A Cross-linguistic Analysis of Hyper-ECM constructions

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Abstract

According to standard Minimalist analysis, in an exceptional case marking (ECM) construction such as 'John believes her to be smart' the embedded subject Noun Phrase/ Determiner Phrase (NP/DP) 'her' moves out of the infinitival compliment because the embedded clause is considered to be defective and nominative case is not available. Instead, the embedded subject receives accusative case[1] from the verb in the matrix clause. In this paper, I show that contrary to the assumption that only embedded infinitives allow long A-movement (movement of a DP from an embedded finite clause to an argument position in the main clause), empirical data from languages like Greek, Romanian, Korean and Japanese show that A-movement of finite complement clauses (Hyper-Raising, Hyper-ECM, etc.) is indeed possible in many languages. I also propose a unified analysis of long A-movement constructions which explains what is essentially the same phenomenon in terms of the same theoretical assumption, rather than through different and unrelated theories as found in existing literature.

Keywords: Exceptional Case Marking, A-movement, Defective Clauses, Tense and phi-features (φ-features[2])

[1]*Since it is the exception rather than the rule for a matrix light verb (v) to assign accusative case to the subject of a complement clause, this type of case assignment is referred to as Exceptional Case Marking (ECM).*

[2] φ-features refer to person, number as well as gender (for languages that have grammatical gender) features.

1. Introduction

In the Minimalist Program, the analysis of ECM constructions operates on the assumption that ECM predicates select defective TPs (Tense Phrases) that lack a CP (Complementiser Phrase) layer. The embedded T-head therefore cannot assign case to its subject. Due also to the absence of a CP in a defective clause, the embedded subject DP is able to engage in a long distance agreement relation with the matrix light verb (ν). Subsequently, the functional head ν of the matrix clause assigns accusative case to the subject of the embedded TP. It is not expected that a subject DP embedded within a CP would be assigned accusative case by a matrix light verb. However, as I demonstrate in this paper, empirical data from languages like Greek, Turkish, Korean, Japanese, etc. provide evidence that the subject of an embedded finite clause can be assigned case by ν in the matrix clause despite the presence of an intervening CP. Furthermore, this type of case assignment can be followed by movement of the embedded subject to the matrix object position. Henceforth, I refer to DP-movement from the embedded subject position of a finite complement to the matrix object position as *Hyper-ECM*.

2. The Standard Analysis of ECM Constructions in the MP

ECM constructions are very similar to Raising constructions (see Davies and Dubinsky, 2004; Radford, 2004 and Ademola-Adeoye, 2012 for detailed discussion on Raising), with the difference being that the matrix predicate in ECM constructions is not unaccusative, but transitive. Both ECM and Raising constructions select defective infinitival complements. Consider the ECM constructions in (1):

(1) a. I believe her to be smart.
b. I believe that she is smart.
c. *I believe she to be smart.

In contrast to Raising constructions, where the embedded subject of a non-finite clause is assumed to be assigned nominative case by the matrix finite T-head, in the ECM construction in (1a), the embedded

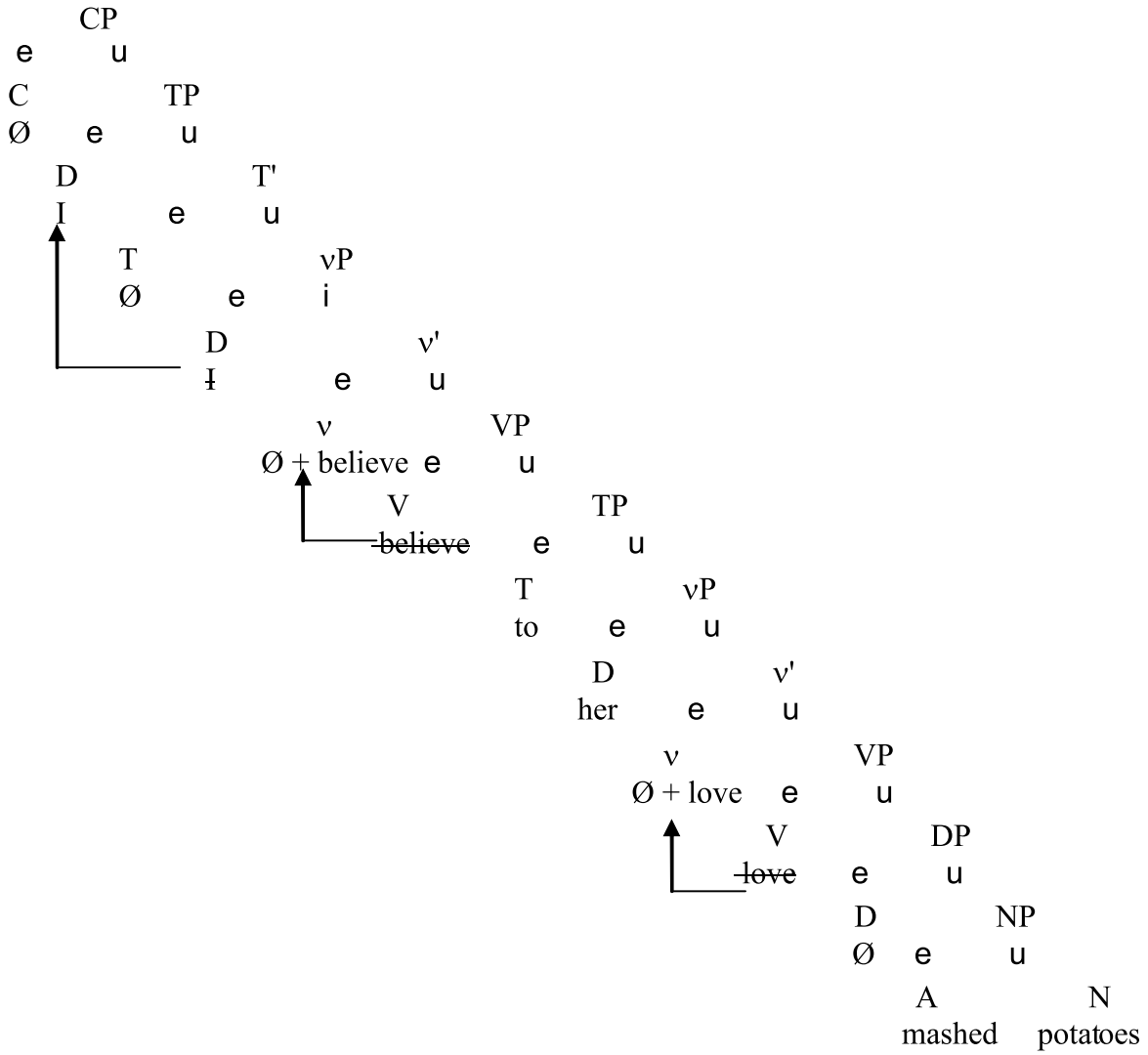
subject *her* is assumed to have been assigned accusative case[3] by the matrix light verb ν because *her* is unable to get nominative case in the defective embedded non finite clause. As in the case of Raising constructions, the embedded subject in (1a) is able to have access to accusative case from the matrix light verb because the embedded complement in (1a) is assumed to be a bare TP, and not a full CP. In (1b), the embedded subject DP is assigned nominative case by the embedded finite T-head. Therefore, the embedded DP remains in the complement clause as expected, and the sentence is grammatical. In contrast, in (1c), the embedded subject of the non-finite defective complement is realised as nominative *she*. Because a defective non-finite clause lacks the features required for valuing the case feature of its subject as nominative, the sentence in (1c) is ungrammatical. The fact that the embedded subject DP in (1a) is realized as *her* instead of *she* is an indication that the embedded subject DP has been assigned accusative case by the matrix light verb. ECM predicates are transitive. Therefore, an ECM verb like *believe* can assign case to an object DP. This is evident from its ability to occur in simple transitive structures like (2) where *believe* assigns accusative case to its object *them*:

(2) a. I believe them.

Furthermore, ECM predicates also select external arguments and, in contrast to Raising predicates, therefore do not take expletives as their subjects (Epstein and Seely, 2006). They do, however, allow for expletives to appear in their object position. To concretize the discussion, below is a derivation of the ECM construction *I believe her to love mashed potatoes* in a step-by-step fashion below.

[3] Generative analyses differ with respect to the question of whether the embedded subject in an ECM construction which receives accusative case from the matrix clause actually also raises to the matrix object position. I follow the Raising account, first introduced by Rosenbaum (1967) and more recently re-introduced by Johnson (1991), Koizumi (1993, 1995), Radford (2004) and Hong (2005) which assumes that the embedded subject DP overtly moves in the syntax and ends up in the matrix object position.

(3)



The derivation of (3) proceeds in a bottom-up fashion until it reaches the stage when the embedded TP is merged with the matrix Verb (V) which originates as the head of the matrix Verb Phrase (VP), the complement of the matrix light verb. Since the light verb is transitive and C-commands the infinitive subject with matching person and number features, each can value and delete the uninterpretable feature of the other. As a result, the embedded subject is assigned accusative case by the matrix light verb and spelled out as her. The matrix light verb, being transitive, also projects an external argument I with interpretable first-person singular features, but

an unvalued case feature. The external argument I merges with ν'[4] to derive the νP, which in turn merges with a null finite T which has an interpretable present-tense feature, uninterpretable and unvalued φ-features, and uninterpretable EPP features. Merging T with its νP complement derives the T'. Since matrix T is finite and has uninterpretable agreement features, it can act as a Probe and agree with the Goal I with matching agreement features in its C-command domain. This results in the pronoun I valuing and deleting the person and number features of the matrix T, and conversely in the T valuing the case feature of I as nominative and deleting it. The EPP feature of T subsequently triggers Raising of the pronoun I from [Spec, ν] to [Spec, T], thereby deleting the EPP feature on T. Merging of the subject DP I to the T' derives the TP. The derived TP finally merges with a null declarative complementiser to form the CP: I believe her to love mashed potatoes.

3.0. Tests for ECM Constructions

In this section, I provide three arguments in favour of the claim that the embedded subject in (4a) has moved from a position inside the embedded TP into the object position in the matrix clause. These arguments are based on well attested syntactic differences between ECM constructions (see Davies and Dubinsky, 2004) such as (4a) and object Control constructions such as (4b):

(4) a. John believed her to have left the room.
b. John persuaded her to leave the room.

There are fundamental differences in the characteristics of the DPs immediately following the matrix verbs in (4). While the object Control verb *persuade* in (4b) selects an internal argument (object DP *her*), the ECM verb *believe* in (4a) selects a TP whose subject is *her*. Therefore, the object of the Raising verb *believe* originates inside the infinitive and moves to the matrix object position. In addition, the embedded subject position of the ECM construction in (4a) is occupied by the unpronounced copy of the moved subject. In contrast, the embedded subject position of the object Control construction (4b) is filled by a

[4] The bar levels like *v*', T' are the intermediate projections of each categorial head.

PRO which is 'controlled' by the antecedent DP in the matrix object position. Therefore in (4b), the matrix object DP *her* is base generated in the matrix clause as the argument of *persuade* and controls *PRO* in the embedded subject position. In contrast, in (4a), *her* is base-generated in the embedded clause as the argument of *leave* but moves from the infinitive into the object position in the matrix clause.

On the basis of these differences, certain tests can be derived that distinguish ECM from object Control structures. Since object Control predicates assign thematic roles to their objects, but ECM predicates do not assign thematic roles to their object positions, only ECM-predicates such as *believe*, but not object Control verbs like *persuade*, allow for expletives in the object position of matrix verbs:

(5) a. John believes it to have rained.
b. John believes there to be a UFO in the backyard.

(6) a. *John persuaded it to rain.
b. *John persuaded there to be a UFO in the backyard.

The fact that semantically empty elements like *it* and *there* can be objects of the verb *believe* in (5) indicates that *believe* in (5) does not assign a thematic role to its object. Consequently, *believe* must be an ECM verb. The subject of the embedded infinitive has received accusative case from the matrix ν, but instead of A-movement of the embedded subject to [Spec, ν], the infinitival subject remains *in situ*, and the EPP-feature associated with matrix ν is satisfied by the expletive *there*.

Another test that distinguishes ECM constructions from object Control constructions is based on the behaviour of idiomatic expressions:

(7) a. John believed the cat to be out of the bag by now.
b. John persuaded the cat to be out of the bag.

The idiomatic reading is retained when the subject part of the idiom chunk in (7a) undergoes Raising from the embedded subject position to the matrix object position. In contrast, in the object Control construction in (7b), the idiomatic interpretation is not possible. While

the cat can be understood as a secret in (7a), in (7b), the only possible meaning of *the cat* is a specific feline (Davies and Dubinsky, 2004).

ECM and object control constructions also differ in meaning when the complement clause is passivised:

(8) a. John believes the professor to have taught Mary.
b. John believes Mary to have been taught by the professor.

(9) a. John persuaded the professor to teach Mary.
b. John persuaded Mary to be taught by the professor.

In the ECM construction in (8), the embedded passive construction in (8b) is the truth-functional equivalent of the active construction in (8a). In contrast, the active and passive forms of the object control construction in (9) are not synonymous.

