Adjectival Ordering in English and Dutch in the Light of Recent Theories of Noun Phrases

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Abstract

This thesis reports about two studies on what the preferred order of stacked adjectives is in noun phrases, according to native speakers of English and Dutch. Recent theoretical research on this topic (Scott 2002, Truswell 2004, 2009, Szendrői 2010, 2013) use this domain of investigation as a basis for theoretical claims concerning the nature of adjectives (being specifiers vs. adjuncts) and NP-internal displacement, but they seriously lack when it comes to reporting about native speaker consultation about the data. This thesis aims to fill this gap by presenting the results of two online questionnaire studies of adjectival ordering, specifically testing the proposals above against native speaker judgements in two contexts: noun phrases with neutral orders and those with contrastive contexts. The results predominantly validate the findings of Truswell (2004, 2009) as opposed to those of Scott (2002) when it comes to neutral orders, and the claims of Szendrői (2010, 2013) as opposed to Truswell (2005) when it comes to contrastive orders. This in turn suggests that (i) adjectives should not be thought of as specifiers but rather as adjuncts, and (ii) some types of A-bar displacement in noun phrases are optional.
1. Introduction

This study focuses on the order of stacked adjectives in English and Dutch, as within the research on nominals this is a very poorly understood topic. The aspect that is lacking in existing research on nominals is *word order concerning adjectival modification* and the judgements of native speakers concerning the possible orders. While the order of determiners with respect to the noun is highly rigid and easily observable, ordering restrictions between adjectives and the noun and between so-called 'stacked' adjectives are more variable. Even though the issue of word order restrictions between adjectives and the noun is a basic one in determining the syntax of noun phrases, extant works on this topic — Scott (2002), Truswell (2004, 2005, 2009), Szendrői (2010, 2013) — do not base their claims on extended native speaker judgements. A first prominent account, Scott (2002), for example, does not report about native speakers at all. Scott is a native speaker himself, so there is a fair chance he used his own judgement as a native speaker, but he did not use native speaker consultation in his methodology. Truswell (2004, 2005 and 2009) does not elaborate on using native speakers to judge how acceptable certain orders are, either. The author claims to have discussed some issues with fellow native speakers, but does not actually provide details on how he did this. Last but not least, Szendrői (2010, 2013) does not report anything about her collection of data, either. It is therefore fair to say that appropriate collection of native speaker judgements is entirely lacking in research on stacked adjectives. For this reason, the thesis is dedicated to finding out about native speaker judgements in this area.

This thesis will investigate adjectival order in noun phrases in two domains: noun phrases with neutral orders and those with contrastive orders, as to find out what kind of speaker preference there is when it comes to the order of stacked adjectives. The precise goal is to check the results of the above mentioned previous studies, specifically Scott (2002), Truswell (2004, 2005, 2009), and Szendrői (2010, 2013) via two online questionnaires (designed for neutral and contrastive noun phrases) with native speakers as respondents. The results of the two questionnaires will be described for each study, including the theoretical claims proposed in them.

This thesis consists of the following parts. In section 2, the theoretical background is introduced both for neutral and contrastive NPs. Section 3 gives details of the data collection about neutral orders (section 3.1), followed by the results of the judgement task (section 3.2), and the discussion of the results (section 3.3). Section 4
presents the data collected about contrastive orders (sections 4.1. and 4.2) using the same methodology as in section 3, and shows how these reflect on the findings of the previous literature. Section 5 sums up and lists the outcomes of this research for the study of noun phrases and further consequences for syntactic theory. The thesis will end with an appendix with links to the questionnaires and graphs about the domain of givenness.
2. Theoretical background

2.1 Basics about noun phrases and adjectives

Since the focus of this study is on stacked *adjectives*, this section starts by providing some background information on adjectives in general. Adjectives are usually characterized in terms of their syntactic behaviour as reflected in their positions in sentences. Adjectives can occupy two positions cross-linguistically: they can occur in attributive position before nouns — see (1) and (2) —, or in predicative position following intensive verbs — cf. (3) and (4) (Ali, 1985; Huddleston & Pullum, 2002 among others).

(1) the handsome prince.
(2) the young lion.
(3) The prince seems handsome.
(4) The lion appeared young.

The focus in this thesis will be adjectives in attributive position, in which adjectives modify nouns, cases such as (1), where *handsome* modifies *prince* and (2), where *young* modifies *tiger*. Clearly, in nominals with only one adjective, the position of the adjective is well known to be fixed: it always follows the determiner and precedes the noun (Quirk et al, 1972; Abney, 1987; Huddleston & Pullum, 2002; Payne et al, 2010). However, in nominals with more than one adjective the order of adjectives is less well known and straightforward: the literature on this topic is quite divided on what counts as an acceptable order. The next sections introduce what can be found on this topic in previous works. Section 2.2 is dedicated to adjectival orders in neutral noun phrases, and section 2.3 introduces emphatic noun phrases in which one of the adjectives is contrastive.

2.2 Adjectives in noun phrases with neutral orders

In a noun phrase with a *neutral order*, none of the adjectives are emphasised and there is no contrast expressed on any element, noun or adjective. Sentences such as (5) show a *neutral order*, as there is no emphasis on any of the three adjectives. Compare this to (6) — which can be understood as a response to (5) — in which the colour adjective is
emphasised. The orders found in noun phrases such as in (6) will be termed contrastive orders.

(5) I liked that blue, satin, British shirt you wore yesterday.

(6) Do you mean my RED, satin, British shirt? I don’t have a blue one.

The few linguists and scholars who discussed the grammatical order of stacked adjectives in earlier research seem to be in disagreement. The two most often cited studies, Scott (2002) and Truswell (2004, 2009), have different views on the neutral order in which adjectives should be presented. As the next sections will show, Scott (2002) argues for a fixed universal hierarchy of clausal functional projections, which in turn predicts a strict ordering between distinct types of adjectives. Truswell (2004, 2009), on the other hand, states that adjectives can be divided into groups and that the order of adjectives can vary freely within a single group. The position in which the adjectives are placed in turn reflects on the structure of the noun phrase (McKinney-Bock, 2010a). This means that the ordering variation among adjectives entails different structural configurations, as will be shown below.

2.2.1 The order of adjectives in neutral NPs according to Scott (2002)

Scott described his notion of stacked adjectives in his paper “Stacked Adjectival Modification and the Structures of Nominal Phrases” basing himself on previous research reported in Cinque (1999). In that work, Cinque aims to justify the hypothesis that adverb phrases (AdvPs) are unique, overt manifestations of the specifiers of distinct maximal projections in the clause. In addition, he argues for a fixed universal hierarchy of clausal functional projections (henceforth FPs). Adapting Cinque’s insight, that adverbs are specifiers of FPs that reflect distinct semantics classes, Scott (2002) extents the same model for the realm of adjectival modification. He argues that it is theoretically desirable (forced by consideration such as Uniformity) to treat adjectives, the nominal counterparts of adverbs, as specifiers of FPs that reflect the semantic classes by which they pattern in linear ordering.

As for the order of adjectives, Scott argues that it corresponds to the adjectival ordering scheme (henceforth AOS) that is introduced in Kingsbury and Wellman (1986) and can be found in Figure 1.
Scott claims that, in case the order of adjectives does not comply with the AOS presented by Kingsbury and Wellman, it is considered ungrammatical by native speakers (see also Teodorescu (2006) for a comparable observation). The following examples illustrate this phenomenon as (7a) and (8a) are both considered to be grammatical since they comply with the AOS, while (7b) and (8b) are considered to be ungrammatical because they do not.

(7)  
    a.  a big, old, black, English dog  
    b.  *an English, old, black, big dog

(8)  
    a.  a small, round table  
    b.  *a round, small table

The existence of a strict ordering restriction between adjectives goes beyond a descriptive observation as it has theoretical relevance as well: as Scott argues, the AOS provides evidence that adjectives are not adjuncts in the syntax. He supports this claim by describing one of the characteristics of adjuncts, namely that they can be ordered freely as shown in (9a) and (9b). Since adjectives cannot be ordered freely, Scott concludes that adjectives, therefore, cannot be adjuncts.

(9)  
    a.  a book about physics in German  
    b.  a book in German about physics

(10)  
    a.  the big, red car  
    b.  *the red, big car

In examples (9a) and (9b) the adjuncts can be base-generated in different positions or orders without a change in meaning. The same freedom in ordering is not found with adjectives as is illustrated in (10a) and (10b). Example (10a) is considered to be grammatical since the adjectives are in the order which is consistent with the order
suggested in the AOS, whereas (10b) is considered to be ungrammatical since the order of the AOS is not maintained. It is important to note that Scott only focuses on the neutral noun phrase in which neither the noun nor any adjectives should be interpreted to have a contrastive focus reading. If stress is placed on any of the adjectives, other ordering rules apply (e.g. Truswell, 2005; Szendrői, 2010), see section 2.3.

Since Scott argues that adjectives are not adjuncts, he claims that they do not appear in adjoined position (adjointed to X’ or XP) in the syntactical representation either, but rather in specifier positions of functional projections. These functional projections have a certain semantic content pertaining to the type of the adjectives that occupies them. Ordering restrictions between the adjectives arise due to selectional restrictions between the functional heads: in other words, the order of adjectives is very strict because each functional head has selectional restrictions and can thus only combine with one type of complement. For illustration, consider the syntactic representation in Figure 2.

Figure 2: The syntactic representation of “the big, red, English teacup” according to Scott (2002)

![Syntactic Representation](image)

2.2.2 The order of adjectives in neutral NPs according to Truswell (2004, 2009)

Truswell (2004, 2009) puts forward a different approach to the basic structure of adjectival modification, based on extensive data collection on stacked adjective orders via a corpus study carried out through Google’s search function. This method was motivated by the author’s observation that too few cases of stacked adjectives could be
found in the British National Corpus. As he was able to find more data via Google, he used that instead.

In his paper, Truswell looked at different kinds of adjectives. He discusses modal, subsective, and intersective adjectives, of which subsective and intersective adjectives are the more frequently used ones and also the ones that do not take scope with respect to other adjectives. Truswell uses four types of adjectives for intersective adjectives in his paper, namely; material, nationality, shape, and colour adjectives. These adjectives are called intersective because of their intersective semantics (Griffiths, 2006; Truswell, 2004, 2009 among others). E.g. a red glass denotes something that is red and is a glass. Treating these latter nominals as predicates and representing them in set theoretical notation as denoting sets, the intersection of the two sets correspond to things that are red glasses, c.f. Figure 3.

