

Phrasal and Sentential Conjunction in Transformational Grammar

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1 . Abstarct

The present paper discusses two types of noun phrase conjunction in English from the cognitive linguistic views. This approach will shed some light on what is going on in the listener's mind when he decodes and encodes linguistic messages.

2 . Phrasal and Sentential Conjunction

There are two basic types of noun phrase conjunction, which we will call 《phrasal》 and 《sentential》, based on the underlying P-marker from which each type derives. Correlating each type is a distinct type of semantic interpretation.

When phrasal conjunction is involved, the act denoted by the verb phrase is an act shared by the two or more persons or things denoted by the conjoined noun phrases. For example, when we have a sentence such as (1), the act of conferring one act is shared by the two persons who confer with each other.

- (1) John and Mary conferred.

Sentence (1) cannot be paraphrased by sentence (2).

- (2)* John conferred and Mary conferred.

When sentential conjunction is involved, each person or thing denoted by the conjoined noun phrases has its own act, as in (3).

- (3) John and Mary know the answer.

That is, John's knowing the answer and Mary's knowing the answer are two distinct acts of knowing the answer since they cannot have a shared consciousness. Since two acts are involved, two underlying verb phrases are also involved, as indicated in (4), which is a paraphrase of (3).

- (4) John knows the answer and Mary knows the answer.

Sentence (4) is derived by coordinate recursion from the underlying sentences (5) and (6).

- (5) John knows the answer.
(6) Mary knows the answer.

In sentential conjunction, as its name implies, we start with two or more separate sentences, which are conjoined as in (4), and then if the two verb phrases are identical to each other, the first of the two identical verb phrases is deleted, generating sentence (3). Since we are starting with two sentences, we are of course starting with two verb phrases, and each verb phrase denotes an act or event distinct from that denoted by the other verb phrase.

The conjoining of (5) and (6) may be achieved by the use of a double based transformation or by the use of a recursive phrase structure rule. If a double based transformation is used, it must have a structural description that matches the nonterminal representation of sentences (5) and (6), and its structural change must specify that those two sentences will be joined by <and> as in (7).

$$(7) \left. \begin{array}{l} X + NP1 + VP1 + Y \\ X + NP2 + VP2 + Y \end{array} \right\} \longrightarrow X + NP1 + VP1 + \text{and} + NP2 + VP2 + Y$$

Since (7) matches the nonterminal representation of (5) and (6), it will operate on these two sentences to combine them into one sentence (4). Then since the two verb phrases involved are identical, rule (8) will operate to delete the first of the two identical verb phrases.

$$(8) \begin{array}{l} X + NP1 + VP1 + \text{and} + NP2 + VP2 + Y \\ (VP1 = VP2) \end{array} \longrightarrow X + NP1 + \text{and} + NP2 + VP2 + Y$$

Applying rule (8) to sentence (4) will delete the first of the two identical verb phrases <know the answer>, transforming (4) into (3). The fact that there is only one verb phrase in (3) that is apparently shared by the two noun phrases does not mean that (3) indicates phrasal conjunction. It is the number of the verb phrases in the underlying structure that indicates the number of acts involved, and since there are two verb phrases involved prior to the application of rule (8), there are two distinct acts of knowing the answer is involved. Therefore, sentence (3) indicates sentential conjunction, even though only one verb phrase is left over.

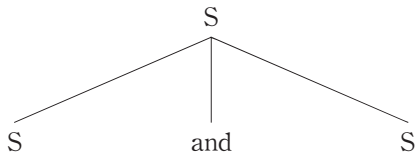
3. Recoverability

When deletion such as that specified by rule (8) occurs, it is subject to the condition of recoverability. Since the listener must be able to recover or reconstruct in his own mind the underlying structure that the speaker had in his mind in order to apply a semantic interpretation to the sentence he is hearing, transformational rules must be formulated in such a way that the listener is able to reverse them and reconstruct the underlying structure intended. Since rule (8) can apply only when the two verb phrases are identical, as indicated by the condition in parentheses, the listener knows that the deleted verb phrase (VP 1) must have been identical to the remaining verb phrase (VP 2).

