Degree Project
Level: Bachelor’s

A Corpus Study of Signalling Nouns in L2 English Essays by Swedish Students

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Subject/main field of study: English Linguistics
Course code: EN2035
Credits: 15
Date of examination: June 7, 2018

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Abstract

This study is about the structure of the noun phrases used with signalling nouns, which are abstract nouns that are hard to understand without a context. The inspiration for the study comes from work by John Flowerdew. The aim is to investigate in what type of noun phrases (NP) the signalling nouns are used by L2 English students and if the structures of these NPs tell us something about the meaning of the nouns. The material of the study is from the pioneering learner corpus the *International Corpus of Learner’s English* (ICLE). In general, it was found that the chosen signalling nouns *thing, argument, possibility, chapter, kind* and *fact*, are frequently used in complex NPs. There were some differences in the distribution of nouns, with *thing, kind* and *fact* having rather high frequencies in comparison to the other nouns. For this reason, samples of these nouns were selected for the analysis. The findings indicate that these signalling nouns rarely appear alone but are most often used in complex NPs. Furthermore, the results also show that a large proportion of these nouns is used in fixed phrases.

Keywords: noun phrase, syntax, noun phrase complexity, corpus, second language acquisition
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Appendix
1. Introduction

Nouns form the biggest word class and are therefore usually the word class a language learner is presented with first (Cambridge Dictionary). It is common the case that the nouns a learner first learns are quite concrete and easy to relate to. However, during the language acquisition process, the learner is gradually introduced to more abstract nouns, for example problem, reason, idea, etc. In this thesis, the focus is on a group of abstract nouns of English called signalling nouns. Flowerdew defines a signalling noun as “potentially any abstract noun, the meaning of which can only be made specific by reference to its context” (Flowerdew, 2003, p. 329). The focus of this thesis is on signalling nouns and more specifically on their syntax. As can be seen in the definition of signalling nouns by Flowerdew, these nouns are hard to understand without a context and therefore the interest of this study lies in the context of these nouns, more precisely on the noun phrases (NP) where they appear. The aim is to study the structure of the NPs where these signalling nouns are used and, by doing so, to answer the following questions:

- How complex are the noun phrases used together with the signalling nouns thing, argument, possibility, chapter, kind and fact used by L2 English learners?
- What kind of modifiers are used together with the signalling nouns?
- What roles do the elements of the NPs have for the interpretation of the noun?

According to Flowerdew, signalling nouns are problematic to understand for both non-native and native speakers for various reasons that have to do with cognitive complexity or pedagogical practicality (Flowerdew, 2003, p. 330). Therefore, the focus of this study is on the complexity of noun phrases that include a signalling noun in writing by second language learners. The material of this study is taken from a learner corpus, the International Corpus of Learner’s English (ICLE). The learning of signalling nouns is complicated and therefore
studying the use of signalling nouns can be useful to possibly create strategies to help understand and learn these nouns more easily.

2. Theoretical Background

In this section, the background of the study is presented. Firstly, second language acquisition is presented. Secondly, the concepts of noun and noun phrases are presented and, finally, signalling nouns are presented.

2.1 Second Language Acquisition

Second language (L2) refers to the additional language that a person is learning after their first language (L1) as a child. This so-called second language can in fact be a third, fourth or fifth language. The term target language is also generally used to refer to any language that is the aim of the learning. When studying second language acquisition researchers usually make a difference between informal L2 learning, which happens in a natural context, and formal L2 learning, which on the other hand generally happens in the classroom (Saville-Troike 2006, p. 2). In this essay, the focus is on the use of the noun phrases together with signalling nouns by second language learners that generally have learned the language primarily through formal learning in the classroom.

2.2 The Noun Phrase

The syntax of the English language has been a focus for English linguistics for a long time. When studying the syntactic structure of a language, clauses are divided into phrases, of which the noun phrase (NP) is a grammatical unit which consists of a noun as a main word (Hirtle, 2009, p. 5). Greenbaum and Quirk (1990, p. 363) define the head noun as follows:

“The head, around the which the other components cluster and which dictates concord and other kinds of congruence with the rest of the sentence outside the noun phrase.”
The other elements of a noun phrase are determinations, premodifications and postmodifications. The most common determiners are articles but pronouns and quantifications are also often used as determiners in a NP (Greenbaum & Quirk 1990, p. 74-75). Premodifications are placed before the head noun whereas postmodifications are situated after the head (Greenbaum & Quirk 1990, p. 364). A single noun is also considered as a NP, as in the following examples which illustrate different types of NPs.

1) boy
2) the boy
3) the funny boy
4) the school boy
5) the boy behind the door
6) the boy playing football
7) the boy who plays football

In all of these sample phrases, boy is the head noun. The first one is the simplest form of a NP and consists a lone head noun. The second one has the definite article the as a determiner. The third one has an adjective as a premodifier; an adjective used as an premodifier is also called an attributive adjective (Coffin, Hewings, O’Halloran, 2004 p.11). A noun can also work as a premodication, as in the fourth example. The rest of the examples consist of several type of postmodifiers: a prepositional phrase (5), a non-finite clause (6) and a relative clause (7). A noun phrase can be even more complex and consist of several pre- and postmodifications. The complexity of NPs has been studied extensively, and the definition of the complex noun phrases varies remarkably between studies and depends on the aim of the study. Generally, the simplest noun phrase only contains a head noun as in the first example above, boy. Similar kind of NPs as the examples 3-7 are considered as complex NPs in this study.