*Figure 3 Set theoretical representation of intersective adjectives*

![Set theoretical representation of intersective adjectives](image)

Another type of adjective that Truswell introduces is the subsective adjective, such as adjectives denoting size and quality. Size is a relative notion that can only be understood in relation with the denotation of the modified noun. For example, a big mouse is still a lot smaller than a big elephant. In other words, one can't directly compare the size of an elephant with the size of a mouse. The same is true for the category age-related quality since an old computer is very new compared to an old piece of antique. These kinds of size and quality adjectives clearly do not have an intersective meaning and thus they are not intersective adjectives.

Truswell states that subsective adjectives precede intersective adjectives in a noun phrase (Truswell, 2004, 2009; Svenonius, 2008; McKinney-Bock, 2010 b), but adjectives
belonging to the same group (either subsective or intersective) can be ordered freely. This is a very different approach from Scott (2002) who claims adjectives should be placed in a set order, regardless of their semantic type as subsective or intersective (see figure 1 and 2). According to Truswell the examples in (11) would all be considered correct because in (11a) and (11b) the subsective adjective precedes the intersective adjectives: subsective size precedes intersective colour, material, and nationality. In (11c) all three the adjectives are intersective and therefore they can be ordered freely according to Truswell. Scott, however, would only consider (11a) to be correct since it is the only order which complies with the AOS, which takes the order to be: size < colour < nationality < material. While Truswell would perceive all the orders to be grammatical, Scott would only perceive (11a) as grammatical whereas (11b) and (11c) would be ungrammatical according to him.

(11)  
a. a big, black, woollen scarf  
b. a small, English, pink teacup  
c. a woollen, black, Italian jumper

Unlike Scott (2002), Truswell (2004, 2009) is not specifically interested in a particular order but rather in the basic structure of adjectival modification. He does not take a stand as to whether adjectives are adjuncts (something Scott (2002) argues against) or (multiple) specifiers of a given projection in general, but he notes that his results argue against taking adjectives to be specifiers of dedicated functional projections each with a distinct semantic content. Truswell’s findings are summarised in (12). This structure illustrates that, according to Truswell, a correct order will consist of a determiner preceding subsective adjectives (if any), followed by intersective adjectives (if any), then followed by a noun. The asterisks (*) in the formula show that adjectives in each class can be iterated. A noun phrase could consist of two subsective adjectives and one intersective adjective (e.g. the big, new, black phone), or three intersective adjectives (e.g. the yellow, Turkish, woollen doll), etc. To ensure that a different formula for every possible combination of adjectives is not necessary, the asterisk represents all adjectives of that type in a sentence.

(12)  [DP D0 [XP AdjP subsective *X0 [NP AdjP intersective *N0]]]
2.2.3 Comparing Scott (2002) and Truswell (2004, 2009)

There are several aspects of adjectival ordering on which Scott (2002) and Truswell (2004, 2009) disagree. According to Scott, adjectives are specifiers of functional projections. Truswell, on the other hand, states that adjectives can be either specifiers of functional projections (allowing multiple specifiers in the same phrase) or adjuncts. Scott clearly states that adjectives cannot be adjuncts since they cannot be ordered around freely. He continues that the functional projections should always come in a strict order, the AOS. Deviating from this order results in ungrammaticality. Truswell argues that adjectives which belong to the same group (either subsective or intersective) can, in fact, alternate.

2.2.4 Universality of adjectival orders

In the introduction of his paper, Scott (2002) expresses that the fixed order of adjectives is considered part of Universal Grammar and therefore universally applicable to the order of stacked adjectives in other languages besides English. Truswell (2009) also refers to the fact that the order which he introduces in his paper is cross-linguistically applicable.

2.2.5 Research question concerning neutral orders (Research question I)

As the discussion above shows, there is considerable disagreement in the available literature when it comes to the syntactic position of stacked adjectives and the order in which they must appear. Scott (2002) and Truswell (2004, 2009) subscribe to distinct adjectival orders, and as a result put forward distinct syntactic representations for adjectival modification.

To find out which of the two proposals is correct, this thesis will investigate adjectival ordering as defined in the following research question:

**RESEARCH QUESTION I:**

*What is the neutral order of adjectives in noun phrases?*

The research question will be studied with reference to English, in comparison to Dutch, through native speaker consultation via an online questionnaire, Questionnaire I,
with the aim to find out which adjectival orders are acceptable to native speakers. With the help of the findings, it will be possible state whether adjectival orders are strict and whether the claims made by Scott (2002) and Truswell (2004, 2009) hold up with respect to the assumed universality of the AOS.

2.3 Adjectives in noun phrases with contrastive orders

When emphasis is put on one of the adjectives, more orders become available (Cinque, 2005, 2010). Contrastive adjectives can be placed in various positions and these positions reflect on the structure of NPs, specifically concerning the left periphery of noun phrases. Since contrastive constituents are focal and normally target dedicated focal positions in the left periphery, contrastive adjective orders could reveal whether there is such a dedicated focal position, a Focus Phrase (henceforth FocP), for contrastive elements in noun phrases.

In clauses, constituents can move towards the left in various A-bar movement processes, one of which is known as movement to FocP (Haegeman & Gueron, 1999; Radford, 2009). In negative inversion — cf. example (13) — a negative emphatic element such as on no account is placed in the left peripheral FocP (Radford, 2009). This kind of movement is obligatory since on no account cannot be placed anywhere else in the sentence.

(13) On no account will I work on Sundays

Corrective constituents also bear emphasis and can appear in a left peripheral projection which researchers have identified as a focus phrase. Consider the initial position of the object Bill in (14) and s1 in (15). The inversion in (14) and (15) is optional (the sentences are also correct without inversion; “I invited Bill, not Tom” and “She took the s1”.)

(14) Bill, I invited, not Tom!
(15) a. She took the s8 to Edinburgh.
    b. No, the s1 she took.
The question researchers have been asking themselves is whether similar leftward, focus-driven movement processes are also available in the nominal domain. Initial indication shows that such movements are available, consider the cases of wh-movement / the movement of emphatic demonstratives as in (16) and (17) (t indicates the trace left behind by movement). The data originate from Horrocks & Stavrou (1987) and Haegeman and Gueron (1999).

(16) a. a very important decision
    b. [ [How important] a t decision ] is this?

(17) a. I didn’t expect that big a turnout.
    b. [That big] a t turnout

In these examples, leaving the emphatic phrase in-situ yields ungrammaticality, as seen in (18) and (19). This clearly shows that A-bar movement to the left is obligatory in these examples.

(18) * A how important decision is this?
(19) * This is a that big turnout.

Research on adjectives, however, has not yet yielded unambiguous evidence that movement of focal adjectives towards the left can be attested in the nominal domain, and if so, whether it is obligatory or optional. There are conflicting views on the matter, as the following comparison between Truswell (2005) and Szendrői (2010, 2013) will reveal.

2.3.1 The order of adjectives in contrastive NPs according to Truswell (2005)

Truswell (2005) claims that the correct way of using a contrastive adjective is to place it before all other adjectives. He states that this is due to movement: the contrastive adjective cannot stay in-situ but has to undergo movement to the left. The leftward moving contrastive element targets a focussed position in the noun phrase, which he dubs the Focus Phrase (or FocP). According to Truswell this movement has to take place in order to put emphasis on the contrastive adjective.
The fronting operation in effect means that the order of adjectives in neutral and contrastive noun phrases can be distinct. For example, subsective adjectives should always precede intersective adjectives in neutral phrases (see 2.2.2), but in contrastive noun phrases the order could switch as an emphatic intersective adjective comes to move above and thus occurs to the left of a subsective adjective. According to Truswell (2005) this is only possible when there is contrastive focus and one of the adjectives (in this case the intersective one) is emphasised. Consider for illustration (20). Example (20a) is incorrect because the intersective adjective (*black) is not emphasised and yet it precedes the subsective adjective (big), while (20b) is correct because the intersective adjective (black) is emphasised and as a result it *must* front to a position before the subsective adjective (big).

(20) a. *the black, big car  
b. the BLACK, big car

The syntactic representation for this phenomenon is shown in Figure 4, which depicts a simplified syntactic representation of *the PINK, small teacup* in which pink moves into a focussed position. (XP is adopted as the label for the projection hosting adjectives in Truswell’s work, see (12) above).

*Figure 4: The syntactic representation of “the PINK, small teacup” according to Truswell (2005)*
2.3.2 The order of adjectives in contrastive NPs according to Szendrői (2010, 2013)

Szendrői agrees with Truswell that movement of contrastive adjectives to the left is possible, and that contrastive elements move to FocP. However, she does not share all of Truswell's views. Specifically, she goes against his idea that the adjective must obligatorily move as, according to Szendrői, the movement is optional. The adjective can stay in-situ, as long as elements following the focussed element are given (in the sense that it is mentioned before in the discourse). In such cases, a contrastive adjective does not have to move to the left. In (21) big bag is introduced in the first sentence and therefore counts as given information in the second clause, whereas contrastive black is new information.

(21) Mary wanted to buy a big bag. Eventually, she bought a BLACK, big bag.

In other words, Szendrői states that for a contrastive reading reordering is not mandatory as a contrastive adjective can be left in-situ and marked prosodically. This makes movement to the left optional instead of a requirement to indicate contrastive focus.

If Szendrői's claim is correct, it has repercussion not only for the structure of noun phrases, but beyond that as well. Specifically, she argues that adjective reordering, when it occurs, takes place to mark the post adjectival chunk as what she calls the domain of contrast, roughly corresponding to the amount of structure that the focal constituent has in its scope\(^1\). Thus, the target position of focal movement varies depending on the size of the domain of contrast, and does not correspond to a fixed FocP.

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\(^1\) The notion that Szendrői refers to a domain of contrast is adopted in turn from Neeleman et al (2009). It is defined as the sister category of an ex-situ focus item and corresponds to the amount of structure that the focus item has scope over. In semantic works, the domain of contrast is defined as the background associated with the focus. Szendrői uses adjectival reordering facts to support to claim that a syntactic operation like movement can be triggered by the need (or preference) to mark domain of contrast.
2.3.3 Comparison of Truswell (2005) and Szendrői (2010, 2013)
Both Truswell (2005) and Szendrői (2010, 2013) claim that the contrastive adjective can move to a position to the left, to a so-called Focus position (FocP). Truswell and Szendrői both agree that a requirement of what follows the FocP is that the information must be given. However, when discussing the possibility of the contrastive adjective staying in-situ their views could not be further apart. Truswell claims that the contrastive adjective cannot stay in-situ and it has to move to a focus position in order to get a contrastive reading. Szendrői does not agree with this statement as she claims that the adjective can either move to a focus position or stay in-situ. The movement to the left is not a necessity to make the reading contrastive as a contrastive intersective adjective can be marked prosodically according to her.

