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On the Case-Marking of Existential Subjects in Estonian[1]

Abstract

It has been suggested in typological descriptions that there are three kinds of factors that condition the syntactic expression of core arguments (such as case marking of subjects): referential properties, the predicate or the whole clause. This paper outlines the system of differential subject marking in Estonian existential sentences and systematises the bulk of variables, their interplay and prominence relationships. It shows that in Estonian existential subject marking, all three conditions apply but they are not equally important. Also two additional factor types count: construction type (existential clause, characterised by topicality and inclusivity effects) and other pragmatic factors. The paper suggests that the dominant variables co-defining the Estonian existential subject case are the subject's divisibility-based referential properties, the referent's situational inclusivity determination and the use of a quantifier in the subject phrase. The paper proposes a new and simpler binary division conditioning the case of Estonian divisible subjects. It relies on the distinctive pragmatic implicatures arising from situational uses.

1. Introduction

In the Baltic language area the differential subject and object marking are wide-spread phenomena and the factors conditioning them partly overlap. In the coastal Finnic, Baltic and East Slavic languages, differential subject marking (DSM) is more characteristic of the subjects with fewer prototypical properties, especially the subjects of existential clauses which

brings them closer to the objects (Koptjevskaja-Tamm & Wälchli 2001: 656, 665). The examples (1) and (2) are from Estonian:

(1) *Peenra-l*   *kasva-vad*   *lille-d.*
     flowerbed-ADE   grow-3PL   flower-N.PL
     'There are flowers growing on the flowerbed.'[2] (Erelt et al. 1993: 14)

(2) *Peenra-l*   *kasva-b*   *lill-i.*
     flowerbed-ADE   grow-3SG   flower-P.PL
     'There are some flowers growing on the flowerbed.' (Erelt et al. 1993: 14)

Existential subjects (e-subjects) are not active agents and they do not function as actors of transitive propositions. Koptjevskaja-Tamm & Wälchli (2001) have described these non-canonical grammatical elements as a grey area between typical objects and subjects that permits different sub-divisions (2001: 656, 666).

The purpose of this paper is to give a comprehensive overview of the factors influencing DSM in the existential clauses (ECs) in Estonian. The paper assesses and systematises the main subject marking conditions pointed out in earlier research on Estonian (especially Nemvalts 2000), as well as closely related Finnish (Vilkuna 1992; Vähämäki 1984; Huumo 2001, 2010). The paper also simplifies the internal organisation of the varied set of factors influencing DSM and weighs the salience of each factor. In this process new facts from corpus data are interpreted and also rarer phenomena of the system are described. It is necessary to give a new account of the Estonian e-subjects' case choice factors due to the difficulty in applying the large bulk of conditions introduced so far on the analysis of real texts.

The rest of the introduction of the paper (Section 1) gives an overview of the study, of Estonian EC and the main notions relating to DSM. The main part of the work (Section 2) first proposes an account of the DSM system in Estonian and presents numeric corpus data and a flow chart of the relative ordering of DSM rules. It then outlines the order of prominence, usage frequencies and implementation principles of the subject case-marking restrictions. Section 3 summarises the account of Estonian e-subjects' case-alternation. The conclusion (Section 4) indicates

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[2] See the list of abbreviations in the Appendix.

some implications of the Estonian data on the typological description of arguments' realisation.

1.1   Data and method

In this study, 279 ECs from the syntactically annotated part of the Corpus of Written Estonian (SAC) were analysed. The genre of the corpus texts is fiction: narratives about various aspects of human lives. By using the filtering options of MS Excel, first all clearly unsuitable SAC sentences (containing the object and predicative tags) were removed and thereafter the existential sentences were found manually by applying the criteria defined in Section 1.2. I call the final data set of ECs the existential clause corpus (ECC).[3] When studying less frequent phenomena, the author's native-speaker introspection was also used, as well as examples from the larger Balanced Corpus of Estonian (BCE; contains fiction, journalistic and scientific texts) and the internet.[4] These clauses are not included in the frequency charts and tables of Section 2. Sentences with coordinated subjects were included more than once because the subjects can have different case-marking conditions. Where necessary, the sample clauses have been shortened.

1.2   Defining the Estonian existential sentence

One can distinguish the following basic clause types in Estonian: the unmarked (multifunctional) clauses, existential, possessive, source-marking resultative and experiential clauses (Erelt & Metslang 2006: 254). DSM is observed in the ECs and the possessive clauses which can also be considered as a subtype of existentials (Nemvalts 2000: 45); in other clause types the subject is invariably in the nominative. ECs are not frequent: in the data, out of 2818 BCE clauses 10% were clearly ECs and 2% marginal ECs.

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[3] The corpus is available upon request from the author.

[4] Despite the relative drawbacks of the use of Google in linguistic research (e.g. the representativeness, comparability and verifiability of the data), it was sometimes necessary to use this source due to the rarity of some phenomena that belong to the Estonian e-subject case-marking system.

It is difficult to give a universal definition of Estonian e-subjects, however they share some semantic, information structural and formal features, some of which are grammatical rules and some statistical preferences. **Semantically**, EC is used to present some referent in a spatial or temporal location (or the whole situation or the whole world) in order to *characterise* the location (see also Milsark 1979: 170). The situation in EC is structured from the perspective of the presupposed location (Partee & Borschev 2007: 156). In Estonian ECs, the location is usually mentioned or activated in the discourse first and then a discourse new referent, the e-subject, is presented in the situation (cf. Huumo & Perko 1993: 391 on Finnish). As has been claimed about Finnish (Helasvuo 1996: 352), and as it also shows in the ECC, the e-subject is seldom used to introduce salient discourse participants.

ECs have a statistical preference for their **information structure**: a vast majority of ECs have the locative phrase as the topic and the predicate and subject belong to the pragmatic assertion (see Section 1.3). As mentioned above, the e-subject is usually new in discourse. Among the 279 ECs in the ECC 93% of e-subjects are non-topical. A smaller subgroup of ECs has marked information structure with a subject that has been mentioned in the discourse earlier, see example (3). The corresponding sentence with the nominative pre-verbal subject, like (3b), and similarly (4), should be considered non-existential intransitive clauses: the subject is not the element being presented by the clause; the role of the clause is to characterise the subject referent, not the location, and there are no formal features of an EC (see below). In (3b) the subject is also definite. Definiteness is not a criterial feature of e-subjects but statistically indefinite e-subjects and definite non-existential intransitive subjects are extremely common (see Section 1.3). In both examples the subject is the topic of the clause − that is not a criterial e-subject feature either but still very uncommon among them.

(3)   *(Kus kõik mu sokid on?)*
       (Where are all my socks?)

   a. *Nei-d   on   vannitoa-s   ja   magamistoa-s.*
      they-P   be.3 bathroom-INE   and   bedroom-INE
      'Some of them are in the bathroom and (some of them are) in the bedroom.'
      (cf. Vilkuna 1992: 53)

b. *Nee-d   on   vannitoa-s   ja   magamistoa-s.*
  they-N.PL   be.3   bathroom-INE   and   bedroom-INE
  'They are in the bathroom and bedroom.' (cf. Vilkuna 1992: 53)

(4) *Põhjus   / vahe   on   selle-s,   et ...*
   reason.N.SG   / difference.N.SG   be.3   this-INE   that
   'The reason / difference is that...' (BCE)

ECs share some **characteristic formal features**: the possibility of the partitive subject in the affirmative clauses and requirement in the negative clauses; the lack of number agreement on the predicate if the subject is in the partitive plural; the subject's preferred post-verbal position (XVS order). Also prototypical direct objects have the same properties, though the objects lack agreement with the verb in *every* situation. Nevertheless, the dominating view in Estonian linguistics is that the argument permitting case alternation in ECs is a subject and not an object (Nemvalts 2000: 47–48, see also Hakulinen et al. 2004 § 894 on Finnish).[5] As in Finnish, most of the Estonian intransitive verbs can serve as the predicate of an EC. In ECs the verbs' existential meaning is foregrounded and the rest of the lexical content backgrounded in this use (cf. Huumo 1999: 41). If the negative counterpart of an EC has a non-partitive subject, it is normally an unmarked clause.

Hence when evaluating whether a particular clause is an EC one has the choice of semantic, information structural and formal criteria. In this study, **when selecting clauses for the final data set**, I used the following formal and semantic criteria.

1. The subject was in the partitive (which sometimes co-occurred with the lack of agreement).
2. The function of the clause was to present some referent in a discourse (in a location or the whole situation). If the function of the clause was to say something about the location or situation, not the subject referent, I regarded it an EC. Sometimes it was necessary to use discourse context to identify this.
3. The verb had a foregrounded existential meaning.

When the first condition was fulfilled (see (5)) I did not look at the criteria 2 and 3. The latter were used with nominative subjects, see example (6).

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[5] Recent research on Finnish (Helasvuo & Huumo 2010) suggests to separate this argument from both subject and object and call it the e-NP (existential NP).

(5)   *Pole   pääsu.*
       be.NEG   escape.P
       'There is no other way out.' Lit. 'There is no escape.'

(6)   *Kui   jõud-sid   kätte   suur-ima   väsimuse   hetke-d, ...*
       when arrive-PST.3PL at.hand great-SUP.G tiredness.G moment-N.PL
       'When the moments of greatest tiredness arrived, ...' (ECC)

Possessive clauses were also included in the corpus (adessive NP + 'be' + e-subject).

(7)   *Su-l   on   kogemus-i.*
       you-ADE   be.3 experience-P.PL
       'You have some experience.' Lit. 'You have some experiences.' (ECC)

Properties like word order, definiteness, givenness, discourse salience and the partitive in the corresponding negative clause were not used for identifying ECs as they rather represent statistical tendencies. See also Section 2.2.2 on using the criteria for determining e-subjects.

To describe the distribution of **DSM** in Estonian it is necessary to recognise two main types of e-subjects: NP subjects and quantifier phrase (QP, see Section 2.4.2.2) subjects. NP subjects have as a head singular count nouns (nominative), plural count nouns (nominative and partitive), singular mass nouns (nominative and partitive) and singular nouns whose categorisation is unclear (nominative).[6] The subjects' number and case-marking are also influenced by an active recategorisation process between these types, compare example (7) with (8).[7]

(8)   *Su-l   on   kogemus-t.*
       you-ADE   be.3 experience-P.SG
       'You have some experience.'

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[6] Although it is semantically hard to draw a line between discrete and indiscrete objects, different languages are thought do this through the means of grammar (cf. Lyons 1977: 42). However, in the case of this noun group Estonian grammar does not seem to make this distinction, see Section 2.3.1.

[7] It has been noted that 22% of Estonian simple nouns are polysemous (Langemets 2009: 5); therefore different meanings of the same lexeme play a considerable role in the Estonian DSM and differential object marking.

In example (7) the plural indicates that *kogemus* 'experience' is a count noun while in example (8) the singular partitive indicates that it is a mass noun, see also Section 1.3. In the affirmative clauses, the case-marking of Estonian e-subjects depends on semantic, syntactic and pragmatic factors. The following list contains the **factors in the order of occurrence frequency** (based on the number of subjects in ECC whose case is determined by the factor):

1. the subject noun's lexical semantics (including countability and quantitative definiteness);
2. inclusivity of the subject referent's quantity in the situation;
3. the lack of inclusivity determination on divisible e-subjects in the situation;
4. the predicate verb's lexical semantics or the construction as a whole.

In most cases these factors overlap with each other. The list above indicates the dominant and decisive factors upon which the e-subject case depends in the ECC. Most of these factors can trigger both the nominative and the partitive case-marking – this will be shown in the rest of this paper.

1.3   Relevant notions

Contemporary typological approaches to **differential subject marking** tend to be rather wide and involve different layers of language: "In a broad sense, a language may be said to have DSM if some subjects have a different [c]ase, agree differently, or occur in a different position than others." (Woolford 2009). DSM is a split in subject-marking that is caused by referential, predicate-related, clausal, pragmatic, morphological or phonological factors (Dixon 1994: 70–110; Witzlack-Makarewich 2010: 65–157; Woolford 2009). In the literature the term DSM (also non-canonical subject marking) has been used with several kinds of splits in the marking of transitive and intransitive subjects in both dominatingly accusative and ergative languages. This approach allows the incorporation of indexing and discrimination, split and fluid intransitivity and several other phenomena. Narrower approaches restrain this notion to the marking of semantically lower subjects (Aissen 2003) or marking caused by subject features alone (Woolford 2009: 17) or to the typologically common splits between different lexical predicate groups. For this study of Estonian e-subjects narrower approaches are not suitable as e-subjects' differential case-marking is caused by referential properties of the NP, semantics of the predicate verb or the whole construction (in the sense of Goldberg 1992),

as well as by clausal and pragmatic properties. In this paper I will only look at the case-marking split of e-subjects and will not address the differences between the e-subject and the intransitive subject.

