

Sloppy symmetry: a derivational account of symmetric predicates

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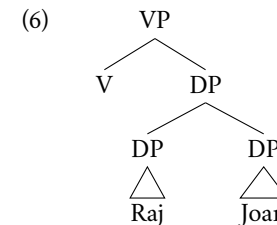
1 Introduction: symmetry & reciprocity

- (1) **Symmetric predicates** (Winter 2018:2)
A predicate R is symmetric iff for every x and y , $R(x,y)$ is logically equivalent to $R(y,x)$.
- (2) a. Raj married Joan. \Leftrightarrow Joan married Raj. *symmetric*
b. Bill hugged George. \nLeftrightarrow George hugged Bill. *non-symmetric*
- (3) **Reciprocity-Symmetry Generalization (RSG)** (Winter 2018:11)
A reciprocal alternation between a unary-collective predicate P and a binary predicate R is plain if and only if R is truth-conditionally symmetric.
- (4) **Plain reciprocity** (Winter 2018:5)
Let $E \neq \emptyset$ be a domain of singular entities, and let P be a unary-collective predicate ranging over sums of entities in E . Let R be a binary predicate alternating with P , ranging over pairs of entities in E .
For all $x,y \in E$ such that $x \neq y$: $P(x+y) \Leftrightarrow R(x,y) \wedge R(y,x)$
- (5) a. Raj and Joan married. \Leftrightarrow Joan married Raj. \wedge Raj married Joan.
b. Bill and George hugged. \nLeftrightarrow George hugged Bill. \wedge Bill hugged George.

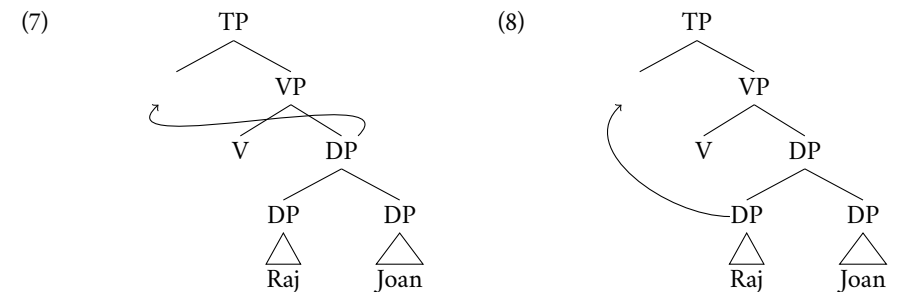
Winter (2016, 2018) presents a semantic account of the RSG, in which both the transitive and the intransitive version of, say, *marry* are derived from the same, unary-collective protopredicate:

“The collectivity of the protopredicate *marry*^c is viewed as the origin for the inherent symmetry of the transitive verb *marry*: since the protopredicate does not distinguish different roles, we expect all participants to be equally licensed in different argument positions.” (Winter 2016:264)

Our proposal involves a syntactic reinterpretation of Winter’s account, whereby both variants of verbs like *marry* or *meet* are derived from the same underlying structure:



Argument raising then yields either the intransitive (7) or the transitive variant (8) (see Lakoff and Peters (1969) for an earlier—very different—derivational account, and see also Kayne (1994:63–65)):



This analysis straightforwardly captures the intuition—expressed, among others, by Dowty (1991) and Winter (2018)—that the two participants in both (7) and (8) cannot be distinguished in terms of their θ -role: the plural internal argument [*Raj Joan*] receives a single θ -role. Let’s call it [Participant].

In the remainder of the talk we elaborate on this analysis in three different ways:

- **Section 2:** we provide supporting evidence for the unaccusative nature of symmetric predicates
- **Section 3:** we explore an approach to coördination that accounts for the insertion of *and* in (7) as well as its absence in (8)
- **Section 4:** we adduce evidence from participant switches under VP-ellipsis in favor of the representation in (8)

2 Symmetric predicates as unaccusatives

2.1 Passivization

Symmetric predicates cannot be passivized:

- (9) a. *Joan was met by Raj. (under the reading *Raj met Joan*)
 b. *Joan was married by Raj. (under the reading *Raj married Joan*)
 c. *John was dated by George in high school.

