

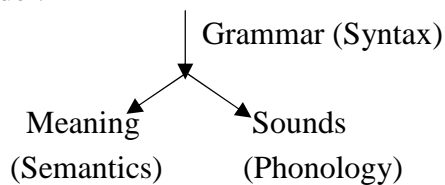
Morphological Agreement Realization Motivated by Information Structure*

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1. Introduction

It is a long tradition in generative grammar that the semantic and phonological components are part of syntax, being input to actual semantic interpretation and actual phonological realization. This has been represented as the (reversed) Y-model (Chomsky 1981, 1995):

(1) Y-model:



A theoretical assumption that this syntactic model yields is that what can be ‘seen’ as meaning and sound is what is translated from a syntactic feature; as the mapping to the semantic component is independent of the mapping to the phonological component, there is no direct interaction between sound and meaning.

Morphological agreement MA is a typical example of what is called ‘translation’ of a syntactic feature. MA is a linguistic property which represents a grammatical information at more than one position of a sentence either by the same form or by a different form:

(2) My neck hurts.

A subject *my neck* is the 3rd person singular, which information is doubly represented by *-s* attached to a verb *hurt*. Since the information of person is already expressed on a subject, it would not be necessary to express the same information on another sentential element once again; in that sense, MA is redundant. In addition, MA itself does not affect sentential meaning. The reason why agreement has been regarded as syntactic is that there appears to be some selection relation between two relevant elements: since a subject *my neck* is the 3rd person singular, a morpheme *-s*, which represents the 3rd person singular, appears, and vice versa. It is absolutely arbitrary whether a language has MA, though: most of the European languages have MA, whereas the Asian languages like Japanese and Chinese do not have MA at all. It is also arbitrary how many MA a language has. Italian and Spanish have MA in all persons and numbers; English has MA only for the 3rd person singular; French has a partial MA paradigm.

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The most well-known tendency on subject MA is that a language that has a relatively rich MA system allow null subjects more, whereas a language whose MA system is poor does not allow a subject to be null (Chomsky 1981, Burzio 1986, Rizzi 1982, 1986):

- (3) a. Telefonerà. (Ita.)
 telephone-3sg.FUT
 'He/she will telephone.'
- b. *(He/she) will telephone.

Italian, in which a verb inflects for all persons, allow a subject to be empty (3a), whereas English, which has MA only for the 3rd person singular, does not allow empty subjects (3b). The situation is not so simple, however: languages like Chinese and Japanese that do not have MA at all may freely allow a subject to be null (Jaeggli and Safir 1989):

- (4) Denwasuru-darou. (Jap.)
 telephone-FUT
 'I/you (sg.)/he/she/we/you (pl.)/they will telephone.'

A subject in (4) can be interpreted as any person, as illustrated in the translation. More complicated is the fact that even languages like Icelandic that have a relatively rich MA system may not allow an empty subject (Holmberg and Platzack 1995):

- (5) *(Ég) sakna þín. (Ice.)
 I miss-1sg.PRES you
 'I miss you.'

The other tendency on subject MA is that MA marking is obligatory when a subject is preverbal, whereas manifestation of MA is optional depending on particular languages when a subject is postverbal (Rizzi 1982, Alexiadou and Anagnostopoulou 1998, Belletti 2001):

- (6) a. Gianni ha telefonato. (Ita.)
 Gianni has-3sg telephoned
 'Gianni telephoned.'
- b. Ha telefonato Gianni.
 has-3sg telephoned Gianni.

- (7) a. Trois filles arrivent. (Fre.)
 three girls arrive-3pl.
 'Three girls arrive.'

- b. Il arrive trois filles.
 it arrives-3sg. three girls
 ‘There arrive three girls.’

In Italian, a finite Aux(iliary verb) *ha* agrees with both preverbal and postverbal subjects (6a-b). In French, on the other hand, a finite verb agrees with a preverbal subject (7a), but not with a postverbal subject (7b). Van Gelderen (1997) states that in a language that has object MA, a verb tends to display more MA when an object precedes a verb rather than when the former follows the latter. The following case is past participle PP agreement in cliticization:

- (8) Paul les a repeintes (/*repeint). (Fre.)
 Paul them has repainted-FEM.pl repainted-MASC.sg
 ‘Paul repaired them.’

PP agrees with a clitic that is interpreted as feminine plural.

MA has long been assumed to be realization of a structural relationship: when an argument occupies/moves to the Spec of a functional head, MA is realized as the result of a structural relation between the argument and the head (the *Spec-head* relation; Chomsky 1981/1986, Chomsky 1995). It has also been claimed that MA identifies the interpretation of a referent as a certain person, which allows a subject to be null in languages like Italian (Rizzi 1986). In the current system since Chomsky (2000), agreement is accounted for with a proposed mechanism *Agree*, a feature matching operation; it is assumed that uninterpretable agreement features are deleted from a syntactic operation, sent to the phonological component, and translated into MA. The recent literature (Sigurðsson 2006b, Bobaljik 2006, among others) claim that an abstract syntactic feature like Case and agreement should be distinguished from its actual morphological realization in the phonological component.

In this paper I would like to consider the fundamental question whether agreement is actually syntactic, by investigating the environments in which MA appears/does not appear based on information structure (Lambrecht 1994). I argue that MA realization is motivated by a certain information-structural property, thus, agreement is not syntactic. The paper is organized as follows. In section 2, I summarize analyses of MA in the history of generative grammar (Chomsky 1981/1986, 1995, 2000); I introduce recent proposals on MA (Sigurðsson 2003, 2006b, Bobaljik 2006). I also present the environments in which MA appears that are suggested in the literature. In section 3, I introduce information structure (Lambrecht 1994), its definition, and three kinds of information structure, sentence-focus, predicate-focus, and argument-focus. In section 4, I investigate the environments in which MA appears/does not appear based on the three types of information structure. In section 5.1, I consider the result with the notion of the *exhaustive identification domain EID*, a syntactic domain that semantic/information-structural properties are reflected on (Hosono 2007). Based on two generalizations that subject MA appears in predicate-focus, and that object MA does not appear in sentence-focus, I propose to formulate MA realization with the EID as follows: i) subject MA appears inside the EID in a split focus structure; ii) only one MA (i.e. subject

MA) is allowed to appear inside the EID in a non-split focus structure; and iii) otherwise, MA realization is free. Then, I claim that MA realization is motivated by an information-structural property, thus, agreement is not syntactic. In section 5.2, I discuss relevant issues on MA. I claim that focus and agreement in fact belong to the same category, which is also suggested by the recent literature (Miyagawa 2004, Chomsky 2005). I discuss ‘linguistic components looking like MA’, that is, a topic marker *-wa* and honorification in Japanese, whose realization I claim is motivated and determined under some information-structural conditions. I also mention association of MA realization with Case marking. In section 6, I briefly conclude this paper.

I would like to remark one point. A cross-linguistic fact that has been pointed out in relation to MA is that a language that has a rich inflectional system tends to locate a finite verb in a higher position, whereas a language whose inflection is relatively poor puts a finite verb in a lower position (Emonds 1978, Pollock 1989, Holmberg and Platzack 1995, Roberts 1993):

- (9) a. Jean embrasse souvent Marie. (Fre.)
 John kisses often Mary
- b. *Jean souvent embrasse Marie.
- (10) a. *John kisses often Mary.
- b. John often kisses Mary.

French, which has a relatively rich inflectional system, locates a finite verb in a higher position; thus, an adverb *souvent* follows a finite verb *embrasse* (9). English, whose inflectional system is poor, on the other hand, puts a finite verb in a lower position; thus, an adverb *often* precedes a finite verb *kisses* (10).¹

Biberauer and Roberts (2005) recently propose to distinguish rich MA system from rich tense system. They claim that a language that has both rich MA system and rich tense system allows V-to-T movement as well as null subjects (e.g. Italian, Spanish, etc.), whereas a language that does not have rich MA system but has rich tense system allows V-to-T but not null subjects (e.g. French) (Biberauer and Roberts 2005:6). According to their argument, (rich) MA system is in fact irrelevant to availability of verb movement. Following their claim, I hereafter concentrate on issues on the relation between arguments and MA realization, leaving aside verb movement.²

¹ An English Aux inflects for several persons; thus, English locates a finite Aux in a higher position (Emonds 1978, Pollock 1989).

² Many proposals on verb movement have been presented so far. Some literature (e.g. Svenonius 1994, Matushansky 2006) claim that verb movement is triggered by subcategorization feature of T; others (Bobaljik and Brown 1997, Hornstein 2001, Nunes 2004) propose interarborial operation/sideward movement. Chomsky (2001) recently claims that verb movement is a phonological operation, mainly because verb movement does not affect semantics. See those literature for details.

2. MA realization and the conditions under which MA appears

2.1 MA realization as translation of syntactic agreement feature

Apparent syntactic selection relation between relevant sentential components has long been accounted for on the assumption that MA is translation of a syntactic agreement feature including its value like the 3rd person singular:

(11) My neck hurts.

An MA *-s* represents the information that a subject *my neck* is the 3rd person singular; thus, this morpheme was assumed to be (pro)nominal (Chomsky 1981:52). On this assumption, one of two tendencies concerning subject MA, namely, that a language that has richer MA system may allow null subjects more often than a language that has poorer MA system, was accounted for as follows: MA as a pronominal element, a collection of ϕ -features (*AGR*), identifies the content of a subject, which allows the subject to be null (Chomsky 1981, Rizzi 1982). The other tendency that MA realization is obligatory in a preverbal subject case whereas it is optional in a postverbal subject case, as well as the fact that a subject a verb agrees with is normally assigned the Nom(inative) Case, were simultaneously accounted for as follows: the subject that is located in the Spec of I(nfl) that contains *AGR* shares features like person with the functional head (the *Spec-head* agreement), and is also assigned the Nom(inative) Case by *AGR* (Chomsky 1986:24).

In the Minimalist Programme (Chomsky 1995), the second tendency was associated with morphology-driven movement: an overt syntactic movement tends to show overt morphological realization. With the economy principle and checking theory, difference between a preverbal subject case in which presence of MA is obligatory and a postverbal subject case in which MA realization is optional is accounted for as follows: when *AGR* feature is checked overtly, MA overtly appears; when *AGR* feature is checked covertly, MA realization can be optional. This is illustrated as below³:

(12) a. Io verrò. (Ita.)
I come-1sg.-FUT
'I will come.'

b. [_{AGR}SP io verrò+Agr ([ϕ , Case]) [TP ... [VP i_{IO} ...]]] (Syntax)
[_{AGR}SP io verrò+Agr ([ϕ , Case]) [TP ... [VP i_{IO} ...]]] (LF)

(13) a. Verrò io.
come-1sg.-FUT I

³ A finite verb would move from a lower position, which I ignore.

- b. [_{AgrSP} (pro) verrò+Agr ([ϕ ,Case]) [_{TP} ... [_{VP} io ...]]] (Syntax)
 [_{AgrSP} (pro) verrò+Agr ([~~ϕ~~ ,Case]) [_{TP} ... [_{VP} io ...]]] (LF)

- (14) a. Il arrive trois filles. (Fre.)
 it arrive-3sg.-PRES three girls
 ‘There arrive three girls.’

- b. [_{AgrSP} il arrive+Agr ([ϕ ,Case]) [_{TP} ... [_{VP} ... trois filles]]] (Syntax)
 [_{AgrSP} il arrive+Agr ([~~ϕ~~ ,Case]) [_{TP} ... [_{VP} ... trois filles]]] (LF)

AGR has [ϕ ,Case], which must be checked. When AGR is checked overtly by NP/DP-movement, MA appears overtly as actual realization of overt AGR checking (12). When AGR can be checked covertly, on the other hand, AGR checking occurs at LF; MA may appear overtly (13). Alternatively, covert AGR checking may not realize MA (14). Later, *uninterpretable feature* was newly introduced as the representative of linguistic property like MA that does not affect meaning. To distinguish it from interpretable feature that has semantic content, it was assumed that uninterpretable feature must be checked before a syntactic computation enters LF. The above difference was accounted for as follows. An uninterpretable [ϕ], which was attributed to T, is checked accompanied by pied-piping of the phonological matrix of a checker (12); alternatively, the former is checked only by movement of the formal features of a checker (13-14).