Divisibility plays a major role in the e-subject marking in both Estonian (Nemvalts 2000: 60) and Finnish (Csirmaz 2005; Vilkuna 1992; Vähämäki 1984: 404). Divisibility can be described as follows: if x is part of gold and x' is part of x then also x' is part of gold unless we have information that x' is not part of gold (Krifka 1989:41). It separates both mass nouns and plural count nouns from singular count nouns (Krifka 1989: 39–41). In the position of e-subject (and elsewhere) the divisibles, i.e. mass nouns and plural count nouns, have the same case-marking motivations (Nemvalts 2000: 71, 104, 147–148). These nouns are also characterised (in the case of Finnish, Vilkuna 1992: 39–41 and in the case of Estonian, Rajandi & Metslang 1979: 11–12) by the following properties:

– they are additive in the sense that their number marking does not change when you add to them something that belongs to the same category (adding a portion of *sand* to another portion of *sand* still gives *sand* as a result, adding some *boys* to *boys* still gives a *boys* as a result);
– their referent does not have inherent shape (the word *sand* does not have the feature [Shape] in its lexicogrammatical meaning, sand's shape depends on its vessel or location; also the word form *boys* lacks the feature [Shape], the referent group of boys can stand in a row or be randomly located);
– as e-subjects, they can occur in the partitive in the affirmative;
– they combine with the quantifier *palju* 'a lot' but this combination procedure does not change their original number marking (*liiv* 'sand.N.SG' + *palju* 'a lot' > *palju liiva* 'a lot of sand.P.SG', *poisid* 'boy.N.PL' + *palju* > *palju poisse* 'a lot of boy.P.PL'). This is not true in the case of singular count nouns that, in combination with *palju*, need to be used in the plural and not in the singular (*poiss* 'boy.N.SG' + *palju*> *palju poisse* 'a lot of boy.P.PL' (**palju poissi* 'a lot of boy.P.SG'));
– they do not occur directly with numerals (**kaks liiva* 'two sand.P.SG', **kaks poisi-d* 'two boy-N.PL').[8]

Definiteness is a category that includes the interplay of the following factors: identifiability, including familiarity, on the one hand (quality-related notions) and inclusiveness, including uniqueness, on the other

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[8] In special cases the plural count nouns can be quantified by a numeral with plural marking but then they take the meaning 'plurality of bounded sets': *viie-d teatripileti-d* [five-N.PL theatre.ticket-N.PL] 'five sets of theatre tickets' (cf. Vilkuna 1992). Sometimes mass nouns can take the plural but then they obtain the meaning 'different kinds'.

(quantity-related notions) (Lyons 1999: 2–13). Lyons brings the following examples. *Put these clean towels in **the bathroom** please* (familiarity: *the bathroom* is definite because it is known from the immediate situational context). *They've just got in from New York. **The plane** was five hours late* (identifiability: the referent is definite through the association with the situation). *Beware of **the dog*** (uniqueness: the dog is definite in the context when the proposition can be found on a warning sign and the passer-by has actually never seen the specific dog mentioned. The sign says that there is only one dog in the vicinity and the reader is being warned against that unique dog). *Beware of **the dogs*** (inclusiveness: *the dogs* is definite because it refers to all the dogs, i.e. inclusive amount relevant in this context. The dogs are definite even if the reader has never seen the ones mentioned on the warning sign).

Lyons (id.: 3–11) describes the semantics of definiteness as follows. In the case of familiar NPs the referent is definite because the speaker presents it as familiar to both the speaker and hearer. If an NP is definite due to identifiability, it is because the speaker signals that the hearer is in the position to identify the referent (knows it or is able to work it out). In the case of uniqueness the definite NP signals that "there is just one entity satisfying the description used", relative to the particular context. If an NP is definite due to inclusiveness, the reference is to the totality of the objects or mass in the context which satisfies the description.

The more basic and comprehensive category of qualitative definiteness is identifiability that also embraces the expressions that are definite due to familiarity; the more basic category of quantitative definiteness is inclusiveness that also involves the expressions that are definite due to uniqueness (Lyons 1999: 13). Givón shows that the most typical environment for definite NPs is in referring expressions of factual, realis contexts. "Definite" may be viewed as a further sub-specification of "referring" (2001: 441–442).

Hawkins' speech acts based definiteness theory called *location theory* (1978) brings all the aforementioned aspects of definiteness together. In definite reference the speaker introduces a referent to the hearer, locates the referent in some shared set of objects and refers to the totality of the objects or mass within this set (for denoting these actions, Vilkuna (1992: 16) uses the term 'location instruction' in accordance with Hawkins' theory). An expression is definite if its (potential) referent can be **uniquely located in the listener's discourse model** of the moment (it has to have a location instruction in the context or the interlocutors' knowledge, e.g. in the earlier

discourse). In indefinite reference the speaker just introduces a referent to the hearer and refers to a proper subset of the referring expression (Hawkins 1978: 167, 187).

ECs' subject realisation is better characterised by quantification than definiteness (Milsark 1979: 196–208). Also **the Estonian DSM largely depends on inclusiveness** and not on identifiability (as does Finnish DSM; Hakulinen et al. 2004: §1241).[9] In ECs, inclusive quantity, i.e. universal quantification over a set (Milsark 1979: 204), is marked with the nominative:

(9) *Puu-lt   lange-sid   lehe-d.*
     tree-ABL   fall-PST.3PL   leaf-**N**.PL
     '(All) the leaves fell down from the tree.' (Nemvalts 2000: 126)

Often the partitive NP stands for a part or sub-quantity of a specific, potentially bigger entity that can exist – a **contextual boundary,** location instruction. The phenomenon can be explained in terms of the relationship between two embedded entities or sets. In the same way, as a bounded larger (or standard) set for *some chess pieces* is the whole *chess set* (see also Koptjevskaja-Tamm & Wälchli 2001: 665). However, in the data, the sentences having a bounded larger set is rather an exception than a rule: often this bigger entity is unclear, unspecified in the context (Koptjevskaja-Tamm 2001: 525):

(10) *Õue-s   mängi-b   laps-i.*
      outside-INE   play-3SG   child-P.PL
      'There are some children playing outside.' (translated from Vilkuna: 1992: 47)

The sentence claims a non-inclusive amount of children to be playing outside but it does not refer to the existence of any major group of children which the ones who are playing outside may be part of. If the NP referent is non-inclusive, i.e. it has indefinite quantity, it does not necessarily mean that the quantity in question is smaller than the total quantity (cf. Vilkuna 1992: 46). Therefore quantitatively indefinite NP means *some quantity* and not necessarily *partial quantity* (see more on inclusivity in Section 2.4.2.).

The definition of ECs depends on **information structure**. According to Lambrecht (1994: 52, 206–219, 335) propositions consist of the

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[9] Usually neither nominative nor partitive e-subjects are in Lyons' sense identifiable.

following parts: pragmatic presupposition, pragmatic assertion, topic and focus. Pragmatic *presupposition* is the set of propositions lexicogrammatically evoked in a sentence which the speaker assumes the hearer already knows or is ready to take for granted at the time the sentence is uttered. Pragmatic *assertion* is the proportion of the sentence which the hearer is expected to know or believe or take for granted as a result of hearing the sentence uttered. The *topic* relation is the relation of aboutness between a proposition and a discourse entity. It is the matter of current interest with respect to which a proposition is to be interpreted as relevant. It is part of the presupposition. *Focus* is a pragmatic relation that is part of pragmatic assertion, an element whereby the presupposition and assertion differ from each other, the unpredictable and unrecoverable element that makes an utterance into an assertion. The novelty of the focus is in the fact that a particular denotatum is chosen as a particular semantic relation. For example, in the sentence (– *What is growing in the flowerbed?*) – *There are flowers growing in the flowerbed* (see example (1)), the presupposition is *There is X growing in the flowerbed*, the topic *is in the flowerbed*, the assertion is *what grows in the flowerbed is flowers* and the focus is *X=flowers.* Topic is an obligatory part of every sentence although sometimes it is implicit and not overtly expressed, e.g. time and place (Erteschik-Shir 2007: 13–16).

2.   Conditions of subject case alternation in the existential clause

Cross-linguistically, non-canonical argument realisation (non-canonical case, agreement and syntactic behaviour) often depends on semantic features, like for example volitionality or stativity (Onishi 2001: 23–40). Onishi demonstrates that any such feature can (sometimes simultaneously) be bound to different levels of language: the predicate's lexical meaning or one of its sub-meanings, verbal affixes, choice of auxiliary, etc.

Estonian DSM is a complex hierarchical system of case motivations and the main case-assignment factor that underlies all the levels is quantitative definiteness, i.e. inclusivity. In Estonian ECs there is often a mix of different competing motivations for e-subject's case-choice that can potentially play a role in determining the case of an e-subject. For example, certain nouns occur in the nominative as e-subjects (existential nominatives) but negation causes partitive marking. One can ask which factor is dominant and overrules the other one in this use. Will the sentence

get a nominative or partitive marking? In the next pair of examples, only the partitive is grammatical.

(11) *Kassi   vaate-s   ei   ol-nud   mingi-t   märguanne-t.*
      cat.G   look-INE NEG   be-PST.PTCP   any-P   signalling-P
      'There was no signalling (signal) in the cat's look.'

(12) **Kassi   vaate-s   ei   ol-nud   mingi   märguanne.*
      cat.G   look-INE   NEG   be-PST.PTCP   any.N   signalling.N
      Intended: 'There was no signalling (signal) in the cat's look.'

It is evident in the data that e-subject's case factors form a layered system of dominance where each dominating factor applies to a certain sub-part of the data (determines the e-subject's case in certain ECs). In some contexts it is also impossible for the nominative and partitive case to express some meanings that they convey in other contexts (for example in the negative clauses the partitive cannot express non-inclusive quantity as it can in affirmative clauses, see example (3) above and Rajandi & Metslang (1979: 3) on a similar issue with Estonian direct objects).

I divide the process of subject case assignment in ECs in **four levels**: A (the highest level: see Section 2.1), B (Section 2.2), C (Section 2.3) and D level (the lowest level; Section 2.4). The factors on the higher levels are the dominant ones that override the levels closer to the bottom: although a particular e-subject may for example have properties relevant for both A and B level factors, then according to this approach, its case is governed by the A level factor. The factors within each level are equal to each other. The prominence order of the factors affecting the subject marking of Estonian ECs, as suggested in this paper, is presented in Table 1. It only involves the decisive factors that primarily influence the e-subject's case.

Table 1. The prominence order of subject marking factors.

Case assignment level	Case factor type	Pre-conditions of the case factor type	Case factors
A	**Polarity**	ECs	A1 Negation
B	**Clausal construction**	Affirmative ECs	B1 Clause level constructions with a partitive e-subject

			B2 Clause level constructions with a nominative e-subject
C	**Head noun semantics**	Affirmative ECs with clausal contructions permitting both Nom and Part	C1 The noun belongs to the group "Existential nominatives" (singular count nouns, set nouns, some abstract nouns, *pluralia tantum*) C2 The noun belongs to the group "Existential partitives" (some abstract nouns)
D	**Situational inclusivity of divisible nouns**	Affirmative ECs with clausal contructions permitting both Nom and Part, the e-subject's head noun is a divisible	D1 Subject case alternation is based on the opposition of the presence or lack of inclusivity meaning (PLI) D2 Subject case alternation depends on the opposition of inclusive-non-inclusive meaning (IN)

In addition to these factors the paper discusses a few other potential case-choice conditions that appear not to have primary influence, for example tense and aspect related case-marking distinctions just co-occur with the inclusive-non-inclusive semantics opposition.

The reader might ask whether this view really holds that there is a hierarchy between the case factor levels. Table 2 shows that the higher level factors dominate over the lower level ones in the corpus. In the table, the grey boxes indicate the number of e-subjects whose case is determined by the *dominating* case factor. For example, 8 e-subjects in ECC have their case determined by nominative e-subject constructions. The non-coloured boxes indicate the other, simultaneously competing case motivations that *are overridden* by the dominating factors in the corpus. These are the potential alternative conditions determining e-subjects' case-marking.

Table 2. Frequencies of dominating (grey) and non-dominating (uncoloured) case-choice factors present among the existential clause corpus e-subjects.