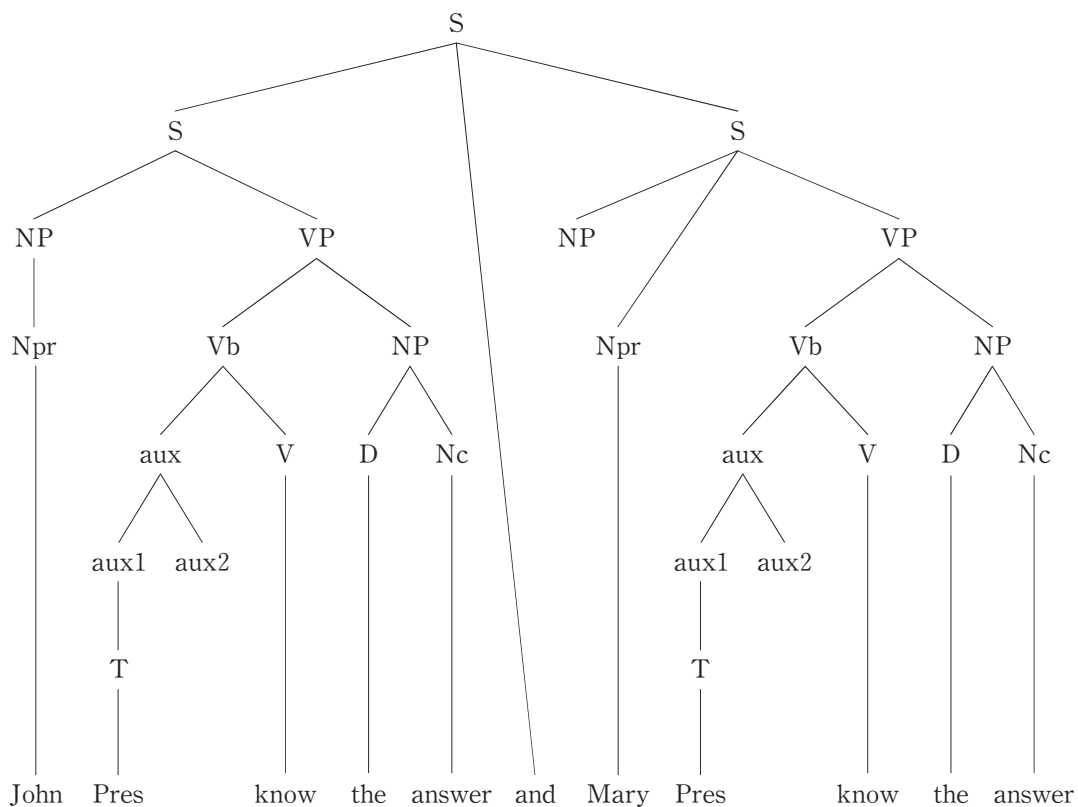
If a recursive phrase structure rule is used instead of the double based transformation (7), it will have the effect of rewriting an S as two or more S's, each separated by 《and》 as in rule (9) where subscript 《n》 indicates that the optional 《and+S》 may be repeated any number of times, or not at all as indicated by the parentheses. If (9) is applied, the resulting partial P-marker will have the form (10).

(9) $S \longrightarrow S \text{ (and+S) } \langle n \rangle + \text{and+S}$

(10)



The two lower S's of (10) may then be expanded by the use of the remaining phrase structural rules, yielding a full P-marker such as (11).

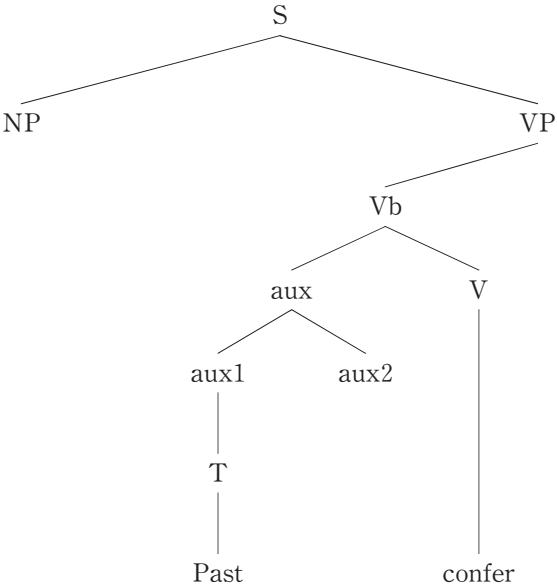


Then rule (8) can apply, as it did to the structure derived by the use of a double transformation, to delete the first of the two verb phrases, yielding sentence (3), but this time by the use of recursive phrase structure rules rather than the use of double based transformations.

