

Alternative S-structure Subject Positions in English

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1. Introduction

The paper argues that specific and non-specific subjects do not occupy the same subject positions in the S-Structure of the English sentence. In fact, as argued by É. Kiss (1996), specific subjects are raised into the specifier position of a projection between IP and CP, called Referential Phrase or Topic Phrase, while non-specific subjects can stand in the specifier position of IP, representing the internal subject position.

Diesing (1988, 1992a,b) and Kratzer (1989) demonstrate that two alternative subject positions are available for bare plural nouns at the same level of representation. They argue that subjects of individual-level predicates occupy the external subject position found in the specifier position of IP, whereas the subjects of stage-level predicates stand in the internal subject position associated with the specifier of VP. Diesing (1988, 1992a,b) also shows that a bare plural noun standing in the external subject position is always understood as generic, whereas it is interpreted as existentially bound in the internal subject position. Diesing and Kratzer argue that the two alternative slots of a subject in S-structure and in Phonological Form (PF) are only available in languages with flexible word order such as German. In English, however, bare plural nouns are claimed to occupy different positions only at Logical Form (LF). É. Kiss (1996), on the other hand, argues that the subjects of the English *know*, whose subject is necessarily specific, and *be born*, whose subject is necessarily non-specific, stand in different subject positions even in S-structure.

É. Kiss (1996) relies on the following facts to account for her assumption: (a) sentence adverbials always precede non-specific subjects, while they can follow specific ones; (b) only non-specific subjects allow PP and CP extraposition; (c) non-specific subjects cannot precede the negative particle, whereas the specific ones can; (d) non-specific subjects do not allow VP-deletion and question tag formation; (e) if the subject is non-specific, an *only*, *even* or *also* preceding it can take sentential scope. These tests, in fact, argue for the fact that the subject of the English transitive verb, *know*, is raised into the external subject position, whereas that of the English verb of coming into existence, *be born*, stands in the internal subject position.

The question that this paper raises is whether or not the two alternative subject positions are available in case of other verb classes as well. Unergative verbs (*run*, *dance*, *live*), an unaccusative verb (*fall*) and some passive verbs (*be invited*, *be caught*, *be flooded*, *be photographed*, *be arrested*) are analysed with the help of É. Kiss's (1996) tests conducted on

know and *be born*. *Know* type predicates, i.e., predicates expressing mental and emotional states have been claimed to tolerate only specific subjects (É. Kiss 1995), whereas *be born* type predicates, i.e., verbs of existence and coming into being, have been claimed to require non-specific subjects (Szabolcsi 1986). This paper aims to test the behaviour of other predicate types that may allow specific and non-specific subjects alike. A property that might affect the surface position of subjects is whether they are generated as internal or external arguments of their verb. Subjects of unaccusatives and passive verbs represent the former type, and subjects of unergatives represent the latter.

In the first part of the paper I present Diesing's (1988, 1992ab) and Kratzer's (1989) theory about the existence of two subject positions, according to which there is an internal ([Spec,VP]) and an external ([Spec,IP]) position for bare plural nouns at S-structure in German and at LF in English. Then É. Kiss's (1996) study is summarized, according to which the subjects of the verbs *know* and *be born* occupy two different S-structure subject slots, [Spec,TopP] and [Spec,IP], respectively. In the second half of the paper the analysis of the subjects of unergative, unaccusative and passive verbs is presented and I argue that in case of these three verb classes the two alternative subject positions are also available.

2. Two Alternative Subject Positions

It has been suggested (Diesing 1988, 1992ab and Kratzer 1989) that two subject positions are available across languages. Subjects of certain predicates may occupy one or the other of these alternative positions depending on the type of the predicate. According to Carlson (1977), Diesing (1988) and Kratzer (1989), predicates can be divided into two major semantic classes: individual-level predicates and stage-level predicates. As argued by Milsark (1974), stage-level predicates express qualities that can be removed without causing any changes in the essential qualities of an individual, whereas individual-level predicates denote qualities that cannot be deleted without causing any changes in the essential qualities of an individual. Thus stage-level predicates denote a temporary property of the subject, whereas individual-level predicates express a permanent property of the subject.

According to Diesing (1988, 1992ab), subjects of stage-level predicates can occupy either the external or the internal subject position. In fact, subjects of some stage-level

predicates such as *be born* can stand only in the internal subject position – unless a focussed adjunct is added (cf. Szabolcsi 1986), while subjects of individual-level predicates such as *know* stand only in the external subject slot. Furthermore, on the basis of Carlson’s (1977) correlation between the classification of predicates and the interpretation of bare plural subjects, Diesing (1992a) claims that subjects of stage-level predicates can have either a generic or an existential interpretation, whereas subjects of individual-level predicates can only get a generic reading (1).