Since Chomsky (2000), a syntactic operation *Agree* has been introduced. It is assumed that Agree is a series of operations: i) feature matching between uninterpretable ϕ -features [ϕ] of a head and an interpretable counterpart of a category, ii) valuation of the former by the latter, and iii) deletion of [ϕ]. *Move*, on the other hand, is assumed to be Agree plus the following (second) Merge triggered by [EPP] on [ϕ]. Under the *probe-goal* system, a syntactic operation in general proceeds as follows. [ϕ] comes into lexicon without values. A head with [ϕ] probes a goal that has an interpretable counterpart [ϕ], which possibly has some [F] too; [ϕ] and [ϕ] match; [ϕ] is valued and deleted by [ϕ]; [ϕ] may (universally or optionally) have [EPP]; the goal activated by its own [F] moves and deletes [EPP]. A preverbal subject case is accounted for as follows:

- (15) a. [_{TP} T+[~~u- ϕ~~ (with [EPP])] ... [_{VP} io+[ϕ , u-Case] ...]]
 (feature matching, valuation, and deletion)

- b. [_{TP} io+[ϕ , ~~u-Case~~] T+[~~u- ϕ~~ , (~~[u-EPP]~~)] ... [_{VP} io+[ϕ , u-Case] ...]]
 (Move and deletion)

T, which has [ϕ (with [EPP])], probes as a goal the subject *io*, which has an interpretable counterpart [ϕ] and [Case]; [ϕ] and [ϕ] match; the former is valued and deleted by the latter (and [Case] of the goal is also valued); [ϕ] has [EPP] too; the goal *io*, which is still active due to its [Case], moves (= remerges) and deletes the [EPP]. With [Case]

also deleted too, *io* is spelled out in [Spec,TP].⁴ The assumption in this theory is that actual realization of MA, Case, and so on, is derived from [u-F] valued by an interpretable counterpart in a syntactic operation. Thus, this leads to claim that since MA or Case is uninterpretable, they must be deleted in a course of a syntactic operation before they reach the semantic component.

The recent literature propose to distinguish an abstract syntactic feature of agreement or Case from its actual realization, the latter of which concerns the phonological component only. Sigurðsson (2003) suggests a theory-internal contradiction that possibly arises in the system since Chomsky (2000). The overall assumption in this system is represented by the Uniformity Principle: syntax and the semantic component are uniform for all languages, whereas parameters are restricted to the lexicon and the phonological component including utterances is highly variable among languages (Chomsky 2001, 2004). Sigurðsson points out as follows. Assume that language A selects a linguistic feature α from the universal set of features $\{\alpha, \beta, \dots\}$ and makes a lexicon, whereas language B selects another linguistic feature β from the universal set and makes a lexicon as Chomsky assumes; then, language A could not access a feature β , whereas language B could not access a feature α . However, the fact that some languages may not have articles (e.g. Russian and Finnish), for instance, does not mean that they lack definiteness. Therefore, languages that lack some linguistic properties should access the universal features, but only do not express them by ‘physical’ grammatical means (Sigurðsson 2003:5-6). It is claimed that “language has innate semantic structures that are independent of their physical exponents; [t]hus, language variation, including parameter setting, is strictly confined to PF (including morphology)” (Sigurðsson 2003:8). Based on this claim, Sigurðsson (2006b) argues that though a feature like agreement and Case that is translated into, say, the 1st person singular or the Nom Case is assumed to exist in syntax, valuation of a feature is made in the phonological component independently of a syntactic operation. It is claimed that values like the 3rd person singular not being syntactic objects, actual MA realization is a morphological translation that a particular language makes for a syntactic agreement feature in an arbitrary way, that is ‘an indirect reflection of abstract, syntactic Agree’ (Sigurðsson 2006b:22).⁵

⁴ It is not clear how a cross-linguistic tendency that MA realization is obligatory in a preverbal subject case whereas it is optional in a postverbal subject case is accounted for according to this system. (I thank Anders Holmberg, as he is the first who suggested this to me (p.c.)) A possible way to account for difference between preverbal and postverbal subject cases might be to say that presence of MA is obligatory when feature valuation and deletion take place as part of an entire operation Move (i.e. Agree + the (second) Merge), whereas MA realization can be optional when feature valuation and deletion occur in Agree only. As it is assumed that the EPP on T is universal (Chomsky 2000), this account might appear to work well. Since feature valuation is done in Agree before categorial movement takes place, however, [u-Case] and [u- ϕ] are already valued with a goal remaining in situ. It would be predicted that MA should always be realized, whether an argument is preverbal or postverbal, as in Italian. Thus, optionality of MA realization in a postverbal subject case does not appear to be well accounted for in this system.

⁵ According to this proposal, Chomsky’s (2000~) Agree will consist of i) feature matching between uninterpretable ϕ -features [u- ϕ] of a head and an interpretable counterpart of a category and ii) deletion of [u- ϕ] by [ϕ]; valuation of [u- ϕ] by [ϕ] is excluded from a series of operations. Based on this system, a syntactic operation goes on regardless of what value a syntactic agreement feature will be translated into in the phonological component, whereas an apparent syntactic selection relation between relevant elements is coded in syntax. Thus, this system appears to be promising with taken into consideration the fact that it is arbitrary among

On the assumption that actual realization of MA or Case should be distinguished from the abstract notion of a syntactic feature, Bobaljik (2006) associates actual realization of MA with that of Case. When actual realization of MA and Case is associated with a grammatical function of an argument (e.g. in saying that a verb agrees with a subject), a mismatch arises between a Nom system and an Erg(ative) system. Specifically, in the former system, a transitive subject and the sole argument of an intransitive predicate are marked as Nom, whereas the direct object of a transitive predicate is dealt with as special, marked as Acc; in the latter system, the sole argument of an intransitive and the direct object of a transitive are marked as Abs(olutive), whereas a transitive subject is treated as special, marked as Erg. Unifying both systems, it is claimed that it is morphological Case (i.e. the highest accessible default Case of Nom/Abs), not a grammatical function, that predicts actual realization of MA (Bobaljik 2006:12-13). Remarkable is Long Distance Agreement LDA in Tsez, a Daghestanian language, in which a verb agrees with a ‘close enough’ argument:

- (16) a. enir [užā magalu bāc’ruɫi] r-iyxo. (Tsez)
 mother [boy bread-III-ABS ate]-IV IV-know
 ‘The mother knows (that) the boy ate the bread.’
- b. enir [užā magalu bāc’ruɫi] b-iyxo.
 mother boy bread-III-ABS ate III-know
 ‘The mother knows (that) the bread, the boy ate.’
 (Polinsky and Potsdam 2001:584,(1))

Tsez is an ergative language; a verb agrees with Abs NPs that have I-IV noun classes. A verb shows a class IV MA in agreement with a clausal Abs argument in a normal case (16a). When an Abs argument in an embedded clause is a topic of the clause, it triggers LDA, as illustrated by a class III MA on a matrix verb (16b). This case shows that MA can be triggered only if a locality condition exists between a relevant argument and a verb, that is, even if no syntactic selection relation exists between them. Claiming that MA is triggered by morphological accessibility to Case and locality, MA realization is formulated as follows: a verb agrees with the highest accessible NP in its domain (Bobaljik 2006:15). MA realization is predicted and determined by morphological Case realization; the latter is post-syntactic; thus, MA realization is also argued to be a post-syntactic, morphological operation (Bobaljik 2006:20).

I would like to consider the assumption that an abstract syntactic agreement feature exists in syntax as an input to the phonological component. The motivation of this assumption is that there appears to be syntactic selection relation between a relevant argument and a verb. One can see many languages work well without MA system in the same way as those with MA

languages whether a language has MA system as well as the fact that it is also arbitrary how many MA a language has. The problem concerning the tendency that a verb must agree with a preverbal subject but does not necessarily so with a postverbal subject will still remain in this system: no language would be forced to realize MA in a preverbal subject case. It appears to me that the assumption of presence of a syntactic agreement feature always causes this problem.

system. Thus, there will be no reason to assume that selection relation must be expressed by some linguistic component. In addition, it is only by seeing a morpho-phonologically translated form of a syntactic agreement feature, specifically a form to which some value like the 3rd person singular is assigned, that one could say that a syntactic selection relation is coded in syntax:

(17) Io verrò /*verrà. (Ita.)
 I come-1sg.-FUT/3sg.-FUT

The form translated from a syntactic agreement feature must be *verrà*, not *verrà*, since the subject is the 1st person singular. From this fact, one could say that a syntactic selection relation exists between a subject *io* and an inflected verb *verrà*. However, if morphological translation of an agreement feature is made solely in the phonological component independently of a syntactic operation as Sigurðsson (2006b) claims, and further, if MA may appear even when there is no syntactic relation between a verb and an argument as Bobaljik (2006) argues with illustration of LDA in Tsez, there will be no ensurance, thus no reason to assume, that selection relation between a relevant argument and a verb as well as a syntactic agreement feature itself are present in syntax. The fundamental question then arises whether MA is translation of a syntactic agreement feature. The answer will be negative, and the negative answer will be strengthened, if one finds evidence that MA realization that appears to be arbitrary from a syntactic point of view is motivated by a component other than syntax.

2.2 The conditions under which MA appears

According to the literature, MA would appear to have duality. It has been claimed that MA, being nominal, functions as identifying the interpretation of a referent that a verb agrees with as the 1st, 2nd, or 3rd person, which has led some literature to claim that the richer MA system a language has, it tends to allow more empty subjects (Chomsky 1981, Rizzi 1986, Alexiadou and Anagnostopoulou 1998, Manzini and Savoia 2002). MA, on the other hand, is redundant in that MA doubly represents the same information that a relevant argument expresses. MA does not affect sentential meaning; thus, it is uninterpretable (Chomsky 1995, 2000). If MA played a role in identifying the interpretation of a referent as a certain person, the following cross-linguistic dichotomy would be predicted: MA always appears when a subject is empty, whereas MA never appears when a subject is present. This prediction is proved to be false, considering the second property: even when a subject is overt, MA appears optionally or obligatorily. In addition, languages that do not have MA system at all (e.g. Japanese and Chinese) allow null subjects, as has been claimed in the literature (Jaeggli and Safir 1989, among others). It seems to me that the nature of MA in human language lies in the second property of duality: redundancy of MA.

A lot of literature have suggested the environments in which MA appears. Concerning subject MA, Givón (1979) claims that MA has a topic property, originating in reanalysis of a subject pronoun as a bound morpheme. Rizzi (1982), unlike Chomsky, who directly associates

presence of MA with availability of null subjects (Chomsky 1981:241), states that ‘a tensed inflection with overt morphological agreement does not uniquely determine the well-formedness of a phonetically null subject in Italian, but simply allows the “definite pronoun” interpretation’ (Rizzi 1982:130). This statement implies that MA realization shows not only that MA can recover the content of a pronoun, but that a relevant subject is defocused in the context. Ariel (2000) claims that MA marking is derived from a speaker’s assessment on accessibility; with the Accessibility Theory, it is claimed that ‘the higher the mental accessibility, the higher the accessibility marker chosen’. MA marking is determined by the degree of (linguistic or non-linguistic) salience of a referent; the accessibility scale is coded in the following way: (from high to low accessibility) zero > MA > bound pronouns > free pronouns > full NPs (Ariel 2000:204-205). Sigurðsson (2006b) states that though MA may be meaningless from a syntactic point of view, MA reduces ambiguity and makes processing easy in communication; different shapes of MA disambiguate indexes in the discourse (Sigurðsson 2006b:26-27). A cross-linguistic tendency has widely been claimed that a verb agrees with a subject that is topic-like, definite, and specific, but does not agree with a focused subject (Lambrecht and Polinsky 1997, Siewierska 2004, Corbett 2006, among others).

