Noun Phrase Adjunction in Iraqi Arabic

Abdulkhaliq Alazzawie[1]

Abstract

This paper deals withnoun phrases that appear in two embedded structures in Iraqi Arabic. The structures are termed Exceptional Case-marking (ECM) and Left-dislocation (LD).The analysis is stated within a non-minimalist framework, specifically within the Principles and Parameters Syntax and its predecessorthe Government and Binding framework of Chomsky (1981) and subsequent work. It will be argued that the noun phases under investigation are both adjoined to CP and to TP respectively. However, they exhibit a number of contrasting properties such as the type of complementizer, the nature of the matrix verb under which these noun phrases are embedded. It will be argued that this collection of apparently unrelated properties can in fact be derived from the interaction of various sub-theories of universal grammar, among them, government, Case theory, theta theory, and the binding theory.It will be proposed that ECM is adjunction of NP within CP, LD is adjunction of NP within TP, ECM Case assignment is from a governing matrix verbal head and LD Case assignment is from a governing functional head, a complementizer.

Keywords: Case, government, left dislocation, adjunction, visibility, full interpretation

1. The Problem

Exceptional Case[2] Marking (ECM) structures pose the following problem. They involve verbs which are subcategorized for sentential complements. The complements include an NP in a peripheral position which receives Case but no thematic role from the governing verb. Two problems arise. First, why should an NP which is not thematically marked by a verb be Case marked by that verb? If the NP is not thematically related nor marked by a verb, then it is not an argument of that verb, yet it is requiring Case marking. Second, where in the tree structure does the NP appear and what is the nature of this position? An account will be proposed in terms of adjunction where Case assignment applies into the adjoined position under government. The account is stated within the Principles and Parameters framework of Chomsky (1981) and related work.

2. Introduction

The term Exceptional Case-marking was introduced in Chomsky (1981) to refer to Case assignment by a matrix clause verb to an embedded subject. Verbs such as *believe, consider, promise and persuade* appearing in biclausal constructions exceptionally govern and Case mark the subject of the embedded clause. It was stipulated that such verbs have the exceptional lexical property of deleting S-bar (CP), thus making the complement clause transparent to government and Case assignment to itssubject noun phrase. Examples include the following:

---

[1]PhD (Simon Fraser University, Canada), Assistant Professor, Department of Foreign Languages, University of Nizwa, Oman. E-mail:abdulkhaliq@unizwa.edu.oman

[2]When the word 'Case' is capitalized, it refers to abstract syntactic relations which mark the functions of noun phrases such as subject and object.

1.   (a) John believes Mary to be intelligent.
(b) John believes her to be intelligent.

2.   (a) I consider John to be the best candidate.
     (b) I consider him to be the best candidate.

The noun phrase subjects *Mary* and *John* get their Case from the higher verb as attested by the accusative form of the pronoun *her* and *him* in the sentences in (b). Similar sentences are also found in Arabic:

3.   (a) atabir Ahmed alfaizalawal
 I consider Ahmed to be the first winner
(b) atabirahalfaizalawal
 I consider him to be the first winner

The noun phrase *Ahmed* is assigned accusative Case by the verb *atabir*"consider" as attested by the accusative form of the pronoun suffixed on the verb.

The problem that arises now is that the verb in question does not govern the NP which it Case marks. Inthe earlier versions of the Government and Binding framework, a definition of government similar to the one given below was in operation:

4.   Government:
α governs β iff
a.   α is X-zero
b.   α c-commands β
c.   α is a head [±N,±V] or T [+*fin*] or C, and
d.   every XP that dominates α also dominates β, and
e.   every XP that dominates β also dominates α.

It was suggested then that certain verbs such as *expect, want, consider, believe and show* can govern and assign Case to an NP across a maximal projection (Chomsky, 1981), hence the term Exceptional Case Marking. This exceptionality would have to be encoded in the lexical entry of this class of verbs that they govern the subject NP of another clause.

The Case requirement is dictated by the Case Filter given below:

5.   Case Filter

Every overt NP must be assigned abstract Case. (Based on Chomsky, 1981: 49)Chomsky (1981, 49) stated the Case filter as follows:

6.   *NP if NP has phonetic content and has no Case (Chomsky 1981, 49)

Overt or 'has phonetic content' means lexically filled or having phonological shape. The Case Filter is one of the components of Case theory which in turn is one of the sub-theories of universal grammar (UG) (Chomsky, 1981, 1986a, 1986b). Case assignment is generally assumed to be universal and applies under government as follows:Inflection or rather tense within the inflection node assigns nominative Case to the subject NP it governs. The verb assigns accusative Case to the NP it governs. In Arabic, the preposition and the noun assign genitive Case to the NP they govern.

Cowper (192: 99) points out that "in some languages, the particular cases assigned by V and P may vary depending on which verb or preposition is involved." No such variation is found in English. Russian has six morphological cases as displayed by the following singular and plural forms for the NP *golova* meaning *head* (DeArmond, 1992; 56):

7.   a. golov+a, golov+y = nominative case, marks subject
         b.golov+u, golov+y = accusative case, marks object
         c. golov+e, golov+am = dative case, marks indirect object and object of some   prepositions

d. golov+y, golov+Ǿ = genitive case, marks possessive NPs, objects of some transitive verbs, and objects of some prepositions.

e. golov+oj, golov+ami = instrumental case, marks NPs in specific syntactic structures, objects of some verbs and objects of some prepositions.

f. golov+e, golov+ax = prepositional case, marks objects of some prepositions.

It has also been suggested and argued for by various researchers that Case assignment applies under a condition of strict adjacency. The evidence is based on examples such as:

8.   (a) Mary speaks English fluently.
          (b) *Mary speaks fluently English.

9.   (a) Mary put the book on the table carefully.
          (b) *Mary put carefully the book on the table.

The intervening adverbs *fluently* and *carefully* violate the adjacency requirements preventing the assignment of Case to the noun phrases *English* and *the book*. The sentences in (b) are ruled out by the Case Filter.

The distribution of PPs in Arabic also yields the same results supporting the condition of adjacency on Case marking:[3]

10.   a.   Hassan [PP b-al-qarya] shafMuna
                    Hassan in the village saw Muna
         b.   Hassan safMuna [PP b- al- qarya]
         c.   *Hassan shaf [PP b-al-qarya] Muna
         d.   Hassan mat [PP b-al-qarya]
                    "Hassan died in the village"

In (9a) the PP *b-al-qarya* appears after the subject; in (9b), it appears in sentence-final position; (9c) shows that it cannot appear between the verb *shaf* and its object, and (9d) shows that it can appear after a non-Case-assigning verb.