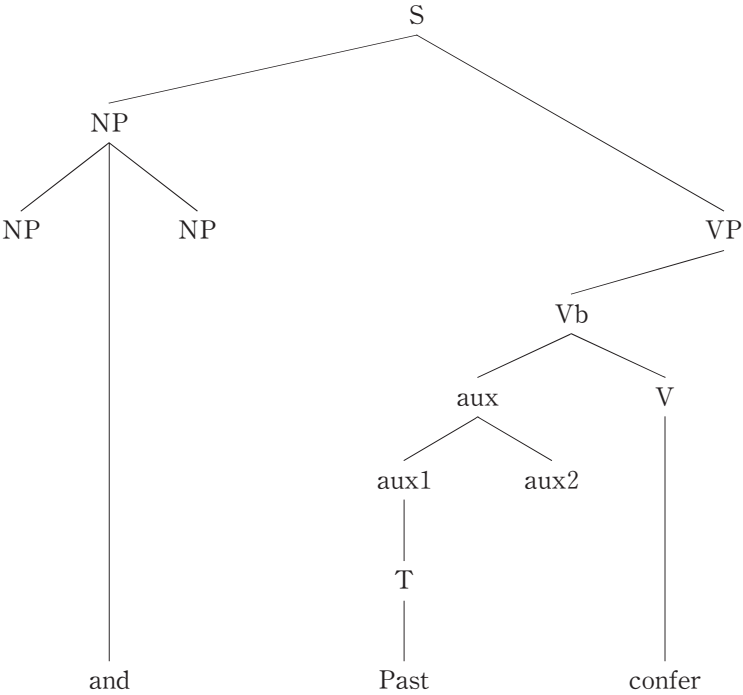
When phrasal conjunction is involved, a recursive phrase structure rule of the form (12) is applied to the noun phrase of one P-marker where subscript $\langle n \rangle$ indicates that the optional $\langle \text{and} + \text{NP} \rangle$ can be repeated any number of times, or not at all as indicated by the parentheses. Thus, if we have generated a P-marker of the form (13), rule (12) may be applied to the subject NP (the NP of S) to yield a P-marker of the form (14).

$$(12) \quad \text{NP} \longrightarrow \text{NP} (\text{and} + \text{NP}) \langle n \rangle + \text{and} + \text{NP}$$

(13)



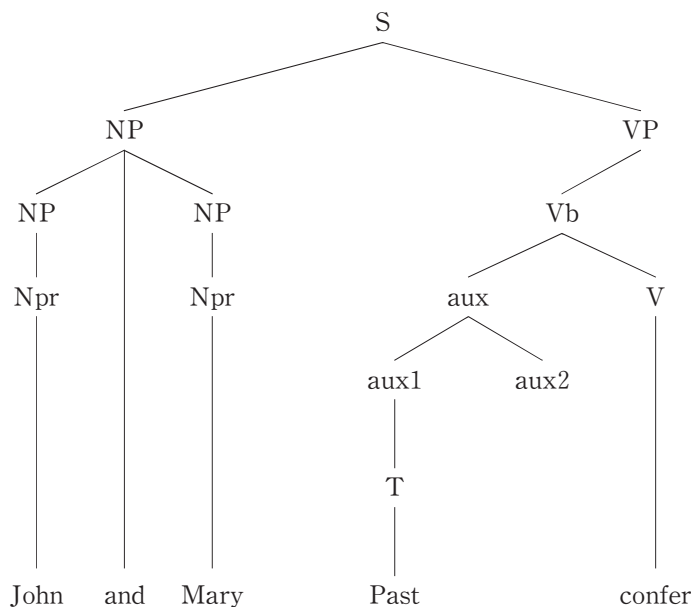
(14)



Each NP may be rewritten as Npr by one of the nonrecursive rewrites of NP, i. e. (15), yielding the P-marker (16), after application of lexical phrase structure rule.