(1) a. Stage-level (existential/generic)

Firemen are available.

b. Individual-level (generic)

Firemen are altruistic.

According to Diesing’s (1992a) explanation, on the existential reading of (1a) there are firemen who are available at some point in time. The generic reading of (1a), however, expresses a natural quality of firemen; they are generally available. As for (1b), only the generic interpretation is given: generally, firemen are altruistic. Predicates such as *be born* and *know* can be distinguished in the same way with the exception that *be born* is claimed to have only an existential reading (2).

(2) a. Boys were born.

b. Boys know how to fix broken things.

The subject of (2a) is existentially bound, whereas the subject of (2b) is bound by the generic operator *Gen* and the two subjects occupy two different subject positions. Following Diesing (1992), the two subject positions can be characterized in relation to the VP as an “inner” position and an “outer” position. The “inner subject” is in the specifier of VP, whereas the “outer subject” is in the specifier of IP. On the basis of this parallel, the subjects of stage-level predicates can appear in the internal subject position¹ and be interpreted as existentially bound, while the subjects of individual-level predicates can stand only in the external subject position² and understood as generic. The latter option, i.e., appearance in the external subject

¹ According to Diesing (1988, 1992a,b), the internal subject position corresponds to the specifier of VP.

² Diesing (1988, 1992a,b) analyses the external subject position as the specifier of IP.

position under a generic interpretation, is also available for subjects of stage-level predicates. Crucially, a bare plural subject is always interpreted as existentially bound if it occupies the internal subject position, whereas it is always understood as generic if it stands in the external subject position.

According to Diesing, these two alternative subject positions are clearly represented at S-structure in languages with flexible word order such as German and Hungarian, while in English bare plural subjects are claimed to occupy different positions only at Logical Form. As opposed to Diesing's assumptions related to German, É. Kiss (1996) shows that the two alternative S-structure subject positions in German hold in English as well. Namely, the subjects of the English *know* and *be born* will occupy different positions even at S-structure.

2.1. S-structure Subject Positions in German

One of Diesing's (1992a) arguments for the existence of two alternative S-structure subject positions in German is related to the use of sentence adverbials such as the particles *ja* *doch*. Assuming that sentence adverbials appear at the left boundary of the predicate phrase (PredP), the appearance of the subject of an individual-level predicate such as *kennen* ('know') on the left of the particles shows that the NP is external to the predicate phrase; hence it is in the external subject position, while the NP subject of a stage-level predicate such as *geboren werden* (be born) appears on the right of the particle. Thus it can be assumed to be internal to the predicate phrase. These relations are shown in (3).

(3) a. daß Jungen *ja* *doch* die Romane von Karl May kennen.

that boys PRT PRT the novels of Karl May know

'that boys (in general) know Karl May's novels.'

b. daß *ja* *doch* Jungen geboren wurden.

that PRT PRT boys born were

'that boys were born.'

(É. Kiss 1996:120)

In (3a) with the subject in the external subject position only the generic reading is available, whereas in (3b) with the subject in the internal subject position the only option is the existential interpretation.

In addition, Diesing argues for the different syntactic positions of the subjects of individual-level and stage-level verbs with the help of the phenomenon of *was für* split. According to Den Besten (1985), the *was für* construction constitutes an NP with *was für* as a specifier. It can either appear as a unit (4a) or it can be split by extracting *was* (4b).

(4) a. Was für Bücher hat er gelesen?

what for books has he read

'What kind of books has he read?'

b. Was hat er für Bücher gelesen?

what has he for books read

(Diesing 1992a:372)

As Den Besten points out *was für* split can take place under one condition: the NP from which *was* is extracted must be governed by the verb. Diesing observes that with individual-level predicates such as *kennen* the extraction is not possible (5a), while the subject of stage-level predicates such as *geboren werden* can undergo *was für* split (5b).

(5) a. *Was_i wollen t_i für Jungen [_{PredP} die Romane von Karl May kennen]?

what want for boys the novels of Karl May know

'What boys want to know Karl May's novels?'

b. Was_i sind [_{PredP} t_i für Jungen geboren werden]?

what have for boys born been

'What boys have been born?'