It should be emphasized that the Case Filter applies to abstract Case (structural or canonical Case) not to morphological Case although abstract Case may have morphological realization. In Standard Arabic, a noun phrase is morphologically marked for Case to indicate its syntactic role in a sentence. For example the NP *alrajul* meaning *man* has the following forms:

11.   a.   alrajulu: nominative used for the subject
                    Jaaalrajulu "the man came"
         b.   alrajula: accusative used for the object
                    Shahadtualrajula "I saw the man"
         c.   alrajuli: oblique or genitive used for object of a preposition or when in construction with another nounslamatualaalrajuli "I said hello to the man" and sayaratualrajuli "the man's car"

The NP meaning *the man* consists of a stem and a visible Case marking in the form of suffixes.

ECM data are presented below.

3. Exceptional Case Marking Data

Iraqi Arabic allows ECM to a wide range of non-subject NPs. (11a) below is a regular declarative clause; (11b-e) illustrates ECMing of subjects, objects, and possessors. Where the ECM'd NP in the data in (11) is an object or a possessor, it is coindexed with a phonologically null pronoun, which is itself coindexed with a clitic. However; when a subject receives ECMing as in (11b), no clitic appears. The complementizes*an* is in parentheses to indicate that the sentences are acceptable with or without the complementizes:

         12.   a.   a- tmanna (an) yu-drusAli b- UBC [4]

---

[3]Arabic dialects have no overt inflectional ending for case.

[4]I am assuming that IA is an SVO language with a cofigurational structure. A rule of V(erb) fronting applies, moving the consonantal verbal root V to vocalic tense T in conformity with the Head Movement Constraint (HMC) which dictates that a head must move to the next higher head position. HMC was originally proposed by Travis (1984: 131, available at: http://www.glottopedia.org/index.php/Head_movement_constraint) as follows:

        1sg hope   that 3sg study   Ali in UBC
        "I hope that Ali studies at UBC"

b.   a- tmanna Ali (an) yu-drusb- UBC
        1sg hope   Ali that 3sg study   in UBC
        "I hope, concerning Ali that he studies at UBC"

c.   a-rid Ali   (an) t-qabl-a   Muna   B-UBC
        1sg want Ali   that 3sgf meet ob cl[5]Muna in UBC
        "I want, concerning   Ali that Muna meets him at UBC"

d.   a- rjuAli (an) ti-tamd- un   al- eh
        1sg request   Ali that 2mpl depend- 2mpl on ob cl
        "I request, concerning Ali that you depend on him"

e.   a- hib Ali (an) y–safirab- uh
        1sg like Ali that 3sgm travel father
        "I like, concerning Ali that his father travels"

All of the above examples are biclausal. The matrix verbs are transitive and thus are Case assigners. They subcategorize complements introduced by the subjunctive complementizer*an*. Other verbs of a similar nature include: *tilab* "to ask" *ntidar* "to wait for" *umar* "to command" *qarrar* "to decide" *nisa*" to forget" *stahaqq* "to deserve" *xtar* "to choose" *simah* "to allow" All these verbs are also Case assigners as they can take an NP complement.
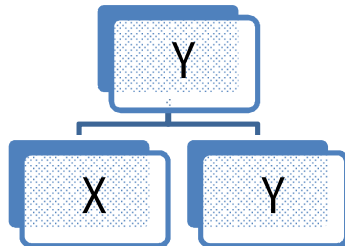
4.1. Adjunction

It is necessary to introduce a definition of adjunction first. A formal definition of adjunction is given in DeArmond (2006: 3) as follows:

13.   X is adjoined to Y if X is not an argument of Y, and if X is dominated by some member of the projection of Y.

In an adjunction configuration, when a node X is adjoined to a node Y, a copy of Y is created such that Y directly dominates X and Y. This is illustrated in the following structure:

14.

In the above structure, the node Y immediately dominates the same node Y plus the node X. The node X is adjoined to Y and thus a sister to it. X is termed an adjunct and Y is the host.

4.2. ECM is NP Adjunction to CP

Consider now the adjunction site the ECM'd NP. Chomsky (1986b), proposed the following constraint:

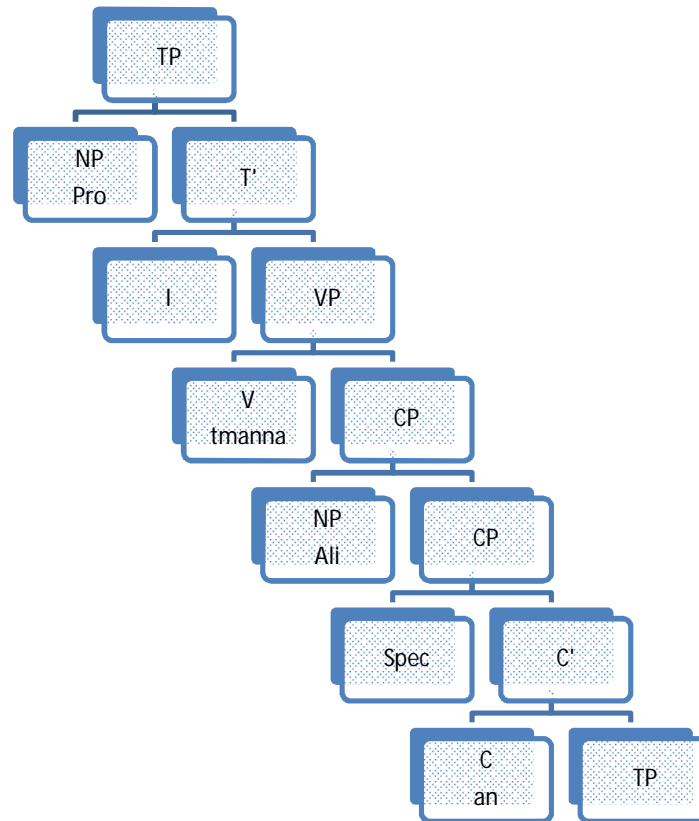15.   The specifierof CP is reserved for Wh-operators.

Assuming this constraint, the site of the ECM'd NP cannot be the specifier position of CP since the NP is not a Wh-operator. We assume the structure-preserving constraint as in Emonds (1985) according to which a maximal projection cannot be in COMP. Since the ECM'd NP is a maximal projection and since COMP is the head of CP the NP in question cannot be in COMP. We propose that the ECM'd NP is base-generated in a position adjoined to CP.