Some predicates can be either symmetric or non-symmetric, depending on the type of prepositional object they take, i.e. the choice of the preposition (Winter 2018:6):

- (10) a. Sue talked to Bill. *non-symmetric*
 b. Sue talked with Bill. *symmetric*
 (11) a. The pope spoke to him. *non-symmetric*
 b. The pope spoke with him. *symmetric*
 (12) a. Bill made love to George. *non-symmetric*
 b. Bill made love with George. *symmetric*

These predicates can only be passivized in their non-symmetric guise:

- (13) a. Sue was talked to by Bill. *non-symmetric*
 b. *Sue was talked with by Bill. *symmetric*
 (14) a. He was spoken to by the pope. *non-symmetric*
 b. *He was spoken with by the pope. *symmetric*
 (15) a. George was made love to by Bill. *non-symmetric*
 b. *George was made love with by Bill. *symmetric*

Note: there is no general ban on forming pseudopassives based on the preposition *with*:

- (16) a. This issue was dealt with by Peter.
 b. The agreement was complied with by Switzerland.
 c. Prohibition was done away with by the government.

2.2 Re-prefixation

Horn (1980:136): “*re-* can be prefixed only to verbs which take an initial 2 [= internal argument, CJ].”

- (17) a. They repainted the house. *transitive*
 b. They reappeared. *unaccusative*
 c. *They resneezed. *unergative*

Symmetric predicates like *marry* or *meet* can be prefixed by *re-*, with the prefix scoping over the subject argument of the verb, exactly as in (17b) (see Horn (1980) and Marantz (2007) for this observation about *marry*):

- (18) a. Raj and Joan remarried.
 b. Raj and Joan remet every year in Spring.

3 Coördination

We assume that the coördinator *and* is not present in the syntactic derivation, but that it is a phrasal prefix prepended to the second of two symmetrically merged phrases:

- (19)
-
- ```

graph TD
 DP1[DP] --- DP2[DP]
 DP1 --- andDP[and-DP]
 DP2 --- Harry[Harry]
 andDP --- Sally[Sally]

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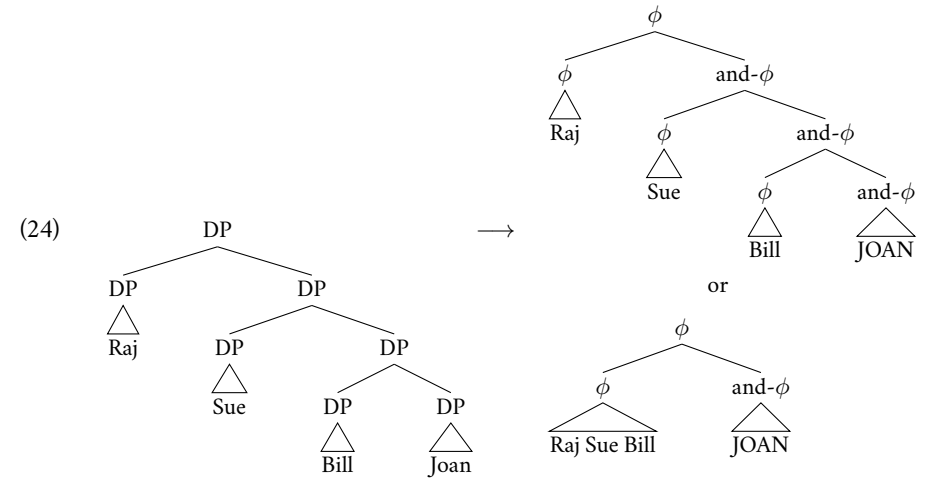
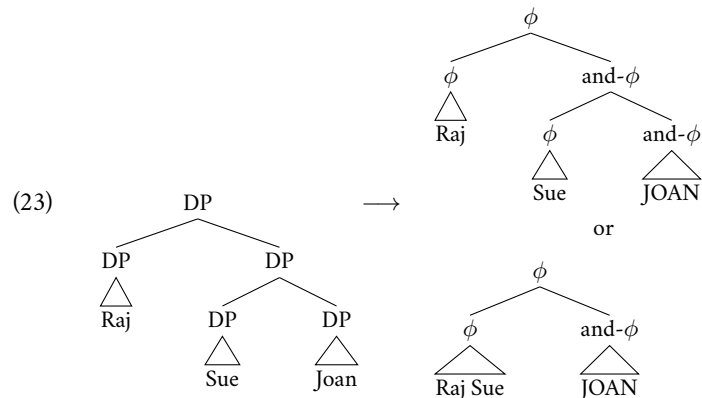
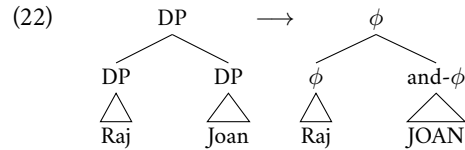
We think the correct description for the insertion site of *and* is prosodic. We follow Wagner (2010) and assume that coördinations are built cyclically in a way that boosts prosodic phrase boundaries at higher levels relative to the boundaries of prosodic phrases more deeply embedded. Wagner’s procedure has (roughly) the following effects:

- (20) Prosodic Structure of Coördinations  
 a. Conjuncts are recursively parsed into binary prosodic phrases ( $\phi$ s) that are right-headed. Normally,  $XP = \phi$ .  
 b. Non-heads cannot be heavier than heads.

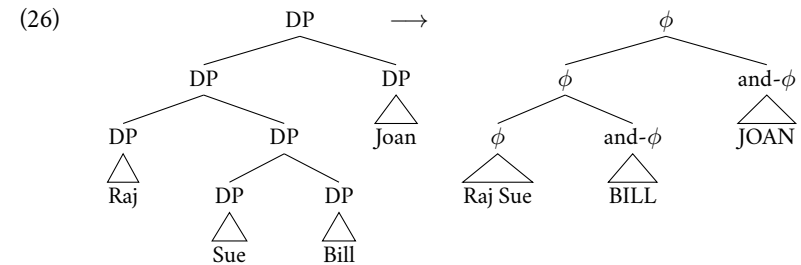
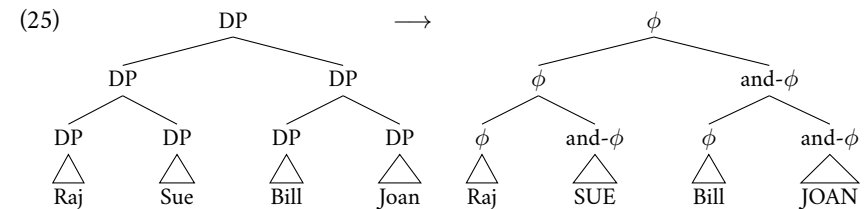
The default rule is that an XP corresponds to a prosodic phrase, though this mapping is sometimes changed. In neutral contexts, the Nuclear Stress rule puts pitch accent on the heads of certain, syntactically determined, prosodic phrases. The rule we suggest for *and* insertion is:

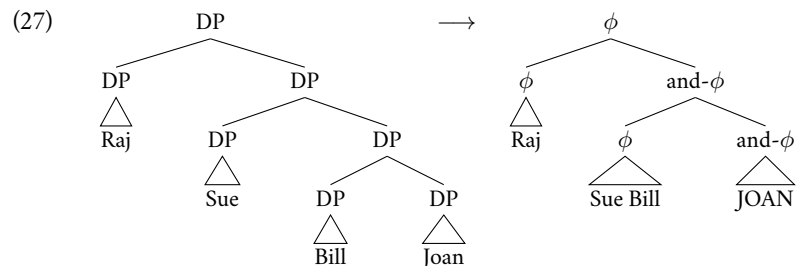
- (21) *And* Insertion  
Insert *and* between the prosodic phrases of a coordination.

Some illustrative examples. We put heavier terms in UPPER CASE.



Note that Wagner's system allows *Raj* and *Sue* in (23) and *Raj*, *Sue*, and *Bill* in (24) to map onto prosodic phrases, overcoming the usual mapping of XP to  $\phi$ .

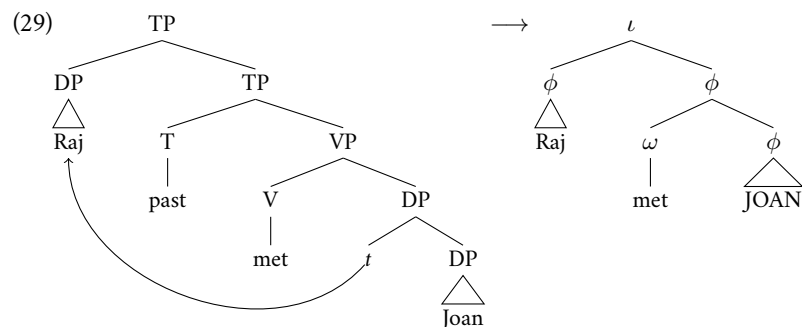




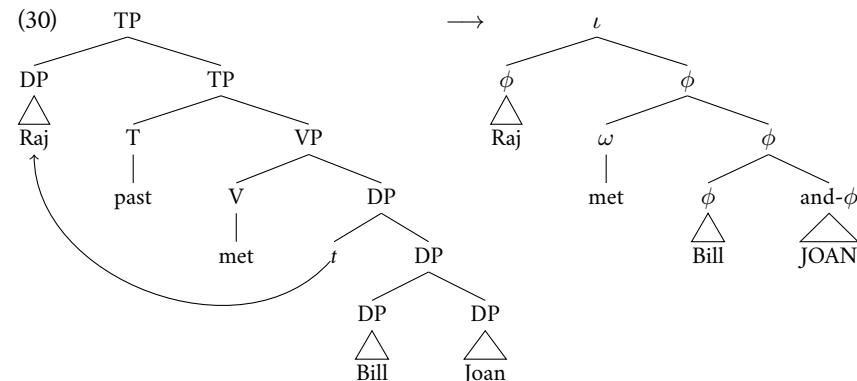
Perhaps the oddness of (26) and (27) results from a constraint that disprefers the two daughters of a coördination to be too different in weight. To our ear (as Kayne would say) these improve if the semantics justifies making such bad prosody.

- (28) a. Raj Sue and Bill and probably Joan  
b. Raj and probably Sue Bill and Joan

When one of the conjuncts has moved and it's pronounced in its moved position, there is no longer a trigger for *and*-insertion:



Unless the coördination has more than two conjuncts:



When *and* is not phonologically present, the semantics normally associated with it are still present, on this view. In the case of *Raj (and) Joan*, we get a DP that refers to a plurality that includes Raj and Joan, and nothing else.