Concerning object MA, it has been claimed that MA may appear on PP when a moved *wh*-phrase is specific or D(iscourse)-linked (Obenauer 1994, Déprez 1998, Rizzi 2000):

- (18) a. Combien de fautes a-t-elle faites? (Fre.)
 how many of mistakes has-she made-FEM.pl
 ‘How many (amongst a known set of) mistakes has she made?’
- b. Combien de fautes a-t-elle fait?
 how many of mistakes has-she made-MASC.sg
 ‘What is the number of things that are mistakes and that she has made?’
 (Déprez 1998:10,(14a-b))

Difference between the interpretation of moved *wh*-objects in (18a-b) is accounted for as follows. When MA is present (18a), it is presupposed that there is a known set of specific mistakes; a question asks how many mistakes among them a subject made. When MA is absent (18b), on the other hand, no known set of mistakes is presupposed; a question asks the number of mistakes that a subject made (Déprez 1998:10). Presence of object MA predicts the specific interpretation of a moved object (Déprez 1998:16).

Based on those literature, it appears that MA realization is motivated under certain discursal conditions. In section 4, I make a detailed investigation of the environments in which MA appears/does not appear based on information structure (Lambrecht 1994).

3. Information structure

I introduce the information structure theory (Lambrecht 1994), its definition, and three types

of information structure on which I base my investigation.

According to Lambrecht (1994:4-6), information structure is the study of how discursal components are expressed on a syntactic structure of a language according to the mental states of a speaker. There are no sentences that do not have information structure. The most important categories of information structure, topic and focus, concern how a speaker evaluates a possible prediction about the relation between a proposition and a given discursal situation. Information structure enters all levels that have meanings like morphology, syntax, and prosody. Lambrecht defines information structure as follows:

(19) INFORMATION STRUCTURE: That component of sentence grammar in which propositions as conceptual representations of states of affairs are paired with lexicogrammatical structures in accordance with the mental states of interlocutors who use and interpret these structures as units of information in given discourse contexts.

(Lambrecht 1994:5)

I follow Lambrecht's definition except the following point. I take the ability to recognize information structure to be the faculty to recognize discursal components like topic and focus that can be realized not only in actual language use that involves more than one speaker but in one's mind. Thus, I do not assume that application of the definition always implies actual language use or actual utterance.

Lambrecht proposes three types of focus structure:

(20) a. *Sentence-focus*:

What happened? – [_{Foc} My CAR broke down].

b. *Predicate-focus*:

What happened to your car? – [_{Top} My car][_{Foc} broke DOWN].

c. *Argument-focus*:

I heard your motorcycle broke down? – [_{Foc} My CAR][_{Top} broke down].

Sentence-focus (20a) contains only new information: nothing is presupposed in a question; the focus spreads over both a subject and a predicate, namely over an entire sentence, in an answer. This is an event-reporting/presentational sentence type. Predicate-focus (20b) is a topic-comment sentence type: *your car*, which is already presented in a question, carries a topic in an answer; a predicate that states a comment about the topic carries the focus. In argument-focus (20c), the focus in an answer identifies an argument information missing in a question (Lambrecht 1994:222-223).

The focus in an answer corresponds to a *wh*-phrase in a question, as illustrated in sentence-focus (20a) and predicate-focus (20b). Rochemont (1998) defines the focus as follows:

(21) Question-Answer pairs: In a well-formed information question-answer pair, the focus is the constituent in the answer that corresponds to the constituent that is wh questioned in the question.

(Rochemont 1998:337)

Following this definition, I call the part in an answer corresponding to a *wh*-phrase in a *wh*-question the focus (or the focus domain). Kiss (1998:245-246) proposes to distinguish information focus from contrastive focus. Information focus simply marks non-presupposed information, whereas contrastive focus acts as a quantificational operator in syntax, binding a variable within its scope. Büring (1997) suggests that contrastive focus is ‘used in corrections and contradictions’ (Büring 1997:179,ft.7). The example of argument-focus (20c) is in fact contrastive focus following these claims. Information focus without contrastiveness is illustrated as follows:

(22) Who does John love? – He loves [_{Foc} Mary].

Not distinguishing one from the other, I simply refer to both information focus and contrastive focus as argument-focus. The focus structure of an answer in predicate-focus (20b) and argument-focus (20c) is divided into a topic domain and the focus domain. Avoiding much use of terminology ‘topic’, I refer to a sentential constituent that is excluded from the focus domain as a non-focus/defocused argument. For instance, predicate-focus implies subject-defocus; thus, I say that a subject in predicate-focus is defocused. In the same way, *he* and *loves* in the answer (22) are excluded from the focus domain; thus, I say either that they are defocused or that they are in a non-focus domain. Based on the three types of information structure introduced above, I investigate the environments in which MA appears/does not appear in the next section.

4. Investigation of MA realization based on information structure

4.1 Subject agreement

I consider subject MA in this section. I classify the environments in which subject MA appears/does not appear into the following patterns: i) a preverbal/postverbal subject with MA, ii) a null subject, and iii) a preverbal/postverbal subject without MA.

I start with a preverbal subject case with MA:

- (23) a. What did Paulo do?
– (^{OK}O Paulo) partiu a janela (#O Paulo). (EP)
Paulo broke the window Paulo
‘Paulo broke the window.’
(Costa 2000:200,(37))

- b. Who broke the window?
 – (#O Paulo) partiu a janela (^{OK}o Paulo).
 Paulo broke the window Paulo
 ‘Paulo broke the window.’
 (Costa 2000:197,(29))

- (24) a. Chi è partito/ha parlato? (Ita.)
 who has left has spoken
 ‘Who left/spoke?’

- b. (#Gianni) è partito/ha parlato (^{OK}Gianni).
 Gianni is left has spoken Gianni
 ‘Gianni left/spoke.’
 (Belletti 2001:62,(3a-c))

- (25) Nous avons été invitées à dîner par Patricia. (Fre.)
 we have-1pl been invited-FEM.pl to diner by Patricia
 ‘We were invited to dinner by Patricia.’

- (26) Pjat’ fil’mov pojavilis’ na èkranax. (Rus.)
 five movies appeared-pl on screens
 ‘(The) five movies were RELEASED.’
 (Lambrech and Polinsky 1997:202,(37a))

According to Costa (2000), when a subject carries old information, it comes to a preverbal position in European Portuguese EP (23a); when a subject carries the focus, it cannot be located in a preverbal position (23b) (Costa 2000:196-200). The same applies to Italian too (24); it is not possible to locate the argument that carries new information in a preverbal position (Belletti 2001:62-63). Not only a finite verb but PP may agree with a passivized subject (25). According to Givón (1979), passive was developed from topicalization of an object. According to Lambrecht and Polinsky (1997:202), (26) from Russian is predicate-focus.⁶ From these data, it seems that the information structure of a preverbal subject case with MA can be predicate-focus.

See also below:

- (27) What happened?
 – (^{OK}O Paulo) cantou (#o Paulo). (EP)
 Paulo sang Paulo
 ‘Paulo sang.’

⁶ The Russian Case system is complicated especially when a noun is modified by a numeral. A numeral *pjat’* ‘five’ is Nom, whereas a noun *fil’mov* ‘movies’ is Genitive in (26). (I thank Halldór Á. Sigurðsson (p.c.) for suggesting this fact to me.)

in a postverbal position. Thus, it seems that a postverbal subject case with MA can be (subject) argument-focus.

See also below:

- (32) a. Cosa è successo? (Ita.)
 what is happened
 ‘What happened?’
- b. (#Gianni) è partito/ha parlato (^{OK}Gianni).
 Gianni is left has spoken Gianni
 ‘Gianni left/spoke.’
 (Belletti 2001:62,(3a-c))

Belletti (2001:80,ft.7) states that a postverbal subject construction can be an appropriate answer to the ‘out-of-the-blue’ question in Italian. This indicates that a postverbal subject case with MA can also be sentence-focus.

I mention two remarkable cases. One is the fact from Trentino and Fiorentino:

- (33) a. Gli è venuto delle ragazze. (Tre.)
 CL is-3sg come some girls
 ‘Some girls have come.’
- b. E’ vegnú qualche putela. (Fio.)
 is-3sg come some girls
 ‘Some girls have come.’
 (Brandi and Cordin 1989:121-122,(26),(29))
- c. Sono venute delle ragazze. (Ita.)
 are-3pl come some girls
 ‘Some girls have come’
- (34) e vengo io (Fio.) vegno mi (Tre.) ‘I come’
 tu vieni te te vegni ti ‘you (sg.) come’
 e viene lui/lei ven elo/ela ‘he/she comes’
 si vien noi vegnim noi ‘we come’
 vu’ venite voi vegní voi ‘you (pl.) come’
 e vien loro ven lori/lore ‘they come’
 (Brandi and Cordin 1989:138,ft.10)

According to Brandi and Cordin (1989), though a verb does not agree with a postverbal subject in the 3rd person plural in Trentino (33a) and Fiorentino (33b), unlike Italian (33c), a verb is required to agree with subjects of the 1st and 2nd person pronouns whether they are

preverbal or postverbal (34). A verb must agree even with a subject of the 3rd person pronoun in Standard Arabic (Soltan 2006, among others). Soltan (2006:248) states that since Standard Arabic is a null subject language, an overt pronoun is always associated with contrastive focus of a subject. The other is the fact on EP:

- (35) a. Quem é que chegou? (EP)
 who is that arrived
 ‘Who arrived?’
- b. ??Chegou /chegaram os alunos.
 arrived-sg arrived-pl the students
 ‘The students arrived.’
 (Costa and Silva 2006:42,(33))

According to Costa and Silva (2006), though almost all EP verbs obligatorily agree with both preverbal and postverbal subjects, an unaccusative verb is exceptional in that it may or may not agree with a postverbal subject in colloquial speech; when a subject carries the focus, presence of MA is preferable to absence of MA (35b). These data show that there are cases in which MA realization is either obligatory or preferred when a subject is focused.

Next, I consider the information structure of a null subject case:

- (36) a. Vad gör Johan? (Swe.)
 what does Johan
 ‘What’s Johan doing?’
- b. (Han) Spelar dataspel.
 he plays computer games
 (He’s) playing computer games.’
 (Holmberg 2003:1,(1-3))
- (37) What happened to your car?
 a. (La mia macchina) si è ROTTA. (Ita.)
 the my car self is broken
 ‘(My car) broke DOWN.’
- b. (Kuruma-wa) KOSHOO-shi-ta. (Jap.)
 car-TOP broke-do-PAST
 ‘(Mycar) broke DOWN.’
 (Lambrecht 1994:223,(5.10,b,d))

Holmberg (2003) states that a pronominal subject *han* can be dropped even in a non-null subject language like Swedish (36b); according to Holmberg (2003), a null subject

construction is VP-focus. Lambrecht (1994:223) states that it is natural to drop a subject in an answer in null subject languages (37). He convincingly argues that a null subject has both topical and defocused status; it is not that a speaker loses propositional information, but that the speaker does not activate a referent; such difference in the degree of activating a topic referent does not distinguish the focus structure of a null subject construction from that of an overt topic construction (Lambrecht 1994:223-224). I support his claim with data of Japanese in which a subject is at least not focused:

- (38) a. Tarou-to Hanako-wa eiga-ni it-ta-no? (Jap.)
 Tarou-and Hanako-TOP movie-DAT go-PAST-Q
 – Tarou-wa ikimashi-ta-ga, Hanako-wa iki-masendeshi-ta.
 Tarou-TOP go -PAST-but Hanako-TOP go-not -PAST
 ‘Did Tarou and Hanako go to movie? – Tarou did go, but Hanako didn’t.’
- b. Tarou-wa nani-o tabe-ta-no? – (Tarou/kare-wa) ringo-o tabemashi-ta./Ringo-desu.
 Tarou-TOP what-ACC eat-PAST-Q Tarou/he-TOP apple-ACC eat -PAST/apple-is
 ‘What did Tarou eat? – (Tarou/he) ate an apple./(It’s) an apple.’
- c. Tarou-wa nani-o shi-ta-no? – (Tarou/kare-wa) ringo-o tabemashi-ta.
 Tarou-TOP what-ACC do-PAST-Q Tarou/he-TOP apple-ACC eat -PAST
 ‘What did Tarou do? – (Tarou/he) ate an apple.’
- d. Tarou-wa Hanako-ni nani-o shi-ta-no?
 Tarou-TOP Hanako-DAT what-ACC do-PAST-Q
 – (Tarou/kare-wa) (Hanako/kanoyjo-ni) kisu-shimashi-ta.
 Tarou/he-TOP Hanako/she-DAT kiss-do -PAST
 ‘What did Tarou do to Hanako? – (Tarou/he) kissed (Hanako/her).’

