d. V2-V3-V1
e. V3-V1-V2
f. V3-V2-V1

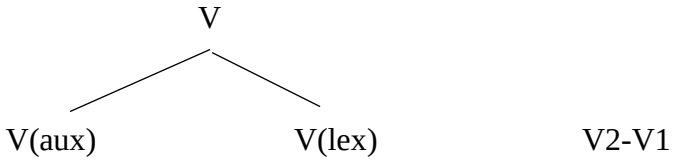
An example sentence is given in (7) (Barbiers et al., 2).

(7) Ik vind dat iedereen *moet kunnen zwemmen* V1-V2-V3
I find that everyone must can swim
'I think that everybody should be able to swim.'

The dialects of Dutch, however, only show the existence of four out of the six options, namely a, b, e, and f. This raises the question why the other two are excluded. Barbiers et al. provide an overview of explanations mentioned in previous research, but they support the theory that explains the different orders through the principle of Merge. It is important to note that the different orders do not differ in semantic or pragmatic meaning of the sentence. Which of the orders is/are used seems to be determined by the geographic location of the dialect, the category of the auxiliaries in the verbal cluster, and the hierarchy of the auxiliaries in the verbal clusters. For example, the Northern dialects have a descending order, like f, whereas most other varieties have an ascending order, as in a. The goal of the article is to "present an explanation of this variation" (Barbiers et al., p. 3) in the form of a clear syntactic system that speakers are unconsciously aware of.

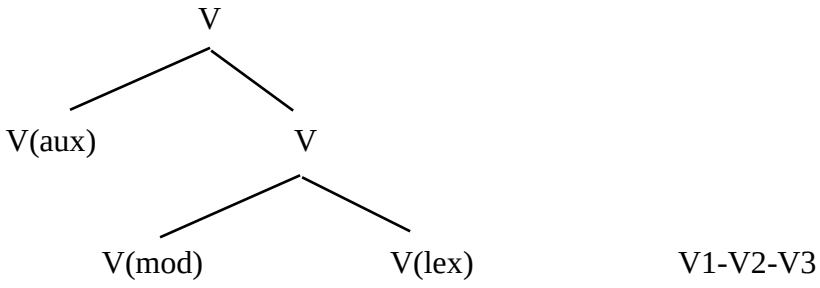
Merge specifies that two words are merged together in a binary branched hierarchy. In the case of verbal clusters, this means that the lexical verb can be combined with another verb, like an auxiliary, but it specifies nothing about the order in which these two verbs have to appear. This leads to two possible outcomes, V1-V2 or V2-V1, in which V1 would be the lexical verb. These outcomes are shown in a syntactic tree for better understanding.

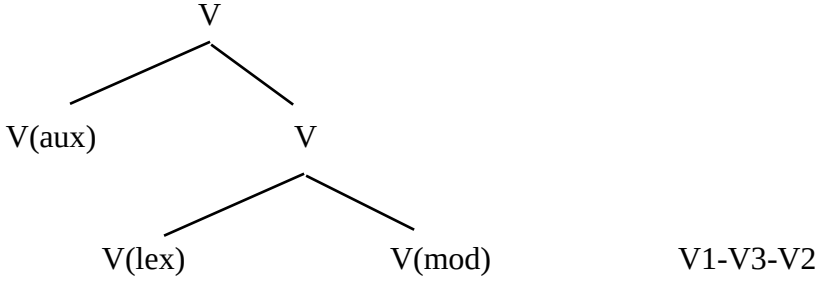


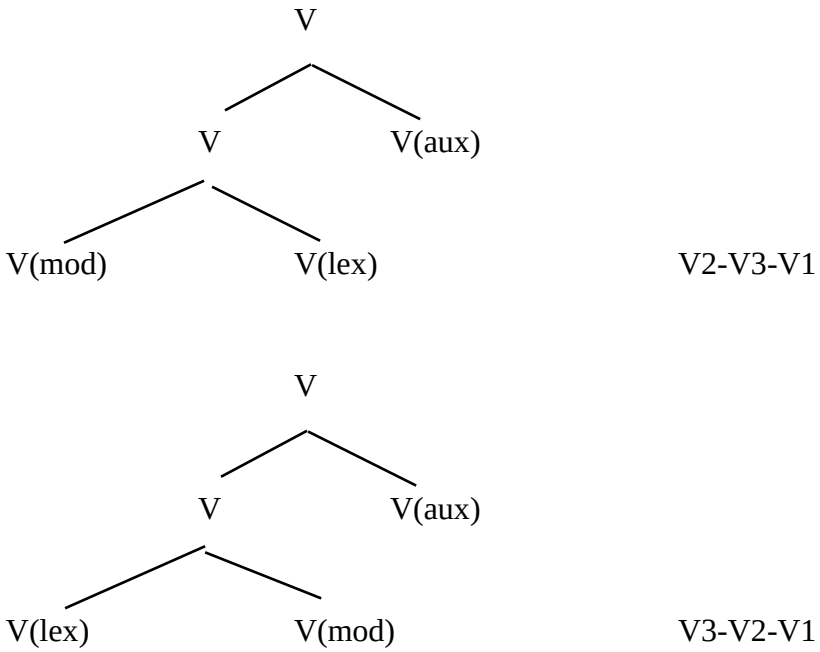


Data from the Syntactic Atlas of the Dutch Dialects (SAND) show that there is a clear pattern in distribution of the variation between word order in verbal clusters over the dialects of Dutch. The order V2-V1 is much more frequent in the Northern dialect areas than in the Southern dialect areas. In the Southern areas, a distinction is made, based on the category of the auxiliary. If V1 is a modal verb, then the order is V1-V2, and if V1 is a perfect auxiliary verb and the main verb a participle, then the order is V2-V1.

If a verbal cluster consists of three verbs, then Merge predicts four out of the six logical combinations to be possible. If the main verb, V3, is merged with one verb at first, due to the binary branching, this results in the cluster V2-V3 or V3-V2. If this cluster is then merged with another verb, this verb will not be able to break the cluster apart, resulting in the possible orders V1-V2-V3 / V2-V3-V1 and V1-V3-V2 / V3-V2-V1. This means that the options V2-V1-V3 and V3-V1-V2 are immediately ruled out.







The empirical data from the SAND describe the pattern in variation of the word order in verbal clusters that can be found in the Dutch dialect areas. Different patterns can be found depending on the nature of the V1 and V2. Overall, it can be stated that the order V2-V1-V3 does not occur and that the order V1-V2-V3 is the most frequent order, especially in the Netherlands. V3-V2-V1 is found particularly in the Northern dialect areas. The order V3-V1-V2 was found quite frequently in two of the three verbal cluster types, even though it was ruled out in the initial analysis through Merge that is proposed by Barbiers et al. They explain its occurrence by linking it to the fact that it frequently appears when the main verb is a participle. They propose a new theory for V3-V1-V2, in which the orders are categorically different, with the participle being ambiguous between verbal and adjectival. If V3 in V3-V1-V2 is actually an adjective, then it is a two-verb cluster and the cluster is no longer interrupted in the way that Merge does not allow.