$$(31) \quad \llbracket \text{Raj } [(\text{and-})\text{Joan}] \rrbracket = \text{Raj} \oplus \text{Joan}$$

## 4 Symmetric predicates & VP-ellipsis

### 4.1 Participant switching

Stockwell (2020) shows that symmetric predicates—when used transitively—allow for *participant switching* under VP-ellipsis, i.e. the subject in the antecedent clause becomes the object in the ellipsis-containing clause and *vice versa*. Non-symmetric predicates do not allow for such a switch:

- (32) John can marry Bill, but Bill SHOULDN'T ~~marry John~~. symmetric  
(He should marry ME instead.)
- (33) \*John can invite Bill, but Bill SHOULDN'T ~~invite John~~. non-symmetric  
(He should invite ME instead.)

Stockwell (2020:69) argues that participant switching in VP-ellipsis “poses a major challenge for syntactic identity: the antecedent and elided VPs have starkly different structures”. Instead, he proposes an antecedent condition on ellipsis that is semantic.

Stockwell's condition, inspired by Rooth (1992), is essentially:

- (34) Let E be a phrase that contains an ellipsis, and A be some other phrase in the discourse. There must be C such that  $C \in F(E)$  and  $\llbracket C \rrbracket = \llbracket A \rrbracket$  and  $\llbracket E \rrbracket \neq \llbracket A \rrbracket$ .
- (35) For  $\alpha$  a phrase,  $F(\alpha) =_{\text{def}} \{\beta: \beta = \alpha \text{ except focus-marked material in } \alpha \text{ is replaced by an alternative}\}$ .
- (36) An alternative to B is something of the same syntactic and semantic type as B that is made salient by the context.

(We've made what we think are benign changes to Stockwell's formulation to help smooth the presentation.)

An exemplification of (34):

- (37) John will dance and MARY will ~~dance~~ too.
- (38) a. E = Mary will dance  
A = John will dance  
C = John will dance  
 $F(E) = \{\text{John will dance, Jerry will dance, Mary will dance, ...}\}$   
b. John will dance  $\in F(E)$   
 $\llbracket \text{John will dance} \rrbracket = \llbracket \text{John will dance} \rrbracket$   
 $\llbracket \text{Mary will dance} \rrbracket \neq \llbracket \text{John will dance} \rrbracket$

This correctly distinguishes (32) from (33) (repeated below as (39) and (41) respectively) because of the semantic equivalence that defines symmetric predicates.

