



Center for Research in Urdu Language Processing  
National University of Computer and Emerging Sciences, Lahore Pakistan

Reference No:

Revision History:

Name	Change Date	Version	Description of Changes
Kiran Khurshid	16 <sup>th</sup> September 2004	0.1	Created
Kiran Khurshid	22 <sup>nd</sup> December 2004	0.2	Introduced coordinate correlatives
Zunaira Malik	20 <sup>th</sup> May, 05	0.3	Addition in Release 5.0
Zunaira Malik	13 <sup>th</sup> June, 05	0.4	Addition of coord_conj OR rule and correlative without constraint pertaining to AND, addition of POSTNOMP
Zunaira Malik	15 <sup>th</sup> July, 05	0.5	Addition of "BUT" NPmain production with neg and addition of (neg) to "AND" production
Zunaira Malik	27 <sup>th</sup> July, 05	0.6	Change of NUM = SG,PL in NPmain BUT and AND-explanation in future work

Rule ID: EGR205

**Rule Syntax:**

NPmain -> NP [comma NP]\* coord\_conj NP (POSTNOMP).

NPmain -> correlative NP coord\_conj NP (POSTNOMP).

NPmain -> NP

NPmain -> NP [ comma NP ]\* coord\_conj (POSTNOMP).

NPmain -> correlative NP coord\_conj NP.

NPmain -> (neg) NP [comma NP]\* coord\_conj (neg) NP (POSTNOMP).

**Rule Functional Description:**

1) NPmain -> (neg: ^=!); NP: ! \$ ^; [comma;; NP: ! \$ ^;]\* coord\_conj: ^ CONJ\_FORM = !CONJ\_FORM, !CONJ\_FORM =c 'AND', ^ NUM = {SG,PL}; (neg: ^=!); NP: ! \$ ^, ^ PERS = ! PERS; (POSTNOMP: ^=!);).

2) NPmain -> correlative: ^=!; NP: ! \$ ^; coord\_conj: ^ CONJ\_FORM = !CONJ\_FORM, !CONJ\_FORM =c 'AND', ^CONJ\_FORM = ^\_ALLOWED\_CONJ, ^ NUM = PL; NP: ! \$ ^, ^ PERS = ! PERS; (POSTNOMP: ^=!);).

3) NPmain -> NP: ^=!;

4) NPmain -> NP: ! \$ ^; [ comma;; NP: ! \$ ^; ]\* coord\_conj: ^ CONJ\_FORM = !CONJ\_FORM, !CONJ\_FORM =c 'OR'; NP: ! \$ ^, ^ NUM = ! NUM, ^ PERS = ! PERS; (POSTNOMP: ^=!);).

5) NPmain -> correlative: ^=!; NP: ! \$ ^; coord\_conj: ^ CONJ\_FORM = !CONJ\_FORM, ^CONJ\_FORM = ^\_ALLOWED\_CONJ; NP: ! \$ ^, ^ NUM = ! NUM, ^ PERS = ! PERS;.

6) NPmain -> (neg: ^=!); NP: ! \$ ^; [comma;; NP: ! \$ ^;]\* coord\_conj: ^ CONJ\_FORM = !CONJ\_FORM, !CONJ\_FORM =c 'BUT', ^ NUM = {SG,PL}; (neg: ^=!); NP: ! \$ ^, ^ PERS = ! PERS; (POSTNOMP: ^=!);).



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**Frequency:** -

**Description:** This rule is used for the combination of noun phrase using the coordinate conjunctions “and” and “or” and the correlative conjunctions either...or, neither...nor and both...and.

*c-structure:* A main noun phrase can either contain only one noun phrase or more than one noun combined by coordinate conjunctions.

*f-structure:* Production 1 represents the combination of noun phrases with “and”. Production 2 combines noun phrases with both...and. Production 3 shows the combination of noun phrases with “or” and production 4 shows combines noun phrases using either...or or neither...nor. A single noun phrase is handled by Production 5. The coordinate conjunction is identified by the value of CONJ\_FORM. Production 7 relates to the POSTNOMP with “in the room” as an ADJUNCT for “girl and boy”.