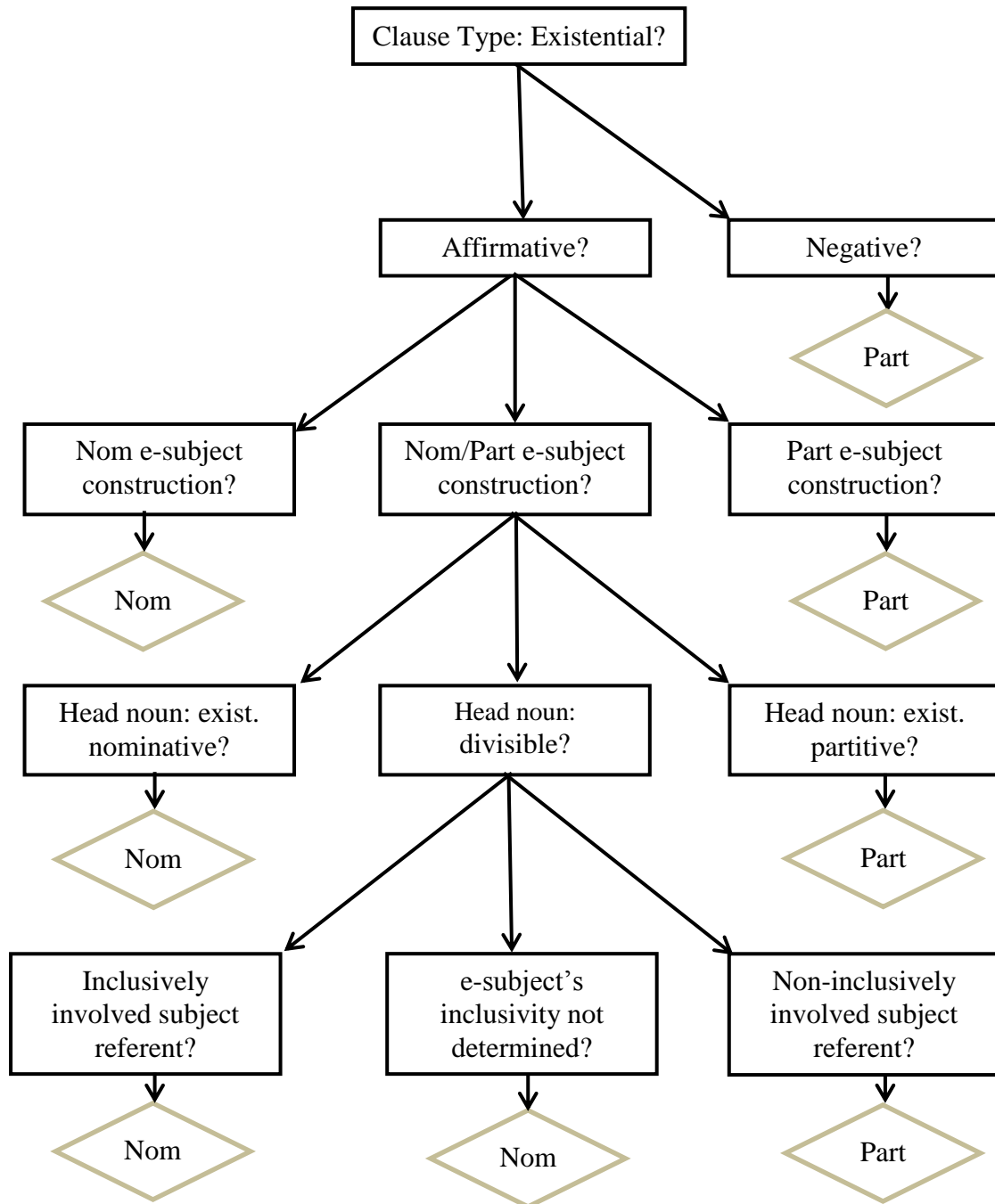| Case factor type	Case factors	A1		B1		B2		C1		C2		D1.1		D1.2		D2.1		D2.2	
		N	P	N	P	N	P	N	P	N	P	N	P	N	P	N	P	N	P
A Polarity	A1 Negation	**1**	**38**																
B Clausal construction	B1 Partitive e-subject constructions	0	2	**0**	**2**														
	B2 Nominative e-subject constructions	0	1	-	-	**8**	**0**												
C Head noun semantics	C1 Existential nominatives	0	18	0	0	6	0	**103**	**0**										
	C2 Existential partitives	0	9	0	1	0	0	-	-	**0**	**20**								
D Inclusivity of divisible nouns	D1.1 Subject case marks non-inclusivity (PLI; Part)	0	-	0	1	0	0	-	-	-	-	**0**	**31**						
	D1.2 Subject case depends on the lack of inclusivity meaning (PLI; Nom)	1	-	0	0	1	0	-	-	-	-	-	-	**41**	**0**				
	D2.1 Subject case marks non-inclusivity (IN; Part)	0	-	0	0	0	0	-	-	-	-	-	-	-	-	**0**	**4**		
	D2.2 Subject case marks inclusivity (IN; Nom)	0	-	0	0	1	0	-	-	-	-	-	-	-	-	-	-	**31**	**0**
	D Divisibles in total	1	11	0	1	2	0	-	-	-	-	**0**	**31**	41	0	0	4	31	0

If you look at the columns in the table then it is always the top cells of each column that are grey. This shows that the factors in the top rows decide the case-choice of those columns' e-subjects. For example, 18 negative ECs have an e-subject that belongs to the lexical noun group Existential nominatives (factor C1). Although the e-subject's head noun's type is also a case factor in the hierarchy, it gets overriden by the negation factor (A1). Although the e-subject's head noun's type is also a case factor in the hierarchy, it gets overriden by the negation factor. The numbers in the grey boxes add up to 279 – the amount of all e-subjects in ECC. The numbers in the non-coloured boxes do not add up to the numbers in the grey boxes because there are some incompatibilities between factors and also additional overlappings among them. For example, in negative ECs there are 2 clauses containing a partitive e-subject construction and at the same time they have existential partitive e-subjects (all together there are three competing case conditions in these clauses).

The two leftmost columns of the table are negative clauses, the rest of the table depicts affirmative clauses. Some boxes have not been filled (marked with a "-") again due to incompatibility of some factors. For example, it is not possible to analyse the negative clauses' referents' inclusivity because negation in ECs negates the whole situation (Nemvalts 2000: 163) and the question of e-subject referent's inclusivity is not relevant here. Levels C and D are mutually exclusive. If an NP is not a divisible but has an existential nominative or existential partitive head noun, it's case cannot express PLI or IN. Also conditions C1 and C2 are mutually exclusive, as well as D1.1, D1.2, D2.1 and D2.2 with each other. The subjects of level D are divisibles, see Section 2.4 for their distribution.

To better demonstrate the relationships in the hierarchy, a flowchart is used (Figure 1) which is an effective tool for analysing and documenting complex processes and dependencies. The figure depicts the order of the factors that should be followed while making decisions about an e-subject's case-determining factors in particular sentences. It allows moving from the level A to level D and, in this process, discarding unsuitable factors one by one until we have reached the matching case-assignment factor. Flowcharts have been used before for illustrating the hierarchical nature of differential object marking in Estonian (e.g. Rajandi & Metslang 1979: 14) and Finnish (Vilkuna 1996: 119). As it is widely known, differential subject and object marking largely depend on similar phenomena in Estonian. The building blocks of the case-formation chart of the present study are partly similar to

Rajandi and Metslang (predicate-related and referential properties), however, the structure is adapted for ECs and new nodes are added.

Figure 1. Factors of differential e-subject marking in Estonian.

```
                        ┌──────────────────────────┐
                        │  Clause Type: Existential?│
                        └──────────────────────────┘
                             │              │
                             ▼              ▼
                     ┌───────────────┐ ┌───────────┐
                     │  Affirmative? │ │ Negative? │
                     └───────────────┘ └───────────┘
                      │      │      │         │
                      ▼      ▼      ▼         ▼
                                            ◇ Part
   ┌──────────────┐ ┌──────────────┐ ┌──────────────┐
   │ Nom e-subject│ │Nom/Part      │ │ Part e-subject│
   │ construction?│ │e-subject     │ │ construction? │
   └──────────────┘ │construction? │ └──────────────┘
         │          └──────────────┘        │
         ▼            │    │    │            ▼
      ◇ Nom           ▼    ▼    ▼          ◇ Part
   ┌──────────────┐ ┌──────────────┐ ┌──────────────┐
   │Head noun:    │ │ Head noun:   │ │Head noun:    │
   │exist.        │ │ divisible?   │ │exist.        │
   │nominative?   │ └──────────────┘ │partitive?    │
   └──────────────┘   │    │    │    └──────────────┘
         │            ▼    ▼    ▼          │
         ▼                                 ▼
      ◇ Nom                              ◇ Part
   ┌──────────────┐ ┌──────────────┐ ┌──────────────┐
   │Inclusively   │ │e-subject's   │ │Non-inclusively│
   │involved      │ │inclusivity   │ │involved      │
   │subject       │ │not           │ │subject       │
   │referent?     │ │determined?   │ │referent?     │
   └──────────────┘ └──────────────┘ └──────────────┘
         │                │                │
         ▼                ▼                ▼
      ◇ Nom            ◇ Nom            ◇ Part
```

The chart shows for each rule which subject case it determines or which further restriction it needs. According to this treatment, negative e-subjects

are first assigned partitive marking (level A of subject case assignment, see Table 1). On the next levels, as mentioned above, only affirmative clauses are under consideration. If the EC contains a clausal construction that requires either a nominative or a partitive e-subject, its subject gets its respective case-marking on level B. One should move a level down (to level C) if the clausal construction permits the use of both the nominative and the partitive. Then the analysis should pay attention to the referential properties of the e-subject's head noun. If the head noun under question either belongs to the group "Existential nominatives" or "Existential partitives" it will get its case accordingly. If the noun belongs to neither group, it is a divisible noun and hence receives its case-marking on level D. Divisible nouns are marked by the nominative if their referents participate in the situation inclusively (IN), by the partitive if their referents participate in the situation non-inclusively (IN, PLI). If the referent is neutral with respect to inclusivity, it gets the nominative case (PLI). In the following chapters, all conditions will be outlined in detail.

2.1 Level A of subject case assignment

Negation is the strongest e-subject case factor. If the subject NP is in the scope of negation, it takes the partitive, regardless of its noun type and context, see example (5) above. As the exception to the rule the e-subject gets a nominative marking in negative ECs when it is out of the scope of negation, when it occurs in a contrasted sentence or when it is presupposed. Of the latter options, the ECC only contains one nominative e-subject that occurs with negation due to presupposition:

(13)   *Maa-s   ei ol-nud   mitte **rohi**,   vaid Ø   muld.*[10]
         ground-INE not be-PST.PTCP   not grass.N.SG but be.PST.3SG soil.N.SG
         'There was not grass but (was) soil on the ground.' (ECC)

Unlike in prototypical ECs, the subject in this example is not given but still accessible in the discourse and the focus of the clause. It is accented due to contrast.

     Presuppositions of referents are usually either created in the previous discourse or the speaker believes the listener to have them. Direct

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[10] The verb of such adversative coordination clause can either be in the affirmative or in the negative – neither the meaning of the clause nor the subject case is changed by that.

presupposition of an e-subject's referent in a given location can be unspecific or contrasting (something is previously said or expected to exist in a particular location – that is actually not there). The EC specifies the expected referent, or in the case of incorrectly expected referent, replaces it. The nominative e-subject in the example is a divisible noun neutral from the point of view of inclusivity. Therefore one could doubt whether it really is presupposition that brings about the nominative or perhaps the nominative case is determined by PLI. Nevertheless, the latter is unlikely: both Nemvalts (1996: 43) and Erelt et al. (1993: 42, 196) suggest that presupposed subjects occur more naturally with nominative marking. The environments that normally require the partitive subject (negation) loosen this requirement in the case of a presupposed subject (Erelt et al. 1993: 45, 158–159). Therefore one could also suggest that in the factors ordering schema, above level A, Negation, there is another level, Direct presupposition. I prefer to treat this phenomenon as an exception and have not included this in the hierarchy because it is very rare: presupposition does in general not go well with the role of the EC.

Vilkuna (1992: 94–95) has demonstrated in Finnish that unrealised contexts (where the event or situation is only hypothetical: future, conditional, doubt, negation, etc. as opposed to realised affirmative contexts) can affect argument interpretation and marking. However, in ECC, only negation is affecting the e-subject case whereas the interrogative and hypothetical contexts usually follow the case-marking rules of affirmative e-subjects, see Table 3. Only 4 interrogative sentences have a content that triggers the use of the partitive: the e-subject referent is either negated or evaluated as highly questionable by the speaker.

Table 3. Negative and other clauses with unrealised contexts in ECC.

	Negative clause	**Interrogative clause**	**Other unrealised situation**
Nominative	1	12	23
Partitive	38	4	10

2.2 Level B of subject case assignment

On level A, the subjects of all negative ECs receive their case-marking. From here on, on the B, C and D level, only the subjects of affirmative ECs will be discussed.

The possibilities of the existential interpretation of a clause and non-canonical (partitive) subject marking have been claimed to depend on both the verb and the construction in Estonian (Rätsep 1978; Nemvalts 2000). The same question is widely discussed in studies on Construction Grammar (e.g. Goldberg 1992, 1995, 1997). Different uses of a verb and combinations of argument realisation are claimed to be attributable to the construction (i.e. independent argument structure) itself (Goldberg 1995: 19) or both to the construction and verbal polysemy (Nemoto 2001: 119–133). According to construction grammar, the term 'construction' has a very wide meaning and it involves primitive grammatical units that are pairings of form and meaning which may be atomic or complex, schematic or substantive (Croft 2001). The inventory of constructions in a language varies by degree of schematicity and the taxonomic links or relationships between them (e.g. case and agreement constructions, lexical items, idioms, control constructions, non-finite constructions, subcategorisation frames, word order and sentence type constructions; e.g. Bickel 2010; Croft 2001). However, in the context of this argument realisation discussion, mostly only clause level constructions are relevant.

