Contrastive analysis of noun + noun sequences in English and their Croatian translation equivalents

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Summary

This paper presents a contrastive analysis of English syntactic structures consisting of two nouns and their equivalents in the Croatian language. Although in theory a distinction must be drawn between noun phrases consisting of two nouns and nominal compounds also consisting of two nouns, this paper focuses on how English [n+n] structures in general contrast with their Croatian translation equivalents. A selection of authentic English corpus data was translated into Croatian and the Croatian translation equivalents were grouped into two major categories based on the formal nature of the translation equivalents: (a) Croatian translation equivalents also consisting of noun + noun structures (whereby the modifying noun in Croatian must be inflected), (b) Croatian translation equivalents which are structurally non-equivalent in taking a premodifying adjective phrase or even lengthier postmodifiers like relative clauses.

Keywords: syntactic phrase, nominal compound, translation equivalence

CONTENTS

1. Introduction

1.1. *Aim of the study*

In this paper I am going to present the differences between English syntactic structures consisting of two nouns and their equivalents in the Croatian language. The paper will consist of two major parts; the theoretical and the research section. In the theoretical part, I will present differences between noun phrases consisting of two nouns and nominal compounds also consisting of two nouns, however, in the analytical part of the paper I will not differentiate between these structures. The main part of this paper will be a corpus study in which I will compare English [n+n] structures with their Croatian translation equivalents. The data will be grouped into categories based on the formal nature of the Croatian translation equivalents, i.e. some Croatian translation equivalents will also consist of noun + noun structures (whereby the modifying noun in Croatian must be inflected), others are structurally non-equivalent in taking a premodifying adjective phrase or even lengthier postmodifiers like relative clauses.

1.2. *Structure of the paper*

As I have already mentioned above, this paper includes two parts, the theoretical and the research section. The theoretical part (given in Section 2) includes the definitions of noun phrases and compounds and provides a detailed explanation of the differences between the two. In Section 3, I will explain the methodology applied in the analytical part of the paper.

The analytical part of the paper will provide a classification of Croatian translation equivalents of English [n+n] syntactic structures. The basis for the classification is the formal nature of the Croatian translation equivalents. The paper concludes with Section 5 where a summary of the main ideas and findings of the paper is given.

2. Theoretical background: differences between syntactic structures consisting of two nouns

2.1. *Free noun phrases*

Of special importance for the present paper are noun phrases which consist of two nouns. One possible analysis is to see them as free phrases where the choice of the premodifying noun is more or less unconstrained. In this section I will present the basic characteristics of noun phrases and provide a closer look on free noun phrases and their differences relative to compounds. One can define noun phrases as phrases with nouns or pronouns as heads and modifiers serving as differentiators. According to *Longman Grammar of Spoken and Written English:* "The basic points on phrase constituency can be summarized as follows: Words make up phrases, which behave like units. Phrases can be identified by substitution and movement tests. Differences in phrase structure correlate with differences in meaning. Phrases can be embedded at different levels." (Biber et al. 1999: 95).

Furthermore, the core of noun phrases consists of the head and the determiner for they cannot be omitted without the noun phrase losing its identity: "Both head and determiner are normally required, and neither can be omitted without destroying the identity of the noun phrase (e.g. *a boat* v. **a* and **boat*, *the event* v. **the* and **event*)" (Biber et al. 1999: 240). Biber et al. (1999: 241) explains how the head noun makes it clear what sort of entity is being referred to (e.g. *boar*, *cat*, *plane*, etc.), while the determiner specifies the instance we are talking about (*a boat*, *this boat*, *his boat*, etc.).

Another point of agreement among grammars is that the dependents (premodifiers and postmodifiers) are parts of noun phrases that can usually be omitted without disrupting the structure and basic meaning of the phrase (e.g. *his $3.5 million maxi-yacht* v. *his maxi-yacht* and *his arrival in Hobart* v. *his arrival*) (Biber et al. 1999: 240; Huddleston and Pullum. 2002: 326).

