Reference No:

Revision History:

Name	Change Date	Version	Description of Changes
Shanza Nayyer	22nd Oct, 04	0.1	Created
Shanza Nayyer	26th Oct, 04	1.0	Rule finalized after discussion with SA
Shanza Nayyer	2nd Nov, 04	1.1	Added a new rule to relative clause
Zunaira Malik	22nd June, 05	1.2	change of relative pronoun occurrence to optional in production 2 and change of ADV_TYPE in production 3 to SEM_TYPE

Rule ID: EGR233

Rule Syntax: Following is the constituent description of the rule.
Rel_Cl -> pro VPmain
Rel_Cl -> (pro) Sdecl
Rel_Cl -> adv Sdecl
Rel_Cl -> PP Sdecl

Rule Functional Description: Following are the functional specifications of the rule.
1) Rel_Cl -> pro:^SUBJ = !,! PRONTYPE =c RELATIVE,!CASE =c NOM; VPmain:^=!;.

2) Rel_Cl -> (pro:^OBJ = !, ! PRONTYPE =c RELATIVE,!CASE =c ACC;) Sdecl:^=!;.

3) Rel_Cl -> adv:^ADJUNCT ADV = !,!SEM_TYPE =c INTERROG; Sdecl:^=!;.

4) Rel_Cl -> [PPn:^OBL = !,!OBJ PRONTYPE =c RELATIVE,!OBJ CASE =c ACC;|PPn_obj:^OBJ = !;] Sdecl:^=!;.

Frequency: -

Description: This rule shows the relative clause that modifies NP.

c-structure: Relative Clause is a clause having a complete sentence modifying NP. The sentence can be transitive or instransitive. Relative clause is introduced by relative pronoun (optional in some cases).

f-structure: If a relative pronoun is followed by a VP, relative pronoun itself is acting as the SUBJ of the clause as given in production 1. If relative pronoun is followed by an S having a mono transitive verb, the relative pronoun acts as the OBJ as given in production 2. The relative pronoun in this case is optional as 'whom' , 'that' and 'which' can be omitted. If an adverb introduced the relative clause, it acts as an adjunct in the f-structure as given in production 3. When PP precedes S production, PP acts an oblique/ object depending on the semantics of PP and the sub-categorization frame of verb as given in production 4.

Examples:
1) The bank that has the best interest rates. (modeled by rule 1)
2) The key (which) I borrowed is broken.   (modeled by rule 2)
3) The year when she graduated was lucky for her (modeled by rule 3)
4) The girl to whom I gave a book is cooperative (modeled by rule 4)
5) the girl on whom I relied betrayed me (modeled by rule 4)

Rule Status: Active
Reference: [1] Pam Peters, "The Cambridge English Guide to Usage"
Related Rules: EGR119, EGR139, EGR146
Related POS: EPOS103, EPOS015
Replaces: - EGR113
Reason: - change of relative pronoun occurrence to optional in production 2 and change of ADV_TYPE in production 3 to SEM_TYPE
Replaced by: -
Reason: -

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

Analysis1: Relative clause serves either to define, or to describe and evaluate the noun to which it is attached. It stands next to it, even if it delays the predicate of the main clause.
For example:
The radio that we bought at the market has never given any trouble

Relative clauses are often introduced by of the *relative pronouns* such as *that, which, who etc.* In certain stylistic and grammatical circumstances there may be no pronoun at all, the so-called "zero relative".
Except in the most formal style, the pronoun can be omitted from relative clauses of which it's the *object* as given below.
The radio we bought at the market has never given any trouble

But when the relative pronoun is the *subject* of the relative clause. Its almost always expressed, whatever the style.
The radio that came from the market has never given any trouble

Some relative clauses are linked to the main clause by adverbs such as *when, where, why:*
I remember the time when we made marshmallow
You remember the place where we went
They remember the reason why we looked so strange

The wh-adverbs act as relaters of the second clause to a noun of time, place or reason in the main clause. In less formal styles, the relative adverbs can be replaced by *that,* as in
I remember the time that we made marshmallow
And even omitted altogether:
I remember the time we made marshmallow

Sentence relative which relate to the whole preceding clause not to any noun in it:
They wanted to go home by ferry, which I thought was a good idea

Sentence relatives are always prefaced by *which.*
[1, p. 468]

Result: The above analysis was finalized.

1. Linking the complementizer (relative pronoun) of relative clause to the head of NP will be done once functional uncertainty is added to the parser. Using that functionality, agreement between relative clause and head noun will be made easier.
    *Example: *The girl which I like is good*
2. Unable to parse 'She is the girl who is good'. But the sentence 'She is the girl who is good and sleeping' is parsed correctly. Have to look for the reason.
3. Sentence relatives as discussed in the above analysis will be analyzed.
4. Sometimes a relative clause has optional relative pronoun as mentioned above. This will be taken care of in the future.
5. Topicalization will be covered when parser will be enhanced as given below:
    *Example:*The girl <u>whom</u> I gave the book <u>to</u> is sleeping