Section 2.2 analyses the Estonian e-subject's case-marking from the constructions' point of view. On the basis of the existent research by Rätsep and Nemvalts, I will focus on the issue from a more form-related viewpoint and, instead of semantic argument structures, I look at formally determined constructions (however these constructions are not independent of the verb's lexical semantic features (cf. Rätsep 1978: 258)). I will show in Section 2.2.4 that Estonian e-subjects enter into nominative and partitive case-frames sometimes due to the verb's and sometimes due to the whole construction's influence. First, Sections 2.2.1–2.2.3 categorise these constructions according to the subject case(s) found in them.

2.2.1 Constructions with the partitive e-subject

Earlier, Estonian e-subject marking has been described throughout specific constructions where the lexical predicates determine the subject case (Rätsep 1978; Nemvalts 2000). Both sources call such constructions *verb-governed sentence patterns*. Rätsep's (1978) verb-governed sentence pattern (also called *formal syntactic structures* (Talmy 2000: 265)) is a generalised abstraction that unites a set of grammatically similar simple

sentences that share the number, form and order of the verb's arguments and obliques.[11] Rätsep attempts to provide a comprehensive list of lexical predicates involved in each of the 1272 (existential and non-existential) constructions. The sentence patterns have no direct connection with clause types, like experiencer clauses or existential clauses – in the sense of construction grammar, they are more specific than the highly schematic clause types.

An example from Rätsep's monograph on Estonian simple clauses (1978) is the construction that has the obligatory elements of a noun in the partitive case, a predicate verb and the optional oblique – a PP (with the meaning 'for someone/something') and it only permits one argument in a grammatical case – in the partitive:

(14) NOUN^{PARTITIVE} VERB (NOUN^{GENITIVE} +jaoks). [12]
    Klaasi   *piisa-b*   *tööstuse*   *jaoks.*
    glass.P.SG   suffice-3SG industry.G   for
    'There is enough glass for the industry.' Lit. 'Glass suffices for industry.' (Rätsep 1978: 106, pattern 7.2)

The construction only occurs with three verbs: *jätkuma, piisama, jaguma* which all have the (sub) meaning 'suffice' and all the clauses in it are ECs. In Rätsep's collection the submeanings (in the sense of Langemets et al. 2009) of these verbs also occur in constructions with a nominative subject. For example:

(15) **N^N V (DE) (DT) (DI)**[13]
    Põõsas-te rida   *jätku-s*   *laua*   *juurest trepi*   *juurde.*
    bush-G.PL line.N.SG continue-PST.3SG table.G.SG from   staircase.G.SG to
    'The line of bushes continued from the table to the staircase.' (Rätsep 1978: 97, pattern 2.2.102)

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[11] Rätsep's work decribes non-contextual constructed sentences. The main problems that appeared when applying these constructions in the analysis of contextual ECs in ECC were emphasis and text coherence related word order divergences. If the reason for different word order was detectable I regarded the corpus sentence matching the pattern.

[12] *jaoks* 'for' – a postposition requiring a genitive complement.

[13] *DE* – 'extralocal directionals' (e.g. the elative, the ablative, various PPs and adverbs with the meaning 'from'), *DT* – 'translocal directional' (path semantics, usually marked by PPs), *DI* – 'intralocal directional' (a place where some action is directed, marked by e.g. illative, allative and PPs; id.: 44–46).

Nemvalts (2000) has identified a number of constructions that involve ECs from Rätsep's collection. After complementing his selection on the basis of ECC I have in the **EC constructions list:**

– 19 constructions that permit just one subject case (12 partitive[14] and 7 nominative subject EC constructions), see the examples in this section and the next one;
– 76 constructions that allow the alternation of nominative and partitive subject marking; see the examples in Section 2.2.3 and onwards.[15]

These constructions are tied to different verbs that can re-occur throughout them and that can also occur in non-existential constructions. Verbs that can occur with partitive subject constructions but also in other constructions include *olema* 'be', *sadama* 'come down, rain', *sisalduma* 'be in', *immitsema* 'seep, exude', etc. I am not aware of verbs that can only occur in constructions that exclusively permit partitive subjects.[16]

An example of how the requirements of the constructions **override the other subject case-marking conditions** is the obligatory partitive case-marking of singular count noun subjects, see example (16). Under all other circumstances, singular count nouns take the nominative in affirmative ECs (see also Section 2.3.1).

(16) N^P V DI. Example with the verb *jätkuma* 'suffice'.
      Meistri-t   jätku-s   iga-le poole.
      master-P   suffice-PST.3SG   everywhere.ALL
      'The master could help out everywhere.' Lit. 'Master sufficed (was) everywhere.'
      (Rätsep 1978: 154, pattern 114)

In the ECC there are no occurrences of singular count nouns taking the nominative in the partitive e-subject constructions. ECC only contains two subjects whose partitive case is determined by a construction. The other example is (17), nominative would be ungrammatical here.

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[14] Rätsep's patterns 1.3, 7.1, 7.2, 7.3, 8.0, 29, 40, 79, 109, 114, and 287.

[15] The full list is available upon request from the author.

[16] The verb *piisama* is exceptional: it only takes a partitive e-subject or an oblique argument but not a nominative subject.

(17) Construction $\underline{N^P\ V\ (N^G\ \textit{jaoks})}$
      Lauda-s   looma   jaoks   ruumi   jätku-b.
      shed-INE   animal   for   space.P.SG   suffice-3SG
      'There is enough space for the animal in the shed.' Lit. 'The space in the shed
      suffices for the animal.'[17] (ECC) (Rätsep's pattern 7.2)

2.2.2 Constructions with the nominative e-subject

In the list of EC constructions used for this analysis, there are eight that
only allow nominative e-subjects.[18] They involve verbs like for example
koitma 'dawn' and *valitsema* 'rule'. These constructions often have
properties of both EC and non-existential intransitive sentence, for
example:

(18) $\underline{(N^{ADE})\ V\ N^N}$. Suitable with the verbs *algama* 'start', *hakkama* 'begin', *käima* 'be
      going on'
      (Rukkipõld lõppes ja)
      juba   alga-s=ki   luht.
      already start-PST.3SG=CL   water.meadow.N
      '(The rye field ended and (as we walked on)) the water meadow already started.'
      (ECC) (Rätsep's pattern 3.2)

(19) $\underline{(DE)\ V\ N^N}$. Suitable with the verbs *liginema, lähenema* 'approach'
      (Aeglaselt jalutades lähenes Rasmus tänavanurgale.)
      Sama-l   aja-l   lähene-s   ristmiku   poole   üks
      same-ADE   time-ADE   approach-PST.3SG   junction.G   towards   one.N
      elusolend.
      living.being.N.SG
      '(Rasmus neared the corner at a slow pace.) At the same time a living being was
      approaching the junction.' (ECC) (Rätsep's pattern 3.3)

Although these clauses are similar to unmarked intransitive clauses they
correspond to the following EC criteria. The role of the clause is rather to
characterise the situation or the locative phrase referent, than the subject
referent, compare (19) with the non-existential (20). Secondly, the

---

[17] This particular example does not clearly show that the subject case depends on the
pattern: *ruumi* 'space.P' is an existential partitive noun (Section 2.3.2.). However, in
BCE there occur many examples with, for instance, normal mass nouns: *Töö-d jätku-s*
[work-P be.enough-PST.3SG] 'There was enough work.'
[18] Rätsep's patterns 3, 3.1, 3.2, 3.3, 3.4, 25, and 107.

foregrounded lexical meaning of this construction's predicate verbs, including the ones exemplified above, is either existence (*käima*, submeaning 'be going on') or coming to existence (*algama* 'start', *hakkama* 'begin', *koitma* 'dawn', *lähenema* 'approach'). The remaining lexical content of these verbs is insignificant for the general purpose of these clauses (e.g. the meaning of volitional activity in the case of *käima*). The clauses in these eight constructions also have other prototypical EC properties: the sentence introduces a new entity in the discourse and the subject's post-verbal position is unmarked and neutral. It is not caused by emphasis or contrast.

   As the predicate verb is not 'be' in these constructions, partitive subjects would not feel natural in the negative counterparts of these clauses. This is also common among ECs with less typical existential predicates (see also Huumo 1999 on Finnish).

   What is mainly common between these sentences and non-existential intransitives as in (20) is that in the affirmative clause, the subject can only occur in the nominative.

(20) *Uurija   lähene-s   küsimuse-le   oskuslikult.*
      researcher.N.SG approach-PST.3SG   question-ALL skilfully
      'The researcher approached the question skilfully.' (Rätsep 1978: 185)

On the basis of the properties listed above, the clauses like (18) and (19) should be classified as ECs (see also Partee & Borschev 2007 on a properties based approach in distinguishing Russian ECs from locative sentences).

   In ECC there are 6 clauses with 8 subjects that belong to 'nominative subject only' constructions, see for example (6), (21) and (22).

(21) *Elektriliini   all   vii-s   purre   üle   jõe.*
      power.line.G   under   lead-PST.3SG   foot.bridge.N.SG   over   river.G
      'Under the power line there was a foot-bridge that goes across the river.' Lit.
      'Under the power line a foot-bridge lead across river.'[19] (ECC)

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[19] The verb *viima* 'take, lead' is prototypically transitive but it is used intransitively if the sub-meaning is 'point somewhere, be located towards a direction, enable to go somewhere' (source: Kaalep & Muischnek 2002).

(22) *Sealt   vaata-b   vastu   mu   mehe   nägu.*
     there.ABL   look-3SG   back   my   husband.G   face.N.SG
     'My husband's face is looking back from there.' (ECC)

Unfortunately, there are only 2 clear instances where the subject case-marking is determined by the construction, e.g. (6). They have divisible referents that can in other constructions also occur in the partitive (see Section 2.3.3). However, in this construction partitive would be ungrammatical. In constructions like (22) the semantics of the predicate has bleached: the original volitional meaning has given ground to a mere existential one. This can be seen especially well in the next example.

(23) *Köögi-st   vaata-s   vastu   segadus.*
     kitchen-ELA   look-PST.3SG   back   mess.N.SG
     'There was a mess in the kitchen.' Lit. 'There was a mess facing (me) in the kitchen.' (BCE)

2.2.3 Constructions with the nominative/partitive e-subject

So far, only these level B factors (constructions) have been discussed where the e-subject's case is specifically determined. However, 76 out of the 95 EC constructions permit both subject cases and therefore their DSM has to be explained by other, lower level factors. They contain a vast number of verbs, for instance *esinema* 'occur', *leiduma* 'be found, reside', *raksama* 'crack' and *värvuma* 'take colour'. The universal EC verb *olema* 'be' is especially common in them:

(24) N^G *ees* V $N^{N/P}$
     Meie ees   ol-i-d   uue-d   ülesande-d.
     we.G in.front   be-PST-3PL   new-N.PL   task-N.PL
     'There were new tasks waiting for us.' (Rätsep 1978: 141, pattern 59)

(25) *Meie   ees   oli   uus-i   ülesande-i-d.*
     we.G   in front   be.PST.3SG   new-P.PL   task-P-PL
     'There were some new tasks waiting for us.' (ibid.)

(26) $N^{N/P}$V A^{TR}. Example with the verb *värvuma* 'take colour'.
     Puu-d   värvu-sid   kollase-ks.
     tree-N.PL   take.colour-PST.3PL   yellow-TR
     'The trees turned yellow.' Lit. 'The trees coloured yellow.' (Rätsep 1978: 136, pattern 47.0)

(27) *Pu-i-d   värvu-s   kollase-ks.*
tree-P-PL   take.colour-PST.3SG   yellow-TR
'Some trees were turning yellow.' Lit. 'Some trees were colouring yellow.'
(Rätsep 1978: 136)

Example (26) is rather categorisable as a non-existential intransitive sentence as it is hard to imagine it being used for the prototypical purpose of the ECs: presenting a new subject referent to the discourse.

2.2.4 Influence of the construction or verbal semantics?

Earlier studies have taken different viewpoints on whether it is the lexical predicates or the whole construction that determines the Estonian e-subject's case. Rätsep (1978: 258) suggests that the arguments' case depends on the verb's lexical meaning but Nemvalts disagrees with this and argues that at least the case-marking of e-subjects depends on the whole clause (2000: 109). It is important to keep in mind though that this is a minority of e-subjects in ECC whose case gets determined on this level B of case-assignment factors – most of the e-subjects' exact case is not determined by neither the predicate verb nor the construction, as shown in Section 2.2.3.

When discussing what influences the case of these e-NPs that get their case-specification on the level B, as shown in Sections 2.2.1 and 2.2.2, it is necessary to distinguish the verb's core semantics from the semantics of the expression (cf. Goldberg 1997: 384). Goldberg demonstrates that the verb only designates the elaboration of the constructional meaning in the most prototypical and common cases (like *He **gave** me an apple*). There are also constructions whose meaning does not depend on the verb's meaning. For example in *The bus **rumbled** down the alley* the core meaning of the sentence involves motion. However, this is not part of the core meaning of the verb (ibid.: 385–386). In the following I will show that the formal realisation of the sentential elements can depend on both verbal and constructional semantics.