The innovative aspect of this paper by Barbiers et al. is the inclusion of intuitions of native speakers about the variation in word orders of the verbal clusters. The goal of this experiment is to see whether the intuitions of the speakers is based on the orders that are available in the speakers' own dialects, thus via the input they received, or whether the approach is more structural, namely which orders are possible or impossible via the principles of the grammar. The speakers were asked to give acceptability judgements about not only the word orders that are present in their own dialect, but also the orders that are not present in their dialect, but are so in other dialects, thus the "non-native orders" (Barbiers et al., p. 32).

The speakers were asked to rank the six possible orders, rather than give a yes/no answer, because this rules out the option that the speakers only looked at their own dialect for possible orders. This set-up of the experiment is vital, because it could bring clarity about whether the word orders are governed by an underlying structure that does not depend on the input speakers receive, or by something else like geographic location.

The participants were asked to rank the and the average ranking based on the speaker intuition that is found is: V1-V2-V3 > V3-V1-V2 > V3-V2-V1 / V1-V3-V2 > V2-V1-V3 / V2-V3-V1. This is strikingly the same order as the frequency of the word orders in the SAND, with V1-V2-V3 being the most frequent order and V2-V1-V3 / V2-V3-V1 not occurring. More importantly, the average ranking does not show signs that the participants based their rankings on which orders are available in their own dialect. It raises the question why the rankings represent the frequency order more closely than the speakers' own dialects.

The answer to this question cannot be that the more frequent an order is, the higher it will be ranked. This is illogical, because all the participants cannot possibly know the frequencies of the various word orders of the language area. Barbiers et al. rephrase this "familiarity hypothesis" (p. 35) as meaning that the most frequently heard orders will be ranked higher by a speaker, but they reject it on the basis of their data. Even speakers from the North, whose most frequent order is V3-V2-V1, rank the order V1-V2-V3 higher. Thus it can be said that "the linguistic environment does not exert any influence on the rankings provided by" the participants (Barbiers et al., p. 33). The additional point that Barbiers et al. make is that the ranking can neither be explained by the familiarity with the orders of Standard Dutch, because this only accounts for the high ranking of V1-V2-V3 and V3-V1-V2, but not for the difference between V3-V2-V1 and V2-V1-V3, which are both not available in Standard Dutch. The next possible solution that is discussed is the influence from processing preferences. Barbiers et al. link their data to three important theories in the field of processing preferences, but none of those theories is in accordance with the data.

Barbiers et al. explain the link between the native speakers' intuitions and the geographic frequency through analysing the word order variation of verbal clusters as following Merge plus the option in some dialects to treat the lexical verb as an adjective. The native speakers are unconsciously aware of the same grammatical system and this results in a higher sensitivity towards one of the word orders over the others, in the same line as the system accounts for the frequency of the word order. The data of the native speakers' intuition experiment show that the native speakers base their ranking on this grammatical system, thus whether the word order is possible or not, rather than whether it is present in their own dialect.

The verbal cluster variation is thus governed by an underlying grammatical structure, and not by rules that are learned through the input of the speakers' own dialect.

2.3 Intuitions of L1 and L2 speakers

The important part of the paper by Barbiers et al (2015) for this research is that they show that it is possible to expose underlying grammatical properties that are not obvious from the input that the speaker has received. They did so by asking participants to judge a grammatical construction that is not part of their own grammar. The results show that the speakers judged some unfamiliar constructions to be grammatical, even though these constructions are absent in their own dialect. This means that there is a grammatical principle in play that is not learned through the input speakers have received.

This research will focus on the question whether such more general properties can also be found with respect to the Northern Subject Rule. It will do so by following the same methodology as Barbiers et al., namely by asking speakers to give an acceptability judgement about a grammatical construction that is not part of their own grammar. For this reason, it is not helpful to find participants that speak a dialect of English that includes the NSR, as their judgements would not be able to show whether the pattern arises through the input, or through more general grammatical properties. This research will look at speakers of Standard English, which means speakers of English dialects that do not include the NSR. They will be asked to rank the acceptability of four sentences, namely sentences that do or do not follow either or both of the two constraints.

If the results show no sensitivity towards the NSR pattern, that is, if the speakers do not rank the sentences that follow the constraints on the realisation of -s in third person plural contexts higher than the sentences that do not follow the constraints, it suggests that the pattern of the NSR is formed by rules that are learned through the input. In this case, there would be no evidence for the presence of more general grammatical properties that give rise to that pattern.

If the results of the speakers of Standard English show a sensitivity towards both constraints of the NSR, it implies that there is more to the grammar than can be learned through the input. None of these speakers would have learned the rules of the NSR through the input, so if they follow the same pattern as the speakers of NSR dialects, despite not having had it in the input, there have to be more general properties in some form or other.

One of the counterarguments against this theory could be that the geographical closeness of the speakers of Standard English and speakers of NSR dialects cannot rule out

that the speakers of Standard English have heard the NSR through contact with speakers of a NSR dialect, and that the sensitivity is the effect of that contact. This is one of the reasons for including speakers who learned English as a second language. It is less likely that Dutch L2 speakers of English have been in contact with speakers of NSR dialects. The inclusion of L2 speakers also gives insight in the difference between the L1 and L2 acquisition processes and the link with grammatical principles that do not depend on the input.

If the results of the acceptability ranking of the L2 speakers of English do not show a sensitivity towards the NSR pattern, and those of the L1 speakers do, it can have two possible explanations. The first explanation of this outcome is that the counterargument mentioned above is correct, namely that the speakers of Standard English are sensitive towards the constraints because they have been in contact with speakers of NSR dialects. The second explanation is that the acquisition process of L1 speakers and L2 speakers is fundamentally different. The event of this result could mean that something in the L2 acquisition process makes the acquisition of the more general properties impossible. Another possible interpretation would be that L2 speakers who learned English after puberty no longer have access to certain abstract grammatical properties. This idea is called the Fundamental Difference Hypothesis (FDH) and it was originally formulated by Bley-Vroman (Gass et al., 2013).

If neither the L1 nor the L2 speakers show a sensitivity towards the rules of the NSR, this could mean that the NSR is not comparable to the word order variations of verb clusters in Dutch in the sense that more general properties cannot be found through this experiment. This result would raise the question what the difference between these two phenomena is, and why the methodology that works for one does not work for the other. This discussion, however, is beyond the scope of this thesis.

If both the L1 and the L2 speakers show a sensitivity towards the rules of the NSR, it could be seen as evidence that the NSR is governed by principles that do not depend on the input, and that these principles available to both L1 and L2 speakers. This shows comparisons with the idea that Universal Grammar is available in both L1 and L2 (Gass, Behney, & Plonsky, 2013). This result could be used as an argument against the idea that the L1 speakers only showed sensitivity because of the geographical closeness to the NSR dialects.