(15) NP \longrightarrow {D+Nc/Npr}

(16)



At this point, one might ask how the listener knows whether phrasal or sentential conjunction is involved since both appear similar in final surface form. This is important since while certain verbs can function only in phrasal conjunction, such as 《confer》, and others only in sentential conjunction, such as 《know》, many verbs can function in both phrasal and sentential conjoined constructions, and since it makes a difference in meaning whether one considers the conjoined construction to be sentential, the listener must have some clues as to whether phrasal or sentential conjunction is intended.

One test is whether the conjoined NP construction can be paraphrased by a conjoined sentence construction in which the verb phrases of the two sentences are identical. That is, if (17) can be paraphrased by (18), then a sentential interpretation is possible.

(17) John and Mary know the answer.

(18) John knows the answer and Mary knows the answer.

If a conjoined NP construction such as (17) can be prefaced by 《both》 as in (19), then a sentential interpretation is possible.

- (19) Both John and Mary know the answer.

Note that a sentence with 《confer》, which does not allow sential conjunction, cannot be paraphrased by a sentence analogous to (18) and cannot be prefaced by 《both》.

- (20) John and Mary conferred.
 (21)* John conferred and Mary conferred.
 (22)* Both John and Mary conferred.

Furthermore, if only sential conjunction is possible, the sentence cannot be followed by 《together》 as in (23) while when phrasal conjunction is involved, such sentences may be followed by 《together》, although it may be stylistically redundant as in (24)

- (23)* John and Mary know the answer together.
 (24) John and Mary conferred together.

Finally, if phrasal conjunction is involved, one of the conjoined noun phrases may be 《conjunction shifted》 to a position at the end of the sentence, where it will follow 《with》 as in (25).

- (25) John conferred with Mary.

(25) is derived from a phrasally conjoined construction, i. e. (20), but a sententially conjoined construction cannot be conjunction shifted, i. e. (17) cannot be transformed into (26).

- (26)* John knows the answer with Mary.

4. Verbs and Conjoined Constructions

Certain verbs can enter into either phrasal or sentential conjoined constructions. One such verb is 《write》. Such conjoined sentences are often ambiguous, unless clues are given in the context or in the prior or subsequent discourse as to which interpretation is intended. For example, 《write》 functions sententially in (27) if we consider (28) to be a paraphrase of (27).

- (27) John and Mary wrote plays.
 (28) John wrote plays and Mary wrote plays.

If (28) is not synonymous with (27), then (27) must be interpreted phrasally. Interpreted

sententially, (27) means that John wrote plays independently of Mary and vice versa. Interpreted phrasally, (27) means that John and Mary collaborated on writing plays. If (27) can be paraphrased by (29), then it must be interpreted sententially.

(29) Both John and Mary wrote plays.

If (29) is not a paraphrase of (27), (27) is of course to be read phrasally. If (30) and (31) are paraphrases of (27), then (27) is to be interpreted phrasally, but if (30) and (31) are not paraphrases of (27), then (27) is sentential.

(30) John and Mary wrote plays together.

(31) John wrote plays with Mary.

Since verbs and adjectives are essentially the same type of unit in the underlying structure, it should not surprise us that certain adjectives can function only in sentential conjoined constructions, other adjectives in phrasal conjoined constructions, and still others in either type of construction. For example, 《fat》 can enter into conjoined constructions that are sententially conjoined.

(32) John is fat.

(33) Mary is fat.

(34) John and Mary are fat.

(35) John is fat and Mary is fat.

(36) Both John and Mary are fat.

(37)* John and Mary are fat together.

(38)* John is fat with Mary.

《Similar》, on the other hand, can enter only into conjoined constructions that are phrasally conjoined.

(39)* John is similar.

(40)* Mary is similar.

(41) John and Mary are similar.

(42)* John is similar and Mary is similar.

(43)* Both John and Mary are similar.

(44)* John and Mary are similar together.

(45) John is similar to Mary.

《Careful》 can appear in conjoined noun phrase constructions in which either phrasal or sentential conjunction is involved.

- (46) John is careful.
- (47) Mary is careful.
- (48) John and Mary is careful.
- (49) John is careful and Mary is careful.
- (50) Both John and Mary are careful.
- (51) John and Mary are careful together.
- (52) John is careful with Mary.

If sentences (50), (51) and (52) are not considered paraphrases of (48), but (49) is considered a paraphrase, then (48) is to be interpreted sententially while if (50), (51) and (52) are considered paraphrases of (48) and (49) is not, then (48) must be interpreted as phrasal conjunction.

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