

## Equi. and Raising Constructions in English: A Head Driven Structure Approach

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### Abstract

Equi (control) and Raising verbs pose problems of interpretation in that they look superficially similar while in fact they are semantically different. They both involve an infinitive complement with no overt subject. But they differ in that the Equi (control) verbs like *try* take an infinitive complement with a PRO subject, where PRO has a controller *John* in the *try* clause, as in *John tries to jump*. Conversely, the Raising verbs like *seem* take an infinitive complement with a trace subject since the subject of *seem*, *Mary* originates as the subject of the infinitive clause, as in *Mary seems to be angry*. The paper shows the differences that hold between the two types of constructions. I appeal to Head-Driven Phrase structure Grammar Theory by Pollard and Sag (1987, 1994), in which head feature and sub-categorisation, unification of structure and sharing play a very important role. However, since the terms Raising and Equi derive from the names of the rules posited for analysis of the two constructions within Transformational grammar theory, I will start by providing an analysis of Transformational grammar approach. Transformational grammar is used here as a cover term for all the versions of a movement theory from TG to minimalist programme.

### 1.0 Introduction

Equi (control) and subject raising verbs pose problems in that they look superficially very similar, yet they differ in a variety of ways. The Equi verbs like *try* and *want* have their subjects similar to those of the complement clauses, and as such the subject of the complement clauses is a PRO subject, and thus controlled by subject of the verb *try* or *want*, as in (1). In contrast, raising verbs like *seem* have their subject NP shared by the matrix clause and the complement clause. In raising verbs, the subject of the complement clause has had its subject raised from the subject of the main clause, as in (2a). Similarly, in the object-raising verbs, the subject of the complement clause has raised to become the object of the higher clause, as in (2b) (Crystal 1985:255).

- (1) Nancy wants to quit.
- (2) a. Mary seems to be angry.  
b. Tom believes John to be honest.

The terms Equi and Raising derive from the names of the rules posited for analysis of the two constructions within Transformational Grammar theory (Soames and Perlmutter 1979). In the Equi-NP constructions, the subject noun phrase of the complement clause is identical to that of the main clause and is therefore deleted (Crystal 1985:111), as in (1). The transformation of Equi NP deletion derived constructions like [*Nancy wants [to quit]*]

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from underlying structures like [*Nancy wants [ Nancy to quit ]*] by deleting the subject *Nancy* of the embedded clause (Pollard and Sag 1994:133). In contrast, raising verbs like *seem* have their subject NP shared by the matrix clause and the complement clause. In raising verbs, the subject of the complement clause has had its subject raised from the subject of the main clause, as in (2a). In example (2a), the transformation of *Subject-to-Subject Raising* mapped the underlying structures like [*for Mary to be angry*] *seems*] onto constructions like [*Mary [seems to be angry]*] by raising the embedded subject *Mary* into the subject position of the embedding clause (Pollard and Sag 1994:133). Similarly, in the object-raising verbs, the subject of the complement clause has raised to become the object of the higher clause, as in (2b) (Crystal 1985:255). In this paper I show that Equi and raising constructions are different and therefore cannot receive the same analysis. The differences are determined by the verbs in the superordinate clauses. I show the differences that hold between the two constructions from theoretical perspective of Transformational Grammar (henceforth TG) and Head Driven Phrase Structure Theory (henceforth HPSG).

The paper is organised as follows: In section 1.1 and 1.2, respectively, I give an overview of Transformational Grammar and HPSG theories used in analysing Equi and Raising constructions in this paper. TG is chosen for analysis here since the two terms Raising and Equi derive from the rules posited within Transformational grammar theory. HPSG is chosen here as a non-transformational theory, which has similar basic goals as TG. Both the theories are considered to be generative grammars (Morapedi 2006:7). TG, like a non-transformational generative approach, such as HPSG, aims to provide a model for the description of all languages. Both the models are expressed as a system of rules and principles that allow for a constrained, but unlimited, number of grammatical utterances. Section 2 provides a TG analysis, showing the differences between the two types of constructions (Equi and Raising). Section 3 provides HPSG analysis. I show the feature structures (Equi and Raising) using attributive-value matrix (AVM) diagrams.