2.3.4 Research question concerning contrastive orders (Research question II)
As shown above, the literature contains conflicting claims as to whether contrastive adjectives can stay in-situ or have to undergo movement to the left, to a dedicated Focus projection. To find out which approach is correct, the second part of this thesis answers the following research question:

Research question II:

*Do contrastive adjectives assume a distinct position from their non-contrastive equivalents?*

This question will be studied with reference to the two works discussed above, to find out whether native speakers agree with Truswell and mark the sentences in which the adjective stays in-situ as incorrect, or whether they agree with Szendrői and allow for the adjective to either move to the FocP or stay in-situ.

This research question will be studied with reference to English, compared to Dutch via native speaker consultation through an online questionnaire, *Questionnaire II*. Importantly, the example sentences in this questionnaire will be based on the results of Questionnaire I: to construct the in-situ and ex-situ occurrences of adjectives, it will make use of the neutral base order that was the outcome of Questionnaire I.
3. Adjectival modification in neutral orders

3.1 Methodology for noun phrases in neutral orders – Questionnaire I

In order to answer Research question I (What is the neutral order of adjectives?) a questionnaire was conducted which will be referred to as Questionnaire I throughout the thesis. The goal of this questionnaire was to get a better insight in the order of adjectives used by native speakers of English and Dutch. The investigation was conducted via an online (Google forms) survey, in the form of a judgement task in which participants had to judge the grammaticality of an utterance with a noun phrase including multiple adjectives.

The number of adjectives that the participants were presented with was three per sentence. There are several reasons for this. First of all, it is very rare for more than three adjectives to appear in a sentence (Teodorescu, 2006). Secondly, because of the scarcity of more than three adjectives per sentence, it is very difficult to judge whether a sentence would be considered correct or not (Scott, 2002). Finally, with more than three adjectives the possible different orders would also increase, which in turn would make the questionnaires too long for participants to keep focus. With these reasons in mind, three adjectives per sentence were wielded.

The types and kinds of adjectives, which were used in the questionnaire, were chosen carefully such that they represent both subjective and intersective adjectives.

The following adjectives were used in Questionnaire I; quality (subjective), size (subjective), colour (intersective), nationality (intersective), and material (intersective). These actual categories were chosen as all of these adjectives are very frequently used in everyday speech and the adjectives have a clear order in Scott’s approach, namely quality < size < colour < nationality < material, whereas Truswell claims they can vary in order but only if the subjective adjectives (size/quality) precede the intersective ones (colour/nationality/material).

Questionnaire I contained three types of different adjectival structures. The first type consisted of one subjective adjective and two intersective adjectives, the second type of two subjective adjectives and one intersective adjective, and finally, the third type of three intersective adjectives. This way there was a division between subjective (termed S below) and intersective (termed I) adjectives. For all these different types the
participants were presented with three example sentences each, which were presented in a randomized order.

The combination of one subsective adjective and two intersective adjectives
In the first case one subsective (S) and two intersective (I) adjectives were combined. The three types of adjectives used are: size (S), colour (I), and material (I). Below the adjectives are introduced per condition.

Q1-E1\(^2\)  Mum! I can’t seem to find any of my clothes this morning. Have you seen my ... jumper anywhere?

<table>
<thead>
<tr>
<th>Subsective</th>
<th>big</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intersective</td>
<td>black, woollen</td>
</tr>
</tbody>
</table>

These adjectives were presented in every order possible, which created six example sentences for the participants to share their views on. For all of the six possibilities presented below (example a-f) the participants had to tick one of the boxes of the five-point-scale, see section 3.1.2.

a) Mum! I can’t seem to find any of my clothes this morning. Have you seen my big, black, woollen jumper anywhere?

b) Mum! I can’t seem to find any of my clothes this morning. Have you seen my big, woollen, black jumper anywhere?

c) Mum! I can’t seem to find any of my clothes this morning. Have you seen my black, woollen, big jumper anywhere?

d) Mum! I can’t seem to find any of my clothes this morning. Have you seen my black, big, woollen jumper anywhere?

e) Mum! I can’t seem to find any of my clothes this morning. Have you seen my woollen, big, black jumper anywhere?

f) Mum! I can’t seem to find any of my clothes this morning. Have you seen my woollen, black, big jumper anywhere?

\(^2\) Q1-E(\text{number}) represents Questionnaire 1 - Example (the number of the example)
The example sentences (a-f) are only written out for this first example, but naturally all six possibilities were presented to the participants for every example sentence presented below.

Q1-E2 We have seen so many tables at the museum of 20th century furniture in The Hague. Do you remember that ... table they used to have breakfast on?

<table>
<thead>
<tr>
<th>Subsective</th>
<th>large</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intersective</td>
<td>brown, wooden</td>
</tr>
</tbody>
</table>

Q1-E3 She finally bought her wedding dress. She has been looking for it for so long. She couldn’t make up her mind about what she wanted. Eventually, she bought a ... dress.

<table>
<thead>
<tr>
<th>Subsective</th>
<th>small</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intersective</td>
<td>white, lace</td>
</tr>
</tbody>
</table>

The combination of two subsective adjectives and one intersective adjective

In the second case two subsective adjectives (S) and one intersective (I) adjective were combined. The three types of adjectives that were chosen are: size (S), quality (S), and colour (I).

Q1-E4 I have wanted to buy a car for so long. Eventually, I decided to buy a ... one.

<table>
<thead>
<tr>
<th>Subsective</th>
<th>big, new</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intersective</td>
<td>red</td>
</tr>
</tbody>
</table>

Q1-E5 I went to an antique store and they had the most amazing things. I bought a(n) ... cabinet.

<table>
<thead>
<tr>
<th>Subsective</th>
<th>small, old</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intersective</td>
<td>brown</td>
</tr>
</tbody>
</table>
Q1-E6  I won some money in a lottery, so I bought a ... TV.

| Subsective | big, new |
| Intersective | silver |

The combination of three intersective adjectives

In the final case three intersective (I) adjectives were combined. The three types of adjectives that were chosen for this case are: colour (I), material (I), and nationality (I).

Q1-E7  My best friend went on holiday and come home with these ... boots. They look amazing!

| Subsective | - |
| Intersective | brown, leather, Australian |

Q1-E8  I love tea, so my husband bought me a(n) ... teapot for my birthday.

| Subsective | - |
| Intersective | pink, porcelain, English |

Q1-E9  We made an amazing trip around the world. Among the souvenirs we bought is a(n) ... vase.

| Subsective | - |
| Intersective | brown, wooden, African |

3.1.1 Choice of languages

Both Scott (2002) and Truswell (2009) claim that the adjectival order that they suggest is universal (see section 2.2.4). In order to check this, the questionnaire study was conducted not only in English but also in Dutch. Dutch was chosen as a language of comparison because the structure of the noun phrase in Dutch is similar to that of the noun phrases in English. Both the English and Dutch languages have very similar noun
phrase structure, including the position of adjectives. Both languages have determiners on the left side of the adjectives and the noun is always placed on the right side of the adjectives as is shown in (22) and (23). Because of these similarities, a comparison between the two languages is justified. Naturally, the English questionnaire was in English and the Dutch questionnaire was in Dutch. To cater for complete parallelism, the same questions were asked and the same adjectives used in both the English and Dutch questionnaires.

(22) a. the black car  
b. * the car black

(23) a. de zwarte auto  
b. * de auto zwarte

A difference between the English and Dutch language when it comes to adjectives is the fact that Dutch adjectives show agreement while in English adjectives do not. In English the sentences ‘a green table’ and ‘a green house’ contain the same adjective namely green. However, in Dutch the adjective changes slightly because of agreement as shown in the Dutch sentences; ‘een groene tafel’ and ‘een groen huis’, which contain inflected forms of the adjectives (groen/groenge). The adjective agrees in gender with the noun as the agreement is triggered with neutral nouns in indefinite noun phrases (Broekhuis & Keizer, 2012). In the (24) and (25) below n-neut represents non-neuter nouns and neut represents neuter nouns. A similar difference in the Dutch adjectives can be found in the Dutch examples in (24). The only category which does not show agreement in Dutch is the category of material which is shown in (25).

(24) a. Een bruine muur  
  a brown-e wall(N-NEUT)  
  "a brown wall"

  b. Een bruin konijn  
  a brown rabbit(N-NEUT)

(25) a. Een bruine muur  
  a brown-e wall(N-NEUT)  
  "a brown wall"

A difference between the English and Dutch language when it comes to adjectives is the fact that Dutch adjectives show agreement while in English adjectives do not. In English the sentences ‘a green table’ and ‘a green house’ contain the same adjective namely green. However, in Dutch the adjective changes slightly because of agreement as shown in the Dutch sentences; ‘een groene tafel’ and ‘een groen huis’, which contain inflected forms of the adjectives (groen/groenge). The adjective agrees in gender with the noun as the agreement is triggered with neutral nouns in indefinite noun phrases (Broekhuis & Keizer, 2012). In the (24) and (25) below n-neut represents non-neuter nouns and neut represents neuter nouns. A similar difference in the Dutch adjectives can be found in the Dutch examples in (24). The only category which does not show agreement in Dutch is the category of material which is shown in (25).

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3 Except for the construction type someone nice/ iets gebruikelijks (Kishimoto, 2000), which is not under study in this thesis.
(25)  a. Een ijzeren hek
    *an iron fence* (N-NEUT)
    "an iron fence"

   b. Een ijzeren koelkast
    *an iron refrigerator* (NEUT)
    "an iron refrigerator"

3.1.2 Participants and instructions

The participants were all native speakers (of either English or Dutch). They received Questionnaire I through email or on Facebook (see the links to the questionnaires in the appendix). In the questionnaire, it was stressed that there were no right or wrong answers. The participants had to tick boxes to show how well they thought a particular order was. The explanation for ticking the boxes was presented prior to the example sentences on the first page of the questionnaire and visible during every example sentence. The information which was on the first page of the questionnaire on how to tick the boxes can be found below.

Thank you for taking the time to fill in this questionnaire. Through this questionnaire I hope to get a better insight in the order of adjectives used by native speakers of English. I would like to stress that there are no right or wrong answers. I want to know more about your judgment as a native speaker, so the answers are never considered to be wrong.

