

An Adjunction Analysis of Extraction from Coordinate Structures in English

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1. Introduction: True Coordination?

(1) 等位構造制約 Coordinate Structure Constraint (CSC)

In a coordinate structure, no conjunct may be moved, nor may any element contained in a conjunct be moved out of that conjunct.

(Ross (1967:161))

(2) CSC の違反

- a. * What sofa will he put the chair between some table and ____?
- b. * What table will he put the chair between ____ and some sofa?

(Ross (1967:158))

・True Coordination? ~意味の観点から~

(3) CSC の反例 I (VP coordination)

- a. What did Harry go to the store and buy ____?
- b. How much can you drink ____ and still stay sober?

(Lakoff (1986:152))

(4) CSC の反例 II (IP coordination)

- a. Big Louie sees this mess and who's going to be in trouble?
- b. You so much as mention the Minimalist Program and how loud does she scream?

(Culicover and Jackendoff (1997:210))

・True Coordination? ~統語範疇の観点から~

- (5) If S1 and S2 is grammatical sentences, and S1 differs from S2 only in that X appears in S1 where Y appears in S2 (i.e., S1=...X...and S2=...Y...), and X and Y are constituents of the same type in S1 and S2, respectively, then S3 is a sentence, where S3 is a result of replacing X by X + and + Y in S1 (i.e., S3=...X + and +Y...).

(Chomsky (1957:36))

- (6) a. Pat is a Republican and proud of it. (Sag et al. (1985:118))
- b. Bill could be a plumber and making a fortune. (Peterson (2004:647))
- c. Danny became a political radical and very antisocial.

(Bruening and Al Khalaf (2020:1))

(7) CSC の反例 III (Mismatching Category Coordination)

- a. What town is Bill a plumber of ____ and making a fortune?
- b. What did Danny become ____ and very antisocial?

(8) 提案

Syntax には 2 つの統語主要部 Conj_[PURE] と Conj_[SUB]が存在する。¹

- ・ Conj_[PURE]: 各等位項が island (島)を形成する(cf. Huang (1982))。

→ CSC の対象 (e.g., (2))

- ・ Conj_[SUB]: 付加構造を形成する。(SUB: subordination)

→ 非対称性を示すタイプに関与 (e.g., (3), (4), (6))

(9) 主張

- ・ (3), (4), (6)は付加構造である。

→ Ross (1967)の CSC や Chomsky (1957)の等位項に係る一般化への反例は、実際には反例といえない。

- ・ 解釈要請が統語構造に影響をもたらす。

→ Chomsky (2023)を支持する分析である。

[T] All relations and structure-building operations (SBO's) are thought-related, with semantic properties interpreted at CI.

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¹ 等位接続が従属の関係を表わすこと (cf. Postal (1998))や、等位構造が統語構造上付加構造であるということ (cf. Munn(1993))は従来指摘されている。本発表が他と異なる点は、等位接続詞 *and* として具現する主要部が 2 種類存在し、それぞれ異なる統語構造を形成すると主張することである。

2. Model and Application

2.1. Model

(11) $\text{Conj}_{[\text{PURE}]}$ が形成する等位構造


$$[_{XP} \textit{island} XP [_{\text{Conj}[_{\text{PURE}}]} [_{YP} \textit{island} YP]]]$$

(12) $\text{Conj}_{[\text{PURE}]}$ タイプの等位構造からの抜き出し

- a. * What sofa will he put between the chair and ? (=2a)

[_{CP} what sofa will [_{IP} he put between [_{NP} the chair [_{Conj}[_{PURE}] [_{NP} island <what sofa>| | | |]?]

- b. * What table will he put the chair between and some sofa? (=2b))

[_{CP} what table will [_{IP} he put the chair between [_{NP} *Island* <what table> [_{Conj}[_{PURE}]]
 [_{NP} some sofa]]]]? 

(13) $\text{Conj}_{[\text{SUB}]}$ が形成する等位構造²

- a. $[_{XP} [_{XP} XP] [_{Conj}_{[SUB]} [_{YP} YP Adjunct]]]$
- b. $[[_{XP} XP Adjunct] [_{Conj}_{[SUB]} [_{YP} [_{YP} YP]]]]$

2.2. Lakoff (1986)

(14)CSC の反例 I ((3)の再掲)

- What did Harry go to the store and buy ___?
- How much can you drink _____ and still stay sober?

(15) Scenario (Lakoff (1986))

Type A: “the sequence of events fits normal conventionalized expectations.” = (14a)

Type B: “a conventionalized expectation is violated.” = (14b)

² 厳密には, $\text{Conj}_{[\text{SUB}]}$ と第 2 等位項 / 第 1 等位項と $\text{Conj}_{[\text{SUB}]}$ で付加部を形成する。しかし以下では, 表記の明確さの観点から, 前者の場合は第 2 等位項, 後者の場合は第 1 等位項に *Adjunct* 表示をする。

• Type A scenario

(16) 第 1 等位項からの抜き出し不可能

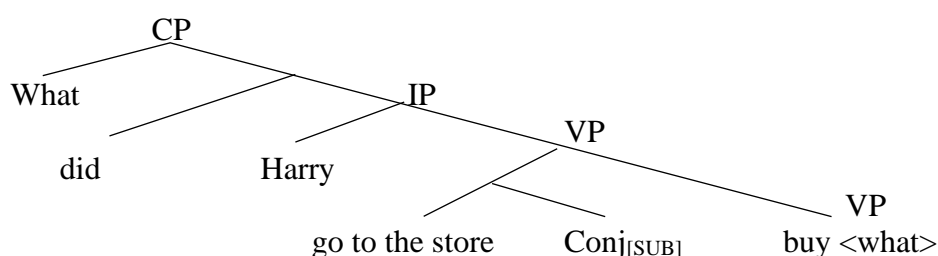
- a. He ate 26 spring rolls and felt satisfied.
 b. * How big a meal did he eat and feel satisfied?