3.1 Hyper-ECM Constructions

3.1.1 Hyper-ECM in Greek

Joseph (1976) shows that in Greek, the subject of the embedded finite CP can be assigned accusative case by the matrix light verb:

(10) Θeoro ton yani [pos ine eksipnos]
consider-1SG ACC-John COMP be- SG smart
'I consider John to be smart.' (Greek; Joseph 1976: 241)

The sentence in (10) has a finite indicative complement with an overt complementiser and a T-head that is inflected for agreement. The subject of the embedded clause bears accusative case and appears before the complementiser *pos*. Joseph (1976) therefore assumes that the accusative subject of the lower clause in (10) has raised from the embedded subject position to the matrix object position, leaving a gap in the embedded subject position. This means that (10) is an example of Hyper-ECM. In order to support this assumption, Joseph (1976) provides arguments based on the differences between object control verbs like *episa* 'persuade', which select matrix object arguments, and verbs like *θeoro*, 'consider', which select sentential complements. First, when the embedded complement of the predicate *θeoro* is passivised, the

meaning of the active construction is synonymous with the passive construction, in contrast to what obtains when the complement of *episa* is passivised.

(11) a. Θeoro ton petro [pos eklepse afto ton skilo]
consider-1 SG ACC-Peter COMP stole-3SG this-the-dog- ACC
'I consider Peter to have stolen this dog.'

b. Θeoro afto ton skilo [pos ine klemenos apo ton petro]
consider-1Sg this-the-dog- Acc Comp be-3Sg stolen-Nom by Peter
'I consider this dog to have been stolen by Peter.'
(Greek; Joseph 1976: 244)

(11a) and (11b) are synonymous. This is in contrast to (12a) and (12b) below:

(12) a. Episa ton yatro [na eksetasi ton yani]
persuaded-1SG ACC-doctor SUBJ examine-3SG ACC-John
'I persuaded the doctor to examine John.'

b. Episa ton yani [na eksetasθi apo ton yatro]
persuaded-1 SG ACC -John SUBJ examine-PASS-3 SG by doctor
'I persuaded John to be examined by the doctor.
(Greek; Joseph 1976: 244)

The passive and active constructions in (11) are similar because the DP *skilo* 'dog' is the internal argument of the verb *eklepse* 'stole' in both examples even though *skilo* is syntactically realized as the object of the main clause in (11b). In contrast, (12a) and (12b) are not synonymous. In (12a), it is the doctor that is persuaded to examine John while in (12b), it is John who is persuaded of the need to be examined. This is similar to the difference that was observed between subject-to-subject Raising and subject Control constructions. Second, Joseph (1976) observes that a sentential idiom such as *ksilo pefti (se kapyo*), which literally means "wood falls (on someone)" preserves its idiomatic reading when its subject part is realised as the accusative object of the predicate *θeoro*. In

contrast, the idiomatic reading is unavailable if the idiom is embedded under *episa*, with the subject realised as the matrix object:

(13) a. Θeoro ksilo [na exi pesi se afton]
consider-1 SG wood SUBJ have-AUX fallen on him- ACC
'I consider wood to have fallen on him' (literal)
'I consider him to have suffered in the fight.' (idiomatic)

b. *Episa ksilo [na pesi se afton]
persuaded-1 SG wood SUBJ fall-3 SG on him- ACC
'I persuaded him to get hurt (in the fight).'
(Greek; Joseph 1976: 246)

The fact that the embedded idiom in (13a) retains its idiomatic reading with a part of it in the matrix object position is an indication that the raised part originated in the embedded clause. In contrast, (13b) lacks an idiomatic reading, because the matrix predicate subcategorizes for a matrix object. The DP *ksilo* in (13b) is therefore an argument of the matrix predicate and at no stage part of the embedded idiom.

3.1.2 Hyper-ECM in Korean

According to Hong (2005), Korean is another language with Hyper-ECM. First, consider the example in (14):

(14) John-i Mary-lul [cengcikha-ess-tako] sayngkakha-n-ta
John-NOM Mary-ACC honest-PAST-COMP think-PRES
'John believes that Mary was honest'
(Korean; Hong, 2005:59)

In (14), the finite embedded clause has an overt complementiser *tako* and the embedded verb is overtly marked for tense (usually an indication that the T-head can assign nominative case). Yet, the embedded subject is assigned accusative case by the matrix light verb. Hong (2005) presents a number of arguments to show that the matrix object in constructions such as (14) originates in the subject position of the embedded finite indicative CP. His first argument is based on the system of honorific marking that exists in Korean. According to Hong (2005), honorific marking is an

instance of agreement in Korean that is established locally via a spec-head relation between the honorific DP and the verb:

(15) a. Mary-ka [halmeni-kkeyse apu-si-tako] sayngkakha-ess-ta
Mary- NOM grandmother-HON.NOM sick-HON-COMP think-PAST

b. Mary-ka halmeni-lul [apu-si- tako] sayngkakha-ess-ta
Mary-NOM grandmother-ACC sick-HON-COMP think-PAST
'Mary thought that her grandmother was sick.'
(Korean; Hong, 2005:60)

In (15a), the embedded subject marked with honorific nominative case *-kkeyse* sanctions the honorific morpheme *-si* on the embedded verb through spec-head honorific agreement. In (15b), the embedded verb *apu-* is also inflected with the honorific suffix *si-*, and the only DP that could act as a licenser for this agreement is again the DP *halmeni* 'grandmother'. However, this DP is overtly realised in the matrix clause and is marked with accusative case. Hong (2005) concludes that honorific agreement on the embedded verb *apu-si-* is explained by the assumption that the DP *halmeni* was in the embedded subject position in a spec-head relation with the embedded verb where it licensed the honorific suffix *si-* on the embedded verb before moving into the matrix clause to be assigned accusative case by the matrix light verb.

The availability of two structural cases in long A-movement constructions is also illustrated by Hong's (2005) second argument, which relates to case mismatch between a possessor DP and the possessed DP. Hong (2005) observes that in Korean, both the possessor and possessed DP must have the same case marking:

(16) a. John-i elkwul-i/*ul tachi-ess-ta
John-NOM face- NOM /* ACC hurt-PAST
'John's face got hurt.'

b. Bill-i John-ul elkwul-ul/*i ttayli-ess-ta
Bill-NOM John-ACC face- ACC /* NOM hit-PAST
'Bill hit John's face.'
(Korean; Hong, 2005: 89)

The examples in (16) show that the possessor DP *John* must bear the same case marking as the possessee – nominative in (16a), and accusative in (16b). However, in (17) below, there is a case mismatch between the possessor *emeni-lul* 'mother-Acc' and the possessed DP *elkwul-i* 'face-Nom'. Yet the sentence is grammatical:

(17) Sue-ka emeni-lul [elkwul-i kowu-si-tako] sayngkakha-n-ta
Sue-NOM mother-ACC face- NOM pretty- HON-COMP think-PRES
'Sue thinks her mother's face is pretty.'
(Korean; Hong, 2005: 89)