A few weeks after this questionnaire, another one will be conducted (based on the results of this first questionnaire). I can only use the results of those who filled in both questionnaires. Therefore, I ask you to fill in your name below. This information is only used to match the two questionnaires afterwards (this one and the follow-up). I would already like to express my gratitude if you are willing to not only fill in this questionnaire, but also the follow-up (which will appear in couple of weeks).

---

4 In the Dutch questionnaire this explanation was in Dutch and naturally the speakers were native speakers of Dutch, not English.
Ticking the boxes:

1. This order is very unnatural. I do not use this in spoken language.
2. This order is unnatural. I may use it very rarely, but it does not sound correct.
3. I do not know about this order. It sounds neither natural nor unnatural to me.
4. This order is natural. I would use this order in spoken language.
5. This order is very natural. It seems to be the best order to use in spoken language.

Be assured that all answers you provide will be kept in the strictest confidentiality. To continue please click “Volgende” which is “next” in Dutch.

3.1.3 English questionnaire

The participants were all native English speakers. There were fourteen male – and fourteen female participants who filled in the English questionnaire which leads to a total of 28 participants (see Table 1). They were all between the age of 20 and 55. Participants were asked to fill in Questionnaire I in which they were presented with nine sentences, each with six possibilities, resulting in 54 questions.

Table 1: The distribution of the English participants of Questionnaire I

<table>
<thead>
<tr>
<th>Participants</th>
<th>Male participants</th>
<th>Female participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>28</td>
<td>14</td>
<td>14</td>
</tr>
</tbody>
</table>

3.1.4 Dutch questionnaire

The participants were all native Dutch speakers. There were 20 male and 28 female participants who filled in the questionnaire, which leads to a total of 48 speakers (see Table 2). They were all between the age of 20 and 50. Participants were asked to fill in Questionnaire I in which they were presented with nine sentences, each with six possibilities, resulting in 54 questions.

Table 2: The distribution of the Dutch participants of Questionnaire I

<table>
<thead>
<tr>
<th>Participants</th>
<th>Male participants</th>
<th>Female participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>48</td>
<td>20</td>
<td>28</td>
</tr>
</tbody>
</table>
3.2. Results for noun phrases in neutral orders

For every sentence in Questionnaire I, a graph is presented with the results. Every order in the graph is numbered (1 to 6), and will be referred to in the text in curly brackets corresponding with the numbers in the graphs. When only a number is produced {1} it corresponds with the numbers 1 in both the English and the Dutch paragraph. When a number is combined with a letter, for example {E1}, it refers to number 1 in the English paragraph, while {D1} refers to number 1 in the Dutch paragraph.

An utterance was considered grammatical if more than half of the people regarded it as grammatical. When transferring the answers to graphs it was often quite clear whether an order was considered to be grammatical or not. Some orders were less clear, but the reasons for that can be found in the discussion of the results below.

3.2.1 The combination of one subsective adjective and two intersective adjectives

In the first case one subsective (S) and two intersective (I) adjectives were combined. The three types of adjectives that were chosen for this case are: size (S), colour (I), and material (I).
Q1-E1 Mum! I can’t seem to find any of my clothes this morning. Have you seen my ... jumper anywhere?

The *size* adjective (*big/groot*) is favoured in the front position {1}+{2}. The English participants show a slight preference for putting the *material adjective* in final position—see {E1} when compared to {E2}. The results show that native speakers prefer to clearly place the subsective adjective (*size*) in the first position in both English and Dutch {1}+{2}.

5 Q1-E(number) represents Questionnaire 1 - Example (the number of the example)
Q1E2 We have seen so many tables at the museum of 20th century furniture in The Hague. Do you remember that ... table they used to have breakfast on?

*English Questionnaire*

<table>
<thead>
<tr>
<th>Description</th>
<th>English</th>
<th>Dutch</th>
</tr>
</thead>
<tbody>
<tr>
<td>large, brown, wooden</td>
<td>30</td>
<td>50</td>
</tr>
<tr>
<td>large, wooden, brown</td>
<td>15</td>
<td>45</td>
</tr>
<tr>
<td>brown, wooden, large</td>
<td>20</td>
<td>35</td>
</tr>
<tr>
<td>brown, large, wooden</td>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td>wooden, brown, large</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>wooden, large, brown</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>

The *size* adjective (large/grote) is once again favoured in the front position {1}+{2}. The *material adjective* is once again slightly preferred as the last adjective — cf. {1} compared to {2}. Again, the subsective adjective (size) is preferred the first position in both English and Dutch {1}+{2}.
Q1-E3  She finally bought her wedding dress. She has been looking for it for so long. She couldn’t make up her mind about what she wanted. Eventually, she bought a … dress.

The size adjective *(small/ kleine)* is once again preferred in the front position. There is also the slight preference to place the material adjective as the last adjective again — cf. {1} compared to {2}. The subsective adjective *(size)* is preferred in the first position in both English and Dutch {1}+{2}.
Results

The findings for the first group of adjectives are rather consistent. The subsective adjective is preferred as the first adjective \{1\}+\{2\}. This is the case in all three example sentences. It is quite clear in all three the example sentences that the only options which are considered correct are the options in which the size adjectives is the first adjective which is presented \{1\}+\{2\}. There also appears to be a small preference for the material adjective to take final position- \{1\} compared to \{2\}.

The size adjective should come first according to Scott (2002). He claims that the set order in which the adjectives should appear is: size $<$ colour $<$ material. Scott is therefore right in his claim that the size adjective should come in first position. The results support his statement. Scott also claims that the material adjective should come in final position. The results seem to support that claim as well. The results are not evident yet to make a general statement about the material adjective being favoured in final position though.

The size adjective favouring the first position is consistent with what Truswell (2004, 2009) claims as well. He states that subsective adjectives precede intersective adjectives and that is exactly what these results show us. The fact that the material adjective seems to be preferred in final position does not support Truswell’s claim since he states adjectives can be ordered freely in one group. The material and colour adjectives are both intersective adjectives so they should in interchangeable.
3.2.2 The combination of two subsective adjectives and one intersective adjective

In the second case two subsective adjectives (S) and one intersective (I) adjective were combined. The three types of adjectives that were chosen for this case are: size (S), quality (S), and colour (I).

Q1E-4 I have wanted to buy a car for so long. Eventually, I decided to buy a ... one.

The two subsective adjectives (size and quality) are preferred in the first and middle position \{1\}+\{5\}. There is no set order in which these two adjectives should come. The English participants seem to prefer size before quality \{E1\} while the Dutch participants
seem to prefer *quality* before *size* \{D5\}. It is evident though that the subsective adjectives are preferred in the two front positions and the intersective (*colour*) adjective is preferred in final position \{1\}+\{5\}.

Q1-E5 I went to an antique store and they had the most amazing things. I bought a(n) ... cabinet.

*English Questionnaire*

Once again the two subsective adjectives (*size* and *quality*) are preferred in the first and middle position \{1\}+\{5\}. The order of these two adjectives does not make a difference. The English participants have a slight preference for *size* before *quality* again \{E1\}, whereas the Dutch participants deem both orders to be correct \{D1\} \+ \{D5\}. It is evident
though that the subsective adjectives are preferred in the first two positions and the intersective (colour) adjective is preferred in final position \{1\}+\{5\}.

Q1-E6 I won some money in a lottery, so I bought a ... TV.

The two subsective adjectives \(\text{size and quality}\) are preferred in the first two positions \{1\}+\{5\}. The English participants have a slight preference for \text{size before quality} again \{E1\}, whereas the Dutch participants show a very slight preference for \text{quality before size} \{D5\}. It is evident that the subsective adjectives are preferred in the two front positions and the intersective (colour) adjective is preferred in final position \{1\}+\{5\}. 

33
Results

The findings for the second group of adjectives are also rather consistent. The subsective adjectives (*size* and *quality*) are preferred in the first and middle position, while the intersective adjective (*colour*) is preferred in the final position {1}+{5}. There is a slight difference in preference between English and Dutch as to which of the subsective adjectives should precede which. However, both English and Dutch consider both orders in which the subsective adjectives come first to be correct.

Scott (2002) does not mention *quality* as a separate functional projection. However, he does mention a functional projection with the description of *Subjective Comment* (indicating not an inherent property, but the speaker’s opinion about a quality) and *quality* falls into this category. The order Scott argues to be the only correct order is: *quality* $<$ *size* $<$ *colour*. The English participants preferred *size* preceding *quality* which means they do not agree with Scott’s suggested order. However, since they also considered *quality* before *size* to be correct there is some truth in Scott’s claim. Scott cannot explain, however, why *size* before *quality* is also considered to be correct. This is inconsistent with Scott’s claim that the adjectives come in a strict and set order. The participants do agree with Scott when it comes to the *colour* adjective as they feel this adjective should come in the final position.

Truswell (2004, 2009) claims the subsective adjectives (*quality* and *size*) should precede the intersective adjective (*colour*), which is true in every case. He also states that the adjectives can show various orders if they belong to the same group (either subsective or intersective). This is the case with *size* and *quality*, since the participants considered either order in which these two adjectives came in the first and second position to be correct. Since *colour* adjectives are intersective they should be preceded by the subsective adjectives *size* and *quality*. This is the case in all three example sentences so the results comply with Truswell’s claims.
3.2.3 The combination of three intersective adjectives

In the final case three intersective (I) adjectives were combined. The three types of adjectives that were chosen for this case are: colour (I), material (I), and nationality (I).

Q1-E7 My best friend went on holiday and come home with these ... boots. They look amazing!

English Questionnaire

Dutch Questionnaire

Most orders are considered to be correct. The first adjective can be either nationality or colour \{1\}+\{2\}+\{3\}+\{4\}. However, the material adjective is not considered to be correct in the first position \{5\}+\{6\}. It should be placed in middle position \{2\}+\{3\} or in final position \{1\}+\{4\}. The final position is even slightly preferred— cf. \{1\}+\{4\} compared to
{2}+{3}. If the material adjective is not placed in the first position {1}+{2}+{3}+{4} the orders are considered to be correct in both English and Dutch.

Q1-E8 I love tea, so my husband bought me a ... teapot for my birthday.

The same phenomenon as seen with the previous example sentence (Q1-E7) is repeated here. Most orders are considered to be correct {1}+{2}+{3}+{4}. It does not matter whether the first adjective is a nationality or a colour adjective. However, the material adjective is not considered to be correct in the first position {5}+{6}. It should be placed in middle {1} + {3} or final position {2} + {4}. If the material adjective is not placed in the
first position \{1\}+\{2\}+\{3\}+\{4\} the orders are considered to be correct in both English and Dutch.