## 1.1 Transformational Grammar

Transformational Grammar theory was initially established by Chomsky in the book, *Syntactic structures* (1957). TG aims to provide a model for the description of all languages. TG assumes the existence of basic sentence forms (kernel sentences) that are generated by a simple phrase structure rules, such as X-bar theory (Jackendoff 1977). Arguing that a phrase structure grammar could not economically generate all the sentences of a language, Chomsky proposed transformational rules that move the elements from their original position in the phrase structure generated structures in order to create more complex 'Surface' structures. For instance, the interrogative sentence in (3b) differs from the kernel sentences in (3a) in that its subject and auxiliary are inverted. A simple transformational grammar would hold that (3b) is formed from the same underlying structures as its declarative counterpart (3a) through a transformation in which the subject is inverted with the modal auxiliary verb, hence giving the interrogative surface structure (Chomsky 1965).

- (3) a. She can write poetry. [kernel sentence]  
 b. Can she write poetry? [transformed counterpart]

Chomsky developed his approach over the years, starting with the Standard Theory of Chomsky (1965) through to Minimalist Programme which started in the nineties (Morapedi 2006:7-8). TG was most seriously challenged for its limitations in terms of cross-linguistic generalisations as well as psychological plausibility. Some of the arguments that were advanced were that Chomsky defined 'subject' as the NP that is directly dominated by the sentence (S) node, and 'object' as the NP that is the daughter of the VP. The definitions were criticised for relying strictly on structural dominance to define grammatical functions,

downplaying or ignoring the role that morphological marking may play in signalling the functions in some languages (Morapedi 2006:10). One of the many main arguments against the use of TG relates to the use of movement paradoxes. That is, the mismatches between a moved constituent and the position from which it is supposed to have moved from, as in (4).

- (4) a. [That he was sick]S we talked about---for days. [Bresnan 2001:17]  
 b. \*We talked about [that he was sick] for days. [Bresnan 2001:17]

Example (4) shows the mismatch between the clause *that he was sick* and the position that it is supposed to have moved from. The moved constituent is of a different syntactic category (clause) from that in the position it is supposed to have moved from (noun phrase) (Bresnan 2001:17; Morapedi 2006:11). Criticisms of the use of transformations in Transformational Grammar gave rise to the formulation of alternative non-transformational generative theories, such as HPSG (Pollard and Sag 1987) and Lexical Functioning Grammar (LFG) (Kaplan and Bresnan 1982); (Morapedi 2006:10). HPSG like other non-transformational theories that have followed criticised transformational approaches.

## 1.1 Head Driven Phrase Structure Grammar

HPSG is a functional theory whose central tenet is that attributes of linguistic structure are not related by movement but rather by structure sharing. HPSG (like LFG, and Relational Grammar) is a non-transformational theory whose emphasis is more on unification of structures. The basic tools of linguistic description in HPSG are features. Features enable linguists to talk about such information as the category of a word, what other words it must appear with (e.g., theta grid), and what level in the tree node is. For example, in this theory, bar levels are treated as features. They indicate the word versus phrase status for every constituent in a tree. The features for a node are next divided into three major classes: (a) the features SYN (syntax), that tell us about the syntactic category of the node and its inflectional properties (HEAD feature), (b) ARG-ST (argument structure) feature structures which represent the theta-grid (list of arguments associated with the word), and (c) the value of SEM (semantic) features, which give information about how the word and sentences are to be interpreted (Carnie 2000:359-362). Unlike TG which relates structures by moving them up and is derivational, HPSG relate structures by structure sharing and is non-derivational (Pollard and Sag 1994:2). The anaphor PRO is co-indexed with other oblique arguments. The relationship between the gap and its filler is more clearly understood as a matter of structure sharing rather than as movement. Raising is treated in terms of structure sharing between a matrix argument and the complement's sub-categorisation specification corresponding to the complement subject. In the raising verb *believe* in (5), there is structure sharing between the matrix object and the subject's subcat list and all this involves token identity of values.

- (5) Mary believes Nancy to be angry.