Note that the embedded predicate *kowu* 'pretty' in the finite indicative complement clause bears honorific marking *-si*, which signals agreement between the predicate and its subject (Hong, 2005). Hong (2005) therefore suggests that in (17), the possessor DP *emeni* 'mother', with the possessee *elkwul* 'face', originated in the embedded subject position of the complement clause where the DP *emeni* licensed the honorific morphology on the embedded predicate in a spec-head configuration before moving into the matrix object position and leaving the possessed DP behind in the embedded subject position. While the raised possessor DP is assigned accusative case by the matrix light verb, the stranded possessed DP is assigned nominative case by the embedded finite T-head. Again, (17) illustrates that in Hyper-ECM constructions, two cases are in fact available: accusative case from the matrix light verb ν, and nominative case from the embedded finite T. In addition, (17) has another important characteristic that will become important for my analysis of this and other long A-movement constructions: Given the standard assumption that possessors merge as the specifiers of their possesses (or possessum), the raised DP in (17) does not really undergo subject-to-object movement, but rather *specifier-of-subject-to-object* movement, thereby stranding the possessor inside the complex nominative DP.[5] As will become clear later, I suggest that long A-movement always involves extraction of a DP from another DP (and that the extracted

[5] In addition, (17) also shows that honorific agreement can be established between an honorific DP embedded in a larger DP and the verb. I return to this possibility later.

DP receives case from the matrix clause) plus it involves stranding of the complex DP from which extraction took place (and that the stranded DP will be marked with nominative case).

The third argument provided by Hong (2005) is that it is possible to passivise the embedded subject of the Hyper-ECM construction in Korean:

(18) a. John-i Sue-lul [ttokttokha-ess-tako] mit-nun-ta
John-NOM Sue-ACC smart-PAST-COMP believe-PRES
'John believes Sue to have been smart.'

b. Sue-ka [ttokttokha-ess-tako (John-ey uyhay)] mit-e-ci-n-ta
Sue-NOM smart-PAST-COMP John-by believe-PRES
'Sue is believed to have been smart by John.'
(Korean; Hong, 2005: 62)

According to Hong (2005), the possibility of passivising the accusative-bearing thematic subject of the embedded clause of the active sentence in (18a) demonstrates that this DP behaves like a regular object. This implies that the embedded subject DP must have moved to the matrix object position, making it possible for the passive rule to apply to it.[6]

3.1.3 Hyper-ECM in Japanese

Tanaka (2002), following Kuno (1976), suggests that like Greek and Korean, (19a) and (19b) constitute an example of Hyper-ECM in Japanese, and argues for a Raising-to-object analysis of examples such as (19b):

(19) a. John-ga [Bill-ga baka-da-to] omot-teiru
John-NOM Bill-NOM fool-COP-COMP think-PROG
'John thinks that Bill is a fool.'

[6] It should be noted that Hong's argument is only valid if it is assumed that the passive cannot apply to subjects of embedded clauses. However, analyses of ECM-constructions that do not assume subject-to-object Raising and that stipulate that accusative case is assigned to the embedded subject DP across a sentence boundary usually explain the "long" passivisation possibility in examples such as (18b) through the defectiveness of the intervening clausal node (a TP, not a CP).

b. John-ga Bill-o [baka-da-to] omot-teiru
John-NOM Bill-ACC fool-COP-COMP think- PROG
'John thinks of Bill as a fool.'
(Japanese; Tanaka, 2002: 637-638)

In the examples in (19), the matrix predicate *omot-teiru* 'thinks' selects a finite indicative complement with an overt complementiser *to* and an embedded finite T-head that is overtly marked for tense (progressive). This means that the T-head should be able to assign nominative case. But while the DP *Bill* is indeed assigned nominative case by the embedded finite T-head in (19a), in (19b), *Bill* is assigned accusative case by the matrix light verb. The examples in (19) therefore show that Japanese also has some predicates that select finite clausal complements whose subjects can be marked with either nominative or accusative case without any adverse effect on grammaticality (see also Hoji 2005 and Kawai 2006).

An additional piece of evidence that suggests that the Japanese predicate *omot-teiru* triggers Hyper-ECM comes from Bruening (2001). According to Bruening (2001), when part of a Japanese idiom embedded under the predicate *omot-teiru* appears in the matrix clause, the construction still preserves its idiomatic reading:

(20) a. Taroo-ga [sono-seejika-no kao-ga hiroi to] omotta
Taroo-NOM that-politician-GEN face-NOM wide COMP thought
'Taroo thought that that politician's face was wide.' (Literal interpretation)
'Taroo thought that that politician was well-known.' (Idiomatic interpretation)

b. Taroo-ga sono-seejika-no kao-o (orokanimo) [hiroi to] omotta
Taroo- NOM that-politician-GEN face-ACC (stupidly) wide COMP thought
Taroo stupidly thought that that politician's face was wide.' (Literal interpretation)
Taroo stupidly thought that that politician was well-known.' (Idiomatic interpretation)
(Japanese; Bruening, 2001:11)

Bruening (2001) explains that the fact that part of the idiom can appear before the matrix adverb *orokanimo* 'stupidly' when marked with accusative case in (20b) suggests that the idiom chunk has moved out of the embedded clause. And the fact that the sentence in (20b) retains its idiomatic interpretation indicates that the idiom chunk must have originated in the embedded clause.

3.1.4 Hyper-ECM in Turkish

Şener (2008) shows that there is a similar case alternation in Turkish. In certain constructions, the subject of an embedded finite clause can be assigned nominative case by the embedded finite T-head or accusative case by the matrix light verb:

(21) a. Pelin-Ø [sen-Ø Timbuktu-ya git-ti-n] san-iyor
Pelin-NOM you-NOM Timbuktu-DAT go-PAST-2SG believe-PRES
'Pelin believes that you went to Timbuktu.'

b. Pelin-Ø sen-i [Timbuktu-ya git-ti-n] san-iyor
Pelin-NOM you-ACC Timbuktu-DAT go-PAST-2SG believe-PRES
'Pelin believes that you went to Timbuktu.'

(22) a. Pelin-Ø [sen-Ø Timbuktu-ya git-ti-n ∂iye] bil-iyor-muş/
Pelin-NOM you-NOM Timbuktu-DAT go-PAST-2SG COMP
know-PROG-EVID
düşün- üyor-muş/ duy- muş
think-PROG-EVID hear-EVID
'Pelin knew/ thought/ heard that you went to Timbuktu.'

b. Pelin-Ø sen-i [Timbuktu-ya git-ti-n ∂iye] bil-iyor-muş/
Pelin-NOM you-ACC Timbuktu-DAT go-PAST-2SG
COMP know-PROG-EVID
düşün- üyor-muş/ duy- muş
think-PROG-EVID hear-EVID
'Pelin knew/ thought/ heard that you went to Timbuktu.'
(Turkish; Şener, 2008: 2)

In (21) and (22), the matrix predicates *san-iyor* 'believe', *bil-iyor-muş* 'know', *düşün- üyor-muş* 'think' and *duy- muş* 'hear', subcategorize finite complements which have overt Tense and Agreement with overt complementisers in (22) and without overt complementisers in (21).