The least expected results would be if the L1 speakers did not show a sensitivity towards the NSR rules, while the L2 speakers did. This result would mean that there is something specific to the L2 process that causes the relevant sensitivities. Although it would be hard to determine what that could be, this result would not be entirely uninteresting, given

the debate about the origin of the NSR pattern. It could be speculated that L2 speakers are essential in the rise of the NSR pattern. This would be in line with the idea expressed in the Celtic Hypothesis that the NSR pattern arose out of language contact, since a contact situation naturally involves L2 speakers, in contrast to a situation in which the NSR pattern arose due to language internal change.

2.4 Summary

The first two subsections have given (additional) information about two important elements of this research. Section 2.1 explained the Northern Subject Rule in further detail, by explaining the Type of Subject constraint, the Subject Adjacency constraint, and the distribution of these constraints in the NSR varieties. It also introduced the two major theories concerning the origin of the NSR, namely the Celtic Hypothesis and the theory of Language Internal Change. Section 2.2 explained how native speakers' intuitions can help to find principles that go beyond the input. It did so by means of the example of word order variation of verbal clusters in Dutch, as discussed by Barbiers et al. (2015). Barbiers et al. described how the intuitions of native speakers on the verbal cluster variation overlap with the frequency rates of these word orders, rather than with the word orders that are present in their own grammar. They explained this by positing that there is an underlying grammatical system that governs which orders are possible and more likely than others. This can be seen as evidence that there could be a difference between the grammar learned through input and universal principles that go beyond the input. Section 2.3 showed in which way this research will attempt to answer the question whether the rules of the NSR are governed by principles that do not depend on the input, or whether they are learned through the input alone. It also discussed the reason for including not only speakers of Standard English, but also speakers who learned English as a second language.

3 Methodology

The method used for this experiment is similar to the native speakers' intuitions experiment performed by Barbiers et al. (2015). The experiment conducted in this research is a questionnaire with an acceptability ranking, distributed among native speakers of English and advanced Dutch learners of English via the social media websites Facebook and Tumblr. The purpose of the questionnaire is to gain insight in the sensitivity towards the constraints of NSR. It will show whether either, or both, of the groups of speakers has a sensitivity towards the constraints, and if so, whether there is a similar subset relation to the one that can be found in the different dialects of the NSR. This sensitivity is measured by the extent to which both groups of speakers of English accept sentences that fall within and outside of the two constraints.

The literature does not give any information on the sensitivity towards the constraints outside of the NSR varieties. This means that this research cannot include a clear prediction on the sensitivity towards the constraints of the NSR by L1 and L2 speakers of Standard English. However, if there is such a sensitivity, it is likely that it is higher for the Type of Subject constraint than for the Subject Adjacency constraint, given the analysis of NSR varieties by De Haas and Van Kemenade (2015). The number and global spread of the varieties that have only the Type of Subject constraint, and the fact that there are no varieties that are more sensitive towards the Subject Adjacency constraint than for the Type of Subject constraint, can point to the hypothesis that the constraints of the NSR form a subset relation. The varieties that only have the Type of Subject constraint form the superset of the varieties that have both constraints. This predicts that sentences with verbal –s in a third person plural context will be more acceptable if the subject is nominal, rather than pronominal. It is also predicted that non-adjacency of subject and verb will be more acceptable than adjacency. Given that the Type of Subject constraint is more widely distributed than the Subject Adjacency, it is predicted that a nominal subject will overrule non-adjacency. This leads to the following predicted ranking for the base items.

1. Sentences with a nominal, not adjacent subject.
2. Sentences with a nominal, adjacent subject.
3. Sentences with a pronominal, not adjacent subject.
4. Sentences with a pronominal, adjacent subject.

3.1 participants

The questionnaire was answered by 23 native speakers of Standard English and 46 native speakers of Dutch, which adds up to a total of 69 responses. Four of these responses are excluded, because the participants either originated from or were currently residential in an area in which the NSR is active. This included three native speakers of English and one Dutch speaker of English. The distribution of the questionnaire through social media led to a wide variety of participants. The age ranged from 16 till 27 in the group of Dutch speakers of English and from 16 till 57 in the group of English native speakers. Overall 46 participants were female, 17 males, and 6 other or unspecified. The Dutch speakers originated from all throughout the Netherlands and one participant from Belgium. The English speakers reside across the globe, from the UK and the USA, as well as Canada, New Zealand, Australia and South Africa. The only criteria for the group of English native speakers was that they were native speakers of English, and the group of Dutch speakers were required to be native speakers of Dutch with at least a B2 level of proficiency in English. Five participants were excluded, because they had not understood the concept of the test format, making their results unreliable. All in all, this leaves 20 native speakers of English and 43 advanced Dutch learners of English, whose data are taken into consideration in this research.

3.2 Procedure

The questionnaire was made via Google forms and the link was shared in the private Facebook group of the study English Language and Culture of the Radboud University in Nijmegen, as well as on a personal Facebook page and personal blog on Tumblr. The link to the questionnaire was accompanied by a request to share the questionnaire with any native speakers of English, as this group of participants would be the hardest to find for a student based in the Netherlands.

3.3 Materials

The questionnaire started with five general questions about the L1, social background and location, in order to make sure the participants did not originate from or live in an area in which the NSR is active. These general questions were followed by three example questions to familiarise the participants with the format of the actual test. The actual test consisted of 21 items, each consisting of 4 sentences, that had to be ranked on acceptability from 1 to 4, in which 1 is the most acceptable, and 4 the least acceptable. These 21 items were presented in randomised order, and so were the sentences within the items. There are three variables in the

experiment, namely the adjacency, subject type and item type. Within the variable item type, there are three values, namely base items, as in (8), inverted items, as in (9), and coordinated items, as in (10).

(8)
a. My brothers usually goes to the market on Tuesday.
b. Usually my brothers goes to the market on Tuesday.
c. They usually goes to the market on Tuesday.
d. Usually they goes to the market on Tuesday.

(9)
a. Are the teachers on strike again?
b. Are they on strike again?
c. Is the teachers on strike again?
d. Is they on strike again?

(10)
a. They sing and dances all night long.
b. They sing and dance all night long.
c. They sings and dances all night long.
d. They sings and dance all night long.

The items with base sentences were essential, as they provided all the basic information on the acceptability of NSR sentences with or without the Subject Adjacency constraint and the Type of Subject constraint. Each item consisted of a sentence in which the subject was nominal and adjacent to the verb, a sentence in which the subject was nominal and not adjacent, a sentence in which the subject was pronominal and adjacent to the verb, and a sentence in which the subject was pronominal and not adjacent, as in (8). There were also three control items for these sentences to ensure the participants did not base their acceptability judgement on the location of the adverb at sentence initial position, which makes 9 base items in total. The control items differ from the regular base items in the sentences in which the subject and the verb are adjacent. In the regular items, the adverb separating the subject and verb in the non-adjacent sentences was moved to the front of the sentence in the adjacent sentences. In the control items, the adverbs were removed in the adjacent sentences.