When discussing what influences the case of these e-NPs that get their Among other groups, there are the following groups that contain e-subjects:

- – "nominative e-subjects only" constructions (7 different);
- – "partitive e-subjects only" constructions (11);
- – "nominative e-subjects only" verbs (a large open class).

There is no "partitive e-subjects only" group of verbs: the verbs that occur in partitive constructions have sub-meanings that occur in other constructions, see Section 2.2.1. Table 4 demonstrates on the basis of the EC sentence constructions list (see above) the possible combinations of EC constructions and the verbs used in ECs.

Table 4. The distribution of existentially used verbs among constructions ("x" marks that there are occurrences in the EC constructions list, "-" marks that there are not.)

Verbs/Constructions	Nom e-subject cn-s	Part e-subject cn-s	Nom/Part e-subject cn-s
Nom subject verbs	x	-	-
Part subject verbs	-	-	-
Nom/Part subject verbs	x	x	x

The lexical predicates view would be supported if verbs clustered together in constructions according to their relevant lexical restrictions. The verbs that belong to the **"partitive subject only" constructions**, should then have two properties:

- compatibility with the existential meaning – as it is the case with all the verbs occurring in ECs;
- their subject referents have obligatorily unbounded (non-inclusive) quantity.

There are over 17 verbs (like *jätkuma* 'suffice, continue', *jaguma* 'suffice, be divisible by', *tunduma* 'seem, smell', *sadama* 'come down, rain', *sisalduma* 'inhere in', etc.; see Section 2.2.1)[20] that can be found in 'partitive subject only' constructions. However, they can also occur in other constructions. Therefore this second meaning component can only be specified by the construction they occur in. In their case it is obvious that the partitive subject requirement cannot only come from the meaning of the verb.

The situation is different in the case of the verbs and constructions with **nominative e-subjects**. All the verbs in 'nominative subject only' constructions are 'nominative subject only' verbs. Although it is theoretically possible, none of the verbs that occur in 'nominative subject only' constructions occur in 'partitive subject only' constructions. Nominative subject-marking shows that the quantity of the e-subject

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[20] Rätsep (1978: 77) does not specify the exact number of verbs in the 'partitive subject only' pattern 1.3.

referent is inclusive – the subject denotes e.g. a singular count noun or a bounded set – or is just unmarked (see Sections 2.3.1, 2.4.1 and 2.4.2). When determining whether this is due to the construction or due to the verb's semantics I follow Goldberg's judgement that in prototypical cases it is the verb whose semantics determines the arguments' realisation (see above in this section).

To conclude, both predicate verbs and whole constructions influence Estonian e-subjects' case. In the case of the nominative e-subjects that receive their case-marking on level B it rather seems to be the verb that determines the case-marking. In the case of the partitive e-subjects whose case is assigned on level B, it is the influence of the whole construction. For brevity, in the following I will refer to both factors as construction-influenced subject-marking.

2.3   Level C of subject case assignment

In the affirmative ECs occurring in the constructions "indifferent" to the subject case, its case depends on the lexical semantics of the head noun: in the existential construction these nouns' case-marking is pre-determined (noun groups in the Sections 2.3.1 and 2.3.2). I call it level C of e-subject's case assignment. One noun group (outlined in 2.3.3.) permits subject case alternation. The nouns that belong there get their case-assignment on level D. In the following analysis of the nouns' countability and other properties determining their case, I use the BCE and Google examples, as well as the Explanatory Dictionary of Estonian (Langemets et al. 2009) in addition to the ECC.

2.3.1 The noun belongs to the group "Existential nominatives"

In the description of grammatical behaviour of lexical sub-classes, more fine-grained distinctions than just 'count nouns' are needed (Croft 2001: 60). In the following I use a more detailed classification for the groups of nouns that occur as nominative e-subject heads in affirmative ECs. I use the term 'Existential nominatives' as a general denomination for all nominative e-subject heads whose case is lexically determined. In ECC this was the largest group, 103 (37%) subjects belong here. The subgroups of the Existential nominatives are singular count nouns, abstract nominatives, set nouns and *plurale tantum* nouns.

Of 279 subjects in ECC, 86 are clear instances **singular count nouns**. From these, 5 get their case marking on level B and 81 on level C. For example:

(28) *Ja   korraga   torka-s   mu-lle   pähe   veider   **mõte**.*
      and   suddenly   strike-PST.3SG I-ALL   head.ILL strange.N.SG thought.N.SG
      'And suddenly I got this strange idea.' Lit. 'And suddenly stroke into my head a strange idea.' (ECC)

In this study, I also treat proper names under this category. A possible explanation of the frequent use of count nouns as e-subjects is that they are more frequent in language in general (for comparison: there were 33 clear mass noun subjects in ECC). In the Frequency Dictionary of Written Estonian (Kaalep & Muischnek 2002) there are about 10 times more count nouns than mass nouns among the 400 most frequent word forms.

Abstract nominatives are a considerable group of abstract nouns that have a rather limited use in the affirmative ECs: they do not permit plural and, as e-subjects, they can only occur in the nominative (cf. Nemvalts 1996: 39–41). As these nouns are often not referential, the further classification between mass and count nouns is in general irrelevant for them. In ECC there are 21 nouns having these limitations of use: one of them had its case assigned on level B and 20 on level C.

(29) *Sugene-s   pisut piinlik   vaikus*
      appear-PST.3SG   a.bit embarrassing.N.SG   silence.N.SG
      'A bit of an embarrassing silence appeared.' (ECC)

There is a group of nouns that doesn't match either the description of count nouns or mass nouns. Often they have the derivational affix *-stik* ('a set of something'), e.g. *sulestik* 'plumage' (Lit. 'feather'+*stik*), *lehestik* 'leafage' (Lit. 'leaf'+*stik*), *lihastik* 'bulk of muscles' (Lit. 'muscle'+*stik*). As e-subjects they occur in the nominative (Nemvalts 1996: 41). For instance:

(30) *Teise-s   Ø   kahise-s   ja   turtsu-s   torustik.*[21]
      other-INE (room.INE) rustle-PST.3SG and   splutter-PST.3SG piping.N.SG
      'In the other (room), the piping was rustling and spluttering.' (ECC)

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[21] The example (30) resembles the "nominative subject only" construction ((N^{ADE}) V N^{N}) outlined in Section 2.2.2 but its predicate verb *olema* 'be' does not occur in that construction.

Here the subject case assignment depends on the semantics of the subject noun. What connects these hardly definable nouns with count nouns is that usually they can be characterised by the feature [+Shape]. They have a definite outline (cf. Rijkhoff 2002: 54), e.g. *lehestik* 'leafage' does not denote an indefinite quantity of leaves of a tree but all the leaves; *sulestik* 'plumage' denotes the whole plumage of a bird. What brings these nouns closer to mass nouns is the feature [+Homogeneous] when looked at their inner structure – if you add to a bird's plumage one feather, you will still get a plumage (cf. Rijkhoff 2002: 53; see also Divisibility in Section 1.3). The noun still preserves its singular marking then. However, at the so called "macro level" of their usage they appear to be neutral to the property [Homogeneous]: for denoting the plumages of several birds, usually the singular form is still used; *lehestik* of several trees is still a singular *lehestik*. The singular *stik*-noun stands both for singleton and multiple sets.

Rijkhoff calls the nouns that possess the property [+Shape] and are neutral to the property [Homogenous] **set nouns**. He characterises them as follows: set nouns are not marked for number, they can contain just one individual or consist of more individuals; they can be directly combined with a numeral and they don't take plural in this case (2002: 46–50).

These criteria apply to the Estonian data in part. In Estonian these nouns are usually both semantically and morphologically unmarked for number. They can consist of one or more individuals. However, the Estonian analogue does not combine with numerals. In ECC, BCE or in Google such examples don't occur:

(31) **Aeda   kaunista-sid   kaks   dekoratiivse-t   lehestikku.*
       garden.P embellish-PST.3PL two.N   decorative-P.SG   leafage.P.SG
       'The garden was embellished by two decorative leafages.'

In some cases the nouns combine with the plural, but similarly to mass nouns, this brings along a meaning change: from a specific entity to different types or kinds of this entity. Hence nouns like *sulestik* 'plumage' form a clearly separate group in Estonian. A possible solution is to add them to the fringe of Rijkhoff's *set nouns* category. However, not all Estonian *stik*-nouns behave this way: the nouns that tend to have clearer boundaries and more discrete structure like *sõnastik* 'dictionary' (Lit. 'word'+*stik*), *saarestik* 'archipelago' (Lit. 'island'+*stik*), behave syntactically like proper count nouns.

Another kind of existential nominatives is the ***plurale tantum*** nouns that have an inherent boundary for their quantity that requires nominative marking in the affirmative ECs (see Vilkuna 1992: 59–60). ECC contained one example of *plurale tantum*:

(32) *Järgne-sid   õhtuvärvi-d   järve-l.*
     follow-PST.3PL   twilight.colour-N.PL   lake-ADE
     '(Then) there followed the twilight colours on the lake.' (ECC)

2.3.2 The noun belongs to the group "Existential partitives"

The group Existential partitives contains mass nouns like *aimu* 'vague.idea.P.SG', *ruumi* 'space.P.SG (submeaning: sufficient space for fitting something in)', *üh-t-teis-t* 'something-P.SG (a thing or two)' and *jõudu* 'strength.P.SG'. They are used non-inclusively in the ECs (cf. Nemvalts 2000: 64–67). In ECC there are 20 uses of existential partitives,[22] for example:

(33) *Endal=gi Ø   ruumi   vaevalt   ringi   pööramise-ks.*
     self=CL   (be.3) space.P.SG   merely   around   turning-TR
     'We ourselves (have) only just (enough) space for turning around.' (ECC)

In many such e-subjects, the semantics of the partitive case is fading and the non-inclusive meaning is often not essential to this form any more, as is in the case of the expressions *juttu tule-ma* [talk.P.SG come-INF] 'come to discussion' and *tegemis-t / tegu ole-ma* [doing-P.SG be-INF] 'be dealing with', and the construction *something*.P + adjective.P: *midagi ilusa-t* [something.P.SG nice-P.SG] 'something nice'. For example:

(34) *Tegemis-t   on   huvitava   isiksuse-ga.*
     dealing-P.SG   be.3   interesting.G   personality-COM
     'Here we are dealing with an interesting personality.' (ECC)

---

[22] The existential partitives (8) that occurred in a negative sentence are not counted in here.

2.3.3 The noun belongs to the group "Divisibles"

The case of divisible e-subjects is determined by situational inclusivity-related variables and pragmatic implicatures. The rest of this paper describes and explains their case-marking principles.

2.4 Level D of subject case assignment

From now on only the divisible e-subjects (i.e. mass nouns and plural count nouns, see Section 1.3) will be discussed. Unlike in the case of the other noun groups, the existential nominatives and existential partitives, the case of divisibles is not assigned on level C. When on the first three levels the subject case constraints were relatively simple and rigid then among the divisibles several choices and meaning nuances comes into play. I will discuss the following semantic and pragmatic factors: inclusivity, the effect of determiners, pragmatic implicatures and specificity. All of these factors are dependent on the particular situational context in the sentence or discourse, not just on the lexical semantics of the head noun. In ECC, 122 e-subjects are divisibles: 12 of them had their case assigned under negation, 3 on level B and 107 (38% of all ECC subjects) on level D.

The DSM factors discussed in 2.4 belong to three main groups. The subject case depends on the presence or lack of inclusivity meaning (Section 2.4.1) or on the inclusive-non-inclusive meaning of the subject referent (2.4.2). In 2.4.3 unspecific reference will be discussed as a potential DSM factor.

2.4.1 Subject case alternation is based on the opposition of the presence or lack of inclusivity meaning

The e-subjects' inclusivity meaning is a quantitative definiteness phenomenon (see Section 1.3) dependent on the situational context and not on lexical semantics. It operates on two levels in Estonian. Primarily it is the question, whether inclusivity is relevant for the e-subject and whether it is marked at all. In most divisible e-subjects, the nominative-partitive opposition stands for the overt marking of non-inclusivity vs. the lack of it (the topic of this section). Less often, there is the proper inclusivity opposition of inclusive and non-inclusive quantity (see Section 2.4.2). The

difference between these oppositions is in the existence or non-existence of a contextual boundary.[23]

The opposition of presence and lack of inclusivity determination (the PLI opposition) is the second most frequent factor influencing the e-subject marking in ECC. 72 subjects (26%) in ECC have this case-assignment motivation. Out of these 41 are nominative and 31 partitive, 20 are mass nouns and 52 plural count nouns. The following sentence pairs exemplify the nominative and partitive marking of plural count nouns ((35), (36)) and mass nouns ((37), (38)). The subject referents in (35) and (37) are concrete and in (36) and (38) abstract.