(É. Kiss 1996:121)

By recalling the syntactic difference between the two kinds of predicates, this contrast can be explained. As the subjects of individual-level predicates are assumed to be in the external subject position, they cannot be governed by the verb, hence they cannot undergo *was für* split. The subjects of stage-level predicates, which are assumed to be in the internal subject position, are in the government domain of the verb; with these subjects *was für* extraction is possible.

É. Kiss (1993, 1995) argues that the predicates *kennen* and *geboren werden* also differ in their specificity feature, and their different specificity features can be the explanation for the fact that they stand in different S-structure positions. Following É. Kiss (1996), the fact that the external subject position can only be occupied by a [+specific] phrase which

functions as a topic can explain why the subject of *geboren werden* with a [-specific] feature is excluded from the external subject position. The specificity requirement is in accordance with the topic function because the topic serves as a position only for referents already present in the universe of discourse (É. Kiss 2002). Hence, these referents must be associated with an existential presupposition. As shown by Carlson (1977, 1978), generic plurals, which are names of kinds, are [+specific]. On the contrary, as É. Kiss (1993) argues, existentially bound bare plurals are [-specific]. Hence, they do not require existential presupposition. The subject of *kennen* and other verbs expressing a mental or emotional state carries an existential presupposition, which means that the referent of the subject is assumed to be familiar, representing a subset of a previously introduced set of referents. As a result, the subject of *kennen* must be a [+specific] NP with an existential presupposition. On the other hand, *geboren werden* and other predicates which express the existence of their subject do not allow an NP with an existential presupposition as their subject; hence their subject must be a [-specific] NP. Owing to the fact that only a [+specific] phrase can function as a topic, the external subject position associated with the topic function cannot be occupied by a [-specific] existentially bound bare plural NP.

Accordingly, the specificity feature can be the underlying explanation for the distribution of grammaticality in (5). In (5a) the non-specific reading of the sentence involving *kennen* is blocked and the specific interpretation of (5b) with *geboren werden* is missing. This correlation, in fact, can be shown in Hungarian as well, where plural NPs with a [-specific] feature have no determiner, while specific or generic NPs have the definite article. Testing the sentences of (5) in Hungarian, the specificity feature is absolutely transparent.

(6) a. Milyen fiúk ismerik Karl May regényeit?

What boys know Karl May's novels

'What boys know Karl May's novels?

b. ??Európai fiúk.

European boys

c. Az európai fiúk.

the European boys

(7) a. Milyen fiúk *születtek*?
 What boys were-born?
 ‘What boys were born?’

b. Egészséges fiúk.
 healthy boys

c. *Az egészséges fiúk.
 the healthy boys

(É. Kiss 1996:123)

The Hungarian equivalent of (5a) is to be answered with a [+specific] plural NP (see (6)). (The sentence in (6b) can only be acceptable if it is contrastively focused.) In the Hungarian equivalent of (5b), on the other hand, only a [-specific] plural NP is available as an answer (see (7)).

A phonological difference can also support the claim that the subjects of *kennen* and *geboren werden* are in different positions. Let us see the following example in (8).

(8) a. weil (‘) Jungen [_{PREDP} die Romane von Karl May kennen]
 because boys the novels of Karl May know
 ‘Because boys know the novels of Karl May.’

b. weil [_{PREDP} *(‘) Jungen geboren werden]
 because boys born were
 ‘Because boys were born.’

(É.Kiss 1996:124)

The subject of the transitive verb in (8a) seems to be optionally stressed, whereas the subject of the verb of coming into existence in (8b) must be stressed. This phonological argument can be explained by assuming a stress rule which assigns an obligatory stress to the phrase in SpecPredP. Such a stress rule has been observed in Hungarian by É. Kiss (1994, 2002), see for example (9):

(9) a. (‘) Az európai fiúk [_{PREDP} *(‘) ismerik Karl May regényeit].
 the European boys know Karl May novels
 ‘European boys know Karl May novels.’

- b. *(‘) Egészséges fiúk születtek.
 healthy boys were-born
 ‘Healthy boys were born.’

On the basis of the stress pattern of the two subjects, it can be assumed that the subject of *kennen/ismer* is external to PredP, whereas the subject of *geboren werden/születik* is in the specifier of PredP, where it is assigned obligatory stress.