Topic subjects *Tarou* and *Hanako* are contrasted in an answer (38a); neither of them can be dropped. When an object (38b), a predicate (38c), and a main verb (38d) are focused with no contrastiveness related to a subject, on the other hand, a topic subject *Tarou* can freely be dropped in the answer. These data show that unless topic arguments are subject to semantic effects more than topicality (e.g. contrastiveness), they can freely be dropped because they are not only assigned topicality but defocused. From these data and arguments, I conclude that a null subject construction is predicate-focus.

Third, I turn to the case of a preverbal subject case without MA. See data from Russian:

- (39) Pjat’ fil’mov pojavilos’ na èkranax. (Rus.)
 five movies appeared-sg on screens
 ‘Five MOVIES were released./There were five MOVIES released.’
 (Lambrecht and Polinsky 1997:202,(37b))

Lambrecht and Polinsky (1997:202) state that (39), in which a verb does not agree with a preverbal subject, is sentence-focus.⁷

I consider a postverbal subject case without MA:

- (40) a. Gli ha telefonato delle ragazze. (Tre.)
CL has-3sg telephoned some girls
'Some girls telephoned.'
- b. Ha telefoná qualche putela. (Fio.)
has-3sg telephoned some girls
'Some girls telephoned.'
(Brandi and Cordin 1989:122,(28a-b),(31))
- (41) a. Chi è venuto?
who is come
'Who came?'
- b. E' venuto Mario.
Is came Mario
'Mario came.'
- (42) Parlerá Mario, non Lucio.
speak-FUT.3sg Mario not Lucio
'MARIO will speak, not LUCIO.'
(Brandi and Cordin 1989:137,ft.6)

According to Brandi and Cordin (1989), a verb does not agree with a postverbal subject of the 3rd person plural in Trentino (40a) and Fiorentino (40b). They state that a postverbal subject typically carries the focus, either non-contrasted (41) or contrasted (42) (Brandi and Cordin 1989:137,ft.6).

See also below:

- (43) a. The three women are (*is) in the room.
- b. There's (/are) three women in the room.
- (44) a. Les trois femmes sont (*est) venues. (Fre.)
the three women are is come-PP.FEM.PL
'The three women came.'

⁷ See footnote 6 for the Russian Case system.

- b. Il est (*sont) venu trois femmes.
 it is are come-PP.MASC.SG three women
 ‘There came three women.’
- (45) a. La Maria la è rivada (*el e rivà). (Cone.)
 the Maria she is arrived it is arrived
 ‘Maria ARRIVED.’
- b. El e rivà (*la è rivada) la Maria.
 it is arrived she is arrived the Maria
 ‘MARIA arrived.’
 (Lambrecht and Polinsky 1997:201,(32-34))
- (46) a. aba-shyitsi ba-ra-rirímbir-a mu gisagára. (Kinya.)
 CL2-guest CL2-PRES-sing-IMPF in village.CL7
 ‘The guests are singing in the village.’
- b. ha-ra-rirímbir-a aba-shyitsi mu gisagára.
 CL16-PRES-sing-IMPF CL2-guest in village.CL7
 ‘There are guests singing in the village.’
 (Lambrecht and Polinsky 1997:202,(35))
- (47) What happened?
 – (^{OK}O Paulo) chegou (^{OK}o Paulo).
 Paulo arrived-3sg Paulo
 ‘Paulo arrived.’
 (Costa 2001:2,(2))

Lambrecht and Polinsky (1997) claim with a lot of cross-linguistic data that a postverbal subject construction is used as sentence-focus, in which MA normally does not appear. In contrast with a preverbal subject construction of predicate-focus (43-46a), a verb may agree (English (43b)), or cannot agree (French (44b), the Italian Conegliano dialect (45b), Kinyarwanda (Bantu) (46b)), with a postverbal subject in sentence-focus. This is attested by Costa’s (2001) data on EP (47). Costa (2001:2) states that though subject inversion is normally not possible in sentence-focus, only subjects of unaccusative verbs can be inverted. From these data, a postverbal subject case without MA is either (subject) argument-focus or sentence-focus.⁸

⁸ Halldór Á. Sigurðsson (p.c.) suggests that there may be accidental correlation between, say, a postverbal subject case and lack of MA. Here, MA realization is investigated based on the information structure of a sentence, not on the position of a relevant argument. Thus, I argue that such accidental correlation, if any, is not problematic for the analyses here.

4.2 Object Agreement

I consider object MA in this section. I consider in turn i) the case of a preverbal/postverbal object with MA, ii) a null object, and iii) the case of a preverbal/postverbal object without MA.

First, see relevant data of a preverbal object case with MA:

(48) Paul les a repeintes (/repeint). (Fre.)

Paul them has repainted-FEM.pl repainted-MASC.sg
'Paul repaired them.'

(49) Combien de fautes a-t-elle fait /faites? (Fre.)

how many of mistakes has-she made-MASC.sg made-FEM.pl
'How many mistakes has she made?
(Déprez 1998:10,(14a-b))

(50) a. Eritunda, n-a-*(ri)-gul-a. (Kin.)

fruit.5 1sg.S-T-OM5-buy-FV
'The fruit, I bought it.'
(Baker 2003:109,(6b))

b. Olukwi si-lu-li-seny-a bakali (omo-mbasa).

wood.11 NEG-11.S-PRES-chop-FV women.2 LOC.18-axe.9
'WOMEN do not chop wood (with an axe).'
(Baker 2003:113,(12b))

PP agrees with an object clitic that is interpreted as feminine plural (48). According to Kayne (1975), a clitic cannot be i) modified, ii) conjoined, iii) stressed, and iv) used in isolation. These observations show that a clitic does not have any factor that enables it to carry the focus; rather, semantics of a clitic is generally associated with definiteness and specificity, as claimed by Déprez (1998). PP can agree with a *wh*-object when the latter is D-linked, as introduced in section 2.2. (Obenauer 1994, Déprez 1998, Rizzi 2000) (49). According to Baker (2003), a verb in Kinande, a Bantu language, obligatorily agrees with the sentence-initial argument, which is interpreted as definite/specific/a topic (50a). In a 'subject-object reversal' construction (50b), a reversed subject *bakali* is contrastively focused (Baker 2003:113). Thus, it seems that the case of a preverbal object with MA is either object-defocus or subject-focus.

Next, I consider the case of a postverbal object with MA. The data is from Mohawk:

(51) Shako-núhwe'-s ne owirá'a. (Moh.)

MsS/3pO-like-HAB NE baby
'He likes babies.'

(Baker 1996:283-284,(4a))

Object MA *-shako*, into which subject MA is also incorporated, appears above. According to Lambrecht and Polinsky (1997), the construction like (51) is predicate-focus.

I consider a null object case:

- (52) Shako-núhwe’-s (ne owirá’ a). (Moh.)
MsS/3pO-like-HAB NE baby
‘He likes them (/babies).’
(Baker 1996:21,(17b))

According to Baker (1996:10), Mohawk allows object-drop. It is possible for an object to be either overt or null; object MA appears above. Recall Lambrecht’s (1994) claim on a null subject: a null subject has both topical and defocused status; it is not that a speaker loses propositional information, but that the speaker does not activate a referent. I claim that the same can hold of a null object. Thus, a null object case is object-defocus.

I turn to the case of a preverbal object without MA:

- (53) a. Jusqu’à combine de faites a-t-elle fait (/faites)? (Fre.)
up to how many of mistakes has-she made-MASC.sg/made-FEM.pl
‘Up to how many mistakes has she made?’
b. Combien de fautes en moins a-t-elle fait (/faites)? (Fre.)
how many of mistakes of less has-she made-MASC.sg/made-FEM.pl
‘How many fewer mistakes did she make?’
(Déprez 1998:12,(19a-b))
- (54) a. Ra-wir-a-núhwe’-s. (Moh.)
MsS-baby-Ø-like-HAB
‘He likes babies.’
b. *Shako-wir-a-núhwe’-s.
MsS/3pO-baby-Ø-like-HAB
‘He likes babies.’
(Mohawk; Baker 1996:283-284,(4b,6))

Unlike a D-linked *wh*-phrase (49), when a modifier that forces a non-specific interpretation (i.e. *jusqu’à* (53a) or *en moins* (53b)) is added, PP agreement becomes deviant (Obenauer 1994, Déprez 1998, Rizzi 2000). This means that object MA does not appear in object-focus. In Noun Incorporation NI, object MA cannot appear with an incorporated object (54). Baker (1996) states that NI is not used when ‘a speaker wants to *emphasize* or call attention to the introduction of a new referent to the discourse’; an incorporated noun cannot bear focal or

contrastive stress (Baker 1996:290).⁹ This indicates that an incorporated noun can be defocused in NI. According to Lambrecht and Polinsky (1997), NI is sentence-focus. The situation is clearly illustrated below:

(55) A: K-ather-ísak-s.

1sS-basket-seek-HAB

‘I am looking for a basket.’

B: ThetΛre Λska w-ather-a-yΛ-tah-kwe’ nek tsi

yesterday one NsS-basket-Ø-lie-HAB-PAST but

‘There was a basket (here) yesterday, but

Wíshe í-k-ehr-e’ wa-ha-[a]ther-a-hnínu-

Michael 1sS-think-IMPF FACT-MsS-basket-Ø-buy-PUNC.

I think Michael (basket-)bought it.’

(Baker 1996:288,(17))

A’s utterance does not contain any old information, which makes it sentence-focus. The first utterance of B reports presence of a basket yesterday; in the second utterance, the basket is presupposed and defocused, whereas a subject *Wíshe* carries a new information, thus the focus. In all those cases, a noun *ather* is incorporated. From all of these data and arguments, it appears that the case of a preverbal object without MA is either object-focus, object-defocus, or sentence-focus.

Finally, I consider the case of a postverbal object without MA. The data is from Kinande:

(56) N-a>(*ri)-gul-a eritunda. (Kin.)

1sg.S-T-OM5-buy-FV fruit.5

‘I bought a fruit.’

(Baker 2003:109-110,(6a))

Object MA cannot appear on a verb when an object is postverbal; a postverbal position is reserved for a focused argument in Kinande, as illustrated by a ‘subject-object reversal’ construction (50b). See also below:

(57) a. What happened? – [_{Foc} John hit Mary].

b. What did John do? – He/John [_{Foc} hit Mary].

c. Who did John hit? – He/John hit [_{Foc} Mary].

⁹ Baker attributes this fact to a phonological reason: an incorporated noun and a verb constitute a single prosodic domain; thus, an incorporated noun loses perceptual prominence (Baker 1996:290).

A postverbal object construction can be either sentence-focus (57a), predicate-focus (57b), or object-focus (57c).