In order to discriminate between noun phrases consisting of two nouns and compound nouns one must know that component parts of compound nouns cannot be subjected to coordination and modification (e.g. a. **[ice- and custard-]creams*, b. *ice-creams and custard-creams*, a. **ice-[lollies and creams]*, b. *ice-lollies and ice-creams*) (Huddleston and Pullum. 2002: 449). Component parts of noun phrases, on the contrary, can be modified and subjected to coordination as one can see in the following examples (a. *[new and used] cars*, b. *two [south London] colleges*) (Huddleston and Pullum 2002: 449). While these kind of tests are sometimes regarded as inaccurate, i.e. as being unable to provide a clear division between composite (free phrase) nominals and compounds consisting of two nouns, they do help to

discriminate between the two in many cases and hence they cannot be completely disregarded.

As this section showed, one can differentiate nominal structures from compound nouns using tests of modification and coordination. However, those tests are not reliable in all cases and for that in the next section I will add more pieces of information on compounds and propose more ways for differentiating compound nouns and nominal structures.

2.2. *Compounds*

The simplest definition of compound would be that it is a unit consisting of two or more bases. It is only logical to assume that both of the consisting units can be nouns. However, as already mentioned above, this definition does not resolve the problem of distinguishing such compounds, where two bases combine in order to form a single word, from syntactic structures in which bases denote separate words in a syntactic construction (e.g. i) *greenhouse, sweetheart, cotton-plant, newspaper* [morphological compound], ii) *green house, sweet taste, cotton shirt, quality paper* [syntactic construction]) (Biber et al. 1999: 444, Huddleston and Pullum. 2002: 1644).

Huddleston and Pullum (2002: 1644) provide the examples given above in [i] and [ii] to illustrate the difference between the two structure types. The authors use a number of additional criteria. First, there is orthography. One can notice that the examples in [i] are written as single words. Examples in [ii] are, on the other hand, written separately: "Those in [i] are written as single words, while those in [ii] are written as word sequences." (Huddleston and Pullum 2002: 1644). However, there are many cases which prove the unreliability of the last criterion: "Orthography does not provide decisive criterion because in many cases there are alternant forms: *daisy wheel*, *daisy-wheel*, or *daisywheel*, for example. And there are compounds, such as the above *full stop*, that are written as two orthographic words." (Huddleston and Pullum 2002: 451). Furthermore, they differentiate the two by the stress placement: "…those in [i] are pronounced with the main stress on the first component while those in [ii] have it on the second…" (Huddleston and Pullum 2002:1644). As it was the case with orthography test, stress test also does not prove as being reliable: "In the first place, there are many combinations that clearly pass the test for composite nominals that have primary stress on the first element – forms like *biology teacher, cooking apple, television screen,*

income tax. Conversely, there are some compounds, such as full stop ("period") or, for many speakers, *hotdog*, that have stress on the second element." (Huddleston and Pullum 2002: 451). Lastly, the authors use a modification test in order to present the contrast between the previously provided examples in [i] and [ii]: "…those in [i] exclude modification of the first component while those in [ii] allow a very wide range of modification such as is found elsewhere with phrases headed by adjectives or nouns – compare *an unusually bright green house, a very much sweeter taste, an Egyptian cotton shirt, a better-quality paper than I'd expected*." (Huddleston and Pullum 2002: 1644).

Huddleston and Pullum illustrated the working of the criteria shown above by submitting the composite nominal *black bird* ("bird which is black") and compound noun *blackbird* ("species of bird") to stress, orthography, meaning, and productivity tests: "STRESS: the composite nominal has primary stress on the second element (black-'bird), while the compound has it on the first ('blackbird). ORTHOGRAPHY: the composite nominal is written as two orthographic words, the compound as one. MEANING: while the meaning of the composite nominal is straightforwardly predictable from the component parts, that of the compound is not – it is specialised, denoting a particular species. PRODUCTIVITY: in the composite nominal the dependent can be replaced by any other adjective that is semantically compatible with the head, whereas there is a quite limited number of compounds with the form Adj + bird." (Huddleston and Pullum 2002: 451).