An X^0 may only move into the $Y0$ which properly governs it
[5]*Ob cl* is an abbreviation for object clitic.

By the definition of adjunction, this position is dominated by CP and is a sister to CP as shown below which is the D-structure of the sentence in (12b):

16.

```
TP
├── NP
│   Pro
└── T'
    ├── I
    └── VP
        ├── V
        │   tmanna
        └── CP
            ├── NP
            │   Ali
            └── CP
                ├── Spec
                └── C'
                    ├── C
                    │   an
                    └── TP
```

4.3. Government and Case-marking of NP

Now let us consider government and Case-marking into the NP under investigation. The NP *Ali* is neither a sister to nor an argument of that verb. But it is Case-marked by the matrix verb *a-rid*, which governs into the CP adjoined position. Assuming the definition of government of (Chomsky 1986b), a governor is able to govern into the specifier of its governed category:

A governs B if A-commands B and there is no G, G a barrier for B, such that G excludes A.[6] The important aspect of the above definition of government in this paper is that it allows a governor to govern into the specifierposition of its complement. This is because the definition of government is relational: a category A is a barrier for B for certain choices of B but not for others. A verb for example can always govern the specifier position of a complement CP which is a barrier by inheritance for something within TP, but not for something in the pre-TP position. It should also be noted that the adjoined category dominating the same category does not constitute an additional category. This means that both CP nodes form level 1 maximal projections of the functional zero level head which is COMP:

---

[6]There are two ways in which a category can be a barrier. First, a category can become a barrier by inheritance when it immediately dominates a blocking category. Second, blocking categories except for TP (IP and S in earlier versions) are themselves barriers.

Chomsky's aim in formulating the definition as such is to unify the theory of government and the theory of bounding, the latter being a theory of locality constraints on movement. This is accomplished by appealing to the common notion of barrier which is a syntactic boundary blocking application of certain processes. The presence of a single barrier blocks government of B by A; the presence of two or more barriers between A and B blocks movement from one of these positions to the other.

17.
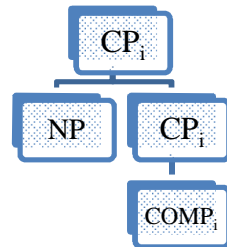
All levels of the projection in this adjunction configuration share the same index. Since Case is assigned under government, a verb taking a CP complement is able to assign Case to the CP adjoined position containing the NP *Ali*. Notice that the verb in question governs and assigns its Case to an NP in a position adjoined to CP.

It should be recalled that, by earlier formulations of government, a verb could not govern across a maximal projection and therefore Case could not be assigned. The new formulation of government resolves this problem. In addition to its role in Case assignment, the refined structural relation of government plays a major role in the theory as a whole. Thematic roles are also assigned under government in that the predicate assigning the thematic role must also govern its argument. It is also involved in the Empty Category Principle (ECP)constraining the movement of lexical and functional heads of phrases.

This section proposed that an ECM'd NP occurs in a position adjoined to CP where it is Case marked by the matrix verb under the revised definition of government within the Barrier framework. The barrier perspective has the effect of making Exceptional Case Marking unexceptional as the exceptionality is systematically accounted for.

Now, we turn to the second structure, Left Dislocation.

5. Left-dislocation

5.1. The Data

Below are examples showing that the LD'd NP iscoindexed with an embedded Pro; Arabic being a pro drop language allows pro to occur in various thematic positions: subjects (a), objects of verbs (b), oblique objects (c), and possessors (d):

18. a. a- ataqid (inna) Ali yu-drus   b-UBC
     1sg believe that   Ali 3sgm study in UBC
     "I believe that, as for Ali he studies at UBC

     b. a-din   (inna) Ali saf-o-h   b-UBC
     1sg believe   that   Ali 3pl saw obcl in UBC
     "1sg believe that as for Ali they saw him at UBC"

     c. a-aruf (inna) Ali al-mudirmitamidal-eh
     1sg know that   Ali the manager depend 3sgm on ob cl
     "I know that as for Ali the manager is depending on him"

     d. sima-it (inna) Ali umn-a tu-drus   b-UBC
     heard 1sg that   Ali mother cl 3sgf study in UBC
     "I heard that, as for Ali his mother studies at UBC"

When the LD'd NP is a subject, it is always coindexed with Pro, which in turn coindexed with AGR(eement). When the LD'd NP is a non-subject, it is coindexed with Pro which is itself coindexed with a clitic as shown in (18):

19.   [$_{TP}$NP$_i$[$_{TP}$CL$_i$- pro$_i$]]

A partial list of verbs which subcategorized for clausal complements, take the indicative Case assigning complementizer*an* and allow left-dislocated NPs include *dira* "to know" *tibayyan* "to appear" *tuwahham*"to be mistaken" *gal* "to say" and*sima* "to hear".

We analyze LD as the base-generation of an NP in a position adjoined to TP.

5.2. Left-dislocation is adjunction to TP

Consider, now, the site of base-generation of the LD′d NP. The base-generation analysis will be argued for later. We suggest here that it is adjoined to TP. Of interest is the fact that the LD′d NP always appears to the right of the complementizer*inna*, as shown by the examples in (19). All the examples in (17) above are rendered ungrammatical if the LD′d NP is placed to the left of *inna*:

20.   *a-ataqid   Ali innayu-drus b-UBC
        1sg believe Ali that 3sgm study in UBC
        "I believe Ali, that he studies at UBC"

This is in contrast to ECM, where we saw that the ECM′d NP always appears to the left of the complementizer*an*. The complementizer, the element *inna* heads CP. Suppose that LD′d NPs are base-generated in a position adjoined to TP as in (21)[7]