Q1-E9 We made an amazing trip around the world. Among the souvenirs we bought is a(n) ... vase.

The results are very consistent. In this third example sentence the same phenomenon can be seen. Most orders are considered to be correct \{1\}+\{2\}+\{3\}+\{4\}. It does not matter whether nationality or colour is placed in the first position. However, the
material adjective is not considered to be correct in the first position \{5\}+\{6\}. It should be placed in middle \{1\} + \{3\} or final position \{2\} + \{4\}. If the material adjective is not placed in the first position \{1\}+\{2\}+\{3\}+\{4\} the orders are considered to be correct in both English and Dutch.

Results
With the first group of adjectives (Q1-E1, Q1-E2, Q1-E3) it appeared as though the material adjective favoured the final position—see again \{1\} compared to \{2\}. The final group of adjectives (Q1-E7, Q1-E8, Q1-E9) makes it very clear that the material adjective should not be in the first position \{5\}+\{6\}. The orders are considered to be incorrect in both English and Dutch if the material adjective is in first position \{5\}+\{6\}. However, when the material adjective is not in the first position the orders were all considered to be correct \{1\}+\{2\}+\{3\}+\{4\}. This means that it does not matter whether colour or nationality is placed in first or second position, because all orders are considered to be correct, as long as the material adjective is not in first position \{1\}+\{2\}+\{3\}+\{4\}.

According to Scott (2002) the order should be: colour < nationality < material, but the results indicate that he is not correct about the fact that colour and material should be in a set order and are not interchangeable. He is also not correct about the fact that material can only come in final position, since it can also appear in the middle position \{2\} + \{3\} — although the final position is preferred \{1\} + \{4\}. Scott presents the order of stacked adjectives as a set order, however the order appears to be a lot freer than he suggests. There is a restriction on the freedom in these adjectives though, as the material adjective has the restriction of not being correct in first position. This means Scott was right when he stated that adjectives cannot be ordered around freely, at least for this type of adjectives.

Since all three adjectives presented here were intersective they should be able to be ordered freely. Truswell (2004, 2009) claims that adjectives that fall into the same group, which is the case here because they were all intersective, do not have a set order. The results show that he is right when it comes to the colour and nationality adjectives. They can truly be ordered around freely and are considered correct in first, middle, and final position. However, there are restrictions on the material adjective, since the material adjective could not be ordered around freely as it was considered to be incorrect in first position. If Truswell had been right, the material adjective should also
have been considered correct in every position. However, as the results clearly show, this is not the case.

### 3.2.4 Speaker variation

As the above shows, the results are very clear in most cases of adjectival combinations. This became evident in that there are large differences in the number of people who claimed to either like or dislike an order. When looking at the results of the questionnaires with an eye on possible speaker variation, it is very interesting to notice there are two distinct groups and a subgroup when it comes to the order of three intersective adjectives (see section 3.2.3). Group 1 (21 people) always considers material incorrect whenever it is not in the final position and they do this consistently. Group 2 (7 people) always considers material to be correct anywhere and they do this consistently as well. The third and final group varies in their opinion and show a preference for material to come as the final adjective but they do not consider the other orders to be solely incorrect. For the distribution of this variation, consult Table 3 below.

<table>
<thead>
<tr>
<th>Type of speaker</th>
<th>Number of speakers</th>
<th>Percentage of speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requiring material adjectives in final position</td>
<td>English: 7 Dutch: 14</td>
<td>English: 25% Dutch: 29%</td>
</tr>
<tr>
<td></td>
<td>Total: 21</td>
<td>Total: 28%</td>
</tr>
<tr>
<td>Allowing material adjectives in final and mid position</td>
<td>English: 5 Dutch: 7</td>
<td>English: 18% Dutch: 15%</td>
</tr>
<tr>
<td></td>
<td>Total: 12</td>
<td>Total: 16%</td>
</tr>
<tr>
<td>Allowing material adjectives in all positions</td>
<td>English: 3 Dutch: 4</td>
<td>English: 11% Dutch: 9%</td>
</tr>
<tr>
<td></td>
<td>Total: 7</td>
<td>Total: 10%</td>
</tr>
</tbody>
</table>

This demonstrates that a fair amount of individual variation exists among the consulted speakers, variation that could be dialectal or idiolectal. At any rate, the placement of adjectives is clearly rule governed for every speaker.

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6 Note that I do not have information about the precise language background of the consulted informants, nor the precise area of origin.
3.3 Answering Research question I

This section was dedicated to answering Research question I, repeated here from above

Research question I

What is the neutral order of adjectives in noun phrases?

This question was posed specifically with reference to the points of disagreement between Scott (2002) and Truswell (2004, 2009). According to Scott, adjectives are specifiers of functional projections. Truswell, on the other hand, states that adjectives can be either specifiers of functional projections or adjuncts. Scott clearly states that adjectives cannot be adjuncts with reference to the fact that they cannot be ordered around freely. Instead they are strictly ordered along the lines of an adjectival hierarchy, the AOS. Deviating from this order results in ungrammaticality. Truswell argues that adjectives which belong to the same group (either subsective or intersective) can, in fact, alternate. The results of Questionnaire I clearly comply with Truswell’s theory about intersective and subsective adjectives.

With the first three example sentences (Q1-E1, Q1-E2, Q1-E3), the vast majority place the subsective adjective in the first position, preceding the intersective adjectives, as Truswell claimed would be the case. The results also often show that participants have a preference to the order which Scott proposes to be correct. However, this is only a preference and not an absolute necessity. While Scott claims that only the unique order that complies with the AOS is correct, my participants’ judgements indicate that more orders should be considered to be correct.

With the next three example sentences (Q1-E4, Q1-E5, Q1-E6) the results show that the majority once again reveal a preference which follow Truswell’s views in putting the two subsective adjectives in the first and middle position. This shows that the native speakers’ judgements are similar to Truswell’s idea that two adjectives from the same group (either subsective or intersective) can be ordered freely in a sentence like the ones we presented them with. Furthermore, the results show that the order which Scott proposed to be correct was in fact considered to be correct by the participants as well. However, this order is not fixed: the participants allow more orders to be correct, as the two subsective adjectives are interchangeable.
In the final section (Q1-E7, Q1-E8, Q1-E9), it appears the results do not support claims made by either of the two researchers. According to Scott only one order is correct but this is not the case as the participants deem four of them \{1\} + \{2\} + \{3\} + \{4\} to be grammatical. However, according to Truswell all orders should have been regarded correct, which is not the case either, as the participants consider material incorrect in first position \{5\} + \{6\}. It seems that the material adjective is an exception to Truswell’s rule that adjectives can be ordered freely within the same group.
4. Adjectival modification in contrastive orders

4.1 Methodology for noun phrases in contrastive orders – Questionnaire II

In order to answer Research question II (*Do contrastive adjectives assume a distinct position from their non-contrastive equivalents?*) Questionnaire II was conducted, using the same languages, methods and instructions as for Questionnaire I.

The goal of Questionnaire II was to get a better insight in the order of adjectives in emphatic noun phrases, used by native speakers of English and Dutch. Questionnaire II was constructed to find out whether the position of the contrastive (stressed) adjective is ex-situ or in-situ. The participants had to tick boxes to show how well they thought a particular order was. Every time a word was written in CAPITAL letters severe stress (indicating emphasis) had to be placed on that word. The explanation for ticking the boxes was presented prior to the example sentences and was visible during every example.

The number of adjectives that the participants were presented with was three per sentence, for the same reasons as in Questionnaire I (see section 3.1). The types and kinds of adjectives were chosen very carefully building on the results of Questionnaire I (see section 3.2): (i) the in-situ examples in Questionnaire II corresponded to grammatical examples in Questionnaire I in which a given adjective was non-initial; (ii) the ex-situ examples in Questionnaire II corresponded to ungrammatical examples in Questionnaire I in which the same adjective appeared in initial position The reason for this choice was to make sure that the ex-situ order can not possibly correspond to a base position of the adjective. Since the ex-situ order corresponded to an ungrammatical order in the neutral condition, it could not have been an in-situ position of the adjective.

Out of the 6 example sentences per category in Questionnaire I, 2 example sentences per question were chosen for Questionnaire II and they were presented in a randomized order. To give an example of how the selection of test sentences were done, consider the following example. In Questionnaire I, it was established that *big, black, woollen* was considered a grammatical order, while *woollen, big, black* was not (section 3.2, Q1-E1).

(26) a. big, black, woollen N 

b. *woollen, big, black N
For every question in Questionnaire I, one such grammatical and one such ungrammatical order was chosen for Questionnaire II, such that they only differed in the order of one particular adjective (in the case of (26) ‘woollen’). The results of Questionnaire I have shown that the order in (26a) is grammatical in the neutral condition and the order in (26b) is ungrammatical in the neutral condition. In Questionnaire II, I set out to ask whether the ungrammatical order becomes grammatical if woollen receives stress and is interpreted contrastively, and whether the grammatical order (26a) continues to be grammatical if the adjective becomes contrastive. Questionnaire II thus contained the same orders as in (26) and aimed to find out whether native speakers accept contrastive adjectives in in-situ (27a) and ex-situ (27b) positions.

(27) a. big, black, WOOLLEN N
    b. WOOLLEN, big, black N

The three different ways in which subsective (S) and intersective (I) adjectives were used previously in Questionnaire I is the same in Questionnaire II. The kinds of adjectives were kept the same as often as possible. The same five kinds of adjectives that were used for Questionnaire I were also used for Questionnaire II, namely; size (S), quality (S), colour (I), material (I), and nationality (I).

Last but not least, all example sentences were set up in a context in which the noun phrase under judgement was in a contrastive relation with a noun phrase in the previous clause, so that the most natural reading of the noun phrase was a contrastive one.

The combination of one subsective adjective and two intersective adjectives

In the first case one subsective (S) and two intersective (I) adjectives were combined. The three types of adjectives that were chosen for this case are: size (S), colour (I), and material (I).
Q2-E1\textsuperscript{7} We all have big, black jumpers, but only David has a ... jumper

<table>
<thead>
<tr>
<th>Grammatical in neutral order</th>
<th>big, black, WOOLLEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ungrammatical in neutral order</td>
<td>WOOLLEN, big, black</td>
</tr>
</tbody>
</table>

These adjectives were presented in a grammatical and an ungrammatical order according to the results of Questionnaire I. This means for every example sentence two orders were possible and those orders are presented in the table with every sentence. For the first example, and only the first example, the sentences are written out (example a and b below), but naturally the two different orders were presented to the participants for every sentence.

a. We all have big, black jumpers, but only David has a \textbf{big, black, WOOLLEN} jumper
b. We all have big, black jumpers, but only David has a \textbf{WOOLLEN, big, black} jumper

Q2-E2 We all bought a large, brown table, but only Peter bought a ... table.