(35) a. *Pilti-de-l*   *ol-i-d*   *kodulooma-d.*
          picture-PL-ADE   be-PST-3PL   domestic.animal-N.PL
          'There were domestic animals in the pictures.' (ECC)

      b. *Pilti-de-l*   *oli*   *koduloom-i.*
          picture-PL-ADE   be.PST.3SG   domestic.animal-P.PL
          'There were (some) domestic animals on the pictures.'

(36) a. *Alatihti*   *juhtu-si-d*   *tema-ga   õnnetuse-d.*
          almost.always   happen-PST-3PL   he-COM   accident-N.PL
          'He often got into accidents.' Lit. 'Almost always accidents happened with him.'

      b. *Alatihti*   *juhtu-s*   *tema-ga   õnnetus-i.*
          almost.always   happen-PST.3SG   he-COM   accident-P.PL
          'He often got into accidents.' Lit. 'Almost always accidents happened with him.' (ECC)

(37) a. *Maa-s*   *oli*   *rohi.*
          ground-INE   be-PST.3SG   grass.N.SG
          'There was grass on the ground.'

      b. *Maa-s*   *oli*   *rohtu.*
          ground-INE   be-PST.3SG   grass.P.SG
          'There was (some) grass on the ground.' (ECC)

---

[23] The more precise term *inclusivity opposition* is more accurate here than *quantity opposition* which has sometimes been used too but can also be used to mark the number category and other meanings.

(38) a. *Lähikonna-s   kost-is   kolin.*
          vicinity-INE   sound-PST.3SG   clatter.N.SG
          'Clatter was heard in the vicinity.' Lit. 'In the vicinity clatter sounded.'

    b. *Lähikonna-s   kost-is   kolina-t*
          vicinity-INE   sound-PST.3SG   clatter-P.SG
          '(Some) clatter was heard in the vicinity.' Lit. 'In the vicinity clatter sounded.'
          (ECC)

The difference between the partitive and nominative subjects can be better understood with the help of the following paraphrases: *there are some X-s there* (the partitive) vs. *there are such X-s there* (the nominative), hence the distinction is not between inclusive and non-inclusive quantity. The ECs subject to this case-assignment factor do not have a **contextual boundary** (location instruction) that would help to identify the inclusive quantity of the subject referent (see also Section 1.3). The lack of a contextual boundary prohibits the reading of inclusiveness but permits non-inclusive (indefinite quantity) reading. The partitive counterparts of (35)–(38) have the non-inclusive reading and the nominative counterparts' inclusivity is unspecified.

This meaning difference between these ECs with the nominative and partitive subjects is only subtle and it often becomes apparent in a particular context (Erelt et al. 1993: 44). According to Nemvalts (2000: 150) the plural nominative (e.g. *inimese-d* 'people-N.PL') identifies the referent as a set that has qualities characteristic to the class (e.g. the notional CLASS OF PEOPLE). The partitive identifies the referent as an entity belonging to the class, i.e. as a member of the class (see also Vähämäki 1984: 73–75 on Finnish and Section 2.4.3 in this paper).

The choice of the nominative – a canonical subject case – also gives the sentence a more transitive feel (in the sense of the transitivity continuum of Hopper & Thompson 1980) and the partitive brings about more intransitive connotations.

2.4.2 Subject case alternation is based on the opposition of inclusive and non-inclusive meaning

The opposition of inclusive and non-inclusive meaning (the IN opposition) is different from PLI in that both the nominative and partitive e-subject are marked for inclusivity. The nominative marks inclusively involved and the partitive non-inclusively involved subject referents. In ECC there are 35

examples whose decisive case choice factor is the IN opposition; the examples are in the nominative and in the partitive, in the singular and plural. It has been suggested that one of the following conditions has to be met, for a divisible subject to be able to express inclusive quantity. Firstly, the context sets a boundary for the subject referent's inclusive quantity (Vilkuna 1992: 60–61; Nemvalts 2000: 108; see Section 2.4.2.1 below); secondly, the subject NP includes an adjective or determiner (see Section 2.4.2.2), or, thirdly, DSM can be used to express aspectual differences (Section 2.4.2.3) (Nemvalts 2000: 87–89, 100–101, 151–152).

In the Sections 2.4.2.1–2.4.2.3 I argue that only the first constraint is decisive and significant for subject case-marking (this posits a minor meaning difference between two otherwise similar types of partitive divisibles – indefinite quantity e-subjects whose case is assigned by PLI or IN: the existence/non-existence of a contextual boundary in the situation. However, partitive case-marking neutralises this distinction).

The opposition types PLI and IN illustrate the well-known distinction between semantic content and **pragmatic implicatures** (what is said vs. what is being communicated) (cf. Haspelmath 2006). In different situational uses, a word with a more general meaning (e.g. 'lion') can get distinctive pragmatic implicatures: 'lion in general' (semantically unmarked) vs. 'a male lion' (semantically marked, minus-meaning). Both of them can be opposed to the semantically marked 'lioness' (plus-meaning) (ibid.). In Estonian ECs, the semantically unmarked nominative gets in some contexts the specific pragmatic implicature 'inclusive quantity'. As the nature of the partitive case is the marking of non-inclusive quantity, the semantic content of the partitive NP is always specified for inclusivity and may be analysed as a hyponym of the general meaning of the nominative NP.

2.4.2.1 Contextual boundary on the referent's quantity

This group of ECs involves NPs that are similar to *plurale tantum* nouns (see Section 2.3.1) but they get their ground for bounding their quantity from situational context, and not from their lexical semantics like the *pluralia tantum* do, for example:

(39) *Selle-l   kase-l   on   juba   lehe-d.*
      this-ADE birch-ADE be.3   already   leaf-N.PL
      'This birch has leaves already.' Lit. 'On this birch is already leaves.' (adapted from Vilkuna 1992: 61.)

The e-subject *lehe-d* 'leaf-N.PL' can have an inclusive reading due to the existence of a contextual boundary, a typical quantity of leaves in the tree: the amount of all the leaves in the leafage. When analysing the case-choice factors of the divisibles in the ECC I considered that (unlike the *pluralia tantum*) the contextually bound NPs also permit the non-inclusive use that brings about the partitive marking:

(40) *Selle-l   kase-l   on   juba   leht-i.*
      this-ADE   birch-ADE be.3 already leaf-P.PL
      'This birch has some leaves already.' Lit. 'On this birch is some leaves.'

In the next example pair, the contextual boundary is the inclusive amount of bonfires that the speaker knows to be lit in the forest in the evening under consideration. The nominative subject stands for all the bonfires that were lit and the partitive denotes some of these bonfires.[24]

(41) *Veel õhtupimeduse-s lõõma-sid   tule-d   metsa   all.*
      still dusk-INE   flame-PST.3PL   bonfire-N.PL forest.G under
      'At dusk, the bonfires were still flaming in the forest.' (ECC)

(42) *Veel õhtupimeduse-s lõõma-s   tule-sid   metsa   all.*
      still dusk-INE   flame-PST.3SG   bonfire-P.PL forest.G under
      'At dusk, some bonfires were still flaming in the forest.'

2.4.2.2 Adjective or determiner in the NP

Nemvalts (2000: 77–80) claims that when the e-subject NP is modified by an adjective the nominative brings about inclusive reading and the partitive the non-inclusive one. The following sentence expresses the possibility of IN opposition difference:

(43) *Hobuse keha-l   on   punase-d ja   musta-d   träpsu-d.*
      horse.G body-ADE be.3 red-N.PL   and black-N.PL spot-N.PL
      'There are red and black spots on the horse's body.' (Google)

In general, the nominative NPs state that *all* the head noun referents in this particular location are of the kind specified by the adjective cluster. (43)

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[24] In this story the narrator talks about the forest owned by their family and about the forest work done by her husband and children. In the narrative, all the bonfires lit in this forest have definitely been lit by them.

implies that there are no other colour spots on the horse's body than red and black. The use of the partitive e-subject, on the contrary, would carry non-inclusive meaning: i.e. the state that (at least) some of the spots on the horse's body are red and black (cf. Nemvalts 2000: 81). Similar IN opposition can be attested in the case of non-coordinated subjects and mass nouns:

(44) a. *Kahe-l   pool kasva-s   kõrge   vili.*
         two-ADE   side grow-PST.3SG   high.N.SG   crop.N.SG
         'High crop was growing on both sides.' (ECC)

    b. *Kõrge-t   vilja   kasva-s   kahe-l   pool.*
       high-P.SG   crop.P.SG   grow-PST.3SG   two-ADE   side
       'Some high crop was growing on both sides.'

The nominative use states that the only kind of crop growing in the location is high (later on in the narrative, this is also overtly expressed). The partitive use, on the other hand, implies that in addition to high crop, the other kind *can* also be growing, for example low crop.

In ECC, not all adjective-modified e-subjects show IN opposition in their case-alternation. For example in the next sentence pair, neither option expresses inclusive quantity. The nominative e-subject is neutral with respect to inclusivity.

(45) a. *Ootamatult   hakka-s   mu-lle   sigine-ma   uus-i*
         unexpectedly start-PST.3SG I-ALL   appear-INF new-P.PL
         naistuttava-i-d.
         female.acquaintance-PL-P
         'Unexpectedly I started to get new female acquaintances.' Lit. 'Unexpectedly new female acquaintances started to appear for me.'(ECC)

    b. *Ootamatult   hakka-sid   mu-lle   sigine-ma   uue-d*
       unexpectedly start-PST.3PL   I-ALL   appear-INF   new-N.PL
       naistuttava-d.
       female.acquaintance-N.PL
       'Unexpectedly I started to get new female acquaintances.' Lit. 'Unexpectedly new female acquaintances started to appear for me.'

If in the case of the examples (43) and (44), the subject case alternation reflects the inclusive – non-inclusive quantity distinction (the "IN-group") then in the case of the example (45) it reflects PLI distinction (the "PLI-

group"). The difference between the two groups is again in the existence of a contextual boundary of the subject referent. In the case of the IN-group clauses, the referent of the subject NP, like *black spots*, has a definite larger (background) entity or set where it belongs to: only these spots are being discussed that are located within the boundaries of the horse's body.[25] On the other hand, in the case of *some new acquaintances* there is no standard size of the larger set of new acquaintances.

Of the 103 subjects in ECC that are modified by an adjective only 9 have their case assigned by the IN opposition. To summarise, an adjective in the NP is not an independent factor permitting IN opposition distinction of the e-subject's case-alternation. Instead, the case-alternation of adjective-modified NPs that shows inclusiveness distinction can be explained by the same conditions as outlined in 2.4.2.1.

Nemvalts (2000: 87–89, 100–101) has shown that there are some **determiners** that condition or release the ban of nominative marking in the affirmative ECs. These include determiners like *terve* 'whole', *mõlemad* 'both', *osa* 'part' when used as a modifier, *oma* 'specific', *teatav* 'certain' and *just see* 'exactly this', *mingi* 'some' and *mõningane* 'some, a certain'. For example:

(46) *Seal   on   mõlema-d lapse-d   /   *mõlema-i-d laps-i.*
　　 there   be.3 both-N.PL child-N.PL / both-P-PL   child-P.PL
　　 'There are both children there.' (Google)

(47) *Se-l   seiga-l   on   oma   tähtsus   /*
　　 this-ADE event-ADE be.3 its.specific   importance.N.SG /
　　 *oma   tähtsus-t.
　　 its.specific importance-P.SG
　　 'This event has its specific importance.' (Nemvalts 2000: 87)

(48) *Ta-l   on   selle-st   mingi   aim.   /*
　　 he-ADE be.3 this-ELA   some.N.SG vague.idea.N.SG /
　　 *mingi-t   aimu
　　 some-P.SG vague.idea.P.SG
　　 'He has some idea about this.' (Google)

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[25] Although at first sight, in the case of the examples of (44) there does not seem to be any bounded larger entity in the context, the larger entity is actually the immediate vicinity visible for the speaker walking along the lane (in this narrative, a child whose line of vision is blocked by the high crops).

Also numerals and measure nouns (*kaks* 'two' and *kamalutäis* 'handful') bound the NP quantitatively and occur in the nominative (49):

(49) *Aia-s   seis-i-d   kaks   õunapuu-d.*
      garden-INE   stand-PST-3PL   two.N.SG   apple.tree-P.SG
      'There were two apple trees in the garden.' (ECC)

Such e-subjects are a borderline case that does not actually go well neither under existential nominative nouns nor under the inclusivity effects of divisible nouns. Numerals can be treated as the determiners of nouns (Krifka 1996: 583–584). Although the nouns with numeral and quantifier determiners have singular form, they have plural semantics – therefore this e-subject type is discussed here under divisibles.

     In sum, the prototypical function of determiners is to give the subject referent a contextual boundary that enables inclusive quantity interpretation – which can be regarded a manifestation of the IN opposition. For example (46) and (47) rather talk about the inclusive amount of 'children' and 'importance' than some indefinite or partial amount. In ECC there are 15 examples (5%) where the determiner conditions the e-subject's nominative marking: in 10 cases a numeral and also *mõni* 'some' and *ükski* 'one'.