When Brunner (2013) studied noun phrase complexity and typology in British, Kenyan and
Singaporean English he categorised them according to the model from de Haan (1993). This model is also adopted in this study to categorize complex NPs. The model is presented in the Table 1:

Table 1. NP patterns based on de Haan (1993)

<table>
<thead>
<tr>
<th>Type</th>
<th>NP pattern</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prem+post</td>
<td>(DET) + PREM + HD + POM</td>
<td>The young boy that I met yesterday</td>
</tr>
<tr>
<td>post</td>
<td>(DET) + HD + POM</td>
<td>The boy of yesterday</td>
</tr>
<tr>
<td>prem</td>
<td>(DET) + PREM + HD</td>
<td>A beautiful flower</td>
</tr>
<tr>
<td>none</td>
<td>(DET) + HD</td>
<td>The boy</td>
</tr>
</tbody>
</table>

Note: Prem (PREM) stands for premodification, post (POM) for postmodification, DET for determiner, and HD for head noun.

The present study uses this classification to study the complexity of noun phrases including signalling nouns. Furthermore, complex NPs are categorized according to their modifications.

The complexity of the NPs by second language learners of English has been studied and it has been shown that the complexity of the NPs develops when the proficiency in the academic language develops (for example, Biber, Gray & Popoon 2011). According to Parkinson and Musgrave (2014), who have studied academic texts by L2 speakers at two different levels in their learning, the learners at lower levels tend to overuse adjectives as premodifiers in their academic writing whereas, at higher level, learners more often tend to use noun premodifiers. According to Parkinson and Musgrave, other types of common modifiers in academic writing by L2 speakers are relative clauses and prepositional phrases, the use of which is increasing (2014, p. 54).
Hutter (2015) is a corpus study of NP structure in student essays. Hutter focused on three types of NPs: NPs with a noun as a premodifier, NPs with an adjective as a premodifier and NPs with a prepositional phrase as a postmodifier, comparing which kind of NPs students used in different sections of their essays (Hutter, 2015, p. 56). The categorization of the NPs in this study is more detailed, based on different types of the pre- and postmodifiers (see Table 2 below).

2.3 Signalling Nouns

At the centre of this study there are signalling nouns, for which the inspiration comes from John Flowerdew’s studies of these abstract nouns. Before starting to look more closely at signalling nouns, however, it is important to consider what is meant by a noun.

Nouns can be divided into common and proper nouns, where common nouns include both countable and non-countable nouns, both of which can be divided into concrete and abstract nouns (Greenbaum & Quirk, 1990, p. 70). Flowerdew states that any kind of abstract noun that is difficult to understand clearly without the context can be considered a signalling noun. As examples he gives the following nouns: “attitude, assistance, difficulty, endurance, process, reason and result” (Flowerdew, 2003, p. 329-330). When studying the discourse functions of signalling nouns, Flowerdew’s results indicate that the meaning of the signalling noun must be sought in the text with a help of a premodifier or a postmodifiers, in the previous or following clause or outside of the text (Flowerdew, 2003, p. 333). Flowerdew has also studied the use of signalling nouns in the ICLE (2006, 2010). In one study of Cantonese native speakers writing in L2 English, he focused on the errors students made when using signalling nouns. One of his major findings was that students had problems with the preposition choices after the signalling nouns and that they had problems with the collocations with verbs and pre-modification. Furthermore, students also commonly produced errors also involving adjectives used with signalling nouns (Flowerdew, 2006, p. 354-359).
The present study does not focus on errors but on the contexts of signalling nouns, more importantly the NPs where these nouns appear.

Overall, these nouns have been studied in contexts other than as signalling nouns. Aijmer (2007) is a study on the expressions *The (adj) truth/fact/thing is (that) S*. Aijmer argues that the framework ‘Det+N+in (that)’ is used by “speakers to take up contentive positions which involve refutation, elaboration, justification and rhetorical strengthening” (2007, p. 45).

Furthermore, Wang (2016) is a corpus study about the expression ‘The (X) thing is’ and its use in spoken English. Wang’s results indicate that this is a rather common but also very recent expression in spoken English. He also took a closer look at adjectives used in this expression and found that the most common adjectives are *important, interesting, funny amazing* and *good* (Wang, 2016, p.556-558). Moreover, Jacobson (1983) studied whether modality nouns are used more often with *to+infinitive* or *of+ing-form*. Among the nouns he studied was *possibility*, which he found to be more often used in *of+ing-form* even if it also appears together with the preposition *for*. (Jacobson, 1983. 64)

Taking a different perspective, Berns and Davidse (2010) have studied the different structures of the NP *kind of/sort of*, calling them type nouns, and in their study they use a model taken from Denison where they classify these types of phrases in three binominal constructions, which means the structure *type noun + of + second noun*. They have studied the history and development of this expression over time and they found that, over time, its meaning and use have widened so that it can nowadays be used for various meanings (p. 180).