- (39) John can marry Bill, but Bill SHOULDN'T ~~marry John~~. *symmetric*
- (40) a. E = Bill shouldn't marry John  
A = John can marry Bill  
C = Bill can marry John  
 $F(E) = \{\text{Bill shouldn't marry John, Bill should marry John, Bill can marry John, Bill can't marry John, ...}\}$   
b. Bill can marry John  $\in F(E)$   
 $\llbracket \text{John can marry Bill} \rrbracket = \llbracket \text{Bill can marry John} \rrbracket$   
 $\llbracket \text{Bill shouldn't marry John} \rrbracket \neq \llbracket \text{John can marry Bill} \rrbracket$

- (41) \*John can invite Bill, but Bill SHOULDN'T ~~invite John~~. *non-symmetric*

- (42) a. E = Bill shouldn't invite John  
A = John can invite Bill  
C = Bill can invite John  
 $F(E) = \{\text{Bill shouldn't invite John, Bill should invite John, Bill can invite John, Bill can't invite John, ...}\}$   
b. Bill can invite John  $\in F(E)$   
 $\llbracket \text{John can invite Bill} \rrbracket \neq \llbracket \text{Bill can invite John} \rrbracket$   
 $\llbracket \text{Bill shouldn't invite John} \rrbracket \neq \llbracket \text{John can invite Bill} \rrbracket$

#### 4.2 Semantic Equivalence is Too Weak

We are skeptical that semantic equivalence is strong enough for argument structure shifts of this kind. Consider for example active-passive mismatches. Stockwell's system correctly predicts the following example to be well-formed:

- (43) ?Someone might show the solution to you, but (in all likelihood,) it WON'T be ~~shown to you~~.
- (44) a. E = it won't be shown to you  
A = someone might show the solution to you  
C = it might be shown to you  
 $F(E) = \{\text{it won't be shown to you, it might be shown to you, it will be shown to you, ...}\}$   
b. it might be shown to you  $\in F(E)$   
 $\llbracket \text{it might be shown to you} \rrbracket = \llbracket \text{someone might show the solution to you} \rrbracket$   
 $\llbracket \text{it won't be shown to you} \rrbracket \neq \llbracket \text{someone might show the solution to you} \rrbracket$

However, by the same token, an active-passive mismatch involving a switch from a prepositional dative to a double object is predicted to be equally well-formed:

- (45) \*Someone might show the solution to you, but (in all likelihood,) you WON'T be ~~shown the solution~~.
- (46) a. E = you won't be shown the solution  
A = someone might show the solution to you  