However, Huddleston and Pullum also state that both syntactic tests and non-syntactic criteria are far from perfect, Still, they prefer syntactic tests to non-syntactic criteria in the majority of cases where the results are conflicting: "The correlation between these criteria and the syntactic tests of coordination and modification is, however, very imperfect, and since we are concerned with the delimitation of a syntactic construction we will naturally give precedence to the syntactic tests in the many cases of divergent results." (Huddleston and Pullum. 2002: 451).

In Section 4 we turn to the contrastive analysis of the English [n+n] sequences, regardless of their syntactic status as free phrase vs. compound and their Croatian translation equivalents.

3. Methodology

3.1. *On the Corpus*

Since this paper is based on an empirical analysis of corpus data, a few words on the data selection are in order. Firstly, I have chosen to do the corpus study using the *Corpus of Contemporary American English* (COCA), which is a large, balanced corpus of contemporary American English. The targets of the study were English [n+n] syntactic structures which were later translated into Croatian in order to provide their equivalents. After narrowing down the results of search to approximately ten thousand examples and ordering them by the frequency of appearance in the corpus, I extracted a sample of two hundred and fifty examples (among the more frequent ones) and translated them into the Croatian language. The translated structures were grouped into categories which are based on the formal nature of Croatian translation equivalents. The tables provided in sections 4.1., 4.2., and 4.3. show thirty examples of each major group of translation equivalents of English [n+n] syntactic structures.

3.2. *Translation equivalence*

The method which I used while conducting the research is translation equivalence. In order to compare English [n+n] syntactic structures with their Croatian equivalents, I had to translate them. The assumption before translating syntactic structures into Croatian was that many equivalents will consist of noun + noun structures whereas one of the nouns (modifying) will be inflected. I have also assumed that another significant group of equivalents will consist of adjective + noun structures whereby the adjective would be premodifying the noun.

In the following section I will provide thirty most frequent English [n+n] structures per group according to their Croatian equivalents.

4. Analysis of corpus findings

4.1. *Croatian translation equivalents (adjective + noun)*

English [n+n] syntactic structure	Croatian translation equivalent (adjective + noun)
health care	zdravstvena skrb
living room	dnevna soba
executive director	izvršni direktor
interest rates	kamatne stope
phone calls	telefonski pozivi
health insurance	zdravstveno osiguranje
blood pressure	krvni tlak
death penalty	smrtna kazna
credit card	kreditna kartica
heart attack	srčani infarkt
climate change	klimatska promjena
press conference	novinarska konferencija
public opinion	javno mišljenje
phone number	telefonski broj
school system	obrazovni/školski sustav
insurance companies	osiguravajuće kuće
school year	školska godina
kitchen table	kuhinjski stol
room temperature	sobna temperatura
hotel room	hotelska soba
control group	kontrolna skupina
birth control	kontracepcijska sredstva
post office	poštanski ured
oil companies	naftne tvrtke
football team	nogometna momčad
age group	starosna skupina
family life	obiteljski život
labor force	radna snaga
science fiction	znanstvena fantastika

My first group of Croatian translation equivalents consists of the adjective + noun structure. One can notice that the adjective is premodifying the noun as in the following example:

[1] John *Gotti made sure his family life was always separate from his work life.*

(John Gotti se pobrinuo da njegov obiteljski život uvijek bude odvojen od poslovnog.)

In this group Croatian translation equivalents are not structurally equivalent to those in the English language, since the modifier is a different word class category.