This ensures that the average acceptability ranking is not influenced by the sentence-initial position of the adverb. It is possible, but not common to start an English sentence with an adverb. For this reason, the regular adjacent sentences could be ranked lower by the native speakers of English, not because of the adjacency factor, but because the adverb would be sentence initial. By deleting the adverb in the control items, instead of moving it, this factor is removed from the equation for the native speakers of English. The opposite problem arises for the Dutch L2 speakers of English. Dutch speakers of English often make the pragmatic mistake of beginning sentences with an adverb. This could influence the results, because the Dutch speakers of English could then rank the adjacent sentences in the regular items higher, because the adverb in sentence initial position reminds them of the Dutch constructions. The control items correct this common mistake by deleting the adverb in the adjacent sentences, instead of moving it. In this case, the Dutch speakers of English too will judge the sentences on the basis of adjacency rather than whether the adverb is in subject initial position or not.

The items with inverted sentences are included, to see whether the sensitivity for the constraints changes for the L1 and L2 groups if the subject and verb are inverted. Inversion does not alter the effects of the constraints in the NSR dialects. Adjacency is not tested in the inversion items, because even in Standard English the verb preferably sits adjacent to the auxiliary or modal. It is therefore to be expected that V-Adv-SU orders are ruled out for this reason, and thus do not reveal anything interesting about the NSR pattern. The important factor within the items with inverted sentences is the difference between the nominal and pronominal subjects, and thus includes two filler sentences to keep the 1-4 ranking format consistent with the base sentences, as can be seen in (9). The important inverted sentences are the ones in which the effect of the NSR is visible, namely by the third person plural –s, while the filler items use the Standard English third person plural forms. Three of the items used the verb ‘be’ and the other three used the verb ‘do’, making in total 6 items. Three of these 6 items contained a nominal subject, and the other three contained a pronominal subject.

The coordinated sentences are included to have sentences in which adjacency is not ruined by an adverb, but rather by another verb and a coordinator. The important factor within the items with coordinated sentences is the location of the verbal –s within the coordinated verb phrase, and these items include one filler sentence to keep the 1-4 ranking format consistent. This can be seen in (10). Three of the six items with coordination sentences contained a nominal subject, the other three a pronominal subject. These sentences provide extra information on the sensitivity towards the Subject Adjacency constraint.

4 Results

The acceptability rankings provided by the 20 native speakers of English and the 43 advanced Dutch learners of English resulted in an average acceptability ranking score for each of the three item types per participant. These acceptability ranking scores were then combined as a group into the average acceptability ranking for the two groups per item type. The two groups were compared with a two-way ANOVA. The results of the base items will be discussed first, followed by the inversion items and lastly the coordination items.

4.1 Base items

Figure 2 shows the average results of the base items for both the native speakers of English and the advanced Dutch learners of English. The first pair of bars stands for the sentence type that follows both the Type of Subject constraint and the Subject Adjacency constraint, which means that the subject is nominal and not adjacent to the verb. The second pair of bars stands for the sentence type that follows the Type of Subject constraint, but does not follow the Subject Adjacency constraint, which means that the subject is nominal and adjacent to the verb. The third pair of bars stands for the sentence type that does not follow the Type of Subject constraint, but does follow the Subject Adjacency constraint, which means that the subject is pronominal and not adjacent to the verb. The last pair of bars stands for the sentence type that does not follow the Type of Subject Constraint, nor the Subject Adjacency constraint. Example (11) shows the example sentences from (8), including the current abbreviations.

(11)

a. My brothers usually goes to the market on Tuesday. (TS+/SA+)

b. Usually my brothers goes to the market on Tuesday. (TS+/SA-)

c. They usually goes to the market on Tuesday. (TS-/SA+)

d. Usually they goes to the market on Tuesday. (TS-/SA-)

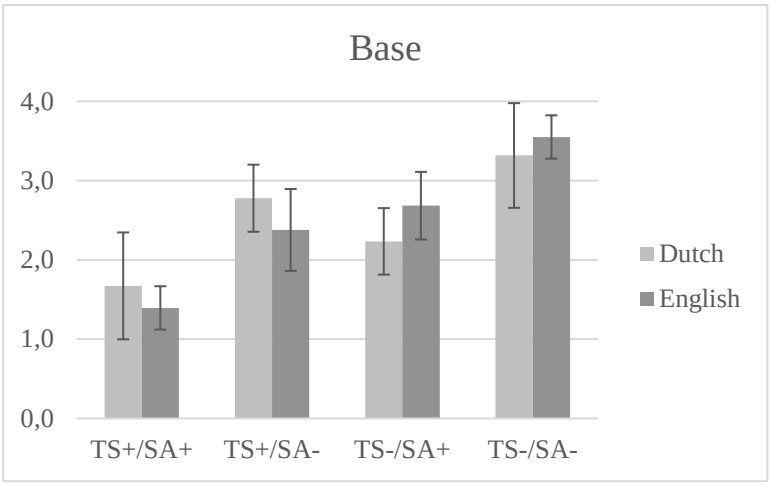


Figure 2: Base items. This figure shows the average acceptability judgement ranking for base type items for the native speakers of English and the Dutch speakers of English.

The native speakers of English ranked the sentences on average in the order TS+/SA+: 1,39, TS+/SA-: 2,38, TS-/SA+: 2,68, TS-/SA-: 3,55. The differences between these rankings are all significant with LSD (Least Significant Difference) = 0,27 and P<0,001. TS+/SA- is significantly better than TS+/SA-, because 2,38-1,39>0,27. TS+/SA- is significantly better than TS-/SA+, because 2,68-2,38>0,27. TS-/SA+ is significantly better than TS-/SA-, because 3,55-2,68>0,27.

The advanced Dutch speakers of English ranked the sentences on average in the order TS+/SA+: 1,67, TS-/SA+: 2,23, TS+/SA-: 2,78, TS-/SA-: 3,32. The differences between these rankings are all significant. TS+/SA- is significantly better than TS-/SA+, because 2,23-1,67>0,27. TS-/SA+ is significantly better than TS+/SA-, because 2,78-2,23>0,27. TS-/SA- is significantly better than TS+/SA-, because 3,32-2,78>0,27.

The difference between the native speakers of English and the advanced Dutch learners of English is significant for all except for the TS-/SA- items. TS+/SA+ is significantly better for native speakers of English than for Dutch speakers of English, because 1,67-1,39>0,27. TS-/SA+ is significantly better for Dutch speakers of English than for native speakers of English, because 2,23-2,68>0,27. TS+/SA- is significantly better for native speakers of English than for Dutch speakers of English, because 2,78-2,38>0,27. TS-/SA- is not significantly different for native speakers of English than for Dutch speakers of English, because 3,55-3,32<0,27. These differences show that both groups are sensitive towards the Type of Subject constraint, as they rank TS+/SA+ higher than to the other sentence types and believe TS-/SA- to be the least acceptable. The groups significantly differ in the ranking of

TS+/SA- and TS-/SA+. The standard deviation of the Dutch speakers of English is 0,612 for the base items, while the standard deviation for the native speakers of English is 0,770. This shows that there are less individual differences between the native speakers of English than for the Dutch speakers of English.