21.
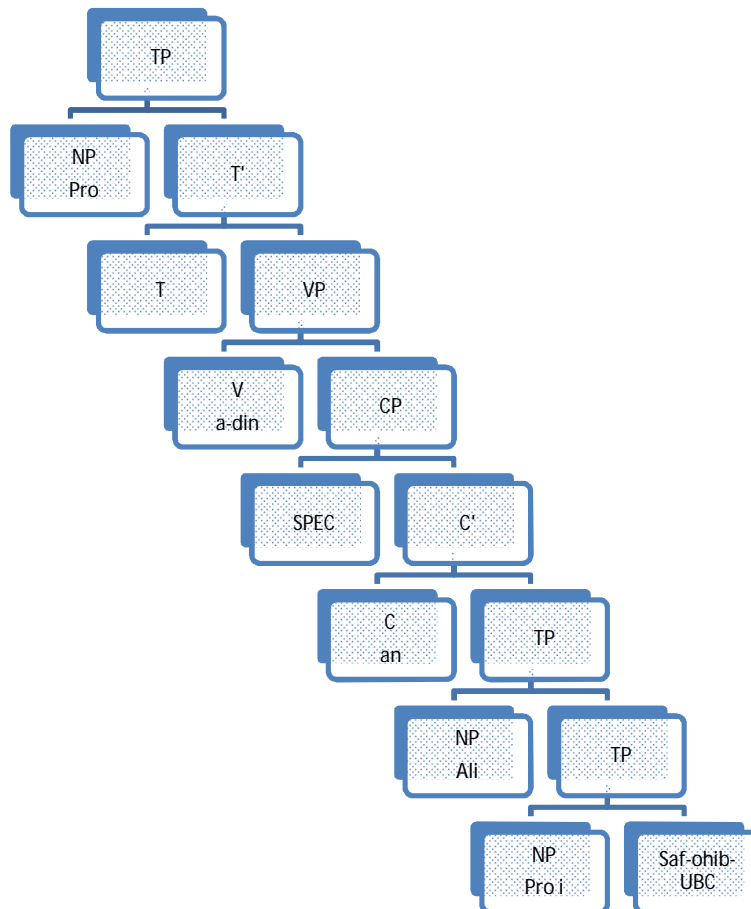
It will be argued that the position adjoined to TP is a position to which *inna* assigns structural Case.

This Section proposed that a LD′d NP is base-generated in a position adjoined to TP, where it is governed and assigned Case by COMP.

---

[7]A similar phenomenon exists in Niuean where ECM occurs only with subjunctive clausal complements with a *ka*complementizer and LD occurs in tensed clauses embedded under verbs of cognition and speaking (Massam, 1985).

6. Differences between ECM and LD

There are a number of differences between the two structures. For example, an ECM′d NP appears to the left of the element *an*[8]. The clausal complement containing *an* istenselesssubjunctive. On the other hand, the LD′dNP appears to the right of the complementizer*inna* introducing an indicative clausal complement. Another difference is while an ECM′d NP can be embedded only under Case-assigning verbs, aLD′dNP can be embedded under both Case assigning and non-Case assigning verbs. The two constructions differ also in terms of the behaviour of pronominals and variables (traces) as discussed below.

6.1. The Behavior of Pronominals

ECM also differs from LD in that when a pronoun is ECM′d, i.e. occurs in a position adjoined to CP, the pronoun must be disjoint in reference with the matrix subject, but when the pronoun is LD′d, i.e. occurs in a position adjoined to TP, it may or may not be disjoint in reference from the matrix subject. (22) illustrates the ECM construction and (23) illustrates the LD construction:

22. Ali $_{j/*I}$ y-rid-a[$_{CP}$ pro$_i$[$_{CP}$(an)[$_{TP}$t-hib-a$_i$pro$_i$al-mara]]]
 Ali 3sgm want ob cl that 3sgf like ob cl the woman
 "Ali wants of him that the woman would like him"

23. Ali $_{j/I}$ y-itaqid [$_{CP}$(inna) [$_{TP}$huwwa$_i$[$_{TP}$ al-mara t-hibb-a$_i$pro$_i$]]]
 Ali 3sgm believe that he the woman 3sgf like ob cl
 "Ali believes that, as for him, the woman likes him"

6.2. The Use of Traces and Clitics

The difference between ECM and LD with respect to the use of traces and clitics is that ECM has the option of using either a clitic or a trace whereas LD has only one option, namely the use of clitics. ECM and LD with clitics are given above in (22) and (23) respectively. The following pair illustrates the two ways of effecting ECM in IA:

(24) a.a-rid[$_{CP}$al-walad$_i$[$_{CP}$[$_C$(an) [$_{TP}$t-hib-a$_i$ al-mara]]]]
 1sg want the boy that 3sgf like obcl the woman
 "I want of the boy that the woman would like him"

b. a-rid [$_{CP}$walad$_i$ [$_{CP}$O$_i$[$_C$(an)[$_{TP}$t–hibt$_i$ al-mara]]]]
 "I want of a boy that the woman would like"

In (24) the object NPs *al-walad* have been ECM′d by the verb *a-rid* which governs them. However, (24a) has a clitic in the source clause condexed with the NP *al-walad*. (24b) has a trace *t*coindexed with an empty category operator *O.* which is condexed with the NP *walad*. It will be argued later that the ECM′d NP in both cases is base–generated and that *t* in (24b) is the trace of an empty operator *O*, which has been moved to [SPEC, CP] by move-α.

There is also a difference in definiteness between the ECM′d NPs in (24). In (24a), the NP must be definite whereas in (24b), it must be indefinite as shown by the ungrammatically of the sentences in (25). (25a) is a version of (24a) with an indefinite NP and (25b) is a version of (24b) with a definite NP:

(25) a.*a-rid [$_{CP}$walad$_i$[$_{CP}$[$_C$(an) [$_{TP}$t-hib-a$_i$ al-mara]]]]
 1sg want boy that 3sgf likeob cl the woman
 "I want of a boy that the woman would like him"

b.*a-rid [$_{CP}$al-walad$_i$[$_{CP}$O$_i$[$_C$(an) [$_{TP}$t-hibt$_i$ al-mara]]]]
 "I want of the boy that the woman would like"

(25a) is ungrammatical since the ECM′d NP is indefinite and is coindexed with a clitic. (25b) is also ungrammatical since the ECM′d NP is definite and is coindexed with a trace. The definiteness seems to be related to the presence of a clitic or a lexical NP.

---

[8]*an* can be analysed as non-tense infinitive marker akin to the English infinitival *to,* or it is itself a spell out of non-tense.

This is reminiscent of the definite requirements observed in clitic doubling constructions (i.e. where a lexical NP in Argument position is coindexed with a clitic). The LD structure shares with the clitic doubling constructions the fact that a lexical NP is coindexed with a clitic, the difference being that the Ld'd NP is not in an A-position.

To summarize, the differences between ECM and LD: while an ECM'd NP appearsin a position adjoined to CP, a LD'd NP appears in a position adjoined to TP, the sentential complement in ECM structures is a subjective clause headed by *an* but the complement in LD is an indicative headed by *inna*, an ECM'd pronoun (a pronoun adjoined to CP) cannot be coindexed with the matrix subject but a LD'd pronoun (a pronoun adjoined to TP) can be coindexed with the matrix subject, and an ECM'd NP can be coindexed with a trace of an empty operator which has moved to its S-structure position [SPEC, CP], a LD'dNP cannot.