HPSG shares with TG the goal of modelling how human language is structured in the mind. HPSG is a theory of human language and makes specific claims about language universals and variations. HPSG differs from TG whose major strength is on movement of linguistic structures from lower to higher structures in order to show their relation. Minimalist programme, a latest version of TG also puts more emphasis on derivation (Morapedi p.3. To appear).

## 2. Difference between Equi and Raising from TG approach

One difference between the Equi verbs like *try* and raising verbs such as *seem* is that the raising verbs like *seem* allow a dummy subject such as expletive *there*, whereas a control verb like *want* does not take the expletive *there* (Radford 1997:179). The differences are shown in examples in (6) and (7).

- (6) a. There seemed to be a woman sleeping in the car.  
b. There seemed to be nobody living in the house.

In contrast, the Equi (control) verb like *try* does not allow expletive *there* as its subject. The structure in which *there* is the controller of PRO is ungrammatical, as in (7). The ungrammaticality of example (7) lies in the fact that the referential pronoun PRO requires the controller which is a referential expression

- (7) a. \*There tried to be a woman sleeping in the car.  
b. \*Where is a woman sleeping in the car?

The non-referentiality of the expletive pronoun *there* can be illustrated by lack of questioning of its reference. Therefore, the subject of the control (Equi) predicates has to be always a referential expression.

Another reason why structures such as (7a) are considered to be ungrammatical has to do with the semantic considerations. Equi verbs like *try* assign thematic role to their subjects. Thematic role refers to the semantic role played by an argument in relation to its predicate, as in AGENT, THEME and RECIPIENT for the verb *give*. For example, the verb *try* in (8) assigns thematic role AGENT to its subject. Therefore, the verb *try* requires its subject as an expression that denotes a human being (Radford 1977:273). The non-referentiality of the dummy pronoun *there* debars it from meeting the requirements for the verb *try*, that it must have a subject with the meaning AGENT. The equi verb like *try* is a control predicate, as in (8). The pronoun *He* originates as the subject of *try* and subsequently moves up to become the subject of *does*. The subject pronoun *He* controls the PRO subject of the verb *enjoy* music (Radford 1997:182).

- (8)  $[_{IP} \text{He does } [_{VP} t \text{ try } [_{IP} t \text{ PRO to } t \text{ enjoy music.}$

The null pronoun PRO is assigned the theta role of EXPERIENCER argument of *enjoy*. The nominative pronoun *he* is assigned the theta role of AGENT argument of *try* because it originates as the subject of *try*. Since PRO and *he* are each assigned a theta-role of their own, the theta-criterion is satisfied.

Conversely, a raising verb like *seem* does not assign thematic roles to its subject. The verb *seem* does not require an AGENT or EXPERIENCER subject and therefore allows a non-referential subject like expletive *there* (Radford 1997:179). The *seem* type of verbs can only serve as raising predicates but not control ones, as in sentence (9), where the raising verb like *seem* is used as a raising predicate. In this type of verb, *he* originates as the subject of the verb *enjoy*, as in (9) and is assigned an appropriate thematic role of an EXPERIENCER argument. The subject *he* raises up in successive cyclic fashion to become the subject of *to enjoy* music, and then the subject of *seem to enjoy music* and subsequently the subject of *does seem to enjoy music* (Radford 1977:181)

- (9)  $[_{IP} \text{He does } [_{VP} t \text{ seem } t [_{IP} t \text{ to } [_{VP} t \text{ enjoy music.}$

In this section, I have shown the difference between the equi (control) and raising verbs from a TG perspective. Verbs such as *seem* can function as raising predicate, whereas equi verbs function as control predicates. The *seem* type of verbs cannot function as control

predicate. The equi verbs cannot function as raising predicates.

### 3. HPSG analysis on the difference between Equi and Raising verbs

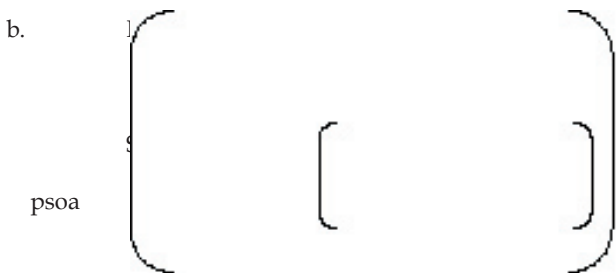
The distinction between the Equi and Raising verbs is that all the subcategorised dependents of Equi verbs are assigned semantic roles, whereas raising verbs do not assign a semantic role to one of the dependents that they sub-categorise for, as in (10) and (11), showing a difference in content for the superficially similar constructions.