4.3. Brief summary

I summarize the result of the investigation:

(58) Subject MA:

Appear: Subject-focus; Predicate-focus; Sentence-focus

Not Appear: Subject-focus; Sentence-focus

Object MA:

Appear: Object-defocus; Subject-focus; Predicate-focus

Not Appear: Object-defocus; Object-focus; Predicate-focus; Sentence-focus

I would like to consider the result of the investigation. I introduced in section 2.2. the statement that a subject that a verb agrees with tends to be definite, specific, topic-like, or salient (Givón 1979, Ariel 2000, Lambrecht and Polinsky 1997, Siewierska 2004, Corbett 2006, among others). The result here shows that this statement is insufficient, though not wrong: though a focused subject would not occur with MA, MA in fact may or may not appear when a subject is focused. In addition, I introduced the problematic cases in which MA realization is either preferable to its absence, or even required, when a subject carries the focus, as illustrated by the languages like Trentino, Fiorentino, and EP. I introduced Déprez's (1998:16) claim that presence of object MA predicts the specific interpretation of a moved object. This is insufficient too, though not wrong, with the facts of (non-)NI taken into account. NI can be object-defocus; non-NI is predicate-focus. Thus, object MA appears in non-NI, in which an object is part of the focus, whereas object MA cannot appear in NI, in which an object is defocused. I propose a possible account of MA realization in the next section.

5. Possible generalization of MA realization and relevant issues

5.1. Possible generalization of MA realization

I would like to consider the result with the notion of the *exhaustive identification domain* EID introduced by Hosono (2007).

In section 3, I briefly introduced Kiss' (1998) and Büring' (1997) claim on contrastive focus. Kiss claims that contrastive focus should be distinguished from information focus: the former acts as a quantificational operator in syntax, binding a variable within its scope; the latter is present in every sentence and can appear everywhere in a sentence, simply marking non-presupposed information. Contrastive focus is defined as follows: it represents, and is identified as, an exhaustive subset of the set of contextually or situationally given elements for which a predicate phrase can potentially hold (Kiss 1998:245). According to Büring,

contrastive focus is ‘used in corrections and contradictions’ (Büring 1997:179,ft.7):

(59) Did you kiss Mary? – I didn’t kiss [_{Foc} MARY], but kissed [_{Foc} LUCY].

Concerning information focus, it is claimed that identification of the focus in (60) operates on an open set of writers; identification of a subset of the set for which a predicate holds does not delineate a complementary subset (Kiss 1998:267-268). (The data is from Hungarian.)

(60) a. Ki írta a Háború és békét? (Hun.)

who wrote the War and Peace

‘Who wrote *War and Peace*?’

b. A Háború és békét TOLSZTOJ írta.

the War and Peace-ACC Tolstoy wrote

‘It was TOLSTOY who wrote *War and Peace*.’

(Kiss 1998:268,(67))

Hosono (2007) claims that the set for part of which exhaustive identification is made is not always contextually given in contrastive focus. Following Kiss, both *Mary* and *Lucy* in the answer (59) should already have appeared in the context. (59), however, also holds in the situation in which the first speaker believes that the addressee likes *Mary*, which indicates that before the question-answer, the name *Lucy* may not have appeared in the previous context. It is also claimed that it is not appropriate to say that identification of information focus does not delineate a complementary subset. When one substitutes *Wordsworth*, or any other writer, for *Tolstoy* in the answer (60b), the former does not match the predicate [wrote War and Peace] with the actual fact taken into account. In that sense, information focus identifies a subset of the set for which a predicate holds, delineating a complementary subset that consists of any other member (of an open set) in the same way as contrastive focus. With the claim that the same argument applies to sentence-focus and predicate-focus, it is argued that the focus, in general, exhaustively identifies a subset (of propositions, and so forth), delineating a complementary subset.

From these arguments, the notion of the EID is introduced. See below:

(61) Who did John hit? – He hit [_{Foc} Mary].



In an answer, an object *Mary* carries the focus. The main idea is as follows: exhaustive

identification is made for a subset of the set that consists of some kinds of information (i.e. *Mary*); syntax has a domain that corresponds to a subset of the set which exhaustive identification operates on, namely the boldface triangle domain that consists of *Mary*. This syntactic domain is called the EID. The EID is taken to be not only a syntactic domain but a domain which semantic/information-structural properties are reflected on. The EID is formulated as follows¹⁰:

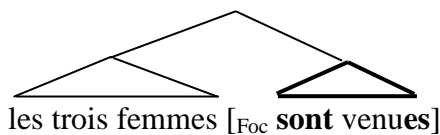
(62) *Exhaustive Identification Domain (EID)*:

The syntactic domain which corresponds to a subset of the set which exhaustive identification operates on.

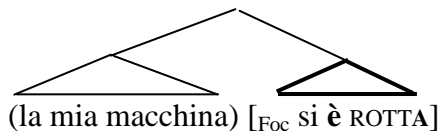
I illustrate relevant structures with the EID in turn. The cases of subject MA are as follows¹¹:

(63) Predicate-focus:

- a. Les trois femmes [_{Foc} **sont venues**]. (Fre.)
 the three women are come-PP.FEM.PL
 ‘The three women came.’



- b. (La mia macchina) [_{Foc} **si è rotta**]. (Ita.)
 the my car self is broken
 ‘(My car) broke DOWN.’



¹⁰ It is argued in Hosono (2007) that the EID can be composed by contrastive topic, which is typically observed in an answer to a multiple *wh*-question (Büring 1997). Imagine below a situation in which Speaker A knows that Fred and Bill attended a party and asks Speaker B, who attended the party too:

i) A: Who ate what?

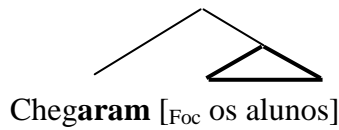
B: [_{Contr.Top} Fred] ate [_{Foc} the BEANS], and [_{Contr.Top} Bill] ate [_{Foc} the POTATOES].

In an answer, contrastive topic denotes each member of a salient set (*Fred* and *Bill*), whereas the focus denotes a member of another set (*the beans* and *the potatoes*). See Hosono (2007) for a detailed discussion of the relation between argument-focus, contrastive-focus, and contrastive topic.

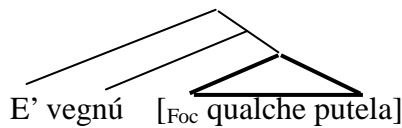
¹¹ I notate MA boldface in the case in which it appears.

(64) Subject-focus:

- a. **Chegar**am**** [_{Foc} os alunos]. (EP)
 arrived-pl the students
 ‘The students arrived.’

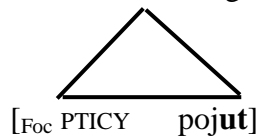


- b. E' vegnú [_{Foc} qualche putela]. (Fio.)
 is-3sg come some girls
 ‘Some girls have come.’

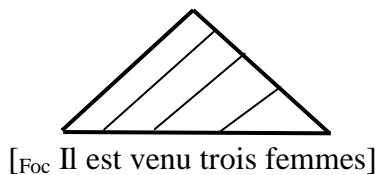


(65) Sentence-focus:

- a. [_{Foc} PTICY **pojut**]. (Rus.)
 birds-NOM.PL sing-PRES.PL
 ‘The BIRDS are singing.’



- b. [_{Foc} Il est venu trois femmes]. (Fre.)
 it is come-PP.MASC.SG three women
 ‘There came three women.’

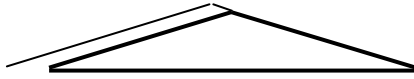


In predicate-focus (63), a subject is excluded from a boldface focus domain, that is the EID, whether it is overt (63a) or null (63b). Subject MA appears inside the EID. A focused subject composes the EID in subject-focus (64). Subject MA either appears (64a) or does not appear (64b) outside the EID. An entire sentence composes the EID in sentence-focus (65); subject MA either appears (65a) or does not appear (65b) appear inside the EID.

Relevant cases of object MA are illustrated as follows:

(66) Predicate-focus:

- a. (He) [_{Foc} **Shako-núhwe'**-s ne owirá'a].¹² (Moh.)
MsS/3pO-like-HAB NE baby
'He likes babies.'



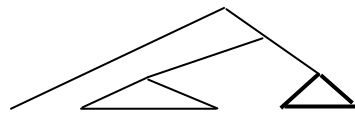
(He) [_{Foc} **Shako-núhwe'**-s ne owirá'a]

- b. John [_{Foc} hit Mary].



(67) Subject-focus:

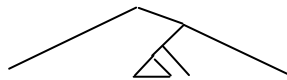
- Olukwi si-**lu**-li-seny-a [_{Foc} bakali] (omo-mbasa). (Kin.)
wood.11 NEG-11.S-PRES-chop-FV women.2 LOC.18-axe.9
'WOMEN do not chop wood (with an axe).'



Olukwi si-**lu**-li-seny-a [_{Foc} bakali]

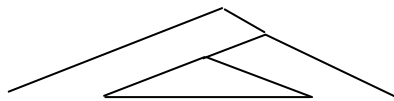
(68) Object-defocus:

- a. Paul [_{Non-Foc} les] a reointes. (Fre.)
Paul them has repainted-FEM.pl
'Paul repaired them.'



Paul [_{Non-Foc} les] a reointes

- b. (He) [_{Foc} **Shako-núhwe'**-s] (them).¹³ (Moh.)
MsS/3pO-like-HAB
'He likes them.'

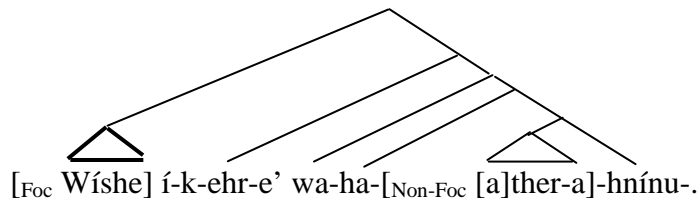


(He) [_{Foc} **Shako-núhwe'**-s ne] (them)

¹² Since the sentence is a null subject construction, I tentatively represent the subject as (*He*).

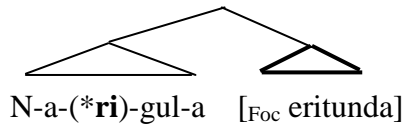
¹³ Since the sentence drops both a subject and an object, I tentatively represent the subject as (*He*) and the object as (*them*).

- c. [_{Foc} Wíshe] í-k-ehr-e' wa-ha-[_{Non-Foc} [a]ther-a]-hnínu-. (Moh.)
 Michael 1sS-think-IMPf FACT-MsS-basket-Ø-buy-PUNC.
 'I think Michael (basket-)bought it.'



(69) Object-focus:

- N-a-(*ri)-gul-a [_{Foc} eritunda]. (Kin.)
 1sg.S-T-OM5-buy-FV fruit.5
 'I bought a fruit.'



(70) Sentence-focus:

- *[_{Foc} **Shako-wir-a-núhwe'**-s].¹⁴ (Moh.)
 MsS/3pO-baby-Ø-like-HAB
 'He likes babies.'



In predicate-focus (66), a predicate composes the EID, which an object is part of; object MA either appears (66a) or does not appear (66b) inside the EID. A subject composes the EID, from which an object is excluded, in subject-focus (67); object MA appears outside the EID. An object is defocused (68); the EID can be composed by any sentential component(s) other than a defocused object. Object MA appears inside the EID when PP *repeintes* composes the EID, but outside the EID when a subject *Paul* composes the EID (68a). Object MA appears inside the EID (68b), since the sentence has a predicate only. Object MA does not appear outside the EID (68c). A focused object composes the EID (69); object MA does not appear outside the EID. An entire sentence composes the EID (70); object MA does not appear inside the EID.

A question arises whether MA appears inside the EID that an argument that a verb agrees with composes by itself, specifically, whether subject MA appears inside the EID when a subject composes it by itself (i.e. in subject-focus), and whether object MA appears inside the EID when an object composes it by itself (i.e. in object-focus). This is attested by American Sign Language ASL (Neidle and Lee 2006). In ASL, non-manual expressions can express

¹⁴ As it is difficult to distinguish the subject MA part from the object MA part, I notate the entire MA boldface.

linguistic properties:

(71) JOHN NOT BUY HOUSE

Neg

‘John did not buy a house.’