The question is how can these properties be accounted for?

6.3. Binding Theory

The facts of pronominals above are accounted for in terms of principle (B) of the Binding Theory(Chomsky, 1981):

26.   Binding Theory:
A. An anaphor is bound in its governing category (GC).
B. A pronominal is free in its governing category (GC).

Principle (B) correctly rules out coindexation between the ECM'd pronominal and the matrix subject, and it correctly rules in coindexation between the LD'd pronominal and the matrix subject, since the two elements do not occur in the same governing category.

The property of respecting locality constraints, such as the CNPC, and the property of not respecting these constraints is associated with a movement rule and a non-movement rule respectively. ECM with clitics and LD are generated in the base; ECM with *t* is derived by an empty operator, *O*, movement to SPEC, where *t* and *O* are coindexed with the base- generated ECM'd NP. We now argue that the LD'd NP is base–generated in the TP adjoined position and that it is not moved into it.

6.4. Left–dislocation is not Movement

LD violates the CNPC:
27.   a-ataqid (inna) al – maraHasanyu-ruf al–haqiqa Ali y-hib-ha
          1sg believe that the woman Hasan 3sgm-know the fact Ali 3sgm like –obcl
          "I believe, as for the woman, Hasan knows the fact that Ali likes her"

It is implausible to derive LD by movement. Consider the following:

28.   a-taqid [$_{CP}$[$_C$ (inna) [$_{TP}$ al-binit$_i$ [$_{TP}$Hasanyu-ruf [$_{NP}$ al-haqiqa
          1sg believe   that   the girl   Hasan 3sgm know the fact
          [$_{CP}$um-ha$_i$pro$_i$ rigs-at   wiya al-walad]]]]]
          Mother gen cl danced 3sgf with the boy
          "I believe, as for the girl, Hasan knows the fact that her mother danced with the boy"
29.   *[$_{CP}$wiyyamin [t-itaqid[$_C$(inna) [$_{TP}$al-binit [$_{TP}$Hasanyu-ruf
          With whom 2sgm believe that the woman Hasan 3sgm know
          [$_{NP}$al- haqiqa um-ha   rigs-at   t]]]]]
          The fact   mother gen cl danced 3sgf"
          With whom do you believe that, as for the girl, Hasan knows the fact that her mother danced?"

In (28), the LD'd NP *al-binit* is coindexed with the phonologically null *pro*, in the embedded clause across a complex NP. The sentence will not be predicted to be grammatical, if one assumes that LD is derived by movement since as demonstrated by the ungrammatically of (29), Arabic is subject to subjacency[9] In addition NPs can be left-dislocated without binding any argument position; rather a lexical NP appears instead of an empty category:

---

[9]Subjacency holds as a condition on the application of movement rules: if (Ali, Ali+1) is a link of a chain, then Ai+1 is subjacent to A.B is n-subjacent to A iff there are fewer than n+1 barriers for B that exclude A. Chomsky (1986 b:30)

30.   a-taqid (inna) al-iraqkulhuqul an–nafuttu-shtugul
        1sg believe that the Iraq all fields the oil 3Pl operate
        "I believe, as for Iraq all the oil fields are operative"

Thus, there is evidence that LD is not an instance of move-α. Rather the LD'd NP is base-generated in the TP adjoined position. This raises the question of why LD should not be derived through movement. Why is the following sentence ungrammatical?:

31.   *a-rif   (inna) al-walad$_i$ al–mara   t-hibt$_i$
        1sgmknow that the boy the woman 3sgf like

Case theory accounts for the ungrammaticality of (31). The NP *al-walad* is assigned Case in its original position as the complement of the verb *t-hib*. It is assigned another Case by virtue of the fact that it is governed by the Case assigning complementizer*inna*. In other words, the same NP has received two Cases from two case assigners giving rise to Case conflict; thus (31) is ruled out.[10] In what follows, we argue against a Raising to Object (RTO) analysis, and in favour of our ECM analysis of the IA data.

7. Against RTO: ECM and Move–α

The main objection to the RTO analysis comes from the projection principle, which requires that all complement argument positions be projected from the lexicon and be represented uniformaly at each syntactic level (D-Structure, S-structure,LF). Some researchers (Carden, Gorden&Munro, 1982) have argued that a RTO analysis should be maintained to account for other languages such as Fijian.[11]

We now argue that the ECM'd NP is base-generated in the specifierpostion of CP and that it is not moved to it. Therefore, it cannot be accounted for by RTO. IA exhibits two ways of effecting ECM: one employs the clitic and resumptive pronoun strategy and the order does not as shown above in (24a) and(24b) respectively. The sentences are repeated here for convenience:

32.   a. a-rid [$_{CP}$al-walad[$_{CP}$[$_C$(an) [$_{TP}$ t-hib-a al–mara]]]]
        1sg want   the boy   that 3sgf like ob cl the woman
        "I want of the boy that the woman would like him"
        b. a-rid [$_{CP}$walad$_i$ [$_{CP}$O$_i$[$_C$(an) t-hibt$_i$al –mara]]]
        " I want of a boy that the woman would like"

In (32), the object NPs *alwalad* and *walad* have been ECM'd by the verb *a-rid* which governs them. (32a) has a clitic in the source clause. (32b) has a trace *t* instead of a clitic. Our thesis is that the ECM'd NP in both instances is base-generated and that *t* in (32b) is the trace of an empty operator *O*, which has been moved to [SPEC, C]. The empty operator movement analysis proposed here is parallel to that of Chomsky (1986a) for relative clauses. The S-structure of (32b) is as follows:

33.   [$_{TP}$ pro [$_{VP}$rid[$_{CP}$walad$_i$[$_{CP}$O$_i$ [$_C$(an[$_{TP}$almara [$_{VP}$thibt$_i$]]]]]]

In (32), *O* is an empty operator and *t* is the variable that it binds. Notice that although the variable is bound by *O* it does not have its range specified by *O* since *O*is empty. The range of the variable here is determined by the NP *walad*. We assume the principle of strong binding of Chomsky (1986a:85) as distinct from ordinary binding. It is stated below:

34.   A variable must be strongly bound.

Strong binding is the requirement that a variable's range be either specified by its value or be assigned by an antecedent that binds it. We assume that the lower CP in (33) is predicated of the NP *walad*, so that the index shared by *O* and *t* is identified with that of *walad*. It follows, then, that in the chain*waladO t. O* is coindexed with *walad*.