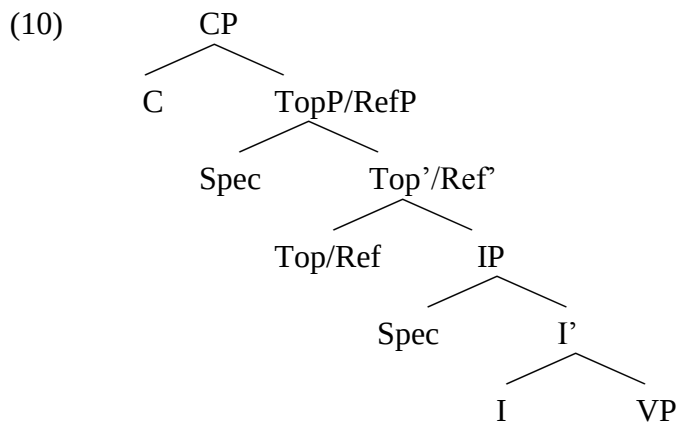
2.2 Subject Positions in English

Diesing (1988, 1992a,b) and Kratzer (1989) argue that in English the positional difference between the two predicates can hold at the level of LF as they presume that all subjects must appear in [Spec,IP] at S-structure. Thus the generalisation proposed by Diesing (1988, 1992a,b), according to which the bare plural subject in the external position has a generic reading, hence it is [+specific], whereas the one in the internal subject slot is interpreted as existentially bound, hence it is [-specific], is observed in German at S-structure but in English it is delayed until LF.

As for the syntactic properties of the two subjects, Diesing (1992a) argues that subjects of individual-level predicates are base-generated in [Spec,IP], whereas subjects of stage-level predicates are base-generated in [Spec,VP] – although in English the subject of *know* and that of *be born* occupy these different positions at LF. Her explanation is based on the fact that individual-level and stage-level predicates are associated with different inflections. Individual-level predicates have an Infl that assigns the theta-role ‘has the property x’ to [Spec,IP]. Meanwhile, the verb assigns a theta-role to its own subject, a PRO in [Spec,VP] which is controlled by the lexical NP in [Spec,IP]. Thus the individual-level predicate takes two arguments: one that is the subject NP in [Spec,IP] and the PRO subject in [Spec,VP]. Since both the lexical NP and the PRO have their own theta-roles, lowering of the subject NP base-generated in [Spec,IP] into [Spec,VP] is not possible. On the other hand, the inflection of stage-level predicates is an “unaccusative” Infl as the subject is base-generated in [Spec,VP] and no theta-role is assigned to [Spec,IP] by Infl. Similarly to raising predicates, the subject of a stage-level verb receives its theta-role in [Spec,VP] and raises to [Spec,IP] at

S-structure to receive Case. On the bases of May (1977, 1985) who shows that subjects of raising predicates such as *seem* can lower into [Spec,VP] at LF, Diesing (1992a) assumes that the subjects of stage-level verbs can also move into [Spec,VP] at the level of Logical Form.

É. Kiss (1996), on the contrary, claims that the subject of *know* and that of *be born* occupy different S-structure positions in English as well. Namely, the internal subject position is assumed to be [Spec,IP], while the external subject position is in the specifier of a projection between IP and CP, which she labels as Referential Phrase (RefP)³. RefP is, in fact, an alternative term for Topic Phrase, which I will use for labelling the external subject position. By assuming two S-structure subject positions for bare plural NPs, É. Kiss (1996) suggests the following structure:



In the framework she puts forth, the assumption of the two alternative positions of bare plural subjects is claimed to account for different facts of English. One is that the subject of *know* can precede a sentence adverbial, whereas the subject of *be born* cannot. Presuming that IP functions as the predicate phrase (PredP), sentence adverbials must be external to it to take a sentential scope. Therefore, if we assume that the subject of *be born* is in the [Spec, IP], whereas the subject of *know* is in [Spec, TopP], the distribution of the grammaticality of (11) can be accounted for.

- (11) a. [TopP Boys *luckily* [IP know the novels of Karl May]].
 b. ??[IP Boys *luckily* were born].

³ The projection Referential Phrase, dominating IP and dominated by CP, was first proposed by Stowell and Beghelli (1994).

- c. Luckily [_{IP} boys were born]. (É.Kiss 1996:129)

The claim that bare plural NPs can occupy different subject positions at S-structure in English can explain another fact as well. Relying on Guéron's (1980) observations regarding the possibilities of PP/CP extrapositions from specific and non-specific subject NPs, É. Kiss (1996) points out that the subjects of *know* and *be born* also differ in whether they allow PP and CP extraposition from NP or not. In fact, Rochemont and Culicover (1990) show that extraposition is not an outcome of a movement transformation; extraposed constituents are base-generated in their surface positions; that is, inside the predicate phrase, either in the VP, or adjoined to VP. Furthermore, extraposition is possible if the extraposed phrase and the NP are in a government relation⁴. Therefore, assuming that an extraposed constituent is adjoined to VP, it cannot be in a government relation with a phrase in [Spec,TopP] because of the IP boundary. Thus extraposition in case of *know* is predicted to be impossible (12).