While the (a) examples have a nominative embedded subject, the (b) examples, whose embedded T-heads also exhibit overt agreement, have an accusative embedded subject. Although the word order in (21) and (22) does not show whether the thematic subjects of the embedded clauses have raised to the matrix clause or remained inside the embedded subject position, the fact that they bear accusative case shows that they are case-marked from outside. At the same time, the agreement between the embedded verb and the DP *sen-i* 'you' shows that at least at some stage in the derivation, this DP must have been inside the embedded subject position. The combination of both observations (case assignment from the matrix clause, and agreement with the embedded predicate) can be interpreted as evidence that (21b) and (22b) are Hyper-ECM constructions.

4. An Overview of Existing Proposals

In the preceding section, I have focused on the empirical evidence for the existence of long A-movement constructions that I have collected through an extensive study of the available literature. Before I present my own theoretical analysis of the underlying syntactic mechanisms and relations that allow for the possibility of long A-movement, I want to discuss and contrast some of the existing proposals that have been made in the literature to explain the relevant data.

There are several competing analyses of Hyper-ECM. Most of the proposals suggest that Hyper-ECM is possible because the embedded clause in Hyper-ECM constructions is somewhat defective despite being a finite CP. However, as I will show, there are also accounts of long A-movement which do not assume defectiveness of the embedded clause. Importantly, these theoretical approaches are mostly motivated by idiosyncratic properties of the respective language under investigation; an account which is based on an idiosyncratic property of a specific language naturally cannot be extended to a language which does not have this property. I consider this the main shortcoming of most existing analyses.

The first proposal assumes that, despite the presence of full agreement in the embedded clause, the embedded T-head is defective and therefore incapable of assigning nominative case. In order to explain the

possibility of Hyperraising in Greek, Alexiadou and Anagnostopoulou (1999) suggest that nominative case assignment in Greek is not linked to φ-feature agreement between T and its subject. They suggest that, although it is possible for a verb to be overtly marked for agreement, nominative case is unavailable to the subject DP if the agreeing T-head does not have the right tense features. Alexiadou and Anagnostopoulou (1999) propose that semantic tense is the feature of T that is responsible for nominative case assignment in languages like Greek.[7] For instance, Alexiadou and Anagnostopoulou (1999) observe that the Greek Raising predicate *arxizo* in (23) selects a complement that does not have an independent tense specification:

(23) *O eaftos tu arxizi [na ton anisixi avrio]
The self his-NOM begin-3SG SUBJ CL-ACC worry-3SG tomorrow
'He started being worried about himself tomorrow.'
(Greek; Alexiadou and Anagnostopoulou 1999:12)

Alexiadou and Anagnostopoulou (1999) argue that the example in (23) is ungrammatical because the tense feature of the embedded clause is defective and can therefore not be modified by a temporal adverbial. They suggest that the embedded T-head in (23) has not inherited tense features from C. If the tense property of the T-head in the Raising subjunctive complement in (23) is defective, then the case feature of the embedded subject cannot be valued by the defective embedded T-head, and the DP remains an active goal which can be probed by a head in the matrix clause. Uchibori (2000, 2001) also suggests that in Japanese, Hyperraising out of a subjunctive complement is possible because the tense feature of the embedded T-head of complements such as the one in (24b) below is defective as evidenced by its incompatibility with temporal adverbials:

[7] In this respect, it is relevant that many languages, including Greek, allow Hyperraising out of subjunctive complement clauses. One typical explanation for Hyperraising and Hyper-ECM constructions with finite subjunctive complements that has been given in the literature is that the subjunctive mood is responsible for the embedded T-head being defective, despite being selected by a finite C-head. Generally, subjunctive clauses are assumed to be temporally deficient (Binnick,1991; Cowper, 2002; Landau, 2004; Nevins, 2004; Boeckx and Hornstein, 2006; Polinsky and Potsdam, 2006).

(24) *John-ga tuini [t_i sungaku-o sakuban benkyoosu-ru-yooni] nat-ta
John-NOM finally math-ACC last night study-NONPAST-SUBJ-COMP happen-PAST
'Finally, it happened as a natural consequence that last night, John studied Math.'
(Japanese; Uchibori, 2001: 10)

Alexiadou and Anagnostopoulou's (1999) and Uchibori's (2000, 2001) theories seem to account for languages like Greek and Japanese for which it has been argued that tense is the feature of T that is responsible for nominative case assignment. However, this view of nominative case assignment does not straightforwardly account for languages in which complement clauses that allow for Hyperraising in the subjunctive mood are not temporally deficient. For example, Zeller (2006a) shows that the subjunctive complement of the Hyperraising verb *fanele* can have an independent temporal interpretation:

(25) UJabu u-be-fanele izolo [ukuthi a-hamb-e namhlanje]
Jabu1a SM1a-AUX-ought yesterday that SM1a-leave-SUBJ today
'It was vital yesterday for Jabu to leave today.'
(Zulu; Zeller 2006a: 267)

Even if the assumption that semantic tense is the feature responsible for nominative case could account for instances of Hyperraising in languages like Greek or Japanese, where Raising occurs from temporally deficient subjunctive complements, it is unable to explain Hyperraising in languages like Turkish, Hebrew, Yoruba, Igbo, etc. This is because in these languages, the embedded subject DP moves from a finite *indicative* complement whose tense always has an independent temporal interpretation. Consider the Yoruba example in (26):

(26) òjò jọ pé ó ma rọ̀ ní ọ̀la
rain seems COMP 3SG will fall at tomorrow
'Rain seems that it will fall tomorrow.'

The embedded clause in (26) is a finite indicative clause with an overt complementiser *pé*. The fact that the embedded clause bears a tense (future) that is different from the one that the matrix clause bears

(present), indicates that the embedded tense is not deficient and it can be given its own temporal interpretation, independent of the superordinate clause. Alexiadou and Anagnostopoulou's (1999) and Uchibori's (2000, 2001) accounts therefore do not explain why there is Raising out of semantically tensed complements like (26).