(Neidle and Lee 2006:204,(3))

The head shake that marks negation begins at *NOT* and can spread over an entire phrase. Neidle and Lee claim that ASL expresses each person (that corresponds to MA) by pointing to a spatial location (ϕ -location). The 1st person is expressed in a way that either the thumb pad or the back of the thumb points to the 1st ϕ -location (Neidle and Lee 2006:210). The 2nd and 3rd persons are expressed in a way that head tilts point to corresponding ϕ -locations, the center of the forehead and the temple respectively. These markings are sufficient to license null subjects (Neidle and Lee 2006:212).

Neidle and Lee claim that a head tilt is used to express predicate-focus:

(72) JOHN_i BATHE

ht-3rd_i

(Neidle and Lee 2006:214,(21))

The head tilt that marks the 3rd person starts just after a subject *John* is articulated, and is kept throughout the articulation of VP (Neidle and Lee 2006:213-214). They state that the use of a head tilt in (72) is appropriate in the following contexts in which a predicate is focused:

(73) a. What does John do in the morning? – He bathes, he gets dressed, ...

b. How does John get clean? – He bathes.

(Neidle and Lee 2006:215,(34-35))

Such a use of a head tilt is inappropriate in the contexts like below, where a subject is focused:

(74) a. Who bathes? – John bathes.

b. Is Peter bathing? – No, John is bathing.

(Neidle and Lee 2006:216,(36-37))

They claim that the same head tilt can also be used to express both subject- and object-focus, when a head tilt occurs over a relevant argument:

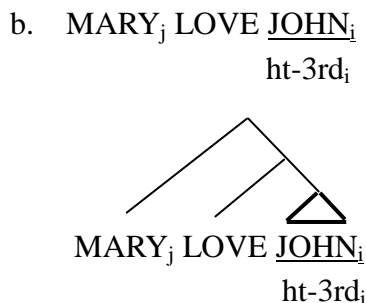
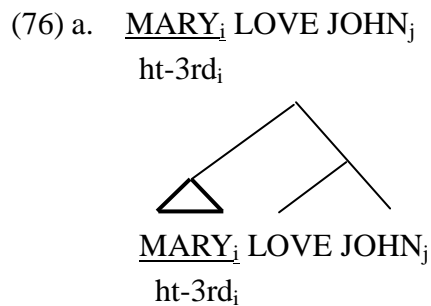
(75) a. MARY_i LOVE JOHN_j

ht-3rd_i

‘MARY loves John.’

- b. MARY_j LOVE JOHN_i
 ht-3rd_i
 ‘Mary loves JOHN.’
 (Neidle and Lee 2006:214,(27-28))

When a head tilt occurs over *Mary*, it marks the subject as focused (75a); when a head tilt occurs over *John*, it marks the object as focused (75b). From these data, it is claimed that predicate-focus and argument-focus can be marked by a head tilt that points to the corresponding ϕ -location; concerning a subject case, the head tilt as predicate-focus marker also expresses subject agreement (Neidle and Lee 2006:214-215). These data show that ASL realizes a head tilt corresponding to MA inside the EID that the argument a verb agrees with composes by itself. Then, the structures of subject-focus (75a) and object-focus (75b) are illustrated as follows:

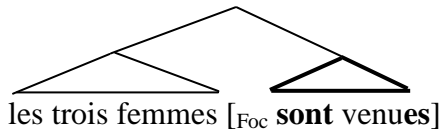


The head tilt that marks subject-focus appears inside the EID that consists of a subject only (75a); the head tilt that marks object-focus appears inside the EID composed by an object only (75b). Note that the case of object-focus indicates that object MA appears in object-focus. Thus, object MA in fact either appears (i.e. ASL) or does not appear (i.e. Kinande) in object-focus.

I find the following generalization concerning MA realization from all the above data: though subject/object MA realization appears to be free in any focus structure, i) subject MA appears in predicate-focus,¹⁵ and ii) object MA does not appear in sentence-focus. I repeat relevant cases below:

¹⁵ Noticing this fact, Lambrecht and Polinsky (1997) formulate lack of agreement/(presence of) impersonal agreement with a focused subject as a strategy of detopicalizing a subject. See their paper for details.

- (77) a. Subject MA in predicate-focus:
 Les trois femmes [_{Foc} **sont** venues]. (Fre.)
 the three women are come-PP.FEM.PL
 ‘The three women came.’



- b. Object MA in sentence-focus:
 * [_{Foc} **Shako-wir-a-núhwe'**-s]. (Moh.)
 MsS/3pO-baby-Ø-like-HAB
 ‘He likes babies.’



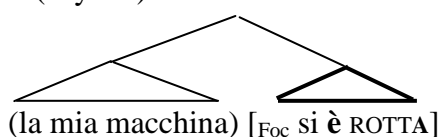
Predicate-focus (77a) implies subject-defocus: the focus structure of predicate-focus is split in that it is composed by the EID that consists of a predicate and a non-focus domain that contains a subject. Subject MA appears inside the EID. Thus, subject MA appears inside the EID in a split focus structure. The focus structure of sentence-focus is not split, since an entire sentence composes the EID (77b). Thus, object MA does not appear inside the EID in a non-split focus structure. Therefore, I tentatively formulate MA realization with the notion of the EID as follows:

(78) Morphological Agreement Realization:

- Subject MA appears inside the EID in a split focus structure;
- Object MA does not appear inside the EID in a non-split focus structure;
- Otherwise, MA realization is free.

I would like to consider the question why subject MA appears in predicate-focus, in other words, why there are no cases in which subject MA does not appear in the focus domain when a subject is defocused. Recall a null subject case, in which subject MA appears on a verb though the argument that a verb agrees with is phonetically empty:

- (79) a. (La mia macchina) [_{Foc} si è ROTTA]. (Ita.)
 the my car self is broken
 ‘(My car) broke DOWN.’



I introduced in section 2.2. Rizzi's (1982:130) statement that subject MA does not uniquely

determine the well-formedness of a phonetically null subject, but simply allows a “definite pronoun” interpretation, which, I claimed, shows that a relevant subject is defocused in the context. I also introduced in section 4.2. Lambrecht’s (1994:223-224) argument that it is not that a speaker loses propositional information, but that the speaker does not activate a referent, in an empty subject construction. Based on these claims, a defocused argument can be dropped if the degree to which a speaker activates it is low. Thus, one answer to this question seems to me that subject MA too might be dropped together with a defocused subject if subject MA is outside the focus domain.

We saw a language, ASL, in which MA can function as a focus marker. There are also languages like Somali in which focus markers change their forms (Svolacchia, Mereu, and Puglielli 1995):

- (80) a. Cali muxuu sameeyay? (Som.)
 Cali what-FM-he did
 ‘What did Cali do?’
- b. Cali Maryan buu dilay.
 Cali Maryan FM-he beat
 ‘Cali beat/BEAT MARYAN.’
 (Svolacchia, Mereu, and Puglielli 1995:73-74,(15;16a;32c))

A focus marker *buu* functions as either focusing an object *Maryan* or focusing a predicate as illustrated in the translation (Svolacchia, Mereu, and Puglielli 1995:74,80). Remarkable is that a focus marker *buu* agrees with a (defocused) subject *Cali*: the marker that displays MA of a defocused argument focuses a sentential component other than that defocused argument. The other case is from Kinande:

- (81) Eritunda ry-o n-a-h-a omukali. (Kin.)
 Fruit.5 5-FOC 1sg.S-T-give-FV woman.1
 ‘It’s a fruit that I gave to a woman.’
 (Baker 2003:123,(38))

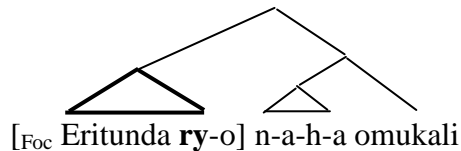
A focused argument may be located in the sentence-initial position, in which case a focus particle appears. A focus particle displays MA with a focused argument. This illustrates that a focus particle that appears in the focus domain shows object MA. The structures of these data are as follows:

- (82) a. Cali [_{Foc} Maryan buu dilay]. (Som.)
-
- Cali [_{Foc} Maryan buu dilay]

- b. Cali [_{Foc} Maryan buu] dilay.



- c. [_{Foc} Eritunda ry-o] n-a-h-a omukali. (Kin.)



A predicate (82a) and an object (82b-c) compose the EID respectively; MA appears inside those EIDs. Distinction between a focus marker and MA seems to me extremely delicate: a focus marker changes its form behaving like MA in some cases; MA appears with a focused sentential component in others. Thus, the other answer to the question why subject MA appears in predicate-focus seems to me associated with the fact that a function of MA sometimes overlaps that of a focus marker.

I turn to the question why object MA does not appear in sentence-focus. I would like to mention Hungarian, which has two kinds of subject MA paradigms, one inflected for indefinite objects and the other inflected for definite objects. The literature (e.g. Dikken 2004) state that though the 1st and 2nd person pronouns can be dropped, thus, should semantically be definite, they are exceptional in use of the definite paradigm. According to Dikken (2004:445), when an object is the 2nd person and a subject is the 1st person singular, a special ending form, *-lak/-lek*, has to be used (83a). In all other cases in which an object is the 1st or 2nd person, an ending form is selected from the indefinite paradigm (83b-c). (Pronouns can be dropped.)

- (83) a. (Én) szeret-lak/*-ek/*-em (téged). (Hun.)

I love-*lak*/-INDEF/-DEF you
'I love you.'

- b. (Te) szeret-sz/*-ed (engem).

you love-INDEF/-DEF me
'You love me.'

- c. János szeret-Ø/*-i (engem/téged).

János love-INDEF/-DEF me/you
'János loves me/you.'
(Dikken 2004:447-448,(5-7))

Dikken claims that though *l-* appears to come from the 2nd person indefinite paradigm and *-k* from the 1st person indefinite paradigm in forms *-lak/-lek*, *l-* is an object clitic (Dikken

2004:460). This argument as well as the above data appear to me to show that one MA cannot function as both subject MA and object MA simultaneously.¹⁶

This situation is in contrast with subject MA. Recall that in languages like Trentino and Fiorentino, a verb must agree with the 1st and 2nd person pronominal subjects (84), though it is not required to agree with a 3rd person plural subject (85).

(84)	e vengo io (Fio.)	vegno mi (Tre.)	'I come'
	tu vieni te	te vegni ti	'you (sg.) come'
	e viene lui/lei	ven elo/ela	'he/she comes'
	si vien noi	vegnim noi	'we come'
	vu' venite voi	vegni voi	'you (pl.) come'
	e vien loro	ven lori/lore	'they come'
	(Brandi and Cordin 1989:138,ft.10)		

- (85) a. Gli è venuto delle ragazze. (Tre.)
 CL is-3sg come some girls
 'Some girls have come.'
- b. E' vegnú qualche putela. (Fio.)
 is-3sg come some girls
 'Some girls have come.'
 (Brandi and Cordin 1989:121-122,(26),(29))

Recall also that subject MA can appear in sentence-focus:

- (86) What happened?
 – (^{OK}O Paulo) cantou (#o Paulo). (EP)
 Paulo sang Paulo
 'Paulo sang.'
 (Costa 2001:4,(12))
- (87) a. Cosa è successo? (Ita.)
 what is happened
 'What happened?'
- b. (#Gianni) è partito/ha parlato (^{OK}Gianni).
 Gianni is left has spoken Gianni
 'Gianni left/spoke.'

¹⁶ There are a lot of languages that have agreement forms into which both subject MA and object MA are incorporated. One example is illustrated by *shako-* (MsS/3pO) in *shako-núhwe'-s* 'he likes them' (Mohawk). Mohawk is different from Hungarian in that the former has object MA independently of subject MA (cf. Baker 1996). I argue that this fact too supports the claim here.