As is seen in the results of these studies, few of the nouns focused in this studies are used in fixed phrases that have also been studied before. Therefore, it is interesting to examine in what kind of contexts L2 learners use these nouns. According to the results of the Flowerdew,
and other studies mentioned above, it is accepted that these nouns often appear in complex
NPs and that the role of the modifiers is important for the reader to understand the meaning of
the signalling nouns.

3. Material and Method

In this essay, corpus material is used as a primary source and the method used in this research
is quantitative. The following signalling nouns have been chosen to be included: thing, argument, possibility, chapter, kind and fact. According to Flowerdew and Forest, these are
typical signalling nouns that have been identified in the literature and they represent the
category of signalling nouns (Flowerdew & Forest, 2015, p. 9-10). The material and the
methodology of this study are presented in greater detail in the following subsections.

3.1 Material and Method of Collection

This study focuses on the complexity of noun phrases among second language learners and
therefore the material is taken from a corpus of writing by second language learners, the
International Corpus of Learners of English, ICLE, and more precisely from the sub-corpus
consisting of texts written by Swedish L1 speakers, SWICLE. ICLE stems from a project that
was launched in 1990 in the Catholic University of Louvain in Belgium. Its aim is to offer a
broad corpus of material of argumentative essays written by different L1 speakers for large-
scale comparative studies. The Swedish subcorpus was collected in three different universities
in Sweden (Växjö, Lund and Göteborg) during the 1990s. The corpus consists of
argumentative essays written by students who studied English at university level. It is not
clear if the students have learned their English in Sweden or in some English-speaking
country, but because the material is collected in Swedish universities from students whose
first language is Swedish, it can also be assumed that the majority of the students have learned
their English in the classrooms i.e. they are formal learners of English. The corpus includes metadata for example detailing whether any of the students have spent any time studying in an English-speaking country.

The material was analyzed with the help of the concordance program AntConc (Anthony 2018). Firstly, a search for all of the chosen signaling nouns was done with AntConc. Next, the concordances were searched and the noun phrases were collected in separate file. Thereafter, some selection was made due to the fact that some of the nouns had a higher frequency than others. In the case of the noun *thing*, every fifth occurrence was chosen, while with the nouns *kind* and *fact* a similar selection was made so that every noun has 30-40 as a total frequency. Even though the frequencies are high it does not mean that all the collocations are noun phrases with the certain word as a head noun, for example the noun *fact* often appears in the prepositional phrase *in fact*. Only phrases where the signalling noun is a head noun was included to the material. In total, the material for analysis consists of 156 NPs.

3.2 Method of Analysis

After collecting the data from the corpus, the NPs were classified according to their complexity using the model from de Haan (Table 1). After classifying the nouns based on category, a closer look at the more complex signalling noun was taken, where the nouns were classified more specifically according to the types of modifiers, as reported in Section 2.2. In this phase, the simple NPs, i.e. those without modifiers, were left out. Depending on the noun, each example was divided in different types of complex NPs. The complete set of types of complex NPs are presented in Table 2:

<table>
<thead>
<tr>
<th>The type of the modifier(s)</th>
<th>Abbreviation used in the Figures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premodifying Adjective</td>
<td>Pre Adjective</td>
</tr>
</tbody>
</table>
A closer look at modifiers was taken after the classification. The final step involved looking for patterns in the use of the NPs, in this phase the aim was to find out if there are some similarities in the use of modifiers with each noun, are some modifiers more frequently used than others with each noun and if so what does this tell us about the context of the noun. The types of modifiers used together with each noun was analysed separately, in order to find out what the modifiers tell us about the use of the noun, their context and if they appear in fixed phrases. Furthermore, previous research and a dictionary were used to find out what the structure of complex NPs and their modifiers tell about the significance of the noun.

4. Results

In this section, the focus is first on the type of NPs in which the signalling nouns appear. The material is presented in Table 3 below. As can be seen in this table, the frequencies of the nouns differ slightly. The noun fact has the highest frequency, with 204 hits, while other nouns with high frequencies are thing and kind. As stated in the material section above, some selection had to be made to make the analysis manageable. In the case of fact, every sixth noun was counted resulting in a total of 34 nouns. With thing, every fifth noun and for kind every third noun was selected for the analysis. However, two of the selected nouns, chapter and argument, had remarkably low frequencies.
Table 3 Frequencies of the nouns in AntConc and frequencies of the nouns in the data

<table>
<thead>
<tr>
<th></th>
<th>Hits in AntConc</th>
<th>Data used in the analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>thing</td>
<td>176</td>
<td>36</td>
</tr>
<tr>
<td>argument</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>possibility</td>
<td>41</td>
<td>40</td>
</tr>
<tr>
<td>chapter</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>kind</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>fact</td>
<td>204</td>
<td>34</td>
</tr>
<tr>
<td>Total</td>
<td>534</td>
<td>156</td>
</tr>
</tbody>
</table>