---

[10]When *inna* is absent we assume that it has been deleted at PF after Case is being assigned to the LD'd at S-structure.
[11]Massam (1985), in a cross- linguistic analysis of ECM data including Fijian and Niuean, argues that RTO cannot be maintained even independently of the projection principle.

We now give evidence that ECM with clitics involves no movement, whereas ECM with *t* involves movement of *O* to SPEC. The evidence comes from the fact that only the former type involves a coreference linkage inside a complex NP.[12] In (35a), the ECM'd NP *al–walad* is linked to a position inside a relative clause. This is impossible in the latter case as demonstrated in (b); Wh-movement is blocked as shown in (c):

(35)   a.a–rid [$_{CP}$al-walad [$_{CP}$[$_C$(an) ti-btasim [$_{NP}$al- mara [$_{CP}$alli   t-hib-a]]]]]
        1sg want the boy   that 3sgf smile   the woman who 3sgf like obcl
        "I want of the boy that the woman who likes him would smile"
        b.*a-rid [$_{CP}$walad$_i$ [$_{CP}$[$_C$(an) ti–btasim [$_{NP}$ al–mara [$_{CP}$alli t-hibt$_i$]]]]
        "I want of a boy that the woman who likes would smile"
        c.*min t-rid (an) ti–btasim al–maraalli t-hib t
        who 2sgm that 3sgf smile the woman who 3sgf like

In addition, ECM'd NPs with clitics can be ECM'd arbitrarily far from their source clause. As seen in (36) the relation between the ECM'd NP *alwalad* and its pronoun can hold across more than one complex NP:

(36)   a-rid [$_{CP}$ar-rajul [$_{CP}$[$_C$(an)[$_{TP}$ti-btasim[$_{NP}$al-mara[$_{CP}$alli
        1sg want the man   that 3sgf smile the woman who
        tu-ruf[$_{NP}$ al-binit [$_{CP}$alli[$_{TP}$ t-hib-a]]]]]]
        3sgf knows the girl who 3sgf like ob cl"
        I want, as for the man that the woman who knows the girl who likes him, would smile"

Another argument for the base-generation analysis comes from cases where the ECM'd NP does not bind any argument position whether a gap or a pronoun. In (37) below there is neither a clitic nor a trace, but a full NP in the embedded clause:

(37)   a-rid al-baysikil (an) it-badl-un-at-tayarat
        1sg want the bike that 3sgf replace the tires
        "I want of the bike that you replace the tires"

Examples like (37) show that movement cannot be involved because there is no site from which an NP has been moved. The contrast between (35a) and (35b) shows that ECM with clitics are generated in the base, whereas ECM with no clitics are derived by movement since, unlike the derivation of the former, that of the latter, under further embedding is subject to the CNPC. We suggested that this movement moves an empty operator to [SPEC,CP] which is coindexed with a trace and a base-generated NP. RTO is only a candidate in cases like (35b). However, since (35b) can also be accounted for by base-generation analysis, a RTO rule becomes redundant.

We argued that IA has two processes of effecting ECM structures. One utilizesclitics, which allows for establishing a long-distance relation not subject to constraints on movement. The other process involves movement of an empty operator to [SPEC, CP] leaving a coindexed trace.

8. ECM and LD Revisited

As an ECM'd NP must have Case assigned to it by the governing verb, a LD'd NP is also assigned by the complementizer*inna*. Notice that the LD'd NP can appear only immediately after the complementizer*inna*:

(38)   a-ataqid (inna) *[hwaya] Ali umm-a   t-hibvacouver
        1sg believe that very much Ali mother-his 3sgf-like vacouver
        "I believe, as for Ali his mother likes vacouver very much"

In (38), the quantifier*hwaya* intervenes between the LD'd NP *Ali* and the complementizer so that the NP is not adjacent to the Case-assigner resulting in ungrammaticality. The sentence is grammatical without the quantifier since the NP is adjacent to its Case-assigner. This can be explained by a view of Case-marking which requires government and adjacency. The LD'd NP must be adjacent to the complementizer for Case reasons.

---

[12]The complex NP constraint (CNPC) of Ross (1967) is subsumed under Subjacency.

Case adjacency holds in IA as the distribution of adverbs in (39) reveal:

(39)   a. Hassan y-hibMuna
           Hassan 3sgm –like Muna
            "Hassan likes Muna"
         b. Hassan y-hibMunahwaya
                              a lot
     c. Hassan y-hibMunahwaya
     d.*Hassan y-hibihwayaMuna
     e. Hassan y-hcihwaya
       "Hassan speaks a lot"

hwaya can be ordered after the subject (39b); *hwaya*can appear in sentence-final position(39c); *hwaya*canbebe positioned between the verb and its object (39d), and *hwaya*can also appear after a non-Case assigning verb(39d). The NP *Muna* in (39d) is not adjacent to its Case assigner, the verb *y-hib*, since *hwaya*intervenes between the two elements. Therefore, the sentence is ungrammatical because the NP *Muna* does not get Case.

Another piece of evidence that *inna* assigns Case to the LD'd NP is provided by the fact that LD cannot be derived via move-α. LD is grammatical only when the LD'd is coindexed with a clitic but not with a trace: In (40a) the LD'd NP *al-walad* is in the embedded clause and in (40b) it is in the main clause. The version with a trace instead of a clitic is ungrammatical:

(40)   a.a-rif   (inna) al–walad al–mara   t-hib-a/*t
         1sg believe that the boy the woman 3sgf like obcl
         "I believe as for the boy the woman likes him "
         b.   al–walad al–mara   t-hib-a/*t
         the–boy the woman 3sgf like obcl

This is also true in standard Arabic as demonstrated by the following examples which are minimally different from (40) by word order in the embedded clause and overt morphological marking for Case and indicative mood:

(41)   a.   a-rif-u (inna) al –walad-a tu-hib-u-hu/*t al –marat-u
         b.   (inna) al-walad-a tu-hib-u-hu/*t al-marat-u

Unlike standard Arabic, IA does not exhibit morphological Case; however since we are concerned with the assignment of abstract Case and not morphological Case, we assume that *inna* also assigns accusative Case in IA. It is generally assumed that the Case Filter prohibits the assignment of two distinct Cases to a single NP. This phenomenon is known as Case conflict. Case conflict should in fact be interpreted as a unique relation between Case assigners and Case bearers.   It is immaterial whether the Cases being assigned are different or identical.