(12) a. ??[_{TopP} Boys [_{IP}[_{VP}[_{VP} know the novels of Karl May] [_{CP} who like adventure]]].

b. [_{IP}Boys [_{VP}[_{VP} have been born to Mary] [_{CP} who resemble her a lot]]].

(É.Kiss 1996:131)

Negation can also make a difference between the syntactic behaviour of internal and external bare plural subjects. In fact, Guéron (1980) pointed out that a non-specific subject, such as the subject of *be born*, in the internal subject position cannot be followed by the negative particle (13a). On the other hand, it can precede the internal subject (13b).

(13) a. *Boys were not born.

b. Not a boy has been born.

(É. Kiss 1996:132)

An external subject, on the other hand, cannot be preceded by the negative particle (14).

(14) *Not John knows the novels of Karl May but Mary.

(É. Kiss 1996:132)

⁴ According to Rochemont and Culicover (1990), Complement Condition licenses the relation between the extraposed phrase and a clause-internal NP, which means that β is a potential complement of α if α and β are in a government relation.

According to É. Kiss (1996), the negative particle is presumed to stand in the head position of NegP – a projection which is assumed by her to be internal to TopP and external to IP. This predicts the ungrammaticality of (14).

VP-deletion and question tag formation also interact with the specific and non-specific subjects differently. As shown by Guéron (1980), a sentence with a non-specific subject cannot undergo VP-deletion (15):

(15) *A riot occurred and then a flood did. (É. Kiss 1996:133)

É. Kiss (1996) explains the phenomenon by identifying predicate phrase deletion as an IP-deletion. Thus IP-deletion is possible if the underlying IP of the second clause is identical with the IP of the first one (16).

(16) John will probably be reading a book on the balcony, and Mary will, too. (É. Kiss 1996:133)

Thus the ungrammaticality of (15) can be explained by the assumption that the non-specific subjects stand in the predicate-internal subject position (Spec, IP), whereas the specific subjects in (16) occupy the predicate-external subject position (Spec, TopP).

Question tag formation can also be an indicator of the syntactic difference between specific and non-specific subjects. According to Guéron (1980), a question tag, similarly to IP-deletion, is possible only in sentences with a specific subject (17).

(17) a. *A man arrived, didn't one/he?
b. *A storm occurred, didn't it? (É. Kiss 1996:133)

As for another argument for the different S-structure positions of specific and non-specific subjects, the particles *only*, *even* and *also* are claimed to apply to the whole sentence if the subject is non-specific; otherwise they apply to various phrases which they adjoin to.

(18) a. *[Only [JOHN READ A NOVEL BY KARL MAY]]; nothing else happened.
b. *We were very active on Sunday: I made a cake, and [also [JOHN READ A NOVEL

BY KARL MAY]].

- c. *We were very active on Sunday: I made a cake, and [even [JOHN READ A NOVEL BY KARL MAY]].

(19) a. [Only [A BABY WAS BORN]]; nothing else happened.

b. It was an eventful trip; [also [A BABY WAS BORN]].

c. It was an eventful trip; [even [A BABY WAS BORN]]. (É. Kiss 1996:134)

In case of (18) the particles cannot be understood as sentence adverbials; they can only apply to the NP. While in case of (19) they can not only be interpreted as applying to the NP alone but to the whole sentence as well. Thus, according to É. Kiss (1996), this distribution can be explained if the maximal phrase that the particles can adjoin to and take scope over is the predicate phrase (IP). In (18) the sentences are ungrammatical if they c-command and take scope over the whole sentence, including TopP. The sentences are acceptable if the particles are adjoined only to the subject NP. As opposed to (18), sentences (19) are grammatical because the particles are adjoined to IP so they can apply to the whole sentence.

On the whole, by testing the subjects of *know* and *be born* with the help of the above presented facts of English sentences, it can be seen that the bare plural subjects of these two verbs clearly occupy two different S-structure subject positions. In fact, in case of *know*, a verb expressing mental state, the subject must be [+specific], whereas in case of *be born*, a verb expressing coming into being, the subject must be [-specific]. Therefore, the specificity feature of these subjects can account for whether they occupy the external or the internal subject position. The question that the present paper seeks to answer is whether or not the assumption that [+specific] and [-specific] subjects occupy different subject positions still holds in case of the subjects of other verbs which allow both [+specific] and [-specific] subjects as well.