Figure 3 shows the sensitivity towards the Type of Subject constraint in the base items for the Dutch speakers of English and the native speakers of English. The native speakers of English ranked the sentences that followed the Type of Subject constraint on average 1,89, and the sentences that did not follow it on average 3,12. The difference between these rankings is significant with LSD=0,28, because 3,12-1,89>0,28. The Dutch speakers of English ranked the sentences that followed the Type of Subject constraint on average 2,23, and the sentences that did not follow it on average 2,78. The difference between these values is significant, because 2,23-0,78>0,28.These significant differences mean that both L1 and L2 speakers of English have a sensitivity towards the Type of Subject constraint.

Figure 3: Sensitivity of the Type of Subject constraint in the base items. This figure shows that both groups significantly rank the sentences that follow the Type of Subject constraint higher than sentences that do not follow it. This means that both groups show sensitivity towards the Type of Subject constraint.

Figure 4 shows the sensitivity towards the Subject Adjacency constraint in the base items for the Dutch speakers of English and the native speakers of English. The native speakers of English ranked the sentences that followed the Subject Adjacency constraint on average 2,04, and the sentences that did not follow it on average 2,96. The difference between these rankings is significant with LSD=0,16, thus 2,96-2,04>0,16. The Dutch speakers of English ranked the sentences that followed the Subject Adjacency constraint on average 1,95, and the sentences that did not follow it on average 3,05. The difference between these values

is significant, because 3,05-1,95>0,16. These significant differences mean that both L1 and L2 speakers of English have a sensitivity towards the Subject Adjacency constraint.

Figure 4: Sensitivity of the Subject Adjacency constraint in the base items. This figure shows that both groups significantly rank the sentences that follow the Subject Adjacency constraint higher than sentences that do not follow it. This means that both groups show sensitivity towards the Subject Adjacency constraint.

4.2 Inversion items

Figure 5 shows the average results of the inversion type items of both the native speakers of English and the advanced Dutch learners of English. The first two pairs of bars represent the filler items, which means that the verbs do not receive -s, regardless of the subject type. The first and second sentence type would be seen as grammatical in Standard English. The third pair of bars stands for the sentence type that follows the Type of Subject constraint, which means that the subject is nominal, and the verb receives –s. The last pair of bars stands for the sentence type that does not follow the Type of Subject Constraint, which means that the subject is pronominal, and the verb receives –s. The third and fourth sentence type would not be seen as grammatical in Standard English, but are grammatical under the NSR. Example (12) shows the example sentences from (9), including the current abbreviations.

(12)

a. Are the teachers on strike again?	(TS+/V)
b. Are they on strike again?	(TS-/V)
c. Is the teachers on strike again?	(TS+/V-s)
d. Is they on strike again?	(TS-/V-s)

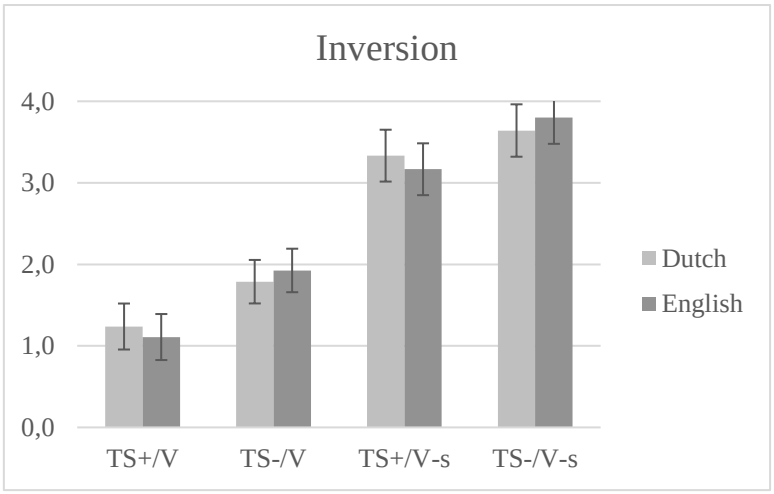


Figure 5: Inversion items. This figure shows the average acceptability judgement ranking for the inversion type items for the native speakers of English and the Dutch speakers of English.

The native speakers of English also ranked the sentences on average in the order TS+/V: 1,11, TS-/V: 1,93, TS+/V-s: 3,17, TS-/V-s: 3,80. The differences between these rankings are all significant with LSD=0,15 and P<0,002. The difference between TS+/V and TS-/V are significant, because 1,93-1,11>0,15. The difference between TS-/V and TS+/V-s is significant, because 3,17-1,93>0,15. The difference between TS+/V-s and TS-/V-s is significant, because 3,80-3,17>0,15.

The advanced Dutch speakers of English ranked the sentences on average in the order TS+/V: 1,24, TS-/V: 1,78, TS+/V-s: 3,33, TS-/V-s: 3,64. The differences between these rankings are all significant. The difference between TS+/V and TS-/V is significant, because 1,78-1,24>0,15. The difference between TS-/V and TS+/V-s is significant, because 3,33-1,78>0,15. The difference between TS+/V-s and TS-/V-s is significant, because 3,64-3,33>0,15.

The difference between the advanced Dutch learners of English and the native speakers of English is not significant for the first two sentence types, which was expected since they are both grammatical in Standard English. The difference between the two group scores for the TS+/V items is not significant, because 1,24-1,11<0,15. The difference between the two groups scores for the TS-/V items is also not significant, because 1,93-1,78<0,15. The difference between the two group scores for the TS+/V-s items is significant, because 3,33-3,17>0,15. The difference between the two group scores for the TS-/V-s items is significant, because 3,80-3,64>0,15. The difference between the advanced Dutch learners of English and

the native speakers of English is significant for the last two pairs of sentence types, showing that the native speakers of English were more consistent in showing sensitivity towards the contrast between TS+/V-s than TS-/V-s, as opposed to the Dutch learners of English. The standard deviation of the Dutch speakers of English is 1,012, while the standard deviation of the native speakers of English is 1,049. This shows that there is only a slight difference between the individual differences of the Dutch speakers of English and the native speakers of English, with the native speakers showing less individual differences than the Dutch speakers of English.

Figure 6 shows the sensitivity towards the Type of Subject constraint in the inversion items for the Dutch speakers of English and the native speakers of English. The native speakers of English also ranked the sentences that followed the Type of Subject constraint on average 2,00, and the sentences that did not follow it on average 3,00. The difference between these rankings is significant with LSD=0,10, thus 3,00-2,00>0,10. The Dutch speakers of English ranked the sentences that followed the Type of Subject constraint on average 2,00, and the sentences that did not follow it on average 3,00. The difference between these values is significant, because 3,00-2,00>0,10. These significant differences mean that both L1 and L2 speakers of English have a sensitivity towards the Type of Subject constraint.