4.2. *Croatian translation equivalents (noun + noun in genitive)*

English [n+n] syntactic structure	Croatian translation equivalent (noun + noun in genitive)
law enforcement	provedba zakona
family members	članovi obitelji
breast cancer	rak dojke
oil prices	cijene nafte
crime scene	poprište zločina
weight loss	gubitak težine
test scores	rezultati testa
air pollution	onečišćenje zraka
water heater	grijač vode
education reform	reforma obrazovanja
unemployment rate	stopa nezaposlenosti
prostate cancer	rak prostate
lung cancer	rak pluća
water supply	zalihe vode
body parts	dijelovi tijela
cash flow	tok novca
speed limit	ograničenje brzine
water quality	kvaliteta vode

air quality	kvaliteta zraka
hearing loss	gubitak sluha
vanilla extract	ekstrakt vanilije
garlic cloves	češanj češnjaka
gang members	članovi bande
game plan	plan igre
energy sources	izvori energije
truck driver	vozač kamiona
skin cancer	rak kože
mortality rate	stopa smrtnosti
knee injury	ozljeda koljena

The next group of Croatian equivalents includes structures which consist of two nouns, one of which is inflected. The second noun is the modifier and it is marked by the genitive case while the first noun has the status of the head noun.

[2] *And again I don't think we realize how dangerous skin cancer really is.*

(I opet ponavljam, mislim da ne shvaćamo koliko je rak kože zaista opasan.)

This group of translation equivalents may at first appear to be structurally close to the English counterparts since in both cases we have a [n+n] sequence, however it is not. There are two important differences between the two. First, the modifying noun has a different case-marking (case-marking is not even an issue in English due to its impoverished case system). Second, the head-modifier ordering is different, as explained above.

4.3. *Croatian translation equivalents (single word noun)*

English [n+n] syntactic structure	Croatian translation equivalent (single word noun)
parking lot	parkiralište

ice cream	sladoled
dining room	blagovaonica
cell phone	mobitel
stock market	burza
college students	studenti
side effects	nuspojave
subject matter	tema
power plants	elektrane
role model	uzor
time period	razdoblje
price tag	cijena
hiding place	skrovište
railroad tracks	tračnice
fairy tales	bajke
construction site	gradilište
opposition parties	oporba
ocean floor	podmorje
light bulbs	žarulje
vacuum cleaner	usisivač
family name	prezime
business cards	posjetnica
taxi driver	taksist
town square	trg
soap operas	sapunice
tree trunk	deblo
door handle	kvaka
egg yolks	žumanjak
lawn mower	kosilica

Single-word equivalents to English target structures were also easy to come by. Namely, many English [n+n] sequences translate readily into single words in Croatian as it can be seen in the example [3].

[3] *Soon after, the assistant led me back to the parking lot.*

(Nedugo zatim pomoćnik me odveo natrag do parkirališta.)

Although this is not the focus of the analytical part of the present paper, many of the English structures above appear to be closer to compounds than free phrases (cf. *soap opera* is a name for a special TV series genre and does not allow further intervening modifiers *soap Mexican opera), in which case their replacement by single-word Croatian equivalents, rather than any kind of modifier + head equivalents seems quite natural.

4.4. *Rare translation equivalents*

As we can see from the previous sections, the easiest Croatian translation equivalents to come by consist of adjective + noun, noun + noun, and single word noun structures. While conducting the study of corpus, I had to provide some less common translations. The first one is descriptive translation, where the modifier is a relative clause. The best example for such structure would be *prescription drugs (lijekovi koji se dobiju na recept).*

[4] *Several prescription drugs were found in Whitney Houston's hotel room*

(Nekoliko vrsta lijekova koji se mogu dobiti na recept pronađeno je u hotelskoj sobi Whitney Houston.).

The example [5] displays the usage of prepositional phrase as modifier using *rights movement (pokret za prava (žena, manjina etc.)* as an example.

[5] *"Stop the hate! Stop the anti-gay politics!' Welcome to " glitter bombing,' the latest act of political theater from the L.G.B.T. (lesbian, gay, bisexual and transgender) rights movement.*

(“Stop mržnji! Stop anti-gay politici!' Dobrodišli na “bombardiranje šljokicama,' posljedni čin političkog kazališta pokreta za prava L.G.B.T. zajednice.).