2.4.2.3 Subject case and aspect

The case alternation of e-subjects can reflect aspectual distinction only in the case of divisibles, provided that the predicate is an accomplishment or achievement verb (i.e. telic, cf. Vendler 1967; Dowty 1979; see also Nemvalts 2000) and the verb is used in the imperfect or future tense (Nemvalts 2000: 126–130). For example, in the case of the perfect tenses, the aspect is perfective and the aspect alternation is not possible.

     If these conditions are met, the nominative can stand for perfective and the partitive for the imperfective reading (the interpretation of aspectual opposition is usually optional). Clauses (50) to (53) exemplify accomplishments and the examples (54) and (55) juxtapose a punctual (54) and an iterative achievement (55).

(50) *Silla   taha   kogune-s   rämpsu.*
      bridge.G   behind.ILL   gather-PST.3SG litter.P.SG
      'Litter was gathering behind the bridge.' (ECC)

(51) *Silla   taha   kogune-s   rämps.*
bridge.G   behind.ILL   gather-PST.3SG   litter.N.SG
'Litter gathered behind the bridge.'

(52) *(Raputa-si-n   põõsas-t,   nii   et)*
shake-PST.1SG   bush-P.SG   so   that
must-i   marj-u   ema-le   pähe   sada-s.
black-P.PL   berry-P.PL   mother-ALL   head.ILL   fall-PST.3SG
'(I shook the bush so that) black berries kept falling on my mother's head.' (ECC)

(53) *...musta-d marja-d   ema-le   pähe   sada-si-d.*
black-N.PL   berry-N.PL   mother-ALL   head.ILL   fall-PST-3PL
'(I shook the bush so that) black berries fell on my mother's head.'

(54) *(Õhk   hakka-s   põru-ma   ning)*
air.N   start-PST.3SG   shake-INF   and
üle   pihlaka-te   kihuta-sid   reaktiivlennuk-i-d.
over   rowan.tree-G.PL   sweep-PST.3PL   jet.plane-P-PL
'(The air started to shake and) jet planes swept by over the rowan trees.' (ECC)

(55) *...üle   pihlaka-te   kihuta-s   reaktiivlennuke-id.*
over   rowan.tree-G.PL   sweep-PST.3SG   jet.plane-P.PL
'...jet planes were sweeping by over the rowan trees.'

The verb in (50) and (51) can be replaced by another verb *voolama* 'flow' – and the clauses can still reflect aspectual opposition then. However, the use of this verb in the next example pair gives an imperfective result.

(56) *Tema   pilgu-st   voola-s   armastus-t.*
he.G   gaze-ELA   flow-PST.3SG   love-P.SG
'There was love flowing from his gaze.' (ECC)

(57) *Tema   pilgu-st   voola-s   armastus.*
he.G   gaze-ELA   flow-PST.3SG   love-N.SG
'There was love flowing from his gaze.'

These examples show that for aspectual opposition it is necessary that the situation can occur both perfectively (bounded) and imperfectively (unbounded): there must be a potential boundary in the verb meaning or situation, i.e. a change of state point. In the examples (56) and (57) there is no potential boundary and therefore the verb is used as an activity verb; the perfective-imperfective opposition is impossible (the case-alternation

depends on the PLI instead). The ECs with the aspectual opposition possibility express incremental or potentially iterative meaning or dynamic (serial) conceptualisation of the subject (cf. Huumo 2007 on Finnish). Often these ECs contain an adverbial with the lative meaning: an NP in illative or adessive case or a PP, compare (50) and (51) to (56) and (57). A special type of ECs that permit aspectual opposition, have the target state expressed by a translative adjective, see examples (26) and (27). In ECC, the only ECs that permit aspectual opposition and at the same time contain a non-lative adverbial are the ones with the potential punctual-iterative meaning opposition, compare the locative adverbial examples (54) and (55) (see also Huumo 2001 on Finnish).

I analysed the aspectual case-alternation possibility in 92 ECs with divisible subjects (whose case is not assigned on the higher levels; I also discarded from the analysis the NPs with a quantifier determiner that can never take the partitive case in the affirmative). Among these EC there are:

– 22 telic predicate verbs (verbs that enable both perfective and imperfective use) and 70 atelic (verbs that only allow imperfective use);
– 63 uses of aspect-prone tense (imperfect, semantic future) and 29 uses of a tense in which aspect-alternation cannot occur (perfects, present);
– 11 clauses where the mere change in subject case brings about the possibility of the opposite aspectual interpretation[26] and 81 clauses whose subject case-alternation cannot do it.

In ECC, including the examples (50)–(53), the aspectual opposition was always accompanied by the potential of IN distinction, just as outlined in the Sections 2.4.2.1 and 2.4.2.2. If the situation is perfective, the quantity of the subject referent is inclusive, and if the situation is imperfective its quantity is non-inclusive. Aspect is not a decisive factor determining the e-subject's case (but an attendant meaning that sometimes occurs with the IN meaning opposition). Huumo (2010: 89) concludes the same about Finnish.

2.4.3 Unspecific reference: a potential motivation for subject case alternation

Nemvalts (2000: 150) claims that in the case of mass noun and plural count noun e-subjects the nominative identifies a class and the partitive identifies

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[26] In the case of coordinated subjects the verb is counted more than once (as many times as there are subject NPs).

the members of a class via their quantity. Following Vähämäki's (1984: 73–75) set theoretical approach Nemvalts means by *class* an abstract concept (e.g. THE CLASS OF BOYS) whose members are not abstract but ontological real world entities.[27] This implies that the plurality of classes means different kinds of classes (e.g. CLASSES OF BOYS includes the CLASS OF SMALL BOYS, etc.).

This section analyses whether class reference, as proposed by Nemvalts, has any effect on the divisible e-subject's case. It is important to keep in mind that this class-related nominative function discussed in this section is different from the type of reference outlined in 2.4.1. (here: "identify a class", in 2.4.1: "identifies the referent as a set that has qualities characteristic to the class"). I start with an example of plural count nouns:

(58) *Aia   taga   kasva-sid   riisika-d.*
       garden.G   behind   grow-PST.3PL   milk.mushroom-N.PL
       'Behind the garden milk mushrooms were growing.' (ECC)

(59) *Aia   taga   kasva-s   riisika-i-d.*
       garden.G   behind   grow-PST.3SG   milk.mushroom-P-PL
       'Behind the garden (some) milk mushrooms were growing.'

These clauses have a generic-like meaning if used to state that there were mushrooms growing in this location over several years. The meaning of the partitive subject is very similar to the corresponding nominative but the case overtly marks the NP for non-inclusive quantity. If the nominative plural subject of this EC identifies the class, then, according to the definition above, the nominative noun (unlike the partitive one) must denote an abstract concept, the CLASS OF MILK MUSHROOMS.

For assessing mental concepts, the empirical corpus analysis method of this study is not suitable. However, class semantics has many overlaps with the more accessible linguistic phenomenon of **unspecific reference** which is a complex set of different meaning possibilities. To check whether it is true that such nominative nouns are denoting a class, i.e. an abstract generalisation, I juxtapose these uses with various descriptions of

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[27] The class reference vs. quantification opposition has also been attested in differential subject and object marking phenomena in the neighboring language Russian (Paykin & van Peteghem 2002).

unspecific reference and evaluate whether specificity can cause DSM in Estonian.

Chesterman (1991: 188–190) notes that specificity can be viewed as a gradient in which "the cut-off point between the two poles of 'referential' and 'non-referential' would be difficult to place with any precision". Vilkuna (1992) has presented a systematic description of the elaborate nature of unspecific reference in Finnish. In this discussion only the types appearing in affirmative contexts are relevant: reference to a category, quantified contexts, generic NP reference and sort and species reference (*lajireferenssi* in Finnish).

I argue that often these instances overlap with Vähämäki's and Nemvalts' logical class reference (e.g. the CLASS OF BOYS). Although Nemvalts' explanation includes the identification process and Vilkuna's one is rather just centred on the nominals' referential properties, I find that the notions are mostly comparable.

2.4.3.1 Reference to a category

Vilkuna (1992: 106–125) explains the difference between expressing a category or an individual entity with referentiality: when only the category is mentioned, the referent is unspecific; reference to an individual is specific. When the reference is to a category, the focus is on the description which is more important for the communicative purpose than referring to a specific individual. For example: *Now you are asking **the wrong person**!* The sentence loses its communicative function if the NP is replaced with the specific *me.*

Vähämäki's characterisation of classes is compatible with Vilkuna's examples: the reference is an abstract concept characterised by identicalness of its members. Among the level D subjects, category reference only occurred in 3 (3%), for example:

(60) *On   ju   **elukutse-i-d**   nagu   tuletõrjuja   ja   autojuht,*
     be.3 MDA   profession-PL-P   like   fire-fighter.N and   driver.N
     mille-ga   laps   on   varase-st   ea-st   tuttav.
     that-COM   child.N be.3 early-ELA age-ELA familiar.N
     'Obviously, there are professions like the fire-fighter and driver that children are familiar with from an early age.' (ECC)

In (60) it is clearly the class reference that is relevant to the story: it is *professions* (and not directly fire-fighting or car-driving) that is a generalisation of the particular jobs listed afterwards. The divisible referent

is in the plural partitive and not (as Nemvalts proposes) in the nominative. Reference to a category cannot distinguish nominative divisible subjects from the partitive ones.

2.4.3.2 Quantified contexts

In quantified contexts the situation is recurrent and it is not bound to one point in time or to one place. The referent is unspecific and not unique as the situation is quantified by adverbials like *alati* 'always', *kord aasta-s* 'once a year (INE)', etc. or by the plurality of some NP (Vilkuna 1992: 96). In such ECs there is a mismatch between the grammatical number-marking of the subject NP and its quantity on the semantic level. For instance:

(61) *Kõigi-st   padriku-te-st kost-is   nen-de   mahe   hääl.*
       all.PL-ELA   scrub-PL-ELA sound-PST.3SG   they-G.PL mellow.N.SG voice.N.SG
       'From all the scrubs their mellow voice was heard.' Lit. 'From all the scrubs sounded their mellow voice.' (ECC)

In (61) the subject referent *hääl* 'voice.N.SG' is quantified by the plural forms of *kõigi-st* 'all.PL-ELA', *padriku-te-st* 'scrub-PL-ELA' and *nen-de* 'they-G.PL'. The quantified context effect only comes forward when *singular count nouns* refer to a number of instances, as in (61). Then the reference is unspecific. However, the NPs that are already in the plural bear the quantified meaning independently from the quantified contexts. The quantification effect does not work with mass nouns because they preserve their homogeneous and shapeless structure in these contexts. In conclusion, unspecific marking in the quantified contexts is close to Vähämäki's class reference but it does not occur with divisible e-subjects.

2.4.3.3 Generic NPs

The generic reference is similar to the above mentioned ones but the contexts are not time-bound or factual (Vilkuna 1992: 149). Prototypical generic sentences refer to laws, norms and principles and allow making predictions based on them (Dahl 1975). In the context of assessing the grammatical function of the nominative e-subject it is relevant to consider that the genericity of the predicate can occur separately from the genericity of the NP. For instance, in the next sentence the predicate is generic but the subject NP is specific: *Riitta's new car drives at 160 km/h* (Vilkuna 1992: 142–144). Vilkuna describes generic NPs as expressions that stand for abstract, intentional entities and kinds like the NPs in the following example: *The child who loses the dummy too early starts sucking her*

thumb, pillow corner or teddy-bear's ear (1992: 151). In the following I rely on Andrew Chesterman's (1991: 131) claim about Finnish generics that states that the generic meaning does not fit with the partitive but does combine with plural NPs.

(62) *Metsässä   ulvoo   susia.*[28]
      forest-INE   howl-3SG   wolves-P
      'In the forest (some) wolves howl.' (non-generic; Chesterman 1991)

(63) *Sudet   ovat petoeläimiä.*
      wolves-N   are   beasts-of-pray-P
      'Wolves are beasts of pray.' (generic; Chesterman 1991)

This implies that the generic NPs are not compatible with non-inclusive meaning but they do fit with the inclusive collective meaning that the plural nominative can bring about. A difference between the generic NPs and Vähämäki's conceptual class notion is that if a class involves all its members then the generic reference may only roughly do it. Generic sentences can be construed by adding modifiers or quantifiers like *most, all, generally* etc. (Chesterman 1991: 34–35).