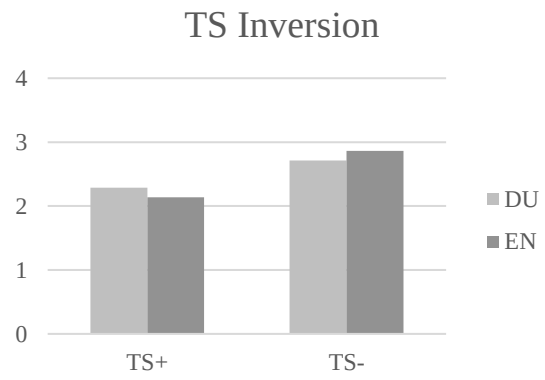


Figure 6: Sensitivity of the Type of Subject constraint in the base items. This figure shows that both groups significantly rank the sentences that follow the Type of Subject constraint higher than sentences that do not follow it. This means that both groups show sensitivity towards the Type of Subject constraint.

4.3 Coordination items

Figure 7 shows the average results of the coordination type items of both the native speakers of English and the advanced Dutch learners of English. The first pair of bars stands for the

sentence type in which neither of the verb forms in the coordination phrase receives –s. This sentence type would be considered grammatical in Standard English. The second pair of bars stands for the sentence type in which the first verb form of the coordination phrase does not receive –s, whereas the second verb form of the coordination phrase does. The third pair of bars stands for the sentence type in which both verb forms in the coordination phrase receive –s. The last pair of bars stands for the sentence type in which only the first verb form in the coordination phrase receives –s, and the second does not. The second, third, and fourth sentence type would not be seen as grammatical in Standard English. Only the second sentence type would be seen as grammatical under the NSR. Example (13) shows the example sentences from (10), including the current abbreviations.

(13)

a. They sing and dances all night long.	(V/V)
b. They sing and dance all night long.	(V/V-s)
c. They sings and dances all night long.	(V-s/V-s)
d. They sings and dance all night long.	(V-s/V)

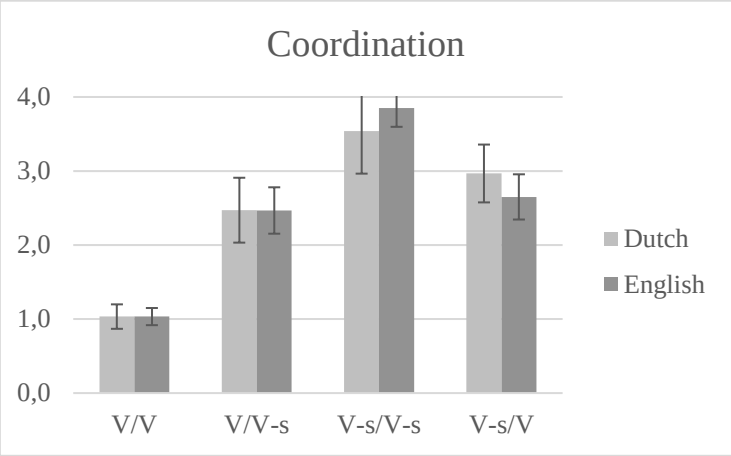


Figure 7: Coordination items. This figure shows the average acceptability judgement ranking for the coordination type items for the native speakers of English and the Dutch speakers of English.

The native speakers of English also ranked the sentences on average in the order V/V: 1,03, V/V-s: 2,47, V-s/V: 2,65, V-s/V-s: 3,85. The differences between these rankings are significant with LSD=0,20 and P<0,001, except for the difference between V/V-s and V-s/V. The difference between V/V and V/V-s is significant, because 2,47-,1,03>0,20. The

difference between V/V-s and V-s/V is not significant, because 2,65-2,47<0,20. The difference between V-s/V and V-s/V-s is significant, because 3,85-2,65>0,20.

The advanced Dutch speakers of English ranked the sentences on average in the order V/V: 1,03, V/V-s: 2,47, V-s/V: 2,97, V-s/V-s: 3,54. The differences between these rankings are all significant. The difference between V/V and V/V-s is significant, because 2,47-1,03>0,20. The difference between V/V-s and V-s/V is significant, because 2,97-2,47>0,20. The difference between V-s/V and V-s/V-s is significant, because 3,54-2,97>0,20.

The difference between the advanced Dutch learners of English and the native speakers of English is not significant for the first two sentence types, which is remarkable for the V/V-s sentence type, but not for the V/V sentence type. The difference between the two group scores for the V/V items is not significant, because 1,03-1,03<0,20. The difference between the two group scores for the V/V-s items is not significant, because 2,47-2,47<0,20. The difference between the two group scores for the V-s/V items is significant, because 2,97-2,65>0,20. The difference between the two groups scores for the V-s/V-s items is significant, because 3,85-3,54>0,20. The difference between the advanced Dutch learners of English and the native speakers of English is significant for the last two pairs of sentence types, showing that the native speakers of English were more consistent in their bigger sensitivity towards V-s/V over V-s/V-s than the Dutch learners of English. The standard deviation of the Dutch speakers of English is 0,928, while it is 1,000 for the native speakers of English. This shows that there is very little difference between the individual differences for the Dutch speakers of English and the native speakers of English, with the former group showing slightly more individual differences than the latter.

Figure 8 shows the sensitivity towards the Subject Adjacency constraint in the coordination items for the Dutch speakers of English and the native speakers of English. The native speakers of English ranked the sentences that followed the Subject Adjacency constraint on average 1,75, and the sentences that did not follow it on average 3,25. The difference between these rankings is significant with LSD=0,18, thus 3,25-1,75>0,18. The Dutch speakers of English ranked the sentences that followed the Subject Adjacency constraint on average 1,75, and the sentences that did not follow it on average 3,25. The difference between these values is significant, because 3,25-1,75>0,18. These significant differences mean that both L1 and L2 speakers of English have a sensitivity towards the Subject Adjacency constraint.

Figure 8: Sensitivity of the Subject Adjacency constraint in the coordination items. This figure shows that both groups significantly rank the sentences that follow the Subject Adjacency constraint higher than sentences that do not follow it. This means that both groups show sensitivity towards the Subject Adjacency constraint.

5 Discussion

This research attempts to find out whether the pattern of the Northern Subject Rule is derived from rules that are learned through the input, or whether it might be related to grammatical properties the postulation of which does not exclusively rely on the input data. In order to do so, an experiment was conducted that provided data about the sensitivity towards the constraints of the NSR by people who do not have them in their input. The main result is that both groups show sensitivities to both constraints.