It also should be mentioned that the idea of an embedded CP with an agreeing but nevertheless defective T-head is at odds with the standard assumption that the availability of nominative case is closely linked to the presence of the C-head, regardless of the semantic or morphological properties of T. While nominative case is assumed to be assigned to a subject DP via φ-feature agreement with a T-head (Chomsky, 1998, 2000, 2001), Chomsky (2005: 9) proposes that the non-defective tense and φ-features of T are inherited from the phase head C. According to this view, the source of the inflectional features of the clause and the ability to assign case to a subject in [Spec, T] is the C-head. The fact that many of the complements from which Hyperraising and Hyper-ECM are possible are introduced by overt finite complementisers suggests that these CPs are capable of having nominative subjects. The idea that once a C-head selects a T, the T inherits all the features required for nominative case assignment is supported by examples such as (27a):

(27) a. The lecturer insists that they be on time.
b. *The lecturer insists that they to be on time.

The grammatical example in (27a), which is similar to that found in Aygen (2004: 64), has a subjunctive embedded clause whose T has neither tense nor agreement morphology, but an overt complementiser *that*. Despite the lack of overt tense and agreement on the verb, the embedded subject is assigned nominative case. This clearly shows that the absence of tense and/or agreement features may not always imply that nominative case is unavailable. Rather, it is assumed that the presence of a C layer guarantees that T inherits all features required to assign nominative case to its subject. In contrast, (27b) is ungrammatical because, in principle, the infinitive *to* lacks the features required to assign nominative case to its subject.

The second proposal is that which explains long A-movement in terms of a mechanism which allows the embedded subject to receive case in the matrix clause although the embedded T-position is non-defective. Rodrigues (2004) assumes that in Brazilian Portuguese, the case feature of a subject DP is valued through φ-feature agreement between a T-head and the subject DP in a Spec-head relation. Consider example (28):

(28) a. E parece [que a Maria está doente]
it seem-3SG that the Maria is-3SG sick
'It seems that Maria is sick.'

b. A Maria$_i$ parece [que *pro* está doente]
the Maria seem-3SG that is-3SG-PRES sick
'Maria seems that is sick.'
(Brazilian Portuguese; Rodrigues, 2004: 118)

Rodrigues (2004) suggests that in order for the φ-features of the embedded T-head to be valued and deleted, the T-head enters an Agree relation with the subject DP in the [Spec, V] position of the complement clause. Φ-feature agreement between the embedded T-head and the embedded subject DP results in the valuation and deletion of the φ-features of the embedded T-head. At this point of the derivation, the subject DP in the embedded [Spec-V] position could be moved to [Spec, T] of the embedded clause to have its case feature valued and deleted by the embedded T-head. But once the case feature of the embedded subject DP is valued and deleted, it will become inactive for any further syntactic operation. If there is no lexical item in the numeration that can value the φ-features of the matrix T-head, then the derivation will not converge.

Rodrigues (2004) therefore suggests that in order to prevent the derivation from crashing, the valuation of the case feature of the embedded subject DP is *delayed*[8] until the matrix T-head enters the derivation. Once the matrix T-head enters the derivation, it establishes an agreement relation with the embedded subject DP. The complete φ-

[8] Rodrigues' (2004) suggestion that the valuation of the case feature of the embedded subject DP can be delayed until the matrix T-head enters the derivation is similar to Ura's (1998) and Hong's (2005) suggestions.

features of the embedded subject DP value the φ-features of the matrix T-head and subsequently, the embedded subject DP moves to the matrix subject position where its case feature is valued as nominative by the matrix T-head. The difference between the derivation of (28a) and (28b) is that in (28a), there is a lexical item in the numeration (*e* 'it') that can value and delete the φ-features of the matrix T-head, so there is no need to delay the valuation of the case feature on the embedded subject DP *Maria*. In contrast, in (28b), there is no lexical item in the numeration that can value the φ-features of the matrix T-head. Therefore, the valuation of the case feature of the embedded subject DP is delayed so that it can remain active in order for it to be able to enter into an agreement relation with the matrix T-head, value the φ-features of the T-head and fulfil its EPP requirement. According to Rodrigues, the two derivations in (28) are possible due to the option of delaying case valuation on an embedded subject DP.

The proposal put forward by Rodrigues (2004) (as well as Ura (1998) and Hong (2005)) hence assumes that it is a particular characteristic of long A-movement constructions that they allow (for general, or for language-specific reasons) for a case feature not to be valued in a configuration in which nominative case is normally assigned in that language. However, this type of Raising analysis, which allows for Raising to take place optionally, as an alternative to a similar configuration in which nominative case is assigned, does not address the question of which mechanisms are responsible for this sort of optionality. Why should an embedded subject DP move out of a finite CP when it is otherwise possible for it to be assigned nominative case in the embedded clause? What determines that in the same configuration, nominative case is sometimes assigned, and sometimes not?

The third analysis is that which assumes that nominative case is in fact assigned to the embedded DP in long A-movement constructions, but that this DP nevertheless remains accessible for further syntactic relations. Adesola (2005) posits that in Yoruba Copy Raising constructions[9], the embedded subject DP moves from a potential case

[9] Note that even though the Yoruba, Zulu and Igbo examples are of (Copy) Raising constructions, the same principles apply to Hyper-ECM constructions.

position in [Spec, T] of the complement clause to another potential case position in [Spec, T] of the matrix clause, while leaving behind a pronominal copy which shows φ-feature agreement with its antecedent. Consider the example in (29):

(29) a. Ó jọ [pé Olú àti Adé ní owó lọ́wọ́]
EXPL resemble COMP Olu and Ade have money in hand
'It seems that Olu and Ade are rich.'

b. [Olú àti Adé]$_i$ jọ pé wọ́n$_i$ ní owó lọ́wọ́
Olu and Ade resemble COMP they have money in hand
'Olu and Ade seem to be rich.'
(Yoruba; Adesola, 2005: 110-112)

Adesola (2005) argues that the embedded subject DPs in (29) receive case from the embedded T-heads and then raise from the embedded [Spec, ν] to the embedded [Spec, T] position in order to satisfy the EPP features of the embedded T-heads. In (29a), the embedded subject does not raise any further since there is an expletive in the numeration that is merged in matrix [Spec, TP] to meet the EPP requirements of the matrix T. However, Adesola argues that in (29b), in contrast, where there is no expletive in the numeration, the embedded subject DP, after being assigned nominative case by the embedded T, moves to the matrix subject position to value the EPP features of the matrix T.

Unlike Ura (1998) who clearly states that the raised DP delays getting its case feature valued and deleted until it moves to the [Spec, T] position in the matrix clause, Adesola (2005) argues that in Yoruba Copy Raising Constructions, the embedded subject DP is assigned case by the finite embedded T-head, and yet the embedded DP can still move to the matrix [Spec, T] position. However, Adesola's (2005) assumption that the embedded subject DP gets its case valued in the complement clause creates a problem: according to standard assumptions, once the DP's case feature is valued, it should become inactive for further computation according to minimalist assumptions. Like Ura's proposal, Adesola's

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The only difference is that while a subject DP moves to the matrix subject position in Raising constructions, in Hyper-ECM constructions the embedded subject DP moves to the matrix object position.