Translation equivalents provided in examples [4] and [5] include a noun which is postmodified by the relative clause or prepositional phrase. One can conclude that they are structurally non-equivalent to the English [n+n] syntactic structures.

Another rare case of Croatian translation equivalent consists of two nouns, both in the nominative, e.g. *radio station (radio stanica).* One can say that this type of Croatian translation equivalents is structurally equivalent as it is practically the same as the English [n+n] syntactic structures. However, I have encountered only few of these while studying the corpus. This was expected since two adjacent nouns in the nominative is not a typical Croatian pattern. Croatian is a language that is morphologically rich and unlike English, it marks many structural relationships by morphological means, in this case, by case-marking.

[6] *And after the agreement with the local public radio station, there were more funds.*

(Te nakon dogovora s lokalnom, javnom radio stanicom, bilo je više sredstava.)

Furthermore, the few rare examples of this structural type are probably due to lexical borrowing from English, whereby the structures do not get adapted to the Croatian language system. Other examples which verge on acceptability (since there are perfectly acceptable alternatives) are English *film festival,* which is often taken over as *(Sarajevo) film festival* instead of *(Sarajevski) filmski festival*, etc.

5. Conclusion

As my analysis showed, there are four main types of Croatian translation equivalents. The first group is adjective + noun translation equivalents. The adjective premodifies the noun and both of them change for case, e.g. *living room* (N. *dnevna soba*, G. *dnevne sobe* etc.). Next, one can say that structurally English [n+n] structures and Croatian translation equivalents of this group are non-equivalent for Croatian equivalents consist of an adjective and noun, and not of two nouns as it is the case in English.

The second group includes structures consisting of two nouns. While the first noun has the status of the head noun, the second noun is the modifier and it is marked by the genitive case, e.g. *skin cancer* (N. *rak kože*, G. *raka kože*, D. *raku kože* etc.). When talking about structural correlation, we can conclude that this group of Croatian translation equivalents is not equivalent to the English [n+n] structures, although it may appear as such. Reasons for their structural non-equivalence are different case-marking of the modifying noun and different head-modifier ordering.

Section 4.3 shows us translation equivalents which are exceptional as they translate into single words in Croatian. The noun regularly changes through the cases, e.g. *side effects* (N. *nuspojave*, G. *nuspojava*, D. *nuspojavama* etc.). Furthermore, many of the English structures presented in this section appear to be closer to compounds than free phrases. For that reason it is not unnatural that they would be translated as single-word Croatian equivalents, rather than any kind of modifier + noun equivalents.

Lastly, while studying the corpus, I also had to provide some unusual translation equivalents. First is a paraphrase, in which the head noun in followed by a relative clause. The relative clause postmodifies the noun and this group is also structurally non-equivalent to the English [n+n] syntactic structures.

Second rare type comes in a form of two nouns with both of them being in the nominative. In contrast to the group in section 4.2 where the translation equivalents also consist of two nouns, the first noun remains as it is while the head noun is changing through the cases, e.g. *radio station* (N. *radio stanica*, G. *radio stanice*, D. *radio stanici* etc.). We can conclude that this type of translation equivalents is structurally equivalent to the English [n+n] syntactic structure.

To conclude, the nature of the Croatian language seems to be responsible for some of the differences among the Croatian translation equivalents. Most obviously, Croatian does not tolerate two nominative-marked nouns in a sequence, which means that none of the Croatian translation equivalents (aside from some well-established borrowings or irresponsible loan translations) is structurally identical to their English counterparts. Most typically, the target English structures translate into adj + n sequences, but also n+n (gen) sequences, single word equivalents or even more complex modification types. To what extent the different translation types correlate with the status of the English sequence as a compound or a free phrase is also an interesting question that must be left for future study.

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