**Example:**

- 1) Girl and boy are going to school. (Production 1)
- 2) Both the girl and boy are working. (Production 2)
- 3) Ahmad or Aslam is doing the work. (Production 3)
- 4) Either Ahmad or Aslam is doing the work. (Production 4)
- 5) Neither Ahmad nor Aslam is doing the work. (Production 4)
- 6) A good girl is working. (Production 5)
- 7) Not cats but dogs are good (Production 6)
- 8) I have a cat but not a dog (Production 6)
- 9) She is kiran and not Shanza (Production 1)
- 10) She is not a doctor and not a patient. (Production 1)

**Rule Status:** Active

**Reference:**

- (1) Miriam Butt, Tracy Holloway King, “A Grammar Writer’s Cookbook”
- (2) Quirk et al, “A Comprehensive Grammar of the English Language”

**Related Rules:** EGR118

**Related POS:** EPOS017, EPOS122

**Replaces:** - EGR111

**Reason:** -Addition in Release 5.0

**Replaced by:** -



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### Analysis:

*Analysis 1:* The rules for subject phrases or clauses which are coordinated with (either....) “or” may be understood by the following examples:

- Example:* i) Either the Mayor or her deputy (is/\*are) bound to come.  
ii) What I say or what I think (is/\*are) no business of yours.  
iii) Either the strikers or the bosses (\*has/have) misunderstood the claim.  
iv) Either your brakes or your eyesight (is/?are) at fault.  
v) Either your eyesight or your brakes (are/?is) at fault [2, p 762].

Here “?” means that native speakers are not sure about these constructions.

The pairs *both...and*, *either...or*, and *neither...nor* are termed CORRELATIVES, composed of an endorsing item and a coordinator. [2, p 936] (See POS document for "correlative" for more details)

*Analysis 2:* The c- and f-structures for NP coordination remain basically identical to those of same category coordination. The simplified rule for NP coordination is shown below. As with basic same category coordination, additions must be made for paired conjuncts and for more than two conjuncts [1, p 144].

$$\text{NPCOORD (CAT)} = \text{CAT CONJnp CAT}$$

NP coordination often involves number, person and gender mismatches between the individual conjuncts and the entire coordinated NP [p 143, 1]. The general rule in English, French and German for determining the number, gender and person of a coordinated NP is as follows:

- If any conjunct is plural, the entire NP is plural
- If any conjunct is masculine, the entire NP is masculine
- If any conjunct is first person, the entire NP is first person
- If there is no first person conjunct and any conjunct is second person, the entire NP is second person; otherwise the NP is third person [p 145, 1]

**Result:** We decided on analysis 2 for the formation of c- and f- structures. However, the agreement after the NP coordination was taken from analysis 1.

### Future Work:

1. We need to cater “she is Kiran not Shanza” where not is a coordinate conjunction.
2. change of NUM to {SG, PL} in coord conj productions BUT and AND. There is a difficult situation which arises when negative marker (not) is used with these conjunctions in NPmain.

#### Situation 1: agreement with non-neg noun

Not cats but a dog is good.  
Not a cat but dogs are good.  
Dogs but not a cat are good.  
A cat but not dogs is good.

If either one of the value of NUM is kept instead of both for e.g. PL is kept, then *She is Shanza and not Kiran* does not parse but, *They are Shanza and Kiran* (and all its neg versions) parse.

We need to see in detail what we have to do to model this situation. Commas create even more problems.

A cat and a dog is good – **agreement with the noun that occurs first**  
Cats but not a dog are good.  
A cat but not a dog is good.



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*But with commas*

A cat, a dog and a lion are good. **-Num is plural due to multiple nouns before comma**

A cat, a dog and lions are good.