The data from the search in the corpus is presented in numbers below in Table 4, according to the categories by de Haan (see Table 1). A closer look at every noun separately is presented in specific subsections below. As can be seen in Table 4, almost every noun appears most frequently with a modification, and it is seldom the case that a signalling noun appears alone, which was also expected. Only the nouns thing, possibility and fact appear alone, but in very low frequencies. Depending on the noun, it appears more often with a premodifier, postmodifier or both. In this phase, no overlap occurred, such that if a NP had both pre- and postmodifiers, it was counted only into the first category, which included NPs with both pre- and postmodifier. A closer look at every noun and the complex NPs is presented separately below. All examples presented below are taken from the material.

Table 4 Distribution of the signaling nouns in the material

<table>
<thead>
<tr>
<th></th>
<th>thing</th>
<th>argument</th>
<th>possibility</th>
<th>chapter</th>
<th>kind</th>
<th>fact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>freq</td>
<td>persentage</td>
<td>freq</td>
<td>persentage</td>
<td>freq</td>
<td>persentage</td>
</tr>
<tr>
<td>prem+post</td>
<td>14</td>
<td>39%</td>
<td>1</td>
<td>9%</td>
<td>6</td>
<td>15%</td>
</tr>
<tr>
<td>post</td>
<td>5</td>
<td>14%</td>
<td>7</td>
<td>64%</td>
<td>30</td>
<td>75%</td>
</tr>
<tr>
<td>prem</td>
<td>16</td>
<td>44%</td>
<td>3</td>
<td>27%</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>none</td>
<td>1</td>
<td>3%</td>
<td>0</td>
<td>-</td>
<td>3</td>
<td>8%</td>
</tr>
<tr>
<td>total</td>
<td>36</td>
<td>11</td>
<td>40</td>
<td>2</td>
<td>33</td>
<td>34</td>
</tr>
</tbody>
</table>
4.1 Thing

As can be seen in Table 4, the noun *thing* appears mostly with a premodifier, as in (1) or in NPs together with both pre- and postmodification, as in (2). NPs with only a postmodifier like (3) has the frequency of five. Furthermore, this noun also appears once alone as a simple NP.

(1) the most important thing
(2) a natural thing that the population in Sweden has certain demands concerning immigration
(3) one thing we can do meanwhile

As can be seen in Figure 1, the complex NPs involving *thing* can be divided into six different types of NPs together with a premodifier and a postmodifying relative clause, with a relative clause as a postmodifier, with premodifier and a postmodifying prepositional phrase, with premodifier and a postmodifying non-finite clause, with a premodifying adjective and finally with other types of premodifications.

![Figure 1 Distribution of the complex NPs with thing](image)

When looking at these complex NPs, we see that the most common type of NPs is with an adjective as a premodifier, as in (4). The second most common category has a relative clause as a postmodification, as in (5). However, the complex NPs with premodifier and a postmodifying relative clause, as in (6) and NPs with premodification and a nonfinite verb as
a postmodifier, as in (7) have almost as high a frequency as NPs with a relative clause. Furthermore, NPs with a relative clause as a postmodifier as in (8) constitute 14% of the material, as does the category of NPs with a premodifier and a postmodifying relative clause, as in (9). Thing appears with a relative frequency of 12% in NPs with another type of premodifier than an adjective, as in (10). The least common type of the complex NPs together with the noun thing is the NPs with a premodifier and a prepositional phrase as a postmodifier as in (11).

(4) The important thing
(5) One thing that I find very negative
(6) a natural thing that the population in Sweden has certain demands concerning immigration
(7) the best thing to do
(8) some thing we could benefit from
(9) the best thing I had ever done with
(10) the same thing
(11) the important thing in life

In general, the noun thing appears in complex NPs almost always with a premodifier. It is only together with a postmodifying relative clause when it appears without a premodifier, that is in total four times. When looking at the premodifiers it can be seen that a vast majority of those are adjectives. Of all the 35 complex NPs, 24 occur together with an attributive adjective. Adjectives that appear as premodifiers together with the noun thing are difficult, good, natural, normal, important, small, positive, right and sad. They also appear in the comparative and superlative forms, as in best or most important.

As said above, of all the complex NPs the most common context for the noun thing is with an adjective without a postmodifier, with a total of 12 occurrences. This seems to indicate that the noun thing is often used in phrases like the most important thing is... or the sad thing is... This phrase does not have a meaning in itself; the writer could have also chosen to write it is
According to the Cambridge Dictionary, the construction the thing is used either to introduce an explanation or to emphasize the importance of what the speaker is saying. According to Wang (2016), the expression (the) thing is is usually used with a modifier and the most common adjectives used in this expression are (among others) important, interesting, funny, amazing, good, of which in his material from the COCA (Corpus of Contemporary American English) the most common is important, which is similar to the findings of this study (Wang, 2016, p. 556-558).