(2005) analysis also raises the question of how the embedded subject DP is able to move out of a CP complement clause, since CPs whose T-heads are capable of assigning nominative case are considered to be phases in the Minimalist Program.[10]

The fourth proposal given by Deprez (1992) suggests that the embedded clause is a small clause. In her analysis of Raising Constructions in Haitian Creole, Deprez (1992) argues that Haitian Creole Copy Raising involves the movement of an embedded subject DP from a finite CP to the matrix subject position. She argues that, unlike "regular" Copy Raising constructions, in which a pronominal copy is left at the point of extraction of the subject DP, the raised subject in Haitian Creole does not move from the position of the pronominal copy. In her analysis, (30) is assumed to have the structure in (31):

(30) Jan sanble [li renmen Mari]
John seems he love Mary
'John seems to love Mary.'

(31) [sanble [sc Jan [$_{PRED}$ li renmen Mari]]]
(Haitian Creole; Deprez, 1992: 212)

[10] Although Adesola (2005: 116) suggests that the Tensed S condition, which prevents A-movement across a CP-boundary, no longer features in the Minimalist Program, the Tensed S condition has been replaced by the PIC, which should capture the same empirical phenomena. The idea of PIC suggested by Chomsky (2000: 108), is known as the *Phase Impenetrability Condition* (PIC), which is given in (i) as:

(i) *Phase Impenetrability Condition* (Chomsky, 2000: 108)
In phase α with head H, the domain of H [= complement of H] is not accessible to operations outside α, but only H and its edge [H plus any/all its specifiers].

The domain of H is every constituent C-commanded by H; H and [Spec, H] constitute the edge of H. For example, the PIC implies that a subject in [Spec, T] is not available for any operation outside the CP: Given that CP is a phase, [Spec, T] is in the domain of the phase head C. This explains, for example, why one would not expect the subject or object of an embedded clause to receive case from an element in the matrix clause.

Deprez assumes that the DP *Jan* is base generated in the subject position of a small clause[11], which is the complement of the Raising verb *sanble*. The small clause, in turn, selects a finite complement clause. She explains that the pronoun *li* is unable to satisfy the theta requirement because Haitian pronouns are ambiguous between pronouns and anaphors. As a result, the external theta role of *li* is reassigned to the clausal projection, which turns the whole finite clause into a predicate. This predicate then assigns the theta role to *Jan* via predication (Williams, 1980, 1983, 1986). Subsequently, the embedded subject DP *Jan* moves out of the small clause to the matrix subject position to be assigned nominative case.

Deprez's theory is an attempt to explain data such as (30) without having to assume that long A-movment can exist. Since in principle, it is impossible for a small clause to contain a finite verb or have tense specification, the embedded clause in (30) cannot be considered a small clause because it contains a finite verb *renmen* 'love'. Although (30) seems a clear case of Copy Raising, Deprez effectively re-interprets the finite complement as a non-finite small clause (with a finite clause-like predicate). This allows her to maintain that Raising in (30) is out of a non-finite complement. However, Deprez's analysis has nothing to say about those languages discussed above in which the complement from which long A-movement is possible is introduced by a complementiser. Furthermore, in the light of the great number of languages which clearly exhibit long A-movement, it is not clear if Deprez's language-specific analysis is actually needed, given that an independent analysis for Hyperraising, Hyper-ECM and Copy Raising in these languages would still be required.

Kawai (2006) also proposes a small clause analysis for Japanese Hyper-ECM constructions whose embedded subjects bear accusative case. Kawai (2006) argues that the complements of the examples in (32a) and (32b) are homophonous because Japanese has an impoverished verbal

[11] A small clause is a kind of reduced clause and usually lacks a copula. It is assumed that small clauses do not include tense and inflection (Kawai, 2006; Stowell, 1983, 1989, 1991; Runner, 2006)

morphology. But while the embedded clause in (32a) is a finite CP complement, Kawai (2006) suggests that (32b) is a small clause:

(32) a. kanojo-wa [sono otoko-ga sagishi da to] shinjiteiru
She-TOP the man-NOM swindler is COMP believes
'She believes that the man is a swindler.'

b. kanojo-wa sono otoko-o [sagishi da to] shinjiteiru
She-TOP the man-ACC swindler is COMP believes
'She believes the man to be a swindler.'
(Japanese; Kawai, 2006: 329)

The main reason Kawai (2006) proposes a small clause analysis for examples like (32b) is theory-internal. In the Minimalist Program, movement is only allowed as a last resort. In (32a), where the embedded clause is a finite CP, the embedded subject *otoko-ga* is assigned nominative case by the finite T-head; therefore, there is no need for the embedded subject to move to the matrix object position. By arguing that the embedded clause in (32b) is a small clause, Kawai (2006) can maintain that the embedded clause cannot assign nominative case, and that therefore, the embedded subject DP *otoko* has to move out of the embedded clause to the matrix object position where it is assigned accusative case by the matrix light verb. Kawai (2006) suggests that movement out of the embedded clause in (32b) is only possible if it is assumed that the embedded clause in (32b) is a predicative phrase equivalent to a non-finite clause, which lacks tense and aspectual inflections but may host negation. Since non-finite T-heads do not assign nominative case, it therefore follows that the embedded subject in (32b) would have to move out of the embedded clause in order to have its case feature valued.

Kawai's (2006) small clause analysis seems ad hoc, given that the complement of the non-raised variant in (32a) has the same morphological properties as the complement of the ECM-construction in (32b), yet there is no Raising in (32a). It is similar to the first proposal discussed above in that it argues that the embedded clauses from which long A-movement can occur are syntactically different from those in which nominative case is available. However, there is no independent evidence for this difference. In addition, Kawai's (2006) analysis cannot

be extended to all the other languages with Hyper-ECM. For instance the example of Hyper-ECM in Greek cannot be analyzed as a small clause because the embedded verb is inflected for tense. It contains a copula as well as the past passive participle (Joseph 1976: 244). But if an analysis for the Greek examples is needed anyway, such an analysis can also capture the Japanese data discussed by Kawai, and the language-specific stipulation that identical complements have different syntactic structures is no longer needed.