3. Unergative, Unaccusative and Passive Verbs

Having seen how the necessarily [+specific] subject of *know*, a transitive verb of mental state, and the necessarily [-specific] subject of the coming into existence verb *be born*

behave, let us focus on those types of predicates which may take [+specific] and [-specific] subjects alike.

Three types of predicates will be tested: unergatives (20), taking agent subject generated in [Spec,VP] according to Koopman and Sportiche (1991), and in [Spec,vP] according to more recent versions of generative theory, unaccusatives (21a), taking a theme subject generated in the the D-structure position of the object as shown by Perlmutter (1978), i.e., in the complement position of VP, or, in the recent versions of the theory, in [Spec,VP], and passives (21b), whose subject originates in object position and moves to the position of agent subjects.

(20) *Unergative*

Boys ran the marathon yesterday.

(21) a. *Unaccusative*

Leaves fell on my balcony.

b. *Passive*

Handsome boys have been invited to the party.

The question is whether the two subject positions identified above are available also for verb types whose subject presumably allows both a specific and a non-specific interpretation. The comparison of the behaviour of unergative subjects generated VP-externally and unaccusative and passive subjects generated VP-internally aims to clarify whether the VP-external vs. VP-internal origin of a subject correlates with its IP-external vs. IP-internal landing site.

4. The Analysis

The analysis of the subjects of the three types of predicates has been conducted with the help of É. Kiss's tests. Namely, sentences with unergative, unaccusative and passive verbs have been composed and have been tested against the following assumptions: a) sentence adverbials always precede non-specific subjects, while they can follow specific ones;

(b) only non-specific subjects allow PP and CP extraposition; (c) non-specific subjects cannot precede the negative particle, whereas the specific ones can; (d) non-specific subjects do not allow VP-deletion and question tag-formation; (e) if the subject is non-specific, *only* preceding it can take sentential scope. We tried to compose sentences in which the non-specific reading of the subjects is the primary reading. Also, it is important to note that informants were asked to avoid coercing an interpretation via contrastive focussing or comma intonation. Eventually, 30 sentences have been checked by 60 native speakers who were asked to mark the sentences as correct (OK), marked (?), marginal (??) or bad (*). In the course of the analysis, for the sake of an easier evaluation, sentences marked as correct (OK) and marked (?) have been contracted and represented as correct (OK), while sentences judged marginal (??) have been added to the ones marked as bad (*).

4.1 Sentence Adverbials

(22) Unergative: (42,5 % OK)

- a. **Girls** *interestingly* ran fastest at the Marathon.
- b. **Girls** *in my opinion* have been dancing all night in the neighbouring apartment.

(23) Unaccusative: (78,5% OK)

- a. **Wet leaves** *unfortunately* fell on my balcony.
- b. **Children** *unfortunately* fell victim to the storm yesterday.

(24) Passive: (64% OK)

- a. **Handsome boys** *luckily* have been invited to the party.
- b. **Criminals** *luckily* were caught by the police yesterday.

In case of all of the unaccusative and passive verbs, more than a half of the speakers accepted the sentences with the subject preceding the sentence adverbial, while in case of unergative verbs, almost the half of the speakers marked the sentences as OK. Presumably, those who considered these sentences correct evoked the [+specific] reading of the subjects standing in [Spec,TopP], whereas those who did not accept these sentences might

have interpreted the subjects as [-specific], standing on the right of the sentence adverbials, hence in [Spec,IP].

4.2. VP-deletion and Question Tag Formation

(25) Unergative: (82,5% OK)

- a. **Boys** ran fastest, didn't they?
- b. **Girls** live in the house next door, and old ladies do, too.

(26) Unaccusative: (89,5% OK)

- a. **Wet leaves** fell on my balcony and broken branches did, too.
- b. **Children** fell victim to the storm yesterday, didn't they?

(27) Passive: (89% OK)

- a. **Engineers** were hired by the new company, and students were, too.
- b. **Criminals** have been caught at the station, haven't they?

Considering VP-deletion and question tag formation, it has been tested whether the bare plural subjects can be interpreted as [+specific] standing in [Spec, TopP]. As the results show, most of the speakers accepted the sentences undergoing VP-deletion and question tag formation. It can be concluded that the external subject position, that is, [Spec,TopP] is available for the bare plural subject NPs of unergative, unaccusative and passive verbs.