Furthermore, another common context for the noun is with a postmodifying relative clause, with or without a premodifier. All the premodifiers used in NPs with a relative clause are attributive adjectives and the word thing does not play a big role in the meaning of the phrase. It refers to something to do, as in (9), or the importance of this noun lies mostly at the adjective, as in example (6) above. which could also be formulated it is natural that....

According to Wang, the expression (the) thing is is an abbreviation of the expression (the) thing is that... and this expression can take various forms such as (the) thing is (Wang 2016, p. 556). Aijmer also states that the expressions covered by Det+N+is (that) are semi-fixed units where the N is a slot for a shell noun, such as thing, truth and fact (2007, p. 35). In this material, when thing is used alone without a premodifier, it is with a relative clause. In these cases, the meaning of the noun is rather vague: for example, in (5) the noun thing does not contribute much by way of meaning, but rather has a similar meaning to the generic pronoun something.

4.2 Argument

The noun argument was found in the material only 11 times. Of those 11 hits, seven are NPs with a postmodifier, as in (12) and (15). Three of the NPs include a premodifier, as in (13)
and only one has both pre- and postmodifiers, (14) There are no examples of the noun appearing without modifiers.

(12) *no argument against industry or science or one argument that is positive though*

(13) *a strong argument*

(14) *our main argument on Christmas,*

(15) *an argument for the arranging of the Olympic Games in Stockholm 2004*

A closer look at the complex NPs involving this noun is presented in Figure 2, where the complex NPs are divided into seven different types, as *thing* it appears in NPs of the type: *other pre, pre+PP, pre adjective*. Besides, it also appears with a postmodifying relative clause, with postmodifying prepositional phrase, with several premodifiers, and finally with a postmodifying non-finite clause.

![Figure 2 Distribution of the complex NPs with argument](image)

In general, as can be seen in the Figure 2, this noun has a wide range of variations in complex NPs, especially considering its low frequency as this noun only has a frequency of 11 and these 11 NPs can be divided into seven different categories. As the figure above shows, the most common context for this noun is together with a postmodifying prepositional phrase as in (15), which appears in 37% of the occurrences. This noun appears also twice with a
premodification and a prepositional phrase, as in (14). In the rest of the categories it only appears once.

Due to the low frequency of this noun in the material it is hard to draw any concrete conclusions. However, it can be stated that this noun is always used in complex NPs in the material and does not appear alone. The only context where argument appears more often than once is together with a prepositional phrase, with or without a premodifier. According to the Cambridge Dictionary, this noun has two different meanings: it can either mean the argument as a reason or motivation for or against something, or it can mean a disagreement. The material indicates that the noun argument is used in the first sense above. For example, in (15) above, argument has the meaning “reason”. An argument can be for or against something which can also be seen in the material; prepositions used together with this noun are for or against. One writer has also chosen to use the preposition on, our main argument on Christmas which seems to be accepted use according to the Cambridge Dictionary. Another context used in the dictionary together with this noun is a relative that-clause, which is also used in the material.

3.3 Possibility

Almost 80% of the NPs together with the noun possibility appear together with a postmodifier, as in (16). The next most common type of NPs are the ones with both pre- and postmodifiers, as in (17) This noun is also exceptional compared to other nouns because it appears more often without modifiers than with only a premodifier.

(16) a possibility to support the environment through buying from companies which sell environment friendly articles

(17) a greater possibility of segregation
The variation of the complex noun phrases where this noun appears is presented in Figure 3 below. It appears in seven different types of complex NPs which are mentioned above with *thing* and *argument*.

![Figure 3: Distribution of the complex NPs with possibility](image)

The majority of the complex NPs, 46%, appear together with a postmodifying non-finite clause, as in (18). The second most common context for this noun is with a prepositional clause, as in (19). Both postmodifying prepositional phrases and a postmodifying non-finite clauses appear also with a premodifier, but they are often used without premodifiers. In total, 8% of the complex NPs are together with a premodifier and a postmodifying prepositional phrase, as in (17) 5% of the NPs are together with a premodifier and a prepositional phrase, as in (20). It only appears once in other types of NPs.

(18) *the possibility to escape from them*

(19) *woman’s possibility of controlling her*

(20) *the same possibility to choose*

(21) *a possibility for unrestricted travelling and new educational opportunities*

In conclusion, it is noted that a large majority, 68% of the complex NPs, appear together with a postmodifying prepositional phrase or a non-finite clause. When it comes to the prepositional phrase, the preposition is *of*, except for one hit, and this is in the expression
“possibility of + ing-form”, as in (19). One student has chosen to use the preposition for in the same kind of expression (21). Jacobsen found that possibility is used both together with of +ing-form and with the infinitive. In contrast to the material of this study, he states that possibility is more often used in construction of+ing than with the infinitive. However, he also states that other prepositions that appear together with this noun is for, which also appeared in this study (Jacobson, 1983, p. 64-65).

4.4 Chapter

This noun chapter appears only twice in the material as a whole. Both occurrences involve complex noun phrases, one with a premodification and a postmodifying prepositional phrase, (22), and the other with an adjective as a premodification, (23). Due to the low frequency of this noun further analysis will not be pursued.