(10) a. He hopes to pass.



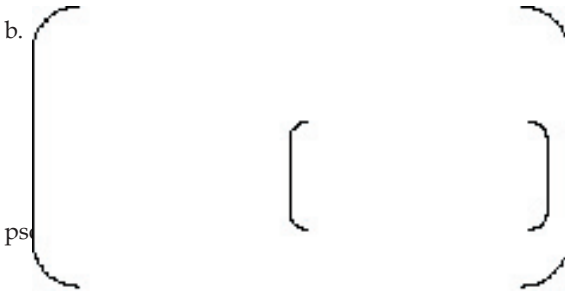
The referential index associated with the subject of an Equi verb *hopes* is assigned a role in the *psoa*, that is the verb's content. In addition, the index is structure shared with that of the unexpressed subject of the VP complement inside the embedded *psoa*, in this case, the *psoa* corresponding to the circumstances that the hoper is hoping to bring about 'PASSING'. Conversely, the subject of superficially similar subjects raising verbs like *tend* are assigned no role in the matrix *psoa*, as exemplified by structure (11).

(11) a. They tend to scramble.



The contrast that exists between the subject of the equi and raising verbs obtains between the objects of object equi verbs like *urge*, a three place verb) in (12) and those of object raising verbs like *suspect* (a two place verb) in (13). The two-place verbs are those verbs that take two arguments, that is, transitive verbs.

(12) a. They urged Tom to be calm.



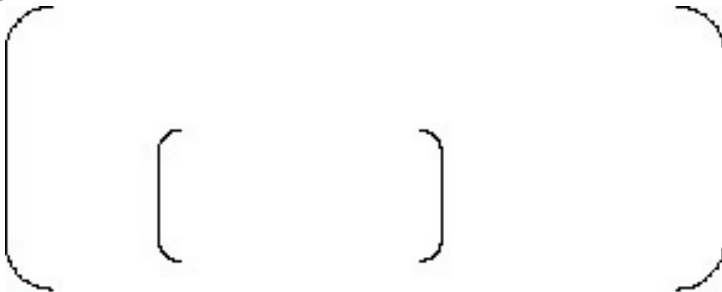
(13) (a) Jerry suspect John to be naughty.



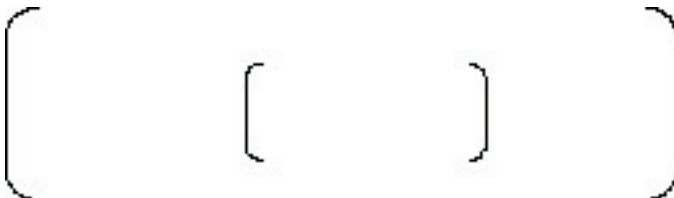
From the examples given above, it is clear that, the essence of the equi/raising distinction is that all the subcategorised dependents of equi verbs are assigned a semantic role, whereas raising verbs always fail to assign a semantic role to one of the dependents that they subcategorise for. For instance, there is no semantic assignment like (\*suspectee).

Another distinction between the equi verb *hope* and the raising verb *tend* is the lexical signs for their subject, as in (14) and (15).

(14) *hope*

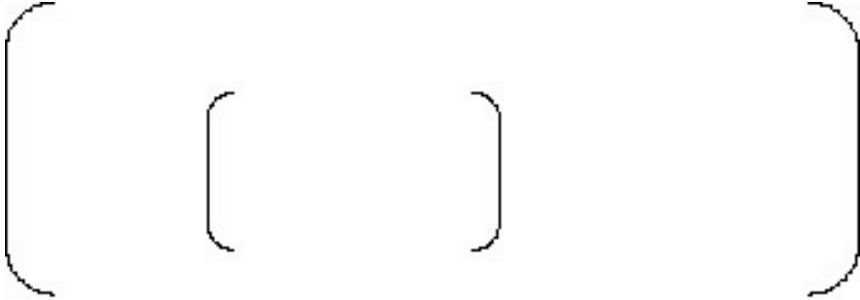


(15) *tend*



The lexical difference between the object equi verb *urge* and the object raising verb *suspect* are illustrated in (16) and (17).

