



## Reference No:

## Revision History:

Name	Change Date	Version	Description of Changes
Shanza Nayyer	2 <sup>nd</sup> Nov, 04	0.1	Created
Kiran Khurshid	16 <sup>th</sup> Feb, 05	0.2	Added VPpass for participles
Zunaira Malik	20 <sup>th</sup> May, 05	0.3	New Release. Removal of VPact

## Rule ID: EGR211

**Rule Syntax:** Following is the constituent description of the rule.

VPpass -> HelpVP (ADVP) v (ADVP)

VPpass -> (ADVP) v (ADVP)

**Rule Functional Description:** Following are the functional specifications of the rule.

VPpass -> HelpVP: ^=!, !\_MAUX VOICE =c PASSIVE, ^TNS\_ASP = !\_MAUX TNS\_ASP;  
(ADVP:! \$ ^ADJUNCT ADV,!ADV\_TYPE =c V\_MOD ;) v:^ =!, !VOICE =c PASSIVE; (ADVP:! \$  
^ADJUNCT ADV,!ADV\_TYPE =c V\_MOD ;)

VPpass -> (ADVP:! \$ ^ADJUNCT ADV,!ADV\_TYPE =c V\_MOD ;) v:^ =!, !VOICE =c PASSIVE, ^\_FLAG =  
PARTICIPLE; (ADVP:! \$ ^ADJUNCT ADV,!ADV\_TYPE =c V\_MOD;).

## Frequency: -

**Description:** This rule shows the VP active and passive form production of English Grammar.

*c-structure:* VP in active can be intransitive, transitive or ditransitive.

VP in passive form is always transitive, hence is not further sub categorized into intransitive and ditransitive forms. VP passive production can have a verb (v) which is preceded by one or many helping verbs (modal and auxiliaries). It is to be noted that the VP in passive form is always preceded by a Helping Verb phrase. However, if it's not, it is supposed to be a passive participle.

*f-structure:* In VPact production, the whole structure of its daughter nodes is passed to the mother node.

In VPpass production, everything in helping verb and main verb is passed to the mother node. A passive voice constraint is added to block the active form of verb to pass through this production. ADVP can optionally modify the verb.

If the passive verb occurs alone it is a passive participle verb phrase, hence a flag named \_FLAG is set to the value PARTICIPLE which is later checked in the rule of VPparticiple, in order to parse the sentence. [3, Pg. 153]

## Examples:

- 1) He has been examined carefully. (PASSIVE)
- 2) The letter written by me is placed on the table. (passive participle)



**Rule Status:** Active

**Reference:**

[1] James Allen, "Natural Language Understanding"

[2] Miriam Butt, Tracy Holloway King, "A Grammar Writer's Cookbook"

[3] Quirk et al, "A Comprehensive Grammar of the English Language"

**Related Rules:** EGR214, EGR215

**Related POS:** EPOS106

**Replaces:** EGR002

**Reason:** some constraints added.

**Replaced by:** -

**Reason:** -

**Analysis:** Following is the in-depth analysis of the rule.

*Analysis 1:*

In the case of English and French, all transitive verbs which have an OBJ as the second argument may be passivized. Here (and generally passivization involved demotion of a SUBJ to either an unexpressed argument or an ADJUNCT or OBL. Within our grammars, passivization is accomplished by means of a lexical rule as:

PASS (SCHEMATA) = SCHEMATA

(^OBJ) -> (^SUBJ)

(^SUBJ) -> (NULL)

(^PASSIVE) =c +

*Example:*

[Doctor]<sub>SUBJ</sub> is examining [her]<sub>OBJ</sub>.

[She]<sub>SUBJ</sub> is being examined.

The lexical rule is called by verbs that can passivize, e.g., by transitive verbs. The lexical rule has the OBJ become the SUBJ and the old SUBJ become NULL. In addition, it requires passive form of the verb to be used. [2, p. 58]

*Analysis 2:*

In the passive form the noun phrase that would easily be in the object position is used in the subject position. Tense is still carried by the initial verb in the verb group. Also, even though the first noun phrase semantically seems to be the object of the verb in passive sentence, it is syntactically the subject. This can be seen by checking the pronoun forms. For example, *I was hit* is correct, not *\*Me was hit*. Furthermore, the tense and number agreement is between the verb and the syntactic subject. Thus you say *I was hit by them*, not *\*I were hit by them*. [1, p. 30]

**Result:** Analysis 1 and 2 approach is used in conjunction. Currently the parser does not provide the functionality to handle passive schemata through lexical rules.

**Future Work:** Further functional annotations might be added in the later stage. The rule might get revised to be modeled through analysis 1.

"Doctor having examined a patient, gave the medicine" type constructions are called active participles and will be modeled later on.

[3, Pg.153]

"Patient being examined by the doctor, died immediately" are called passive participles and will also be modeled later on. [3, Pg.153]