(22) first chapter of one of the finest graphic novels yet to have been published
(23) a boring chapter

4.5 Kind

The noun kind appears almost with an equal frequency with pre- and postmodifications. Pre-modification is exemplified in (24) and postmodification in (25). It appears four times together with only a premodification, as in (26). It also appears once without modifications alone with a determiner, as in (27).

(24) a strange kind of work
(25) these kind of movements
(26) a different kind
(27) this kind
(28) the same kind
The different types of complex NPs together with the noun *kind* are presented in Figure 4 below. It appears in five different kind of NPs.

![Figure 4 Distribution of the complex NPs with kind](image)

The most common context for this noun is together with a premodification and a postmodifying prepositional phrase, as in (24), which has a raw frequency of 16 out of 33. A category almost as common as the first one is the NPs with only a prepositional phrase as an postmodifier, as in (25). In total, 85% of the nouns appear with a prepositional phrase, and the preposition is always *of*, as in the examples above. The other types of complex NPs are not common. It appears twice with a premodifying adjective, as in (26), and with another type of premodifier, as in (28). At the end, the material indicates that the noun kind is often used in an expression *(X) kind of*... 

When Berns and Davidse (2010) studied different structures of the NP *kind of/sort of*, calling them type nouns, classifying these types of phrases in three binominal constructions, which means the structure *type noun + of + second noun*. Firstly, they present the binominal construction of the NP, as in (24), where the head noun appears together with a premodifier and a postmodifier. Secondly, they take up a NP with another type of determiner as in (25)
and say that in this context kind is demoted from head status and kind of together with the premodifier forms a complex determination. Thirdly, they present the case when kind appears only with a prepositional phrase, as in (29). Kind in this expression explains that this person reminds us of the language-police and acts like he or she is the language police. As Berms and Davidse also state in this case, kind “tones down this possibly offensive classification…” (2010, p. 180-181). As can be seen, all three types of the kind of phrases are represented in this study.

(29) a kind of language-police

4.6 Fact

This noun fact appears most often, with a high majority of 74%, with a postmodifier as in (30). In contrast to the other nouns, this noun also appears quite often alone, with a relative frequency of 15%. It does not appear often with a premodifier, as in (31): only three times. Nevertheless, most seldom it appears with a pre- and a postmodification, only once, as in (32).

(30) the fact that the earth's resources are finite
(31) a well known fact
(32) The simple fact that the Swedish government has got less money to 'spend'

The distribution of the complex NPs together with this noun is quite narrow. There are only three different types of complex NPs which are presented in Figure 5 below.

![Figure 5 Distribution of the complex NPs with fact](image-url)
The vast majority of the NPs, totalling 86%, consisting of 25 NPs from the total 29 complex NPs, appear with a relative clause, as in (30). 10% of the complex NPs consists of a premodifying adjective, as in (31). The noun appears only once in a complex NP with a premodifying adjective and a relative clause, (32). Aijmer (2007) does the comparison between the phrases the thing is that... and the fact is that.... The high frequency of this noun with only a determiner also indicates to the frequent use of the expression the fact is.... Moreover, when looking at the results of this study, it can be seen that these phrases have developed differently, where the phrase the thing is that... has lost the use of the relative phrase after and instead is often used in only like the (X) thing is.... whereas the noun fact almost always appears with a relative phrase and, when it does not, it is together with an adjective attribute, which is the most common context for the noun thing. However, Aijmer has studied the expression the fact is that..., where the NP is the fact alone, which presents 15% of the hits, and this could indicate to this type of use of the noun.

4.7 Discussion of the Results

The purpose of this section is to take a closer look at the results of this study in general and discuss the patterns found in the use of the complex NPs in general. First of all, almost all of the signalling nouns appear very seldom in simple NPs. As was shown in Table 4, depending on the verb, it usually appears most often with premodifier, postmodifier or both. All the signalling nouns except thing and chapter appear most often with a postmodifier. According to the definition of a signalling noun, the meaning of each noun must be explained with the help of premodifiers, postmodifiers, in the previous or the following clause, or outside of the text (Flowerdew, 2003, p. 333). For this reason, it was also expected that the signalling nouns would be found so seldom in simple noun phrases, which also was the case. When it comes to the different types of complex NPs, the distribution among categories is presented in Table 5.
As can be seen in Table 5, 146 of the 156 NPs are complex NPs. And, when examining the distribution more closely, it can be seen that the most common context for the signalling nouns in general are with relative clauses as a postmodiﬁer. An even bigger part, 35%, of the NPs appear together with a postmodifying preposition phrase when including both with (16%) and without premodiﬁcation (9%). When Hutter studied the NP structure in student essays she found that the most common type of NPs was with no modiﬁcation, but other common types were with attributive adjectives and prepositional phrases. However, she studied certain types of noun phrases in general with all types of nouns (Hutter, 2015, p. 58). In earlier studies it has been found that prepositional phrases are the most common postmodiﬁers, and the most common preposition in the preposition phrase is deﬁnitely of (Parkinson & Musgrave, 2014,
p. 49). According to the results, together with these signalling nouns the other common modifiers are non-finite verb clause and attributive adjective.