(Belletti 2001:62,(3a-c))

Object MA does not appear, but subject MA can appear, in sentence-focus. Based on these two facts, it seems to me that only one MA realization is allowed in sentence-focus, and that it is subject MA, not object MA, that is allowed to be realized. Thus, I revise the formulation on MA realization (78) as follows:

(88) Morphological Agreement Realization:

- a. Subject MA appears inside the EID in a split focus structure;
- b. Only one MA (i.e. subject MA) is allowed to appear inside the EID in a non-split focus structure;
- c. Otherwise, MA realization is free.

I suggested in section 2.1. that if MA realization that appears to be arbitrary from a syntactic point of view is conditioned by a component other than syntax, MA will not be translation of a syntactic agreement feature. With the result of the investigation and the arguments made so far, I claim that MA realization is motivated by an information-structural component, thus, agreement is not syntactic.

5.2. Relevant issues on MA

I would like to turn to relevant issues on MA. It has long been assumed in generative grammar that discursal properties like focus and topic belong to a CP area, whereas properties like agreement and tense are associated with a TP area (Rizzi 1997, among others). The recent literature claim that agreement feature belongs to C, and then percolates down to T (Miyagawa 2004:4; see also Chomsky 2005). According to Miyagawa (2004), languages may be either agreement-prominent (e.g. Indo-European) or focus-prominent (Japanese, Kinande, Turkish, and so on). In the former language group, an agreement feature goes down from C to T; that feature is involved in syntactic operations like movement. In the latter group, on the other hand, it is a focus feature that percolates down from C to T; that feature causes following syntactic operations.¹⁷ Based on the investigation and arguments made here, MA and focus in fact belong to the same category: MA can function as focusing relevant arguments in some cases (e.g. ASL); a focus marker may change its form behaving like MA in others (e.g. Somali). A further consequence in this paper is that the focus will comprise MA: MA (, subject MA at least,) can always appear in the focus domain.

I would like to consider ‘linguistic components looking like MA’. Miyagawa (2004) argues that though verbs are not inflected, the Top(ic) marker *-wa* is a possible candidate of MA in Japanese. Recall data of LDA in Tsez:

(89) a. enir [užā magalu bāc’ruɫi] r-iyxo

¹⁷ See Miyagawa (2004) for detailed accounts of syntactic operations in those two language groups.

mother [boy bread-III-ABS ate]-IV IV-know
 ‘The mother knows (that) the boy ate the bread.’

- b. enir [užā magalu bāc’ruʔi] b-iyxo
 mother boy bread-III-ABS ate III-know
 ‘The mother knows (that) the bread, the boy ate.’
 (Polinsky and Potsdam 2001:584,(1))

A verb displays a class IV MA in agreement with a clausal absolutive argument (89a). A verb can agree with an Abs argument in an embedded clause (i.e. LDA), as illustrated by a class III MA on a matrix verb (89b). It is quite interesting that it is only when an Abs argument is a topic in an embedded clause that it can trigger LDA (Polinsky and Potsdam 2001:584). See the Japanese counterparts¹⁸:

- (90) a. Haha-wa [musuko-ga pan-o tabe-ta-koto]-o shitteiru.
 mother-TOP [boy-NOM bread-ACC eat-PAST-that]-ACC know
 ‘The mother knows that the boy ate the bread’
- b. Haha-wa [musuko-ga pan-wa tabe-ta-koto]-o/wa shitteiru.
 mother-TOP [boy-NOM bread-TOP eat-PAST-that]-ACC/TOP know
 ‘The mother knows that the bread, the boy ate.’

A clausal complement takes the Acc(usative) marker *-o* in a normal case in Japanese (90a). When an argument in an embedded clause (i.e. *pan* ‘bread’) is a topic (90b), either the Acc marker or the Top marker *-wa* can be attached to a clausal complement. According to the author’s intuition, when the Acc marker is attached to a clausal complement, the topic argument in that clause is simply the topic to which some comment is added. When the Top marker is attached to an embedded clause, on the other hand, the topic argument can be interpreted as contrastive-topic. Recall Bobaljik’s (2006:15,ft.16) statement on ambiguities between *de re/de se* interpretations: the argument in an embedded clause is (*de re*) or is not (*de se*) an argument of a matrix verb at LF; LDA is related to the former, *de re* interpretation. That is, according to the author’s intuition, the construction (90b) in which the Acc marker *-o* is attached to an embedded clause simply means that the mother knows that there was an event in which the boy ate the bread; the construction in which the Top marker *-wa* is attached to an embedded clause, on the other hand, can not only mean that the mother knows that there was such an event, but mean that the mother knows the bread that the boy ate (though she may not know whether the boy ate a piece of cake too). Bobaljik states that the fact that LDA is sensitive to *de re/de se* ambiguities might be problematic for the claim that MA realization is determined under a local relation between an argument and a verb. From the standpoint taken in this paper, it is not problematic whether difference in the

¹⁸ A Japanese *-koto* is a nominalizer; I tentatively notate it as *that*.

interpretations exists or not: realization of (linguistic components looking like) MA is motivated by an information-structural property.

Another possible candidate for linguistic components looking like MA is honorification in Japanese (Harada 1976, Shibatani 1978, Toribio 1990, among others).¹⁹ Use of honorification is optional, involving social factors like deference for people at a higher social status. A dispute has occurred concerning whether object honorification is MA (Boeckx and Niinuma 2004, Bobaljik and Yatsushiro 2006, Boeckx 2006):

- (91) a. Taro-ga Tanaka sensei-o o-tasuke-si-ta.
Taro-NOM Prof. Tanaka-ACC HON-help-HON-PAST
'Taro helped Prof. Tanaka.'
- b. Hanako-ga Tanaka sensei-ni Mary-o go-syookaisi-ta.
Hanako-NOM Prof. Tanaka-DAT Mary-ACC HON-introduce-PAST
'Hanako introduced Mary to Prof. Tanaka.'
- c. *Hanako-ga Mary-ni Tanaka sensei-o go-syookaisi-ta.
Hanako-NOM Mary-DAT Prof. Tanaka-ACC HON-introduce-PAST
'Hanako introduced Prof. Tanaka to Mary.'
(Boeckx and Niinuma 2004:456,(6-8))

O- and *go-* are prefixes of honorification; they are sometimes used as circumfixes as illustrated by *o-V-suru* in (91a). A transitive verb agrees with a direct object in honorification (91a); a ditransitive verb agrees with a dative object in honorification (91b); a ditransitive verb cannot agree when a direct object is in honorification (91c). Boeckx and Niinuma (2004) accounts for this fact in terms of Agree (Chomsky 2000) and dative intervention. Dative intervention has been argued concerning the facts of Icelandic Case:

- (92) a. Stelpunum var hjálpað.
girls-the-DAT-pl-FEM was-3sg helped-NEUT-sg.
'The girls were helped.'
(Boeckx and Niinuma 2004:462,(26))
- b. Mér ?*virðast/virðist [Jóni vera taldir Jóni líka hestarnir].
me-DAT seemed-3pl/3sg Jón-DAT be believed-pl like horses-NOM
'Jón seemed to me to be believed to like horses.'
- c. Jóni virðast/?*virðist [Jóni vera taldir Jóni líka hestarnir].
Jón-DAT seem-3pl/3sg be believed-pl like horses-NOM

¹⁹ Though the literature seem to agree that Japanese honorification, especially subject honorification, is in fact agreement (e.g. Shibatani 1978, Toribio 1990), it does not inflect for person. I simply mention it as 'linguistic components looking like MA'. See Sohn (1994) for a discussion of honorification in Korean.

‘Jón seems to be believed to like horses.’
(Bobaljik and Yatsushiro 2006:377,(27))

An element with Quirky Case does not trigger agreement (92a); a Dat(ive) argument intervening between a matrix verb and an embedded Nom argument blocks agreement between them (92b); when a Dat argument vacates the intermediate position, agreement between a matrix verb and an embedded Nom argument is not blocked (92c). This is accounted for as follows: a Dat argument blocks Agree between a matrix verb and an embedded Nom argument. In the same way, the fact that a ditransitive verb does not agree with a direct object in honorification in Japanese is accounted for as follows: a Dat argument prevents Agree between a verb and an Acc argument, which makes (91c) ungrammatical. Thus, when a sentence does not have a Dat argument, Agree is not blocked as illustrated by (91a) (Boeckx and Niinuma 2004:463-464).

As Bobaljik and Yatsushiro (2006:378) points out, it seems to me that the true fact is the other way round: what a Dat argument does is trigger object honorification, not to be an intervener, as illustrated by a lot of data that Boeckx and Niinuma (2004) present. The above syntactic account would predict that (91c) becomes grammatical when a Dat argument *Mary-ni* vacates to a higher position outside vP, contrary to fact:

(93) * Mary-ni Hanako-ga Tanaka sensei-o go-syookaisi-ta.
Mary-DAT Hanako-NOM Prof. Tanaka-ACC HON-introduce-PAST
‘To Mary, Hanako introduced Prof. Tanaka.’

Further, passivization of a Dat argument in general appears to be impossible in object honorification²⁰:

(94) a. Taro-ga Tanaka sensei-o o-tasuke-si-ta.
Taro-NOM Prof. Tanaka-ACC HON-help-HON-PAST
‘Taro helped Prof. Tanaka.’
b. *Tanaka sensei-ga (Taro-ni(yotte)) o-tasuke-sare/rare-ta.
Prof. Tanaka-NOM (Taro-by) HON-help-PASS/PASS-PAST
‘Prof. Tanaka was helped (by Taro).’

(95) a. Hanako-ga Tanaka sensei-ni Mary-o go-syookaisi-ta.
Hanako-NOM Prof. Tanaka-DAT Mary-ACC HON-introduce-PAST
‘Hanako introduced Mary to Prof. Tanaka.’

b. *Tanaka sensei-ga (Hanako-ni(yotte)) Mary-o go-syookaisa-re-ta.
Prof. Tanaka-NOM (Hanako-by) Mary-ACC HON-introduce-PASS-PAST

²⁰ See Boeckx and Niinuma’s (2004:461,ft.4) comment on this issue cited from Shigeru Miyagawa (p.c.).

‘Prof. Tanaka was introduced Mary (by Hanako).’

- (96) a. Taro-ga Tanaka sensei-ni insutooru-no sikata-o o-osie-si-ta.
Taro-NOM Prof. Tanaka-DAT install-GEN way-ACC HON-teach-HON-PAST
‘Taro taught Prof. Tanaka how to install.’
(Boeckx and Niinuma 2004:458,(13))
- b. *Tanaka sensei-ga (Taro-ni(yotte)) insutooru-no sikata-o o-osie-sare/rare-ta.
Prof. Tanaka-NOM (Taro-by) install-GEN way-ACC HON-teach-PASS/PASS-PAST
‘Prof. Tanaka was taught how to install (by Taro).’

An indirect object can freely be passivized in a normal case as illustrated by the English translations; thus, no syntactic account will prevent a Dat argument in object honorification from being passivized, contrary to fact.

Though use of honorification appears to be optional in general, I would like to take notice of data in contrastive contexts:

- (97) a. HANAKO-denaku, TARO-ga Tanaka sensei-o o-tasuke-shi-ta/tasuke-ta.
Hanako-not Taro-NOM Prof. Tanaka-ACC HON-help-HON-PAST/help-PAST
‘TARO, not HANAKO, helped Prof. Tanaka.’
- b. Taro-ga Tanaka sensei-o O-TASUKE-SHI-TA/TASUKE-TA, O-TSURE-SHI-TA-nodenaku.
Taro-NOM Prof. Tanaka-ACC HON-help-HON-PAST/help-PAST, HON-take-HON-PAST-not
‘Taro HELPED, not TOOK, Prof. Tanaka.’
- c. Taro-ga, HANAKO-denaku, TANAKA SENSEI-O #o-tasuke-shi-ta/tasuke-ta.
Taro-NOM Hanako-not Prof. Tanaka-ACC HON-help-HON-PAST/help-PAST
‘Taro helped PROF. TANAKA, not HANAKO.’
- d. Taro-ga, KOBAYASHI SENSEI-denaku, TANAKA SENSEI-O o-tasuke-shi-ta/tasuke-ta.
Taro-NOM Prof. Kobayashi-not Prof. Tanaka-ACC HON-help-HON-PAST/help-PAST
‘Taro helped PROF. TANAKA, not PROF. KOBAYASHI.’