The expected order for the base items, based on the analysis by De Haas and Van Kemenade (2015), is that sentences with a nominal subject will be ranked higher than sentences with a pronominal subject, and that sentences with a non-adjacent subject will be ranked higher than sentences with an adjacent subject. The native speakers of English did indeed follow this order, with TS+/SA+ > TS+/SA- > TS-/SA+ > TS-/SA-. The speakers of whom English is a second language, from here on the Dutch speakers of English, did not follow the expected order. Their ranking was TS+/SA+ > TS-/SA+ > TS+/SA- > TS-/SA-. They differ from the expected order on the TS-/SA+ and TS+/SA-, but are clear in which sentences type is best, namely TS+/SA+, and which sentence type is the least acceptable, namely TS-/SA-. The data show that the both groups of speakers of English are sensitive towards both the constraints, although the L2 speakers of English did not find the Type of Subject constraint more important than the Subject Adjacency constraint, while the native speakers did.

The expected order for the inversion items is that the sentences that do not have the verbal -s will cluster at the top of the ranking, and that the sentences that follow the Type of Subject constraint will be ranked higher than the sentences that do not. Both the L1 and L2 speakers of English follow this expected order, with TS+/V > TS-/V > TS+/V-s > TS-/V-s. These data show that both groups have a sensitivity towards the Type of Subject constraint, as they both ranked the sentences that follow the Type of Subject constraint higher than those that violate it.

The expected order for the coordination items is that the sentences with no verbal -s will rank highest, followed by the sentences with verbal -s that follow the Subject Adjacency constraint, followed by the two sentence types that violate the Subject Adjacency constraint. Both the L1 and the L2 speakers of English follow this expected order, with V/V > V/V-s > V-s/V > V-s/V-s. These data show that both groups have a sensitivity towards the Subject Adjacency constraint, as they both ranked the sentences that follow the Subject Adjacency constraint higher than those that violate it.

There are four possible outcomes of this experiment that each has a different conclusion about whether the pattern of the NSR arises through the input, or whether it is governed by more general properties. If the L1 speakers show a sensitivity towards the constraints of the NSR, while the L2 speakers do not, it could mean two things. Either a theory of geographic proximity, which could mean that the L1 speakers show sensitivity because they have been in contact with speakers of an NSR dialect. In this scenario, it is most likely that the pattern of the NSR is learned through the input, and there is no evidence for the presence of more general grammatical properties with regard to the NSR. The other option is that the L1 speakers have access to the principles beyond the input that are governing the NSR, but the L2 has not. This second option is comparable to the idea that Universal Grammar is only available in the process of first language acquisition, but not in the process of acquiring a second language (Gass et al., 2013). If the L2 speakers show a sensitivity, while the L1 speakers do not, it could mean that the ability to access the general properties is inherent in some way to the L2 acquisition process. This result is least expected and it is beyond the scope of this research to try and determine in which way the L2 acquisition process and the general principles could be linked. If neither group of speakers show a sensitivity towards the constraints of the NSR, it could mean that the more general grammatical properties of the NSR cannot be found through the intuitions of speakers of non-NSR dialects.

However, the results from all the item types and both groups combined show that both the L1 and the L2 speakers of English have a sensitivity towards both of the constraints of the NSR. This is the result that speaks most in favour of the theory in which the sensitivities to the relevant contrasts must be due to grammatical properties that play a role regardless of the presence or absence of the NSR pattern in the variety of the speaker. It is not very likely that both the L1 speakers and L2 speakers of English gained sensitivity towards the pattern of the NSR through input alone. There are several options that could explain why also L2 speakers show these sensitivities. One could assume that the relevant grammatical properties are available to L1 and L2 speakers alike, because they remain accessible throughout the lifespan. One concrete interpretation of this would be to say that Universal Grammar plays a role in both the L1 and L2 processes. Alternatively, one could hypothesise that UG is not available after puberty anymore, but that some grammatical properties can enter the L2 via transfer from the L1. It should be noted, however, that this research does not deal with properties that the Dutch speakers could have acquired on the basis of the Dutch input. After all, Dutch lacks the NSR too, just like Standard English. What must be transferrable under such an analysis,

then, must be quite abstract properties. It is not entirely clear if this is compatible with the notion of transfer as it is usually employed in the L2 literature. In fact, if UG is no longer available, but that even abstract properties that are not obviously acquired on the basis of the input can be transferred, then it becomes hard to see what type of grammatical knowledge that plays a role in the L1 cannot be transferred. This would consequently make the 'UG no, transfer yet' position in the L2 debate rather vacuous. It is therefore concluded here that the relevant properties responsible for the sensitivities shown by both groups are available for the L1 and L2 speakers alike, and that the availability of them for the L2 group is not a consequence of transfer.

It has been established in what degree the availability of grammatical properties that are relevant for the NSR pattern irrespective of whether the NSR pattern is part of a certain variety. Now it becomes relevant to start thinking about the nature and the format of these properties. A first place to look would be syntactic analyses of the NSR available in the literature to see if they offer concrete properties. It is important to note that these properties should not be structure-specific, because even speakers of a non-NSR variety have access to them. This would be the natural next step of this research approach. However, it is beyond the scope of this research to attempt to gain more information about the nature and format of the properties, for example whether they are more linguistic as in UG or more like a cognitive system. What can be concluded from these results is that a theory of geographical proximity can be ruled out, and that it can be seen as evidence that the pattern of the Northern Subject Rule is governed by general grammatical properties of some form.

6 Conclusion

The Northern Subject Rule is a feature of dialects in the North of the British Isles, as well as some other dialects in the English speaking world, for example Appalachian English (Tortora & Den Dikken, 2010). The rule states that the verb receives –s in third person plural contexts, and it is governed by two constraints. The first constraint is the Type of Subject constraint, which states that the verb does not receive –s if the subject is pronominal. The second constraint is the Subject Adjacency constraint, which states that the verb receives –s if the subject and the verb are not adjacent. Different varieties of the NSR show a subset relation between the Type of Subject constraint and the Subject Adjacency constraint, in which varieties with both constraints form the superset of the varieties with only the Type of Subject constraint.

This research set out to find whether the rules that govern the Northern Subject Rule could be principles that do not depend on the input. Following the analysis by Barbiers et al. about the possibility of such principles, it would be the opposite of grammatical rules learned through the input. Barbiers et al. (2015) found that the rules that govern the variation in word order for verbal clusters in Dutch are not learned through the input, but are part of a bigger, underlying structure. They found this by looking at the acceptability ratings for word orders that were not part of a speaker's own dialect, the "non-native" (Barbiers et al., p. 32) orders. These ratings were relatively universal for all speakers, originating from different dialects, instead of the dialects that these participants spoke.

The same experiment of "non-native" (Barbiers et al., p. 32) rankings was conducted on the NSR, to see whether these rules are learned through the input, or more general grammatical properties. If these rules are learned through the input, then speakers of a non-NSR dialect would not follow the same pattern as speakers of an NSR dialect would. If, however, the rankings of speakers of Standard English are relatively similar to those of a speaker of an NSR dialect, it would be more likely that the pattern of the NSR derives from more general grammatical properties that are universal and not learned through the input.