In an attempt to address some of the shortcomings of the Copy Raising analysis proposed by Ura (1998) for Igbo, Potsdam and Runner (2001) suggest a base-generation analysis of Raising. Although their theory is developed for English constructions such as (33), an approach like theirs could in principle also be adopted for languages with Hyper- or Copy Raising, which is why I discuss it here. Potsdam and Runner argue that the relation between the 'raised' subject, occupying a non-thematic subject position of a Copy Raising predicate, and the pronominal copy in the embedded subject position does not involve movement. They assume that the copy pronoun originates in the embedded clause, and the matrix subject DP is base generated in the matrix subject position:

(33) $[_{TP}$ Richard$_i$ T seems $[_{XP}$ like $[_{TP}$ he$_i$ T $[_{VP}$ is in trouble]]]]
(Potsdam and Runner, 2001: 462)

According to Potsdam and Runner's (2001) analysis (see also Harford (Perez), 1997 and Hoji, 2005 for other base-generation accounts), it is possible to merge a DP directly into the non-thematic position of a Raising predicate. In their analysis, the matrix subject DP *Richard* and the embedded pronominal copy *he* in (33) are assigned a single theta role and form an argument chain, but they independently check the EPP, case and φ-features in their respective clauses. The base generation accounts all rely on the unconventional and problematic assumption that it is possible for two syntactic positions to share a single theta role. However, such an assumption raises the question of why this possibility does not exist more frequently, and also in other constructions. For example, if referential argument DPs can essentially play the role of expletives, then one would predict that e.g. English allows sentences such as (34a) with the interpretation of (34b):

(34) a. *He arrived a man in the city.
b. There arrived a man in the city.

If DPs can be merged into non-theta positions and be interpreted as co-referential to argument DPs elsewhere in the clause, then (34a) should be possible and equivalent to (34b). However, the ungrammaticality of (34a) suggests that there is independent evidence to maintain the assumption that arguments cannot be merged into non-theta positions. Since the [Spec, T] position in Raising constructions is a non-theta position (which is evident from the possibility of having an expletive in the subject position of a Raising predicate), this implies that an argument cannot be merged directly in that position (Ura, 1994; Chomsky, 2000; Davies & Dubinsky, 2004; Radford, 2004). I therefore continue to assume that the overt subject/object DPs of Raising and ECM predicates cannot be base-generated in the matrix clause. In order to arrive in matrix positions, they have to have moved from the embedded subject position to their surface position in the matrix clause.

5 Proposal: A Unified Approach of Long A-Movement Constructions

As pointed out above, the theoretical approaches that have been suggested are not uniform and applicable to the phenomenon of long A-movement in general. Rather, they are mostly motivated by the idiosyncratic properties of the respective language under investigation. An account which is based on an idiosyncratic property of a specific language can naturally not be extended to a language which does not have the property. Although it is, of course, not impossible that the Hyper-ECM constructions in the languages discussed above are caused by entirely different properties of the respective languages, I find such an assumption rather implausible. Even if it turns out that some of the observable differences between the languages discussed above are reflexes of the way the possibility of long A-movement is realised in the language, it is still likely that at least some of the processes which give rise to these idiosyncratic properties are also attested in other languages, even if they are not overtly manifested.

Therefore, I consider it necessary to at least attempt to provide a unified approach of long A-movement constructions, which explains

what is essentially the same phenomenon in terms of the same theoretical assumptions, rather than through different and unrelated theories. I suggest that Raising of a subject NP/DP is permitted in certain languages even though nominative case has been assigned in the embedded clause. In other words, I interpret the data in (10), (14), (19b), (21) and (22) as evidence that the traditional Minimalist account of Raising that equates A-movement with the unavailability of nominative case is incorrect for the following reasons: In the MP (Chomsky, 2000, 2001) nominative case is assumed to be assigned under φ-feature agreement and CPs are typically analysed as strong phases (Chomsky, 2001, 2008); the presence of a CP prevents any constituent within the C-command domain of C from moving out of CP (a consequence of the Phase Impenetrability Condition PIC). However, the embedded verb of the Greek examples in (3) and (5) are overtly marked for agreement, indicating that they are finite and nominative case is available for their subjects. Also, the embedded clauses in the Greek examples in (10) and (11) and the Japanese example in (19b) are introduced by the complementisers *pos* and *-to* respectively indicating that the complement clauses are finite CPs. Yet, the embedded subject has undergone subject-to-object Raising out of these embedded finite clauses.

What I suggest is that Raising of the embedded subject NP/DPs in the examples in (10), (14), (19b) and (21b) is required even though the finiteness of the embedded clauses in these examples makes the embedded subject position a case position. Importantly, however, even though I claim that nominative case is assigned in these embedded clauses, I assume that it is not assigned to the subject NP/DP. Instead, I suggest that nominative case in the examples in (10), (14), (19b) and (21b) is assigned to a phonetically null *resumptive pronoun* which occupies the embedded subject positions in these Hyper-ECM constructions. I propose that it is the presence of a resumptive pronoun which "absorbs" the nominative case available in finite clauses which leaves the thematic subject NP/DP caseless. As a consequence, the embedded thematic subject NP/DP must receive case from, and eventually move into a position in, the matrix clause.

As noted above, I argue that in the examples (10), (14), (19b), and (22b), the resumptive pronoun in the embedded clauses is *pro*, i.e. a subject pronoun without phonetic content. Consequently, in languages such as Greek or Japanese, the resumptive pronoun that occupies the embedded subject position in long A-movement constructions is invisible. It is an interesting fact that Hyperraising and Hyper-ECM constructions are only attested in pro-drop languages, an observation that I label *Ura's generalization* (with reference to Ura 1994). However, as I show below languages such as Greek and Korean use either *pro* or overt resumptive pronouns[12] in long A-movement constructions. Some data presented in Soame and Perlmutter (1979) suggest that in Greek, the embedded gap in Hyperraising constructions can be optionally realised as an overt pronominal copy of the moved subject:

(35) a. Afisa ton yani [na kerdisi to pegnidi]
I-let-1SG the John-ACC SUBJ win the game
'I let John win the game.'
'I let John that he win the game.' (Literal interpretation)

b. Afisa ton yani [na kerdisi aftos o idios to pegnidi]
I-let-1SG the John-ACC SUBJ win he himself the game
'I let John himself win the game.'
'I let John that he himself win the game.' (Literal interpretation)
(Greek; Soame & Perlmutter, 1979:159 & 162)

Yoon (1996) also observes that for many speakers of Korean, the embedded gap in Hyper-ECM constructions can be optionally realised as an overt pronominal copy of the moved subject. My hypothesis that A-chains in Hyper-ECM constructions terminate in null resumptive pronouns is therefore supported by Yoon's data:

(36) a. John-un Bill-ul [*pro* maywu yenglihata-ko] sayngkakhanta
John-Top Bill-ACC PRO very clever-COMP thinks
'John thinks that Bill is very clever.'

[12] For other languages that use resumptive pronouns in long A-movement, see Deprez (1992) for Haitian Creole, Ura (1998) for Igbo, and Adesola (2005) for Yoruba.