This extended version of Case conflict excludes the derivation of LD by movement since the LD'd NP will receive two accusative Cases from two different sources namely the verb and the complementizer. If this explanation is correct it constitutes a solid argument for *inna* as being a Case assigning complementizer. Note that when *inna* is not overt, we are assuming that it has assigned its Case to the LD'd NP and then it deletes at PF.

ECM and LD both may involve unbounded non-subjacent relation. In (42a) below we see a regular ECM structure. In (42b) we see a non-subjacent relation between the ECM'd NP *ar-rajul* and its coreferential theta position, and in (c) we see a long distance non-subjacent relation between the ECM'd NP and its theta pronoun: all the intervening verbs are Case assigners which do not allow ECM:

(42).   a.a-ridar-rajul (an) yi-taqid (anna) as-setany-tard-a
         1sg want the man that 3sgm-believe that the devil 3sgm pursue ob cl
         "I want, as for the man that he would believe that the devil is pursuing him".

         b.a-ridar –rajul (an) t-din   al-mara (anna) as-setan y-tard-a
         1sg want the man that 3sgf believe the woman that the-devil 3sgm pursueob cl
         "I want, as for the man that the woman would think that the devil is pursuing him"

c.   a-rid ar-rajul (an) t-din al-mara (anna) Al-binit t-ihlam (an) as-setan y-tard-a
1sg want the man that 3sgf-believe the woman that the- girl 3sgs-dream that the devil 3sgm-pursue
ob cl
"I want, as for the man that the woman would think that the girl dreams that the devil is pursuing
him."

Based on an analysis of data from Fijian and Nuiean, Massam (1985) proposes that the ECM'd NP must be coindexed with a theta position for theta licensing.Besides licensing via theta coindexation with a trace or a pronominal, coindexation with a lexical NP is also possible in IA as evidenced by the data in (43):

(43)
a.   a-rid as –sayyara (an) it-badl-un at –tayarat
1sg want the car   that 2Pl replace 3Pl the tires
"I want, as for the car that you would replace the tires"

b.   a-rid as-sayyara (an) y-baddil Ali al-muharrik
1sg want the car that   3sgm-replace Ali the engine
"I want, as for the car that Ali would replace the engine"

c.   a-rju   al-bet (an) yi-bne-I-kum   Ali al-mutbax
1sg request the house that 3sgm- build to ob cl Ali the kitchen
"I request, as for the house that Ali would build the kitchen for you"

d.   al-muhafudqarrar al-madina (an) t-nadf-un kullas- sawari?
the mayor decided the city that 2Pl clean 2Pl all the streets
"The mayor decided, as for the city that you would clean all the street".

e.   a-rid bagdad (an) y-zur-un   as- suwah al- matahif
1sg want Baghdad that 3Pl visit 3Pl the tourist the museum
"I want, as for Baghdad that the tourists would visit the museums"

Similary, coindexation with a lexical NP instead of a pronoun appears to be sufficient for theta licensing as shown in (44) where a lexical NP appears in the embedded clause instead of a pronoun:

(44)   a. sima-t (inna) al-bet   Ali bani-I-kum al –mutbax
heard 1sg that the house Ali built for ob cl the kitchen
"I heard, as for the house Ali has built the kitchen for you"

b. Ali yi-taqid (inna) al-iraqkulwahidindafikra an al-hidarat al-qadima
Ali 3sgm believe that the Iraq everyone has idea about the civilizations the ancient
"Ali believes, as for Iraq everyone has an idea about the ancient civilization"

c.a-din (inna) aj-jeskulfiraq al-ihtiat it-sarah-at
1sg believe that the army all unites the reservist 3-discharged
"I believe, as for the army all the reservist unites have been discharged"

The data in (43-44) show that the ECM'd NP is not coindexed with a chain which contains a theta position since a full NP, instead of a pronoun appears in an A-position in the embedded sentence. The ECM'd NP is not in a chain which is assigned a theta role. Furthermore, the ECM'd NP does not constitute a chain which itself includes a theta position. This raises the question of how the ECM'd NP receives licensing, obviously, we cannot say that it is licensed by a chain composition (theta-indexing)

8.1. A Revised Notion of Visibility

One question is how do the ECM'd NP and the LD'd NP receive, licensing, since no theta role is assigned to them. The other question is why do the NPs under investigation require Case, since it is generally agreed in most explications of Case and chain theories that chains are formed on A-positions, and that the Case filter applies only to these chains as a requirement on the visibility of theta roles, since such chains include theta positions. For example, in the Case and chain theories of Chomsky (1981, 1986a), and Stowell (1981) chains are formed on A-positions and the Case filter applies to such chains as requirement on the visibility of the theta roles.

Chomsky(1981,1986) suggests that the Case Filter is derived from the visibility condition. The visibility condition states that an NP "can receive a theta role only if it is in a position to which Case is assigned or is linked to such a position" (1986a:94) as in the following where the non-Case marked NP man is linked to the Case marked expletive there:

(45) There is a man in the room.

An argument must have Case, otherwise it will not receive a theta role and will not be licensed. Thus, the Case Filter follows from the visibility condition.

The ECM'd NP and the LD'd NP are in a base-generated adjoined positions and they do not form A-chains with a theta position, so by the theory above, they should not need to be assigned Case but they clearly do as we argued above.

The data we have examined show that NPs which are not in A-chains are necessarily Case-marked contrary to what is predicted by the visibility condition on theta-marking. ECM'd and Ld'd NPs in IA are in A-bar adjoined positions to which no theta-role is ever assigned, nor do they in all cases bind a variable. Yet they must be assigned Case. It seems that a theta-interpreted chain is only one of the possible kinds of chains. The notion that every chain must contain exactly one theta-position needs to be revised to include the constructions discussed in this paper. We assume the principle of full interpretation (FI). FI is proposed in (Chomsky, 1986a:98) as follows:

(46) Full interpretation (FI): Every element of PF and LF must receive an appropriate interpretation.

FI requires that every element of PF and LF be interpreted and thus licensed. An element A can satisfy FI by being an argument of a head or a trace of an argument, a head of a phrase or an operator. If A is an argument, it must be assigned a theta-role, if A is a syntactic head it must project a phrase, if A is an operator, it must bind a variable. We suggest that a chain can be interpreted non-thematically by predication in the sense of "aboutness relation" with the rest of the sentence,[13] a relation in which theta-indexing is possible but not obligatory. The CP and the TP constituents are propositions about the NPs in question. The restriction imposed on the assignment of the aboutness relation is that the NPs must be assigned Case.