These properties could be of two natures, either something linguistic, like the Universal Grammar (Gass et al., 2013), or they could be something cognitive. It is beyond the scope of this research to determine what the exact nature or form of these properties are. The only aim was to see whether evidence could be found for the possibility that the pattern of the NSR is related to more general grammatical principles, the construction of which does not depend on the input received.

This research did not only include the rankings of native speakers of Standard English, but also speakers of English as a second language, whose L1 is Dutch. This was in order to determine in which way the general properties could be related to the process of second language acquisition. This might be useful in the ongoing debate about UG and transfer in the L2 (Gass et al., 2013). A related effect of the inclusion of L2 speakers of English is to rule out the effect of geographical proximity, which would mean that speakers of Standard English had similar rankings to the patterns of the NSR because of contact with speakers of NSR.

The data from the experiment show that both the L1 and L2 speakers have the same acceptability rankings of sentences that follow the NSR as was expected on previous research on the NSR (De Haas & Van Kemenade, 2015; McCafferty, 2003, 2004; Tortora & Den Dikken, 2010). Previous research showed that both in the historical varieties and the current varieties of the NSR, the Type of Subject constraint is more robust than the Subject Adjacency constraint. This led to the expected order for this research in which sentences that followed the constraints are ranked higher than sentences than violated them, and sentences following the Type of Subject constraint are ranked higher than sentences that follow the Subject Adjacency constraint. Both groups indeed follow this expected order. This means that it is possible that the pattern of the NSR is related to more general grammatical principles, the construction of which does not depend on the input received.

All in all, this research has shown that the pattern of the NSR could be derived from principles that go beyond the input, rather than rules learned through the input.

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Appendix I: The questionnaire

Section 1: General questions

Native language: English, Dutch, other

Native language of parents (not obligatory): …

Place of Birth: ….

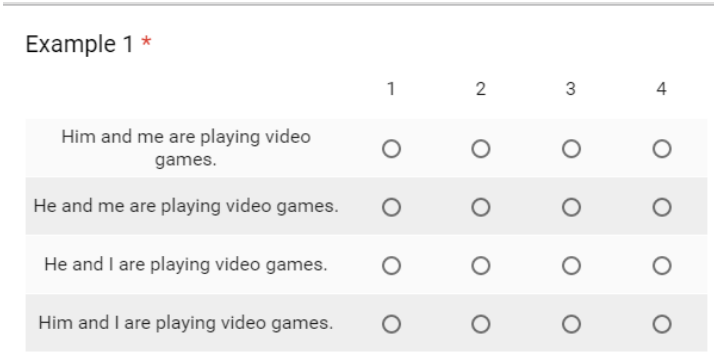
Current residence: ….

Age (not obligatory): …

Gender (not obligatory): Male, Female, Other

Section 2: Example questions

Imagine that you heard the following sentences in a conversation with a native speaker of English. Would you accept these sentences as correct? Please rank the sentences in order of acceptability, 1 being the most acceptable, 4 being the least acceptable. You have to give every sentence a place in the ranking and there cannot be shared places in the ranking.


Example 1 *

	1	2	3	4
Him and me are playing video games.	○	○	○	○
He and me are playing video games.	○	○	○	○
He and I are playing video games.	○	○	○	○
Him and I are playing video games.	○	○	○	○

Example 1:

Him and me are playing video games.

He and me are playing video games.

He and I are playing video games.

Him and I are playing video games.

Example 2:

The children run and laughs.

The children runs and laughs.

The children run and laugh.

The children runs and laugh.

Example 3:

We didn't dare to answer him.
We dared not answer him.
We didn't dare answer him.
We did not dare answer him.

Section 3: Actual test

Imagine that you heard the following sentences in a conversation with a native speaker of English. Would you accept these sentences as correct? Please rank the sentences in order of acceptability, 1 being the most acceptable, 4 being the least acceptable. You have to give every sentence a place in the ranking and there cannot be shared places in the ranking.

1.

Probably the children likes candy.
The children probably likes candy.
Probably they likes candy.
They probably likes candy.

2.

My brothers usually goes to the market on Tuesday.
Usually my brothers goes to the market on Tuesday.
They usually goes to the market on Tuesday.
Usually they goes to the market on Tuesday.

3.

They sing and dances all night long.
They sing and dance all night long.
They sings and dances all night long.
They sings and dance all night long.

4.

Are the teachers on strike again?
Are they on strike again?
Is the teachers on strike again?
Is they on strike again?

5.

They usually goes to the market on Tuesday.
My brothers usually goes to the market on Tuesday.
Usually my brothers goes to the market on Tuesday.
Usually they goes to the market on Tuesday.

6.

The boys shout and fight every minute of the day.
The boys shout and fights every minute of the day.
The boys shouts and fights every minute of the day.
The boys shouts and fight every minute of the day.

7.

Is the two windows broken?
Is they broken?
Are the two windows broken?
Are they broken?

8.

Do they have French class tomorrow?
Does they have French class tomorrow?
Does the children have French class tomorrow?
Do the children have French class tomorrow?

9.

Probably the birds flies north.
Probably they flies north.
They probably flies north.
The birds probably flies north.

10.

They eat and drink five times a day.
They eats and drink five times a day.

They eats and drinks five times a day.
They eat and drinks five times a day.

11.

The girls washes and brush their hair every morning.
The girls washes and brushes their hair every morning.
The girls wash and brushes their hair every morning.
The girls wash and brush their hair every morning.

12.

The volunteers bakes cakes on Monday.
They usually bakes cakes on Monday.
They bakes cakes on Monday.
The volunteers usually bakes cakes on Monday.

13.

Do they eat chocolate?
Does they eat chocolate?
Do dogs eat chocolate?
Does dogs eat chocolate?

14.

Probably they sleeps indoors.
The cats probably sleeps indoors.
Probably the cats sleeps indoors.
They probably sleeps indoors.

15.

Is your neighbours home already?
Are your neighbours home already?
Is they home already?
Are they home already?

16.

Those students chatter and laugh in every class.
Those students chatters and laugh in every class.
Those students chatters and laughs in every class.
Those students chatter and laughs in every class.

17.

The dogs loves treats.
The dogs really loves treats.
They really loves treats.
They loves treats.

18.

Does they have enough sunlight?
Does the plants have enough sunlight?
Do they have enough sunlight?
Do the plants have enough sunlight?

19.

The children usually buys flowers for grandma every Wednesday.
They usually buys flowers for grandma every Wednesday.
Usually they buys flowers for grandma every Wednesday.
Usually the children buys flowers for grandma every Wednesday.

20.

They sorts and packs the medication.
They sort and packs the medication.
They sorts and pack the medication.
They sort and pack the medication.

21.

The farmers checks the crops right after dawn.
They checks the crops right after dawn.
The farmers probably checks the crops right after dawn.
They probably checks the crops right after dawn.