Nevertheless, it is important to note the fact that the frequencies of the signalling nouns in this study are not the same, and that some of the nouns appear remarkably more often in certain categories. For example, of these 34 NPs with a relative clause 74% are NPs together with the noun *fact*. As well as all the 17 NPs with a non-finite verb clause as postmodifier represent NPs with *possibility* as a head noun. It can be stated that the distribution of the NPs in these categories has a great deal to do with which kind of expressions they are often used. The results indicate that many of these signalling nouns are used in fixed expressions (e.g. *the thing is, kind of*) and, therefore, for each noun one modifier dominates the frequencies, which depends on the expressions where the noun appears.

When looking more closely at the distributions, one fact that can be stated is that the noun *thing* is the noun that is distributed most widely in all categories. It is also the noun that appears in 62% of the NPs with an adjective as a premodifier. So, even tough *thing* appears in various types of NPs, it also appears often with an adjective attribute with or without a postmodifier, in total 69% of complex NPs are together with an adjective attribute. When examining more closely the collocations where *thing* appears together with an adjective one pattern becomes evident: this noun appears often in phrases such as *The important thing is*.... According to previous studies (Wang 2016), this expression is very common in modern spoken English, but it is interesting that it is so common in academic texts by L2 English writers.
One of the nouns has an especially wide variation of the complex NPs, namely the noun argument. However, in the NPs including argument there is no indication of any common patterns used as was the case for example with thing. Yet, it is possible that this is due to the low frequency of this noun. Those signalling nouns that have higher frequencies show a tendency to appear in established phrases. Firstly, thing usually appears in the phrases (the) X thing is... A similar pattern was found together with the noun fact that is often used in phrases like (the) fact that.... These phrases also have a similar kind of meaning. Both of these nouns also appear alone with a determiner which could indicate that they are used in expressions such as the thing/fact is.... As with the nouns thing and fact, the noun possibility is also often used in established phrases either with an of-prepositional phrase or with a non-finite verb clause with an infinitive verb (see examples in 3.3). A similar kind of pattern is found in the use on the noun kind that appears often with the preposition “of”, as in a different kind of angle.

5. Conclusion

In this study the aim was to examine in how complex NPs occur with the signalling nouns, thing, argument, possibility, chapter, kind and fact, what kind of modifiers are used in the complex NPs, and what roles the elements of the NPs have for the interpretation of the noun in texts by learners of English as a second language. This study was performed with the help of a learner corpus, the SWICLE, and with the use of the concordance program AntConc. The frequencies for each of these nouns were determined and then a selection process for the nouns that had a very high frequency was applied. The high-frequency nouns were thing, kind and fact. For these the frequency totals were limited to a maximum of 30-40 hits for each noun.
Generally, it can be stated that these nouns are typically used in complex noun phrases, as only 10 of the total 156 NPs are simple noun phrases. According to Flowerdew’s definition of signalling nouns, they are nouns that are hard understand without their context, which is why it was expected that these nouns would seldom appear alone. When looking at the different type of NPs, it is seen that the signalling nouns often appear with a postmodifier; only one of the nouns appears as often with a premodifier as it appears with pre- and postmodifier, and that is thing. Moreover, it depends on the noun, what are the common modifiers used together with it.

Overall, different types of complex NPs were found. Common postmodifiers were prepositional phrases, relative clauses and non-finite verb clauses. On the other hand, the premodifiers were not so variable, but the most common premodifier was an attributive adjective, with or without a postmodifier. Furthermore, nouns that appear often in the NPs with a relative clause (either with or without a premodifier) are the nouns thing and fact. Another type of NP that was common is NPs including prepositional phrase as a postmodification (this also with or without a premodifier). This was common with argument and kind. The noun possibility, by contrast, appears most often with a prepositional phrase or a non-finite verb clause. Attribute adjectives appear together within NPs with all of the nouns.

Moreover, when looking more closely at the complex NPs some patterns in their use were found. For example, the noun thing usually appears in constructions like the (adj.) thing is... or together with one/a (adj) thing (that).... A similar kind of pattern was found in the noun fact, which also has the narrowest distribution appearing only in three different types of NPs. Fact appears almost always with a relative clause (see examples in 4.6) The material indicates that fact is often used in the phrase (the) fact that.... In conclusion, both thing and fact are
used in similar types of NPs to present an opinion, to conclude an opinion or an alternative point of view.

Patterns were also found in the noun *possibility* which almost always appears in a prepositional phrase and especially with the preposition *of* often followed by a verb in a *ing*-form or together with a non-finite verb in infinitive form. Another pattern was found in the distribution of the noun *kind*, as it appears almost always in the NPs with a prepositional phrase (see examples (24) and (25) in 4.5).