(16) *urge*



(17) *suspect*



Despite differing in assigning roles, there are two other important differences between the equi in (14) and (16) on the one hand and the raising verbs in (15) and (17) on the other hand. In the signs of the equi verbs, the VP complement's unexpressed subject, its SUBCAT member, is co-indexed with one of the other syntactic dependents (the subject in (16), which is the object in (17)). Conversely, in raising verbs, the entire SYNSEM value of the subject of the VP complement is structure-shared with that of another subcategorized for dependent, the subject in (15), and the object in (17). The SYNSEM value of the raising controller, which is considered to have been raised, needs not be specified because that information will be provided by the unexpected subject of the complement. Further, the index of the role-assigned subject in (16) is of sort ref. It is not a dummy, whereas no such restrictions appear on the subject of *tend* in the lexical sign, as in (15).

#### 4. Conclusion

The paper has shown the difference between the equi and raising construction which look superficially very similar when in fact they are not. They both have the to infinitive complement constructions with no overt subjects. They have grammatical subjects which do not perform the same functions in the sentence. The equi has a thematic role of argument whereas the subject of *seem* is not a thematic argument. In TG, subjects of the raising verb like *seem* originate in the complement clause and move up to become the subject of *seem*, whereas the equi verbs (like *try*) control PRO (covert subject) of the complement clause. In HPSG, where NPs are similar as in the *seem* type of verbs or one is referential as in the *try* verbs, HPSG unifies them through co-indexing. In constructions like *They hoped to pass.*, the person that passes is the very person that hopes. In the object equi construction like *They urged Tom [Tom to be calm].* *Tom* is the argument of *urge*, whereas in raising constructions like *Jerry suspected John [to be naughty].* *John* is not the argument of *suspect*.

## Works Cited

- Bresnan, Joan. *Lexical Functional Syntax*. Oxford: Blackwell Publisher, 2001.
- Carnie, Andrew. *Syntax: A generative Introduction*. Cornwall: TJ international, 2002.
- Chomsky, Noam. *Syntactic Structures*. The Hague: Mouton 4, .1957.
- Chomsky, Noam. *Aspect of the Theory of Syntax*. Cambridge: MIT Press, 1965.
- Crystal, David. *A Dictionary of Linguistics and Phonetics*. Cambridge: Basil Blackwell, 1985.
- Jackendoff, Ray. *X' Syntax: A Study of Phrase Structure*. Cambridge, MA: MIT Press, 1977.
- Kaplan, Ronald M. and Joan Bresnan. "Lexical Functional Grammar: a formal system for grammatical Representation." *The mental representation of grammatical relations*. Ed. Bresnan, J. Cambridge MA: MIT Press, 1982.
- Morapedi, Setumile . *The Syntax of Locative Inversion Constructions and Related Constructions in Setswana: An approach to Information Structure in Lexical Functional Grammar*. Doctoral thesis. University of Sussex, 2006.
- Morapedi, Setumile. *A Comparative Study of the Syntax of interrogatives in Early Modern English and Contemporary Standard English: A P&P approach*. Pula journal, In Press.
- Pollard, Carl and Ivan. A. Sag. *Information-based Syntax and Semantics. : Fundamentals*. Vol. 1. CSLI Lecture notes no. 13. Stanford: Center for the Study of Language and Information, 1987.
- Pollard, C. and Ivan. A. Sag . *Head-Driven Phrase Structure Grammar*. Chicago:The University of Chicago, n.d.
- Radford, Andrew. *Syntax: A minimalist Introduction*. Cambridge: Cambridge University Press, 1994.
- Soames, Scott and David Perlmutter. *Syntactic Argumentation and the Structure of English*. Berkeley and Los Angeles: University of California Press, 1979.

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