   ECC contains 18 e-subjects (6%, incl. 9 divisible e-subjects) that occur in sentences that state some regularity or a general principle and can therefore be considered generic, e.g.:

(64) *(Kell   kuus hommiku-l   on   niisugune aeg,   kui)*
      o'clock.N   six.N morning-ADE   be.3 such.N.SG time.N.SG   when
      peatänava-l=gi   liigu-vad   ainult varase-d   rongiletõttaja-d.
      main.street-ADE=CL   move-3PL   only   early-N.PL rusher.on.the.train-N.PL
      '(At 6 o'clock in the morning it is such a time when) even on the main street there are only early rushers on the train around (there is no-one else, so the street is pretty empty).' (ECC)

If (64) the situation refers to a general norm and plural nominative e-subject can be considered unspecific. On the one hand it would be possible to state now that the nominative-partitive distinction can signify the generic reference vs. specific reference opposition. However, the subject of (64) can easily be replaced with a partitive one and the referent gets a non-inclusive, that is non-generic reading:

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[28] I have kept the original glossing in examples (62) and (63).

(65) *...kui   peatänava-l=gi   liigu-b   ainult varase-i-d rongiletõttaja-i-d.*
      when   main.street-ADE=CL move-3SG only   early-P-PL rusher.on.the.train-P-PL
      '...when even on the main street there are only some early rushers on the train around.'

The miniscule difference in the interpretation of the two case options rather leads to an alternative analysis: that both the nominative and partitive subject clauses represent a generic *predicate* but specific indefinite subject referent. The subject case-marking then depends on the PLI.

In conclusion, the borders of genericity are vague but (depending on the interpretation) some e-subjects can occur in these contexts. In ECC there are no cases where the e-subject marking unquestionably depends on genericity.

2.4.3.4 Sort and species reference

Also sort and species reference is similar to generic reference, it differs from it in that it is time-bound.

(66) *Anne   pühenda-s   oma uurimuse lehetäi-le.*
      Anne.N   devote-PST.3SG her   research.G blackfly-ALL.SG
      'Anne devoted her research to the blackfly.' (Vilkuna 1992: 157)

The sort and species NPs are non-referential because they are characterised by identicalness of their members and there can be a mismatch between the semantics and coding of the NP's number (Vilkuna 1992: 157–158). Sort and species reference can occur with singular count nouns (non-divisible) and plural count nouns (divisible, reference is to different subspecies). There are no divisible e-subjects of this reference type in ECC. Sort and species reference is compatible with Vähämäki's class reference but it has either little or no compatibility with nominative divisible e-subjects.

2.4.3.5 Interim conclusion

Section 2.4.3 assessed the occurrence of unspecific or class reference in the affirmative ECs and evaluated its influence on subject case-marking. It tested Nemvalts' (2000: 150) hypothesis that *the function of nominative case on divisible subjects is to identify a class* (unlike the partitive that identifies the members of the class through their quantity).

The theoretical notion of class reference matches at large with unspecific reference. Among the 122 divisible subjects in ECC there are 12 clearly unspecific divisible e-subjects that get their case-marking on the

level D (see Table 5) and their case-marking depends on the PLI. In conclusion, I have found no evidence of unspecific reference having an influence on the subject case.

Table 5. The occurrence of different unspecific reference types in the existential clause corpus.

Unspecific reference type / Level of case assignment	Case assignment on level D	Case assignment on the other levels
Reference to a category	3 pl count nouns	1 C level subject
Quantified context	0	5 C level subjects
Generic NP reference	9 pl count nouns	4 C level subjects
		5 A level subjects
Sort and species reference	0	0

3. Towards a comprehensive account

The assignment of Estonian e-subject case is a process that takes place on up to four levels. In the system the most influential rule is negation (the A level factor) that overrides the lower level conditions. The B level conditions only override the C and the D level ones, etc. The factors on each level are equal to each other. To determine the decisive rule of each e-subject case use one has to check the factors on every level until he finds the suitable one (starting from polarity, see Figure 1 in Section 2). If the subject case fails to get assigned on level A, it gets assigned somewhere below; if it also fails to get assigned on level B, it gets assigned on the levels below, etc. Figure 2 presents the frequencies of e-subjects divided by their case and level where it gets assigned in the corpus.

Figure 2. Frequencies of e-subjects in the existential clause corpus according to the level of their case assignment (%).
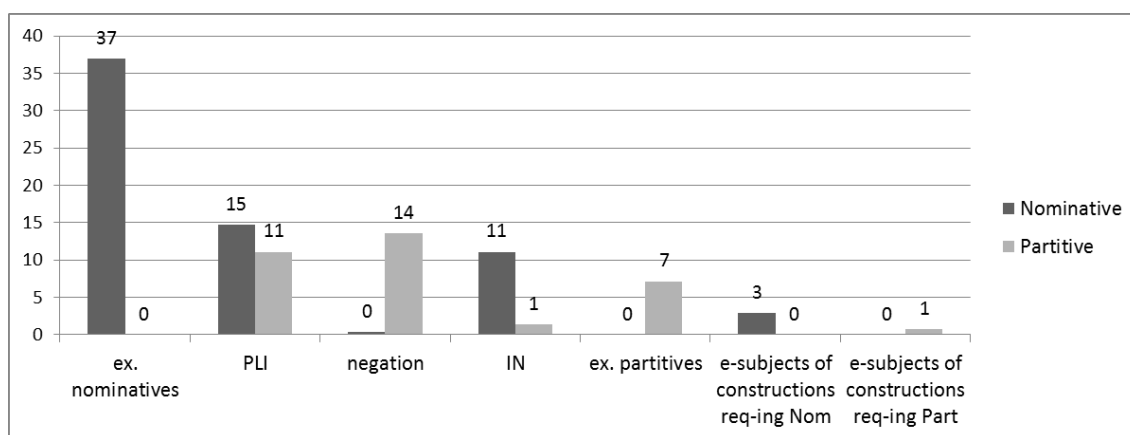
On level A **negative** clause e-subjects of the corpus get partitive marking. Exceptionally, directly presupposed e-subjects also occur in the nominative in the negative context. The case of affirmative ECs' subjects is determined on one of the next levels.

Level B of subject case assignment concerns specific constructions and lexical predicates. In the list of **EC constructions** used in this study, there are 95 different constructions but only 12 require a partitive subject (see Section 2.2.1) and 7 a nominative one (2.2.2). 76 of them leave the subject case choice free (2.2.3). Section 2.2.4 showed that it can be either just the verb or the whole construction that determines particular case assignment. If the verb-governed construction permits both cases, the subject gets its case assigned on one of the next levels.

On level C, DSM depends on **the subject's noun group**: whether the subject noun belongs to the existential nominatives, existential partitives or divisibles (Sections 2.3.1, 2.3.2 and 2.3.3 respectively). The first two groups were introduced in this paper; if these nouns occur in affirmative ECs their case is pre-determined. Existential nominatives is a general term that embraces singular count nouns, *plurale tantum* nouns and two groups introduced in this study that I call abstract nominatives and (on the basis of Rijkhoff's nominal aspect theory) set nouns. Abstract nominatives, e.g. *lootuskiir* 'ray of hope', is a relatively large group of abstract nouns that have a limited use in the affirmative ECs: they tend not to be categorisable neither as count nouns nor as mass nouns. Similarly to count nouns they occur in the singular nominative in the ECs (the partitive is not allowed) but similarly to mass nouns they cannot occur in the plural.

Set nouns are for example *sulestik* 'plumage' and *lehestik* 'leafage' that occur in the singular despite the number of entities they denote (e.g. the plumage of one or many birds). The group existential partitives involves different kinds of abstract nouns whose use in the ECs is fixed to the partitive singular (e.g. *ruumi* 'space.P.SG' and *tegemis-t* 'dealing-P.SG'). None of the ECs whose e-subject case gets assigned on level C contain constructions that specifically determine the e-subject's case.

Level D concerns the marking of **divisible e-subjects** (mass nouns and plural count nouns) that have a more complex meaning-based case alternation. This level involves the opposition of the *presence and lack of inclusivity meaning* (PLI, see Section 2.4.1) and the opposition of *inclusive and non-inclusive meaning* (IN, Section 2.4.2).

In Estonian, the e-subjects' inclusivity meaning operates on two stages. In the first case, the opposition of the **presence and lack of**

inclusivity meaning, only the partitive subject is marked for inclusivity (more specifically, for non-inclusive quantity). The opposition can be better understood with the help of the following paraphrases: *there is some amount of these referents in this location* (partitive subject), or: *there are such referents in this location* (nominative subject). The second opposition, of **inclusive and non-inclusive meaning**, can be better understood by the following paraphrases: *there is some amount of these referents in this location* (non-inclusive quantity, partitive subject marking), or: *all these referents are in this location* (inclusive quantity, nominative subject marking). In the second opposition, both the nominative and the partitive are marked for inclusivity. Hence, the primary difference between these two oppositions is in the meaning of the nominative counterparts. It comes from the existence of a contextual boundary for the subject referent: if there is a contextual boundary, the nominative subject means *all the referents*; if there is no boundary, the nominative stands for *such referents* (inclusivity is irrelevant here). The difference between the partitive e-subjects whose case gets assigned under PLI or IN is minor, dependent on the contextual boundary. The opposition types PLI and IN illustrate the semantic content and **pragmatic implicatures** distinction (Haspelmath 2006; see Section 2.4.2). A special group of e-subjects whose case is assigned under the IN factor is NPs with a numeral determiner (10 subjects out of 35, see Section 2.4.2.2). None of the ECs whose e-subject's case gets assigned on level D neither contain *constructions* that determine the e-subject's case nor specific subject nouns whose case is determined by the noun *lexeme*.

4. Conclusion

This article attempts to give a comprehensive account of subject case alternation in Estonian existential clauses. The paper reassesses the findings of earlier research on Estonian (especially Nemvalts 2000), mainly by using corpus and dictionary analysis and the studies on closely related Finnish.

In this study, the following subject case assignment factors were considered: referential properties of the subject noun, the subject referent's inclusivity and specificity in context; lexical predicates and particular constructions; other clause level and pragmatic properties (polarity, pragmatic implicatures and presupposition).

The Estonian existential subject's case-marking system abundantly exemplifies the interplay of all three variable types indicated by Witzlack-

Makarevich (2010). In typological studies pragmatic factors and the specific nature of morphological forms have also been discussed as factors of argument realisation (Bickel & Nichols 2008: 320). This is also the case with the Estonian e-subjects. The paper proposes an ordered four-level system of grammatical case-assignment rules (in the order of domination it consists of polarity, lexical predicates and particular constructions, the subject noun's lexical properties, situationally determined inclusivity and pragmatic properties). Among the studied 279 ECs, the most frequent subject case-assignment factors are the nominative taking noun type (the 'Existential nominatives' group), the NP referent's inclusivity and negation. The function of the partitive case (as a form marking unbounded meaning) has a major influence on the subject case in affirmative existential clauses. However, the crucial precondition for the option of subject case alternation is usually the existential construction environment itself whose defining feature is the topicality effect (the topic of the sentence is the locational adverbial and the subject tends to serve as the focus of the clause).

Cross-linguistically, non-canonical argument realisation often depends on semantic features, e.g. volitionality, which can (sometimes simultaneously) be bound to different levels of language: the predicate's lexical meaning or one of its sub-meanings, verbal affixes, choice of auxiliary, etc. (Onishi 2001: 23–40). This paper shows that the Estonian existential subject realisation depends in affirmative clauses on one fundamental semantic feature underlying all the case-assignment levels: quantitative definiteness (inclusivity). On these levels, the obligatory or optional marking of the subject referent's inclusive or non-inclusive quantity is either linked to certain verbs, noun lexemes, NPs or constructions. Concerning the situationally triggered inclusivity meaning on the NPs, the paper proposes a new functional explanation based on a binary division: the case alternation either depends on the presence or lack of inclusivity meaning or on the opposition of inclusive – non-inclusive quantity. The distinction between these two oppositions is in different pragmatic implicatures arising from situational uses.

Onishi also demonstrates that in the case of non-canonical arguments, the case-marking, agreement and syntactic behaviour usually differ from the properties of canonical arguments quite significantly (2001: 23–40). As it can be seen from this paper, that while there is some overlap between the case-marking and agreement of the Estonian existential clause argument and the canonical subject there are also considerable differences. Although

it has been suggested in the literature that the properties of Estonian existential subjects bring it close to the object, it can be concluded that it satisfies the conditions of non-canonical argument realisation and can therefore be regarded a non-canonical subject.

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Abbreviations

1 = first person
3 = third person
A = adjective
ABL = ablative
ADE = adessive
ALL = allative
BCE = Balanced Corpus of Estonian
CL = clitic
COM = comitative
COMP = comparative
DE = substitution class "Extralocal directional"
DI = substitution class "Directional"
DSM = differential subject marking
DT = translocal directional
e-NP = existential noun phrase
e-subject = subject of an existential clause
EC = existential clause
ECC = existential clause corpus
ELA =elative
G = genitive
ILL = illative
IN = inclusive-non-inclusive meaning opposition
INE = inessive
INF = infinitive

MDA = modal adverb
N, Nom = nominative
N = Noun
NP = noun phrase
P, Part = partitive
PL = plural
PLI = presence/lack of inclusivity determination
PP = preposition phrase, postposition phrase
PST = past
PTCP = participle
QP = quantifier phrase
SAC = syntactically annotated corpus
SG = singular
SUP = superlative
TR = translative
v = verb

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