The cases where the EMC'd NP/LD'd NP is coindexed with a theta position are interpreted in a straightforward manner. The cases in (43-44) where no coindexation occurs are also interpretable by the "aboutness relation" with the rest of the sentence. Cases like:

(47)   a-rid Ali (an) t-hibSalimaXalid
         1sg want Ali that 3sgf like SalimaXalid
         "I want of Ali that Salima would like Xalid"

Might appear more difficult to interpret since the nature of the lexical NPs do not lend themselves so easily to this type of interpretation within the sentence context, but placed into an appropriate context, the sentence becomes perfectly acceptable.

We extend the visibility condition from a condition on theta-role assignment to a more general condition on LF interpretation. Case is a feature that makes a NP visible not only to theta-marking under the theta-criterion, but to other types of interpretation. In other words, within this proposal, the Case filter is extended from being a condition on A-chains to being a condition on both A-chains and A-bar chains. It is reinstated as a condition on all aspects of LF interpretation, theta-assignment being one such aspect. Case is seen as a condition on interpretation at LF, marking chains visible not to the theta-criterion, but to the principle of full interpretation, which can be satisfied in a limited numbers of ways. This extended Case filter is as in (48):

(48) Case Filter:

The head of an A-chain and A-bar chain (X-chain) must be Case-marked.

---

[13]On the notion of aboutness see Chomsky (1976, 1982 footnote 11). See also Reinhart (1982).

The mechanism of Case inheritance which we assume to be available for both kinds of chains will ensure that, if the tail of the chain is Case-assigned, it will transfer to the head of the chain.

The Case Filter (48) can be motivated by relating it to considerations of LF interpretation. We state the X-chain visibility condition as follows:

(49) X-chain Visibility Condition:

An X-chain must be visible. An X-chain is visible to the Principle of Full Interpretation when it is Case-assigned.[14]

There is evidence that a variable does not necessarily require a theta-role, and that Case makes it visible to the PFI, In (50) the NP *ay bisikil* "which bike" is fronted by move-alpha to the position [SPEC, CP] leaving a coindexed trace *t* in the ECM'd position which is an adjoined A-bar position:

(50) $[_{CP}$aybysikil$_i$ [t-rid-$[_{CP}$t$_i[_{C}$[an[y-badl-unat-tayarat]]]]$
       Which bike 2sgm want that 3Pl replace 3Pl the tires
       "Which bike do you want that they replace the tires?"

In (50) *t* is a variable bound by the operator *ay bysikil*. The variable *t* is in an A-position, governed and assigned Case but not a theta-role by the verb *t-rid*. This argues that the feature Case makes the variable visible, for the PFI, even though no theta-role is assigned to it.

This section proposed an alternative account of ECM and LD structures. In the proposed account the ECM'd position and the LD'd position are both considered A-bar base-generated adjoined positions interpreted by an "aboutness" relation with the rest of the sentence.

9. Conclusion

IA exhibits a productive use of A-bar sentence-internal base-generated adjunction sites. CP adjunction sites, we have argued, are the locus of NPs from which they bear no direct thematic relation, yet in which they get Case marked by a governing verb.TP adjunction sites are the regular locus of LD'd NPs from which they receive no direct theta marking, yet are governed and assigned Case by C. The properties of these structures are accounted for in terms of the interaction of Case theory, government theory, binding theory and X-bar syntax.

An extension was suggested of the visibility condition from being a condition on theta-role assignment to a broader condition on LF interpretation. The NPs in question each heads a vacuous chain, licensed by an "aboutness relation" and must be assigned Case as a consequence of the PrincTPle of Full Interpretation. We provided supporting evidence that Case can be assigned to the specifier position of CP and TP.

---

[14]There is a phonologically empty NP PRO, which is never Case-assigned; nevertheless, a chain consisting of PRO is visible. The same is true of the trace that PRO binds, as in the following example where a theta-role is assigned to the trace:
It is time [PRO$_i$ to be introduced t$_i$to the managers]
Thus, the chain headed by *PRO* must be visible to the Principle of Full Interpretation (*PRO* is an argument) even though it is Caseless, a direct counterexample to the visibility condition (49). Thus, the second part of the condition is modified to: "An X-chain is visible to the principle of full interpretation if it is Case-assigned or is headed by *PRO*". Note that the visibility condition (49) extends to *PRO* and to the chain *PRO, t* without modification if it is assumed that *PRO* has inherent Case.

References

Carden, Guy, Lynn Gordon and Pamela Munro (1982). "Raising rules and the projection principle" ms. University of British Columbia, Washington State University, University of California, Los Angeles.

Chomsky, Noam. 1976. "On Wh movement" in P. Culicover, A. Akmajian and T. Wasow, eds., *Formal syntax*, Academic Press, New York.

—. 1981.*Lectures on Government and Binding*. Foris: Dordrecht.

—.1986a.*Knowledge of Language: its Nature, Origin and Use.*Praeger: New York.

—.1986b.*Barriers*. Linguistic Inquiry Monograph 13, MIT Press: Cambridge: Massachusetts.

Cowper, Elizabeth. 1992. *A Concise Introduction to Syntactic Theory - The Government-Binding Approach*. Chicago: The University of Chicago Press.

DeArmond, Richard. 2006.*On Arguments, Adjuncts and Secondary Complements. Available at* www.sfu.ca/person/dearmond/morph/Adjuncts.doc.RetrievedApril 17, 2015.

Emonds, Joseph. 1985.*A Unified Theory of Syntactic Categories*. Foris Dordrecht.

Massam, Diane. 1985.*Case theory and the Projection PrincTPle*, doctoral dissertation, MIT, Cambridge, Massachusetts.

Postal,Paul. 1974.*On Raising: One Rule of English Grammar and its Theoretical Implication*. MIT Press: Cambridge, Massachusetts.

Reinhart, Tanya. 1982.*Pragmatics and Linguistics: An Analysis Of sentence Topics.*Indian University Linguistics Club, Bloomington, Indiana.

Ross, John. 1967.*Constraints on Variables in syntax*, doctoral dissertation, MIT, Cambridge, Massachusetts.

Travis,Lisa. 1984. *Parameters and Effects of Word Order Variation,* Diss, MIT.available at: http://www.glottopedia.org/index.php/Head_movement_constraint. Retrieved   May, 2nd 2015.