<table>
<thead>
<tr>
<th>Grammatical in neutral order</th>
<th>large, brown, WOODEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ungrammatical in neutral order</td>
<td>WOODEN, large, brown</td>
</tr>
</tbody>
</table>

Q2-E3 All the girls have a small, white dress, but only I have a ... dress.

<table>
<thead>
<tr>
<th>Grammatical in neutral order</th>
<th>small, white, LACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ungrammatical in neutral order</td>
<td>LACE, small, white</td>
</tr>
</tbody>
</table>

\textsuperscript{7} Q2-E\textsuperscript{(number)} represents Questionnaire\textsuperscript{2 - Example} (the number of the example)
The combination of two subsective adjectives and one intersective adjective

In the second case two subsective adjectives (S) and one intersective (I) adjective were combined. The three types of adjectives that were chosen for this case are: size (S), quality (S), and colour (I).

Q2-E4 All my friends have a big, new car, but only I have a … car.

<table>
<thead>
<tr>
<th>Grammatical in neutral order</th>
<th>big, new, RED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ungrammatical in neutral order</td>
<td>RED, big, new</td>
</tr>
</tbody>
</table>

Q2-E5 We all wanted a small, old cabinet from the shop, but only I wanted a … cabinet.

<table>
<thead>
<tr>
<th>Grammatical in neutral order</th>
<th>small, old, BROWN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ungrammatical in neutral order</td>
<td>BROWN, small, old</td>
</tr>
</tbody>
</table>

Q2-E6 We all wanted a big, new TV, but only Robbie wanted a … TV.

<table>
<thead>
<tr>
<th>Grammatical in neutral order</th>
<th>big, new, SILVER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ungrammatical in neutral order</td>
<td>SILVER, big, new</td>
</tr>
</tbody>
</table>

The combination of three intersective adjectives

In the final case three intersective (I) adjectives were combined. The three types of adjectives that were chosen for this case were: colour (I), material (I), and nationality (I).
The entire family has brown, Australian boots, but only Emma has … boots.

| Grammatical in neutral order | brown, Australian, LEATHER |
| Ungrammatical in neutral order | LEATHER, brown, Australian |

Every husband bought an English, pink teapot, but only my husband bought a … teapot.

| Grammatical in neutral order | English, pink, PORCELAIN |
| Ungrammatical in neutral order | PORCELAIN, English, pink |

They all were given an African, brown vase, but only Phillip was given a(n) … vase.

| Grammatical in neutral order | African, brown, WOODEN |
| Ungrammatical in neutral order | WOODEN, African, brown |

4.1.1 English questionnaire

The participants were all native English speakers. There were thirteen male – and twelve female participants who filled in the English questionnaire, which leads to a total of 25 participants (see Table 4). They were all between the age of 20 and 55.

Due to time-pressure to finish this thesis and lack of response from some of the participants from Questionnaire I, there were participants who did not respond to Questionnaire I but did do Questionnaire II and vice versa. To see if these 'newcomers' had different judgements: they were first put into a separate group, causing the existence of two groups: one with participants from Questionnaire I (10 participants) and another with new participants (15 participants). The results for these groups were calculated separately until it became clear that there were no significant differences between the two groups and the results did not change in any way by merging them.
That is why the two groups were merged into one group, which then consisted of 25 participants.

The participants were presented with nine sentences, each with two possibilities, resulting in eighteen sentences. In addition to this, six examples were added in order to check whether Szendrői and Truswell were right about their claim that the material after the focused adjective in the noun phrase must correspond to the domain of givenness (section 4.3). In these six example sentences, new information was introduced after the focussed position as can be seen in (28), which was taken directly from Questionnaire II. Finally, four fillers were added, which leads to a total of 28 questions.

(28) They were all wearing boots, but only Liam was wearing LEATHER, black boots.

<table>
<thead>
<tr>
<th>Participants</th>
<th>Male participants</th>
<th>Female participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>13</td>
<td>12</td>
</tr>
</tbody>
</table>

### 4.1.2 Dutch questionnaire

The participants were all native Dutch speakers. There were thirteen male – and 22 female participants who filled in the Dutch questionnaire, which leads to a total of 35 participants (see Table 5). They were all between the age of 20 and 55.

Due to time-pressure to finish this thesis and lack of response from some of the participants from Questionnaire I, there were participants who did not respond to Questionnaire I but did do Questionnaire II and vice versa. Just like with the English questionnaire, the participants were first divided into two groups until it became clear that the results did not change in any way by merging the two groups. That is why the two groups were merged into one group, which consisted of 35 participants (21 participants from Questionnaire I and 14 new participants).

The Dutch questionnaire consisted of the same sentences as the English questionnaire, however, naturally, they were translated to Dutch.
Table 5: The distribution of the Dutch participants of Questionnaire II

<table>
<thead>
<tr>
<th>Participants</th>
<th>Male participants</th>
<th>Female participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>35</td>
<td>13</td>
<td>22</td>
</tr>
</tbody>
</table>

4.2 Results for noun phrases in contrastive orders

For every example sentence in Questionnaire II, a graph is presented with the results. Every order in the graph is numbered and will be referred to in the text in curly brackets corresponding with the numbers in the graphs.

4.2.1 The combination of one subsective adjective and two intersective adjectives

In the first case one subsective (S) and two intersective (I) adjectives were combined. The three kinds of adjectives that were chosen for this case are: size (S), colour (I), and material (I).
We all have big, black jumpers, but only David has a … jumper

In both the English and Dutch questionnaire, the participants indicated the order in which the contrastive adjective stays in-situ to be correct {1}. Out of the 60 (25 English and 35 Dutch) participants who filled in the questionnaire only four marked this order to be incorrect, which makes it very clear that the majority accepts this order. However, when the adjectives moves to a position to the left the participants no longer agree on what is considered correct or incorrect {2}. Among the English participants a small majority considers the order to be correct {E2}, whereas among the Dutch participants the majority considers the order to be incorrect {D2}.

\[Q2-E^{(number)}\] represents \text{Questionnaire}_2 - \text{Example}(the number of the example)
We all bought a large, brown table, but only Peter bought a ... table.

In both the English and Dutch questionnaire, the participants indicated the order in which the contrastive adjective stays in-situ to be correct \{1\}. It is clear that the majority accepts this order. However, when the adjectives moves to a position to the left a small majority of the participants no longer accept this order as correct \{2\}.  

---

**English Questionnaire**

- **large, brown, WOODEN**
  - (very) unnatural: 0
  - neither natural nor unnatural: 5
  - (very) natural: 25

- **WOODEN, large, brown**
  - (very) unnatural: 10
  - neither natural nor unnatural: 5
  - (very) natural: 15

**Dutch Questionnaire**

- **lange, bruine, HOUTEN**
  - (zeer) onnatuurlijk: 0
  - Niet natuurlijk, maar ook niet onnatuurlijk: 5
  - (zeer) natuurlijk: 30

- **HOUTEN, lange, bruine**
  - (zeer) onnatuurlijk: 15
  - Niet natuurlijk, maar ook niet onnatuurlijk: 5
  - (zeer) natuurlijk: 10
Q2-E3 All the girls have a small, white dress, but only I have a ... dress.

Once again the participants signalled that the order in which the contrastive adjective stays in-situ is correct {1} while the majority does not think the order in which the contrastive adjectives moves to the left is correct {2}. It is visible in the graphs that while the majority do not perceive the order as correct, there is also a rather large group who does consider this order to be correct {2}.
Results

It becomes evident that the order in which the contrastive adjective stays in-situ is perceived as an acceptable order because the majority of the participants consider this order to be correct in all three example sentences in both Dutch and English {1}. The order in which the contrastive adjective moves to the left {2} is not considered acceptable by a small majority of the participants. However, it is noteworthy that there is also a rather large group who does accept this order.

The results do not comply with Truswell’s expectations as he states that for an adjective to become contrastive it has to move to the left and into the position of the Focus Phrase (henceforth FocP). According to Truswell it is not possible to leave the contrastive adjective in-situ, because then it would not be considered to be a contrastive adjective. The native speakers’ judgement, however, show that it certainly is possible for the contrastive adjective to stay in-situ.

The results comply with Szendrői’s claim that contrastive adjectives can stay in-situ. According to her, a contrastive adjective can either stay in-situ or move to the FocP. It appears that a large number of the participants show a judgement that supports her claim.
4.2.2 The combination of two subsective adjectives and one intersective adjective

In the second case two subsective adjectives (S) and one intersective (I) adjective were combined. The three types of adjectives that were chosen for this case are: size (S), quality (S), and colour (I).

Q2-E4 All my friends have a big, new car, but only I have a ... car.

![Graph showing English participants' responses](image1)

![Graph showing Dutch participants' responses](image2)

The order in which the adjective stays in-situ is accepted by all English participants and the majority of Dutch participants {1}. There is a divided opinion when it comes to the adjective moving to the left yet the majority does not believe this order to be correct {2}.
Q2-E5 We all wanted a small, old cabinet from the shop, but only I wanted a ... cabinet.

The order in which the adjective stays in-situ is accepted by all English participants and the majority of Dutch participants {1}. The majority of the participants do not consider the order in which the contrastive adjective moves to the left to be correct {2} even though the difference in number of people is very small with the English participants (the difference is 1 participant) {E2}. 
We all wanted a big, new TV, but only Robbie wanted a … TV.

Very few participants consider the order in which the adjective stays in-situ to be incorrect {1} (only 3 out of 60 participants; 25 English and 35 Dutch participants). The majority of the participants consider the order in which the contrastive adjective moves to the left to be incorrect {2}.

Results
The results are very similar with the results in the first case (Q2-E1, Q2-E2, Q2-E3); it becomes apparent that the majority does not consider the order in which the contrastive adjective moves to the left to be correct. However, there is also a considerable group who does consider this order to be correct.
4.2.3 Three intersective adjectives

In the final case three intersective (I) adjectives were combined. The three types of adjectives that were chosen for this case are: *colour (I), material (I), and nationality (I).*

Q2-E7 The entire family has brown, Australian boots, but only Emma has ... boots.