Replacement of a simple verb form by a honorific form is possible when a subject (97a) and a verb (97b) are contrastively focused. When contrasted objects are different in the degree of deference (i.e. *Hanako* VS *Prof. Tanaka*), use of an honorific form is odd (97c). When contrasted objects do not differ in the degree of deference (i.e. *Prof. Kobayashi* VS *Prof. Tanaka*), on the other hand, use of an honorific form is natural (97d). The same can be said to subject honorification²¹:

²¹ *O-* and *-ninaru* are used as circumfixes.

- (98) a. Takaka sensei-ga, SHINBUN-denaku, HON-O o-yomi-ninat-ta/yon-da.
 Prof. Tanaka-NOM NEWSPAPER-not BOOK-ACC HON-read-HON-PAST/read-PAST
 ‘Prof. Tanaka read the BOOK, not the NEWSPAPER.’
- b. Tanaka sensei-ga hon-o O-YOMI-NINAT-TA/YON-DA, O-KAKI-NINAT-TA-nodenaku.
 Prof. Tanaka-NOM book-ACC HON-read-HON-PAST/read-PAST HON-write-HON-PAST-not
 ‘Prof. Tanaka READ, not WROTE, the book.’
- c. HANAKO-denaku, TANAKA SENSEI-GA hon-o #o-yomi-ninat-ta/yon-da.
 Hanako-not Prof. Tanaka-NOM book-ACC HON-read-HON-PAST/read-PAST
 ‘PROF. TANAKA, not HANAKO, read the book.’
- d. KOBAYASHI SENSEI-denaku, TANAKA SENSEI-GA hon-o o-yomi-ninat-ta/yon-da.
 Prof. Kobayashi-not Prof. Tanaka-NOM book-ACC HON-read-HON-PAST/read-PAST
 ‘PROF. TANAKA, not PROF. KOBAYASHI, read the book.’

When an object (98a) or a verb (98b) is contrastively focused, replacement of a simple form by an honorific form is possible. An honorific form cannot appear when the degree of deference for subjects is different (i.e. *Hanako VS Prof. Tanaka*) (98c); it can appear when the degree of deference for contrasted subjects does not differ (i.e. *Prof. Kobayashi VS Prof. Tanaka*) (98d). These data are analyzed based on the proposal made here as follows: i) an honorification marker can appear outside the EID (97-98a); ii) it can appear inside the EID (97-98b); but iii) it cannot appear outside the EID when the degree of deference for contrasted arguments differs (97-98c,d). I claim that the facts on honorification too support the claim that actual realization of (linguistic components looking like) MA is motivated by information-structural properties.

I would like to turn to association of MA realization with Case marking (Chomsky 1986). I introduced a traditional account in terms of a structural relation between an argument and a functional head (i.e. the Spec-head relation) in section 2.1.²² I also introduced Bobaljik’s (2006) argument that since MA realization is predicted by default morphological Case of Nom/Abs and the latter is a post-syntactic operation, MA realization is also post-syntactic. It will be interesting to consider whether not only MA realization but morphological Case realization are motivated under information-structural properties. Recall Soltan’s (2006:248) claim that in null subject languages like Standard Arabic, an overt person pronoun, which surely inflects for Case, is always associated with contrastive focus of a subject. A possibility would be that the Nom Case can function as showing that a relevant argument is focused, that is as a focus marker, as has been pointed out in the literature (e.g. Schütze 2001).²³ Schütze

²² See Sigurðsson (1996) for a discussion of Icelandic Case.

²³ This would be compatible with Sigurðsson’s (2006a) claim that the first merged argument is translated as the Nom Case, and the second one, if any, as the Acc Case, at the phonological component: from an information-structural perspective, a sentence must have the focus; thus, it is plausible that when a sentence has only one argument, the latter carries the focus marked as the Nom Case.

(2001) argues that the Korean Nom Case marker *-ka* that is stacked to another Case marks the argument that is associated with an IP domain (but is outside VP) as the focus:

(99) A: Swunhi-eykey Chelswu-ka cohunkapwa.

Swunhi-DAT Chelswu-NOM like-seems

‘Swunhi seems to like Chelswu.’

B: Aniya, Yenghi-eykey-ka Chelswu-ka coha.

No Yenghi-DAT-NOM Chelswu-NOM likes

‘No, Yenghi likes Chelswu.’

(Schütze 2001:203,(15))

In the above contrastive focus context, *Swunhi-eykey* in A is negated in B and corrected as *Yenghi-eykey*, to which the Nom Case marker *-ka* is attached. I present data from Japanese:

(100) a. Dou-shimashi-ta-ka?

how-do -PAST-Q

‘What happened?’

b. Kireina tori-ga/#-wa tonde-imasu.

beautiful bird-NOM/-TOP flying

‘Beautiful birds are flying.’

(100a) is the ‘out-of-the-blue’ question that does not presuppose anything; thus, an answer contains only new information (i.e. is sentence-focus). It is appropriate to attach to a subject in an answer *-ga*, which has traditionally been argued to be the Nom Case marker, but not the Top marker *-wa* (100b).

A Nom argument is not always focused though, which is cross-linguistically obvious. Based on the investigation and the arguments made here, subject MA can freely appear at least in the focus domain. Recall that there are languages like Trentino and Fiorentino in which a verb is required to agree with a subject of the 1st and 2nd (and even 3rd in Standard Arabic) person pronouns, which typically inflect for Case:

(101) e vengo io (Fio.)	vegno mi (Tre.)	‘I come’
tu vieni te	te vegni ti	‘you (sg.) come’
e viene lui/lei	ven elo/ela	‘he/she comes’
si vien noi	vegnim noi	‘we come’
vu’ venite voi	vegní voi	‘you (pl.) come’
e vien loro	ven lori/lore	‘they come’

(Brandi and Cordin 1989:138,ft.10)

Together with Soltan’s (2006) claim mentioned above, these data show that MA may

obligatorily appear in a non-focus domain excluding a focused argument, that is outside the EID. If the Nom Case functioned as a focus marker, an overt pronoun could stand itself. What is the role that MA plays in that case, then? A possible account might be that MA shows that a predicate is defocused, namely functions as a predicate-defocus marker. As we have seen so far, MA can function as a focus marker as illustrated by ASL, Somali, and so forth; it is not clear whether there are languages in which MA can also function as a defocus marker of an argument or a predicate. See also data from colloquial Icelandic:

- (102) Ekki þú fara líka!
 not you-NOM-pl leave-INF too
 ‘Please, don’t YOU leave too!’
 (Sigurðsson 2006a:293,(14))

In a negative infinitive (with pleading force), in which MA does not appear, a contrastively focused subject is marked as Nom. This data appears to me to show that Nom Case marking is in fact independent of MA realization. I leave this issue for future research.

6. Conclusion

In this paper, I asked the fundamental question whether agreement is syntactic. I investigated the environments in which MA appears/does not appear based on information structure (Lambrecht 1994). I found two generalizations on MA realization: i) subject MA appears in predicate-focus; and ii) object MA does not appear in sentence-focus. With the notion of the *exhaustive identification domain* (EID) (Hosono 2007), the syntactic domain which semantic/information-structural properties are reflected on, I proposed to formulate MA realization as follows: i) subject MA appears inside the EID in a split focus structure; ii) only one MA (i.e. subject MA) is allowed to appear inside the EID in a non-split focus structure; and iii) otherwise, MA realization is free. With all of these arguments, I claimed that MA realization is motivated by an information-structural property, thus, agreement is not syntactic. I argued that agreement and the focus in fact belong to the same category. I discussed ‘linguistic components looking like MA’, the Top marker *-wa* and honorification in Japanese, arguing that realization of those components too is motivated by information-structural properties. I mentioned association of MA realization with Case marking.

Finally, I briefly refer to several issues. First, MA in the Scandinavian languages displays an interesting behaviour concerning PP (Platzack and Rosengren 1994, Van Gelderen 1997, Holmberg 2002):

- (103) a. Tre bilder blev målade.
 three pictures were painted-pl
 ‘Three pictures were painted.’

- b. Det blev tre bilder målade.
 there were three pictures painted-pl
 ‘There were three pictures painted.’
- c. Det blev målat tre bilder i söndags.
 there were painted-sg three pictures on Sunday
 ‘Three pictures were painted on Sunday.’
 (from Van Gelderen 1997:42,(29-31))

When a subject is in a preverbal position, PP agrees with the subject (103a). In *there*-construction, too, MA appears on PP when a subject precedes PP (103b); MA disappears, however, when a subject follows PP (103c). The last construction is possible also in Norwegian dialects (Christensen and Taraldsen 1989). Anders Holmberg (p.c.) observes that (103b-c) share the property that they can both be an appropriate answer to the ‘out-of-the-blue’ question *what happened?*, which indicates that they both are sentence-focus. He also observes that a difference between them is that the NP that can appear in (103b) requires a quantifier, whereas the NP that appears in (103c) can be either bare or modified by a quantifier. One possible analysis of (103b-c) drawn from Anders Holmberg’s observations will be that the information structure of sentence-focus may be more complicated than Lambrecht’s (1994) claim that sentence-focus is presentational and event-reporting. I leave this issue for future research.

Second, a complementizer can display MA:

- (104) a. West Flemish:
 da-n-k ik komen
 that-1sg I come-1sg
 ‘that I come’
 (Zwart 1993:252,(10a))
- b. Frisian:
 datst (do) jûn komst
 that-2sg you tonight come-2sg
 ‘that you come tonight’
 (Zwart 1993:253,(12a))

A complementizer agrees with a subject in an embedded clause. A language can also have *wh*-agreement:

- (105) Chamorro:
 a. Ha-konni’ si Orasima’ i häggan.
 3sg-take Orasima the turtle
 ‘Orasima took the turtle.’

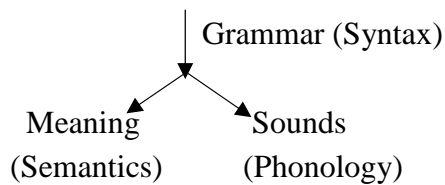
(Chung 1998:58,(78))

- b. Hai mu-na'i hao nu ennao na lepblu?
who WH.Subj.NOM-give you Obl that L book
'Who gave you that book?'
(Chung 1998:59,(81a))

The 3rd person singular MA *ha-* appears on a verb in a declarative sentence (105a), whereas the *wh*-subject marker *mu-* appears on a verb in a *wh*-subject question (105b).²⁴ I leave this issue too for future research.

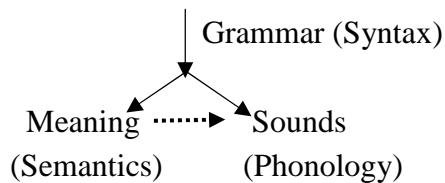
Finally, this paper started with the traditional (reversed) Y-model (Chomsky 1981, 1995):

(106) Y-model:



This model represents the notion that the semantic and phonological components are part of syntax. This yields a theoretical assumption: what can be 'seen' as meaning and sound is what is translated from a syntactic feature; since the mapping to the semantic component is independent of the mapping to the phonological component, there is no direct interaction between sound and meaning. I have shown and claimed that MA realization is motivated by information-structural properties. This, I claim, paves the way to arguing for the following syntactic model in which morpho-phonological realization can directly be determined by the semantic/information-structural component, not being mediated by any syntactic feature:

(107)



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²⁴ According to Chung, *wh*-agreement does not show different values for person and number; a form of *wh*-agreement differs depending on whether a relevant *wh*-phrase is subject, direct object, oblique complement, or adverbial adjunct (Chung 1998:58-59).

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