



1. Introduction

Facts

- Serial Verb Constructions (SVCs) occur in many languages, e.g. SOV Japanese (and Korean), and even English, e.g. *come/go see, go fly a kite, pray tell* (Zwicky 1990).
- According to Aikhenvald (2018:249), SVCs are found in more than two-thirds (most!) of the world's languages.
- Japanese SVCs are productive, compositional and non-compositional (idiomatic) meanings are possible across both transitive and intransitive verb types.
 - Cf. the Compound Verb Lexicon, Nishiyama 2008 and references therein.
- SVC verbs share argument structure.
 - SVCs with an aspectual V2, e.g. *tabe-oeu* 'eat-finish', don't share argument structure.

Research Questions

- Are SVCs part of core language? (Ideally, yes.)
- If so, how are they formed and how are they labeled? (Ideally, use existing mechanisms only.)
- What happens if we simply stack verb theta structures together?

2. Proposal

Basic Assumptions

FormCopy (FC): establish a copy relation between two (c-commanding) **identical inscriptions** via Minimal Search (adapted from Chomsky 2021).

Labeling Theory (Chomsky 2013, 2015):

- $\{X, YP\} \rightarrow \text{Label} = X$
- $\{XP_F, YP_F\} \rightarrow \text{Label} = \text{shared } F$
- $\{XP, YP\} \rightarrow \text{Unlabeled (without shared features)}$
- $\{XP, \{Z, \{XP, YP\}\}\} \rightarrow \text{Label of } \{X\} \text{ is the label of } YP$

Proposal

- Suppose SVCs are formed by (Theta) Merge only.
 - An alternative proposal, use FormSet (Chomsky, In press).
- Merge: Combine X and Y to form object $\{X, Y\}$, X & Y from Workspace, or Y a term of X (Chomsky 2001, etc.).
- Theta Merge builds theta configurations (External Merge, Duality of Semantics) (Chomsky 2007, 2021).
- Argument sharing between theta configurations made possible by FormCopy.

(1) Mari-ga Taro-o osi-taosi-ta
 M.-Nom T.-Acc push-topple-Pst
 'Mari toppled Taro by pushing him.'
 (Adapted from Nishiyama 1998:185)



Figure 1: Transitive v*P Figure 2: Transitive v*P

Labeling Failure

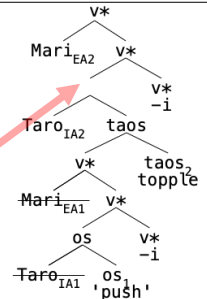


Figure 3: SVC structure

- (2) John persuaded Bill to leave. (Chomsky 2021:24)
- Persuade* takes two complements (Chomsky 1975, 2021)
 - Bill*
 - Bill to leave*
 - There are two separate NPs *Bill*, which each get a separate theta-role.
- (3) John persuaded Bill₁ that he₁ should leave.
- Idioms
- (4) a. John thought the cat got Bill's tongue. [idiomatic]
 b. IJohn persuaded the cat to get Bill's tongue. [non-idiomatic] (see Radford 2009 for similar examples)

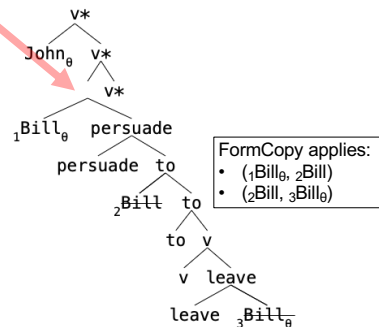


Figure 4: Persuade Double-complement structure

- Chomsky (1975, 2021) indicates that there is a verb-complement relation between ${}_1\text{Bill}_\theta$ and the verbal complex *persuade-to-leave*.
- Evidence for verbal complexes is related to "heavy selectional restrictions" (Chomsky 1975:505). *Persuade*, combined with its complement, determines verb-object selectional restrictions.
- (5) *I persuaded him to bleed/hear/be happy.
- The position of ${}_1\text{Bill}_\theta$ is also motivated by binding facts. Binding of the object (IA) is possible.
- I persuaded myself to leave.
- Passivization of *Bill* is possible.
- Bill was persuaded to leave.
- Modify Labeling Theory as follows:
- (8) $\{XP, YP\}$ has label Z if YP is a verbal complex Z.
- In Fig. 5, *persuade-to-leave* is a verbal complex that can label and takes ${}_1\text{Bill}_\theta$ as a complement.
- Similarly, in Fig. 6, the verbal complex *osi-i-taosu* 'push-topple' labels and takes Taro_{IA2} as a complement.
- $\{{}_1\text{Bill}_\theta, \text{persuade-to-leave}\}$ and $\{\text{Taro}_{\text{IA2}}, \text{osi-i-taos}\}$ are successfully labeled as $\{XP, Y\}$ structures.

We note some further parallels between *persuade-to-leave* and *osi-tao*:

- Passivization is possible with SVCs.
- (9) **Taro-ga** Mari-ni osi-taos-are-ta
 T-Nom M-by push-topple-Pass-Pst
 'Taro was pushed down by Mary.'
- Binding of object (IA) is also possible.
- (10) Ken-ga zibun-zisin-o arai-kiyome-ta.
 K-Nom myself-Acc wash-clean-Pst
 'Ken purified himself.'

This FormCopy analysis also applies straightforwardly for:

- transitive-intransitive SVCs: *uki-sasaru* 'poke-get stuck'
- intransitive-transitive SVCs like *yoi-tubusu* (get.drunk-crush) 'get wasted'

3. Conclusions

- We overcome problems inherent in standard analyses which rely on *ad hoc* lexical or syntactic processes that alter the thematic structures of verbs.
- Kageyama (1993) proposes that SVCs such as *osi-taosu* 'push-topple' are formed in the lexicon, which requires special, i.e. construction-particular, versions of V1 and V2 θ -configurations, complicating the theory.
- Both Nishiyama (1998) and Saito (2016) propose syntactic analyses in which a transitive SVC has a single EA θ -position
 - Nishiyama proposes a separate IA θ -position with PRO as the lower IA.
 - $\{EA, \{IA_i, \{\{PRO_i, V1\}, V2\}\}, \text{Tr}(\text{active})\}\}$
 - Saito proposes a V1-V2 verb complex that jointly selects for an IA.
 - $\{IA, \{V1, V2\}\}$
- We propose that verbs retain their original argument structure in SVCs. This accords with the optimal conditions of the Minimalist Program, the Strong Minimalist Thesis (Chomsky 2000, 2001).
- The Strong Minimalist Thesis (SMT) (Chomsky 2000, 2001, and subsequent work) states that language makes optimal use of the new functionality enabled by some minor rewiring of the brain.
- We provide evidence that our analysis is on the right track because the same syntax processes seem to apply in the English complex-predicate case as in the Japanese SVC.
- Remaining questions:
 - Is this the simplest possible theory to account for SVCs? (Perhaps.)
 - Why don't all languages have SVCs?

Labeling Success

Figure 5: verbal complex *persuade-to-leave*

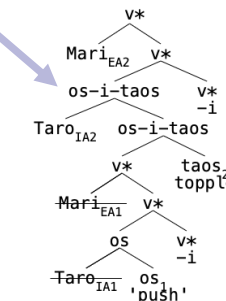


Figure 6: SVC *osi-taos*

- Two transitive verbs combine
- The verbs are stacked
- FormCopy applies:
 - $(\text{Mari}_{\text{EA2}}, \text{Mari}_{\text{EA1}})$
 - $(\text{Taro}_{\text{IA2}}, \text{Taro}_{\text{IA1}})$

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