**English Questionnaire**

The majority believes the order in which the contrastive adjective stays in-situ to be correct {1}. While most of the English participants believe the order in which the contrastive adjective moves to the left is considered correct {E2} most of the Dutch participants consider it to be incorrect {D2}. 

**Dutch Questionnaire**
Every husband bought an English, pink teapot, but only my husband bought a … tea pot.

The majority of both the English and the Dutch participants consider the order in which the contrastive adjective stays in-situ to be correct {1}. The order in which the contrastive adjective moves to a position to the left is also considered to be correct by both the English and Dutch participants {2}.
They all were given an African, brown vase, but only Phillip was given a(n) brown vase.

**English Questionnaire**

<table>
<thead>
<tr>
<th>Order of Adjectives</th>
<th>(very) unnatural</th>
<th>neither natural nor unnatural</th>
<th>(very) natural</th>
</tr>
</thead>
<tbody>
<tr>
<td>African, brown, WOODEN</td>
<td>1</td>
<td>0</td>
<td>24</td>
</tr>
<tr>
<td>WOODEN, African, brown</td>
<td>2</td>
<td>16</td>
<td>0</td>
</tr>
</tbody>
</table>

**Dutch Questionnaire**

<table>
<thead>
<tr>
<th>Order of Adjectives</th>
<th>(zeer) onnatuurlijk</th>
<th>Niet natuurlijk, maar ook niet onnatuurlijk</th>
<th>(zeer) natuurlijk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afrikaanse, bruine, HOUTEN</td>
<td>1</td>
<td>18</td>
<td>5</td>
</tr>
<tr>
<td>HOUTEN, Afrikaanse, bruine</td>
<td>2</td>
<td>10</td>
<td>6</td>
</tr>
</tbody>
</table>

The majority of the participants (both English and Dutch) consider the order in which the contrastive adjective stays in-situ {1} as well as the order in which it moves to the left {2} to be correct.

**Results**

It becomes apparent that the majority of the participants consider the order in which the adjective stays in-situ to be correct. Yet, the order in which the adjective moves to the left is debatable since in every one of the example sentences two groups can clearly be identified. With every example sentence, there is a considerable group who does not agree with the majority.
4.2.4 Overall discussion

It becomes clear that the order in which the contrastive adjective stays in-situ is considered to be correct by a vast majority of the participants of both the English and Dutch language. The disagreement between participants occurred when the participants were asked for their judgements on whether the contrastive adjective could be ex-situ, in syntactic terms, whether it can move to the FocP. The majority mostly claim that this is not the case and the adjective cannot move there. However, it is rather noticeable that there is also a large group that claims the contrastive adjective can move to the FocP.

To find an explanation for this difference in opinion it is necessary to examine individual questionnaires. When inspecting the individual questionnaires it becomes apparent that sixteen out of the 25 English participants were 100% consistent when it comes to whether they consider an order to be correct or not. Eight participants claim that all the sentences in which the contrastive adjective stays in-situ and all the sentences in which the contrastive adjective moves to the FocP to be correct. However, there are also eight participants who claim that all the sentences in which the contrastive adjective stays in-situ are correct, yet all the sentences in which the contrastive adjective moves to the FocP are incorrect. In the Dutch questionnaire, fifteen participants were 100% consistent in their answers as nine participants consider the contrastive adjective in-situ and ex-situ to be correct and eight participants only consider the contrastive adjective in-situ to be correct (and thus ex-situ to be incorrect). This shows that there are two distinct groups when it comes to judging whether the orders in which the contrastive adjective moves into the FocP position are correct or not. For the distribution of this variation, consult table 6 below.

Table 6: The distribution concerning the ability of the contrastive adjective to appear ex-situ

<table>
<thead>
<tr>
<th>Type of speaker</th>
<th>Number of speakers</th>
<th>Percentage of speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>English: 16</td>
<td>Dutch: 15</td>
</tr>
<tr>
<td>Total: 31</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Participants who were consistent in their choice</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participants for whom the focussed adjective can move to the left</td>
<td>English: 8</td>
<td>Dutch: 9</td>
</tr>
<tr>
<td>Total: 17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participants for whom the focussed adjective cannot move to the left</td>
<td>English: 8</td>
<td>Dutch: 8</td>
</tr>
<tr>
<td>Total: 16</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4.3 Domain of givenness

Truswell and Szendrői both agree that a requirement of what follows the focused item is that the information must be given. In other words, information which is presented after the focused item cannot be new information. To check whether this claim was in fact true, example sentences were added to Questionnaire II in which new information was added after the focused item. This way it could be tested whether native speakers indeed regarded these sentences as unnatural.

Since all twelve graphs (six for English and six for Dutch) were very similar, the graph presented below is the average of all six paragraphs for each language. The separate paragraphs can be found in the appendix. As the graphs below show, Truswell (2005) and Szendrői (2010, 2013) were right about the fact that native speakers deem a sentence unnatural if new information is presented after the focused item. Almost all the speakers agreed that the information that appears after the focused item should be given (in the sense of mentioned before) information. The sentences that were presented to the participants can be found below the graph.
Q2-GiE1\(^9\) We all wanted a vase, but only Killian wanted a WOODEN, African vase.

Q2-GiE2 We all wanted a TV, but only Rebecca wanted the SILVER, new TV.

Q2-GiE3 We all liked some teapots, but only Regina liked the PORCELAIN, English teapot.

Q2-GiE4 They all have a car, but only Neal has a RED, new car.

Q2-GiE5 We all looked for cabinets, but only Cora saw the BROWN, old cabinet.

Q2-GiE6 They were all wearing boots, but only Liam was wearing LEATHER, black boots.

### 4.5 Answering Research question II

Section 4 aims to find out how to answer Research question II:

Research question II

_Do contrastive adjectives assume a distinct position from their non-contrastive equivalents?_

Truswell (2005) claims that the correct way of using a contrastive adjective is to have it before all other adjectives in the noun phrase. He states that the contrastive adjective cannot stay in-situ but has to undergo movement to the left. The leftward moving contrastive element targets a focussed position in the noun phrase, which he dubs the Focus Phrase (or FocP). According to Truswell this movement has to take place in order to put emphasis on the contrastive adjective. Szendrői (2010, 2013), on the other hand, claims that contrastive adjectives can stay and be interpreted in-situ in the position where they normally appear in neutral orders.

When looking at the results, it seems that Truswell was incorrect in claiming that a contrastive adjective _has to_ move to the left in order to become contrastive. He states that if the adjective does not move to the left into a focussed position, FocP, the sentence is not considered contrastive but ungrammatical. The results, however, clearly show that native speakers do not agree with this generalization.

Participants do seem to agree with the claims put forward by Szendrői, as she states that the contrastive adjective _can_ move to the left but can also stay in-situ.

\(^9\) Q2-GiE\(_{\text{number}}\) represents Questionnaire 2 – Given information Example (the number of the example)
According to Szendrői, the adjective can stay in-situ, as long as elements following the focussed element are given. Szendrői states that for a contrastive reading reordering is not mandatory as a contrastive intersective adjective can be marked prosodically. This makes movement to the left optional instead of a requirement to indicate contrastive focus.

The majority of the participants actually seems to prefer the order in which the adjectives stays in-situ, which goes right against the claim made by Truswell. It is important to note, however, that there are two distinct groups when it comes to the results. Some of the participants did agree with Truswell’s statements, while others completely disagreed.
5. Consequences and conclusions for theoretical research

In this section the major empirical and theoretical results of this investigation are summarised.

5.1 Empirical results

5.1.1 Adjectives in noun phrases with neutral orders

For the neutral orders we compared the view expressed by Scott (2002) and Truswell (2004, 2009). Scott argues for a fixed universal hierarchy of clausal functional projections (henceforth FPs). According to him an order can only be considered correct if it complies with the adjectival ordering scheme (see figure 1 in section 2.2.1). Truswell states that subsective adjectives precede intersective adjectives in a noun phrase but adjectives belonging to the same group (either subsective or intersective) can be ordered freely (see (12) in section 2.2.2).

In this study, a distinction was made between three groups of adjectives:

- One subsective adjective and two intersective adjectives
- Two subsective adjectives and one intersective adjective
- Three intersective adjectives

The first group of adjectives consists of sentences containing one subsective adjective and two intersective adjectives.
Q1-E3\textsuperscript{10} She finally bought her wedding dress. She has been looking for it for so long. She couldn’t make up her mind about what she wanted. Eventually, she bought a … dress.

All the graphs in both English and Dutch show the same pattern in which it becomes evident that the subsective adjective (*size*) is preferred in the first position and the two remaining intersective adjectives (*colour*, *material*) can be ordered freely \{1\}+\{2\}. This supports Truswell’s claim that subsective adjectives precede intersective adjectives and adjectives in one group are interchangeable. These results do not entirely support Scott’s claims because according to his AOS only one of the options is correct \{1\} whereas the participants deem \{2\} to be correct as well. Since the results are consistent for all three example sentences, it is questionable whether Scott is right about the rigid order selected by the AOS.

The second group of adjectives consists of sentences containing two subsective adjectives and one intersective adjective.

\textsuperscript{10} This is only one of the three example sentences to save space, so the readers can familiarise themselves with the results without having to turn back to section 4. The graphs for the other examples are very similar (see section 3.2). I will only present one graph per subsection and indicate if the other graphs deviate from the one presented here.
Q1-E6  I won some money in a lottery, so I bought a … TV.

The Dutch graphs show the difference between two correct orders {1} + {6} even more evidently than the English graphs. However, even in the English graphs it becomes clear that two orders are considered to be correct, while four of them are not. Either one of the two intersective adjectives (size, quality) should be in the first position while the remaining adjective should follow in middle position and the final position should be filled with the intersective adjective (colour). These results support Truswell’s claims that adjectives which belong to the same group (either subsective or intersective) can be ordered freely and it is also consistent with his view that subsective adjective precede intersective adjectives. According to Scott only option {5} is correct because it follows the order suggested by the AOS. The participants regard option {1} to be correct as well which does not comply with Scott’s claims. Once again the rigid order of the AOS proposed by Scott is challenged by the native speakers’ judgements.

Finally, the third group of adjectives consists of sentences containing three intersective adjectives.
My best friend went on holiday and come home with these ... boots. They look amazing!