4.3. Negation

(28) Unergative: (42% OK)

- a. *Not a girl* ran fast at the Marathon.
- b. *Not a girl* danced at the Halloween party all night.

(29) Unaccusative: (62% OK)

- a. *Not a leaf* fell on my balcony yesterday.
- b. *Not a child* fell on the ice when I looked out of the window.

(30) Passive: (43% OK)

- a. *Not a boy* is invited to the party.
- b. *Not a criminal* has been caught so far.

Based on the fact that the negative particle can precede only a [-specific] subject, sentences with indefinite subject NPs have been tested. Almost a half of the speakers considered sentences with unergative and passive verbs to be acceptable where the negative particle precedes the subject NP. In case of unaccusatives, a bit more than a half of the speakers accepted the sentences. On the whole, approximately 50% of the speakers accepted the sentences with negative particles preceding the [-specific] subjects, while the other 50% marked them as bad. Therefore, it can be assumed that one half of the speakers accept the subjects standing in [Spec, TopP], while the other half analyses the subjects as occupying [Spec, IP].

4.4 Only

(31) Unergative: (73,5%OK)

- a. *Only a boy* ran out in the middle of the class; nothing else happened.
- b. *Only girls* were dancing upstairs, nothing else could be heard.

(32) Unaccusative: (87% OK)

- a. It was a quiet afternoon; *only some leaves* fell from the tree.
- b. *Only some tunnels* were flooded; no other harm was done.

(33) Passive: (83,5% OK)

- a. *Only some classes* were cancelled, nothing else happened.
- b. *Only a criminal* was arrested, nothing else happened.

In case of *only*, it has been claimed that it tends to apply to the whole sentence if the subject is non-specific and stands in the internal subject position; otherwise it applies to various phrases which it adjoins to. Regarding these sentences, the question was whether the speakers can interpret *only* as a sentence adverbial which applies to the whole sentence, or it refers only to the subject NP which it precedes. The greater number of speakers accepted the interpretation where *only* refers to the full sentence. Therefore, presumably the subjects might stand in the internal subject position. As for the other particles, *even* and *also*, which have been discussed and tested by É. Kiss (1996), they have been left out from the present analysis for the following reasons: on the one hand, *even* and *also* are claimed to behave the same way as *only* does; on the other hand, sentences with *even* and *also* seemed much more ambiguous in terms of whether or not they function as a sentence adverbial.

4.5 PP/CP Extraposition

(34) Unergative: (24% OK)

- a. **Boys** ran fastest at the Marathon *who work out every day*.
- b. **Girls** have been dancing all night *who like pop music*.

(35) Unaccusative: (40% OK)

- a. **Leaves** fell on my balcony *which the wind blew around*.
- b. **Children** unfortunately fell victim to the storm *who were ice-skating*.

(36) Passive: (60% OK)

- a. **A boy** was photographed with dark hair.
- b. **Criminals** were caught on the spot *who couldn't escape in time*.

PP/CP extraposition has been claimed to be possible if the NP and the extraposed phrase are in a government relation, hence the NP subject is in the internal subject position. In case of unergative, unaccusative and passive verbs, the test has brought a controversial result: the majority of the speakers accepted extraposition only with passive verbs. Searching for an explanation, a few participants have been asked to comment on the sentences. After having seen the sentences for the second time, they were not sure whether the sentences were that

unacceptable. It has turned out that acceptability is also affected by factors unrelated to the specificity/structural position of the subject (e.g., by the length of the intervening material, and by the category of the extraposed phrase). Because of these open questions, the current test has been left out from the evaluation.

4.6 Summary of the Results

The tests with unergative, unaccusative and passive verbs have served to show whether or not the specific and non-specific subjects occupy different S-structure subject positions in case of the three types of predicates. The position of sentence adverbials, as well as the possibility of VP-deletion and question tags have tested whether the subject can stand in the external subject position. The majority of informants accepted the sentences with VP-deletion and question tags, while in case of sentence adverbials approximately half of the participants marked the sentences as OK. As for the sentences with negation and the particle *only*, they have served as an indicator of whether the subject can occupy the internal subject position. Similarly to the previous results, in case of sentences with *only*, most of the participants considered the sentences acceptable where *only* functioned as a sentence adverbial, whereas sentences with negation were accepted only by 50 % of the speakers.