C = you might be shown the solution

$F(E) = \{ \text{you won't be shown the solution, you will be shown the solution, you might be shown the solution, ...} \}$

b. you might be shown the solution  $\in F(E)$

$\llbracket \text{you might be shown the solution} \rrbracket = \llbracket \text{someone might show the solution to you} \rrbracket$

$\llbracket \text{you won't be shown the solution} \rrbracket \neq \llbracket \text{someone might show the solution to you} \rrbracket$

We think there has to be something more syntactically parallel between the antecedent VP and the elided VP. Active VPs can be the antecedents to passive VPs because they are both semantically and syntactically parallel (under the right theories of passive).

(47) ?Someone should have emptied it, but it wasn't emptied.

(48) a. E = it wasn't emptied

A = someone should have emptied it

C = it should have been emptied

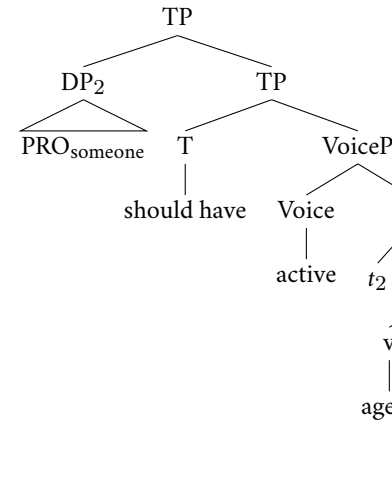
$F(E) = \{ \text{it wasn't emptied, it might be emptied, it should have been emptied, ...} \}$

b. it should have been emptied  $\in F(E)$

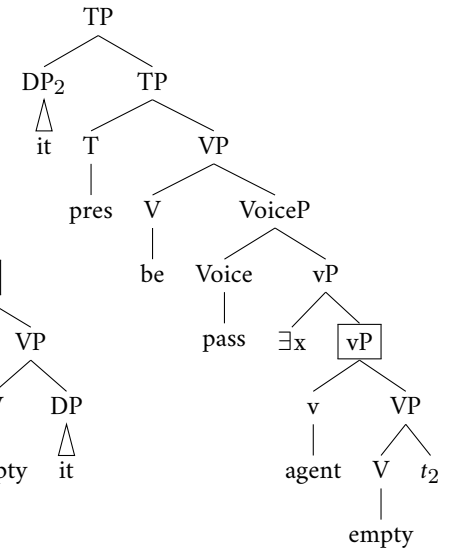
$\llbracket \text{it should have been emptied} \rrbracket = \llbracket \text{someone should have emptied it} \rrbracket$

$\llbracket \text{it wasn't emptied} \rrbracket \neq \llbracket \text{someone should have emptied it} \rrbracket$

(49)



(50)



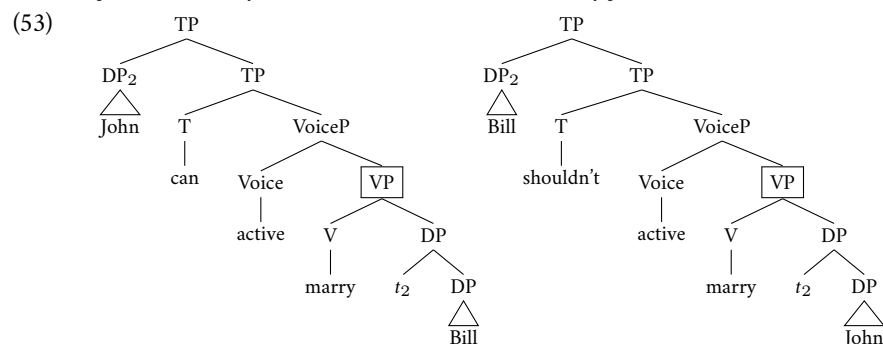
(Note: We must treat the trace of *it* as syntactically equivalent to *it*. See Merchant (2013).)

We propose to replace Stockwell's condition in (34) by (51) (see also Johnson and van Craenenbroeck (2023)):

(51) Let E be a phrase that contains an elided VP,  $\epsilon$ , and A be some other phrase in the discourse that contains VP,  $\alpha$ .  $\epsilon$  **must syntactically match**  $\alpha$ , and there must be C such that  $C \in F(E)$  and  $\llbracket C \rrbracket = \llbracket A \rrbracket$  and  $\llbracket E \rrbracket \neq \llbracket A \rrbracket$

Under our account, symmetric predicates do not run afoul of the syntactic identity requirement expressed by (51).

(52) John can marry Bill, but Bill SHOULDN'T marry John.



Note that if the trace of *Bill* and *John* are syntactically equivalent to *Bill* and *John*, respectively, then the boxed VPs in (53) are syntactically matched.

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