All the graphs in both English and Dutch show the same pattern in which it becomes evident that the material adjective cannot be placed in the first position {5} + {6}. When examining the results even more closely it becomes clear that the material adjective is preferred to be the final adjective {1} + {4} although it is also considered to be correct in the middle position by the majority of participants {2} + {3}. Scott’s views are once again not supported by the results as according to him only order {4} would have been correct. The results clearly show that the participants deemed more options to be correct so Scott’s arguments about having to follow the AOS or native speakers will regard the order as ungrammatical have not held themselves up against our results. Truswell states that adjectives belonging to the same group (either subsective or intersective) can be ordered freely. That is not the case here though, since the material adjective cannot be placed in every position and still be considered correct. It is important to note that the distinct behaviour of material adjectives is not due to language-specific properties of the two languages under investigation. In section 3.1.1, it is pointed out that that there is a difference between English and Dutch adjectives. This difference has to do with agreement as Dutch adjectives exhibit agreement with their noun, while the English adjectives do not. Material adjectives are an exception: in Dutch the material adjectives do not show agreement thus this phenomenon could not have caused the different behaviour of the material adjective as opposed to other types of adjectives. The fact that the material adjectives also shows different behaviour in English, where agreement never obtains
between adjectives and nouns, supports the argument that this inconsistency with the material adjective could not have anything to do with the syntactic phenomenon of adjectival agreement.

5.1.2 Adjectives in noun phrases with contrastive orders

When emphasis is put on one of the adjectives more orders become available (Cinque, 2005; Cinque, 2010). Contrastive adjectives can be placed in various positions and these positions reflect on the structure of NPs. Contrastive orders could reveal more about these structures, namely if there is a Focus Phrase (henceforth FocP) dedicated to contrastive elements. Two contrasting views expressed by Truswell (2005) and Szendrői (2010) were compared when examining contrastive adjectives. Truswell claims that the correct way of using a contrastive adjective is to have it before all other adjectives. He states that the contrastive adjective cannot stay in-situ but has to undergo movement to the left. The leftward moving contrastive element targets a focussed position in the noun phrase, which he dubs, the Focus Phrase (or FocP). Szendrői agrees with Truswell that movement of contrastive adjectives to the left is possible, however, she does not share all of Truswell's views and goes against his ideas by claiming that the adjective can stay in-situ. As long as the information after the focussed element is *given* (in the sense of mentioned before) the element does not have to move to the left. She continues that for a contrastive reading reordering is not mandatory as a contrastive intersective adjective can be marked prosodically. This makes movement to the left optional instead of a requirement to indicate contrastive focus.

In light of the results of Questionnaire II we can conclude the following: first, it does not matter which kind of adjectives (subsective or intersective) were combined, the results for all three categories were almost identical. Below the first sentence of Questionnaire II is presented with its results, but all the other results were very similar as can be seen in section 4.2.
We all have big, black jumpers, but only David has a ... jumper

This results show that there is no distinct variation between the distinct types of adjectives (subsective or intersective) combined. All graphs in this questionnaire look very similar. This shows that native speakers deem the order in which the contrastive adjective stays in-situ to be correct. In every example sentence, the vast majority of the participants claimed the adjective could stay in-situ. Szendrői stated that the adjective could either stay in-situ or move to the left towards the FocP and it seems that the majority of the participants back up her statement. It is important to note, however, that there were two very distinct groups when it came to the question whether adjectives must obligatorily move or not (see Table 6 at the end of section 4.2). It might be interesting to see whether the different in participants’ judgements are a regional or idiolectal phenomenon.

5.2 Further consequences and conclusions for theoretical research

5.2.1 Summary of findings

Taking everything into consideration, Truswell is likely to be right about his adjectival ordering method in neutral sentences. Very often the participants’ judgements supported the orders which were also correct according to Truswell. Scott was also often right, but he only considers one unique order to be correct and the native speakers clearly show this is not the case (especially when three adjectives of the same group are

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11 This is only the graph for the first sentence of Questionnaire II. The graphs for the other example sentences are very similar (see section 4.2).
presented (Q1-E7, Q1-E8, Q1-E9)). Therefore, Truswell’s claims are better supported by the native speaker judgements. However, the material adjectives seem to be an exception to the fact that adjectives are interchangeable within the same group. Truswell does not mention this in any of his works, so he is not completely correct about the interchangeability of all adjectives belonging to the same group.

When considering contrastive orders, it appears that Truswell’s claims were not correct, although a group of participants showed judgements that agreed with him. The results clearly show that a vast majority prefers the contrastive adjective to stay in-situ, whereas, according to Truswell, this should not be possible. It seems that the participants’ judgement rather agrees with Szendrői, when she states that the adjective can either stay in-situ or move to a focused position to the left. A small group may agree with Truswell’s claims, yet the majority agreed with Szendrői’s, so it appears her views are closer to being correct.

5.2.2 Conclusions for theoretical claims

Concerning the theoretical conclusions one can draw from Questionnaire I and II, the following points can be established.

The syntactic status of adjectives

As the results of Questionnaire I clearly show, Scott’s claims are not supported by native speakers’ judgements. It becomes apparent that there is not a rigid scheme that determines the order of adjectives and therefore we must conclude that the argument that adjectives are specifiers in functional projections is invalid. Note that Scott’s proposal about the specifier status of adjectives is singularly based on the alleged strict ordering of adjectives, thus the lack of such a strict adjectival ordering restriction is fatal for the proposal that adjectives are specifiers.

Adjectives are therefore likely to be adjuncts, situated in specific regions in the noun phrase, as Truswell stated. This means that the syntactic representation according to Truswell in Figure 4 is more likely to be the correct representation than Figure 2 according to Scott.
The structure of NPs compared to clauses

Since contrastive adjectives can be ex-situ, we have evidence that they occur in what looks like focus position in the left periphery of NPs. In this thesis we did not investigate whether the adjectives really show effects of movement (as opposed to e.g. base-generation in that position), but we assumed they do following Truswell (2005) and Szendrői's (2010, 2013) views. Because of this movement, we can conclude that noun phrases have a left periphery, which means that in this respect they are parallel to clauses.

Movement in NPs compared to clauses

Contrastive adjectives undergo optional movement as is shown in section 4.2. This shows a difference with for example wh-elements, which obligatorily undergo movement to the left periphery.

(29) How important a t decision is this?

The results furthermore demonstrate that there are distinct types of A-bar movement attested inside NPs: wh-movement, as in (29) above is obligatory, while the movement of contrastive adjectives is optional. This state of affairs is very similar to what we find in clauses: wh-movement is obligatory in clauses, while focus movement is only optional, as was shown before (see (30) repeated from above)

(30)  a. Bill, I invited, not Tom!
     b. I invited Bill, not Tom!

The fact that contrastive adjectives show optional reordering in noun phrases closely resembles the kind of movement in (30), and shows that contrastive phrases show parallel behaviour in clauses and noun phrases.

Universality

It is quite astonishing how much the English and Dutch graphs resemble each other in every question in the results of the two questionnaires. It seems that whatever the rules for adjectival ordering may be, the fact that there is some universal phenomenon
involved seems to be incontrovertible. Naturally, in order to speak of a universal phenomenon, many more languages have to be examined but it is obvious that the English and Dutch participants had very similar thoughts about the correct order in which to place adjectives. In my opinion this produces some evidence for the universality of the orders in which stacked adjectives should be presented.

5.2.3 Some suggestions for future research

Future research on this topic should definitely focus on universality and study adjectival ordering in more languages than just English and Dutch, to find out whether the order in which stacked adjectives should be presented is truly universal. It becomes apparent in this research that English and Dutch are very similar when it comes to stacked adjectives, but it is not possible to talk about true universality when only two languages have been compared, and two closely related languages at that.

Another topic that would need closer attention is the status of material adjectives. Material adjectives are an exception to Truswell’s prediction that adjectives belonging to the same group are interchangeable. It would be interesting to see why that is and what the rules for the material adjective should be.

Finally, it became clear that there were often distinctions in native speakers’ judgements and more research could be done to see whether these differences are a regional or idiolectal phenomenon.
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References


Appendix

Links to questionnaires

Questionnaire I

**English:**

https://docs.google.com/forms/d/1fh_51UTjAB4TA14W9aSgdraA7m9sY6xQ56jnUQj7em4/viewform?c=0&w=1

**Dutch:**

https://docs.google.com/forms/d/1r0rUpou5jWK79h8Hxh3EFclmby9Tthbszj5PdGK7hlk/viewform?c=0&w=1

Questionnaire II

**English:**

https://docs.google.com/forms/d/1w8wQzDh3TwetXF0GM4QcPyZtThF73-p4qnRfsLAnU/viewform?c=0&w=1

**Dutch:**

https://docs.google.com/forms/d/1x8yfM_Ak9i9yw7llKi6S0tO-qbz3RlPb2dHF0EnqA/viewform?c=0&w=1
Domain of givenness graphs

Q2-GiE\({}^{12}\) We all wanted a vase, but only Killian wanted a WOODEN, African vase.

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**English Questionnaire**

![Bar chart for English Questionnaire](chart-en.png)

0 5 10 15 20 25

We all wanted a vase, but only Killian wanted a WOODEN, African vase.

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**Dutch questionnaire**

![Bar chart for Dutch questionnaire](chart-nl.png)

0 5 10 15 20 25 30

We wilden allemaal een vaas, maar alleen Killian wilde een HOUTEN, Afrikaanse vaas.

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\[\text{Q2-GiE}^{\text{number}}\] represents \text{Questionnaire2 – Given information Example}(the number of the example)
We all wanted a TV, but only Rebecca wanted the SILVER, new TV.

**English Questionnaire**

![Bar graph showing responses to the English question]

**Dutch Questionnaire**

![Bar graph showing responses to the Dutch question]
Q2-GiE3  
We all liked some teapots, but only Regina liked the PORCELAIN, English teapot.

**English Questionnaire**

![Bar chart](chart1.png)

**Dutch Questionnaire**

![Bar chart](chart2.png)
Q2-GiE4  They all have a car, but only Neal has a RED, new car.

**English Questionnaire**

![Graph showing responses to the sentence in English](chart.png)

**Dutch questionnaire**

![Graph showing responses to the sentence in Dutch](chart.png)
We all looked for cabinets, but only Cora saw the BROWN, old cabinet.
They were all wearing boots, but only Liam was wearing LEATHER, black boots.

**English Questionnaire**

![Bar chart showing responses to the English questionnaire.]

**Dutch questionnaire**

![Bar chart showing responses to the Dutch questionnaire.]

Ze droegen allemaal laarzen, maar alleen Liam droeg LEREN, zwarte laarzen.