As none of the tests has shown exclusive results, an in-depth interview has also been conducted with one of the informants⁵. First of all, it has turned out that the generic reading cannot be entirely excluded from the sentences that were intended to be interpreted existentially. (Szabolcsi (2010, p. 105) claims that a set denoted by an indefinite can also be denoted by a universal if the domain is restricted differently. E.g., we can describe the same situation with either the statement *Some bottles are empty* or the statement *Every bottle is empty*, depending on whether we have the bottles of oil, or the bottles of oil and vinegar in mind. The use of indefinites and generics apparently overlaps in a similar way.) During the interview, we were trying to put the sentences in a particular context where the non-specific interpretation of the subject could be evoked more easily.

In case of the sentence adverbial test, the subjects in sentences with unergative verbs were interpreted as [+specific] by the informant, and the two sentences were accepted

⁵ The informant was Philip Barker, a professor at Pázmány Péter Catholic University.

with the adverbial following the subject. On the contrary, in the sentences with unaccusative and passive verbs the subjects were considered as [-specific] and, consequently, the informant did not accept these with the sentence adverbial following the subject without coercing an interpretation via contrastive focussing or comma intonation.

Considering the sentences with negation, the subjects with an indefinite article following the negative particle always elicited the [-specific] interpretation of the subject, and these sentences were fully accepted by the informant.

As for the sentences with VP-deletion and question tags, the informant had difficulty in evoking the [-specific] reading of the subjects. Due to the [+specific] interpretation of the subjects, the sentences were marked as OK. With the subjects understood as [-specific], the sentences were considered to be acceptable only with the help of contrastive focussing.

Sentences with the particle *only* referring to the whole event were almost fully accepted. According to the informant's opinion, in the sentences where the subjects were combined with the indefinite article or *some*, the reading was clearly [-specific], and the particle refers to the whole event. Whereas in sentence (31b), where there was a bare plural NP subject, the interpretation was not obvious. The informant interpreted the bare plural subject rather as [+specific] and, accordingly, *only* was claimed to refer only to the NP in this case.

On the whole, according to the answers given by 60 informants, all of the tests suggest that both of the subject positions are available. On the basis of the in-depth interview, the tests indicate that subjects with a [-specific] interpretation can stay in the specifier position of IP, whereas subjects with a [+specific] reading move to the specifier position of TopP. The reason that the first questionnaire has brought less obvious and clear results than the in-depth interview can be the following: some informants may not have accessed the intended readings because they have failed to put them in a particular situation or their answers have been still biased because they coerced an interpretation via contrastive focussing or comma intonation.

5. Conclusion

The paper has argued that specific and non-specific subjects occupy different S-structure subject positions in English. Following É. Kiss (1996), specific subjects stand in the

external subject position, [Spec,TopP], whereas non-specific subjects occupy the internal subject position, [Spec,IP].

As a base point, it has been argued that there are two alternative subject positions at the same level of representation. In terms of Diesing (1988, 1992ab) and Kratzer's (1989) theory, it has been showed that the subjects of individual-level predicates stand in the external subject position, that is, [Spec,IP]; while those of the stage-level predicates occupy the internal subject position, that is, [Spec,VP]. Also, bare plural NPs standing in the external subject slot receive a generic reading, whereas those occupying the internal subject slot are interpreted as existentially bound. In fact, Diesing and Kratzer's claim has been that these two subject positions are available at S-structure in German and at Logical Form in English.

As opposed to Diesing and Kratzer's theory, É. Kiss's (1996) argues that external and internal subject slots are also present at S-structure in English. Her claim is that the subjects of *know*-type predicates, which are necessarily specific, stand in the specifier of TopP, a projection between IP and CP, whereas the subjects of predicates of the *be born*-type, which are necessarily non-specific, occupy the specifier of IP. On the basis of her arguments, this paper has aimed to analyse the availability of the two subject positions in case of the subjects of unergative, unaccusative and passive verbs.

In order to test the available subject positions for the subjects of the three types of predicates, which allow specific and non-specific subjects alike, sentences have been composed in accordance with É. Kiss's (1996) tests. Relying on the results, it can be assumed that as opposed to the subjects of *know* and *be born*, where the former is always raised to the specifier of TopP and the latter stands in the specifier of IP, in case of the subjects of unergative, unaccusative and passive verbs, both S-structure positions are available. According to the in-depth interview, the internal subject position, [Spec, IP] is assumed to be available for the subject in case of its [-specific] interpretation, otherwise the subject is assumed to move in the external subject position, [Spec, TopP]. Finally, the property that the subject of unergative verbs is base-generated as an external argument and those of unaccusative and passive verbs are base-generated as internal arguments can affect the surface positions of the subjects in the sense that in most of the tests the subjects of unaccusative and passive verbs have showed nearly identical results.

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