To conclude, the fact that the frequencies of these words are so varied, with some having frequencies of over a hundred and others appearing only twice, it is difficult to draw a firm conclusion. One solution could have been to find signalling nouns that appear with an almost equal frequency in the material. In future work, this type of study could be expanded to look more closely at other signalling nouns as well. Also, a comparison between written material by second language speakers and by native speakers would be interesting. Such a study could be done with comparison of nouns in academic written language in for example the British National Corpus (BNC), as done in Brunner (2013).
References


Appendix The data according to head nouns

a difficult thing to do
a good thing for all of us
a natural thing that the population in Sweden has certain demands concerning immigration
a normal thing to do
a very good thing in many ways
important thing that I hope
only one final thing to say in this argumentation
the best thing I had ever done
The best thing that the industrialized countries could do
the best thing to do
the important thing in life
the most difficult thing we can do
The most important thing
The only positive thing out of a recession that I can think of
a thing he knew
Another thing one must remember
One thing that I find very negative
one thing we can do meanwhile
some thing we could benefit from
a good thing
One important thing
small thing
The important thing
The important thing
the most important thing
the right thing
the right thing
the right thing
The sad thing
the whole thing
the whole thing
no such thing
no such thing
the same thing
the same thing
the thing
an argument for the arranging of the Olympic Games in Stockholm 2004
One last and important argument
This last argument
our main argument on Christmas
no argument against industry and science
One argument for longer prison terms
only one argument needed for the traditional way of celebrating Christmas
one argument that is positive though
The only argument against celebrating Christmas abroad that I can think about now
a strong argument
the argument for putting people in prison in order to protect society
The fearful possibility that the money we contribute in this case might end up in the pockets
of the Somali clan militias and armed groups
a possibility that things go to far
a possibility for unrestricted travelling and new educational opportunities
no possibility of escaping from it
woman's possibility of controlling her
Sweden's possibility of influencing the EC-countries
The possibility of annihilating a culture or the Swedish culture
the possibility of going abrod for a year or two either to study or to work
the possibility of influencing and perhaps changing things in other EC-countries in return
the possibility of copying genes of beautiful people
the possibility of withdrawing the UN trroups
the possibility of helping their children
the possibility of assimilation
the possibility of calling yourself doctor or attorney
an enormous possibility
the same possibility to choose as we think they do
a glorious possibility to exchange students and scholars all around Europé
the possibility to relax and "digest" all the new impressions and knowledge you work
yourself through in a course as A60
the possibility to get aquatinted with all these fascinating people at a theatre
the possibility to influence different mindsets
the possibility to acquire education in foreign countries
the possibility to be Eliza, Desdemona and Marilyn Monroe
the possibility to escape from them
the possibility to compare how different cultures organize their society
the possibility to heal the more or less broken ties with families and relatives in West or East
Germany
the possibility to escape to a safer place
the possibility to come to Sweden
the possibility to move to another country to start anew
the possibility to choose.
the possibility to choose whether they want to work or stay at home with their children
a possibility to get a better understanding and a deeper knowledge of a particular subject
a possibility to achieve completion, to be able to use all our strength and to bring joy into
the world
a possibility to support the environment through buying from companies which sell
environment friendly articles.
no possibility what so ever to go to Sweden or any other country in our peaceful and well-to-do part of the world
a greater possibility of segregation
less possibility of merging with the native population
the mere possibility of a civil war
a possibility
a possibility
an possibility
the first chapter of one of the finest graphic novels yet to have been published
a boring chapter
kind of tabu
a kind of eternal life
a kind of language-police
a kind of motor in life
the kind of job you like
this kind of information
this kind of miserable confrontation between the Indians and the Europeans
these kind of things
the kind of food that satisfies the soul
what kind of citizens
these kind of movements
what kind of clothes
a different kind of angle
a different kind of nationalism
a special kind of humour
a strange kind of work
a different kind of angle
Another kind of ending
another kind of knowledge
any kind of magic
some kind of identification between a viewer and a character
some kind of supervisor
the same kind of anxiety for the future
the same kind of food
the same kind of problems
the same kind of shows
some other kind of entertaining act to satisfy the machine lovers
the latter kind of immigrant policy
a different kind
a dual kind
the same kind
some kind
the kind that can be found in various shapes all over Sweden
the fact that people throughout the centuries have used their imaginative skills to develop
more and more advanced tools to be used in everyday life
The fact that she has an artistic/philosophic mind
the fact that our children may not have a world to live in
a fact that people tend to fight harder when the battle concerns their own country
The fact that we are different from men
The fact that many Swedish 'multi-nationals' have - more or less - left Sweden a long time ago
the fact that the real loosers are our children
the fact that these people's experiences are what our contemporary society is built upon
the fact that it could be difficult to explain this "vacant" period to and employer-to-be
the fact that the lunetic will have to pay for his deed
The fact that a very large number of prostitutes existed is another sign of the hypocracy of the time
the fact that the Swedish and the British have different opinions concerning housing and heating
the fact that starvation is a problem that just won't go away
the fact that car producers must change thier manufacturing and start to think in a more environmentally friendly way
The fact that Sweden is a member of the EU
scaring fact
a well known fact
a wellknown fact