(Lakoff (1986:154))

(17) Type A の統語構造


[CP [IP [[VP *Adjunct* [Conj_[SUB] [VP [VP ...](18) [CP what did [IP Harry [[VP go to the store] [Conj_[SUB] [VP [VP buy <what>]]]]]]]? (= (14a))

(19)



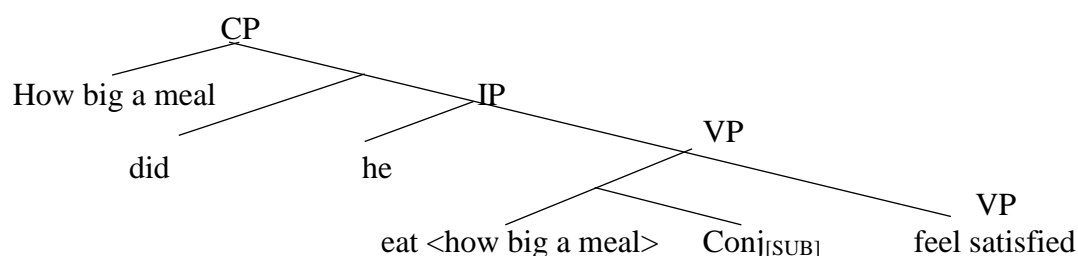
(20) 付加部を超える移動

- a. Which program, eating sandwiches, did he watch ____ ?
 b. Who, walking along the street, did you happen to meet ____ ?
 c. What animal, which is found in Japan, do you like ____ ?
 d. Which movie, which is famous around the world, did you watch ____ ?

(21) * [CP How big a meal did [IP he [[VP eat <how big a meal> *Adjunct*] [Conj_[SUB] [VP [VP feel satisfied]]]]]]]? 

(=(16b))

(22)



(23) 付加部からの抜き出し Adjunct Condition (cf. Huang (1982))

a. * Who did John come back, before I had a chance to talk to ____?
(Huang (1982:487))

b. * Who did Susan watch TV while talking to ____ on the phone?
(Phillips (2013:67))

・Type B scenario

(24) How much can you drink ____ and still stay sober? (= (14b))

(25) The Final Conjunct Constraint

Only scenarios of Type B permit there to be no extraction from the final conjunct.
(Lakoff (1986:154))

(26) 抜き出しが生じる等位項による解釈の違い

- a. What kind of herbs can you eat ____ and not get cancer?
(Implication: Eating herbs would lead to getting cancer)
- b. What forms of cancer can you eat herbs and not get ____?
(Implication: Eating herbs can lead to not getting cancer)
- (Lakoff (1986:154))

(27) 第 2 等位項の解釈

- a. How much milk can you drink ____ and still feel OK?
- b. How much milk can you drink ____ if you want to still feel OK?
- c. How much milk can you drink ____ before you stop feeling OK?
(Altshuler and Truswell (2022:163))

(28) Type B の統語構造

[_{CP} [_{IP} [_{VP} [_{VP}] [_{Conj}[_{SUB}] [_{VP} *Adjunct*] ...]

[_{CP} How much can [_{IP} you [_{VP} [_{VP} drink <how much>] [_{Conj}[_{SUB}] [_{VP} still stay
sober *Adjunct*]]]]]? (= (14b))

2.3. Culicover and Jackendoff (1997)

(29) CSC の反例 II ((4)の再掲)

- a. Big Louie sees this mess and who's going to be in trouble?
- b. You so much as mention the Minimalist Program and how loud does she scream?

(30) Left-Subordinating Coordination (LSC)

- a. You drink another can of beer_{LS} and I'm leaving.
 b. Big Louie sees you with the loot_{LS} and he puts out a contract on you.
 (Culicover and Jackendoff (1997:197-198), with slight modifications)

(31) LSC の解釈

- a. If you drink another can of beer, I'm leaving.
 b. If Big Louie sees you with the loot, he'll put out a contract on you.
 (cf. Culicover and Jackendoff (1997:197-198))

- (32) a. If Big Louie sees this mess, who's going to be in trouble?
 b. If you so much as mention the Minimalist Program, how loud does she scream?

(33) 等位項の範疇について (IP-IP Coordination であるという根拠)

- a. You know, of course, that you drink one more beer and that you get kicked out.
 (≠...that if you drink one more beer you get kicked out.)
 b. Big Louie sees you with the loot and puts out a contract on you.
 (≠ If Big Louie sees you with the loot, he puts out a contract on you.)
 (Culicover and Jackendoff (1997:198))

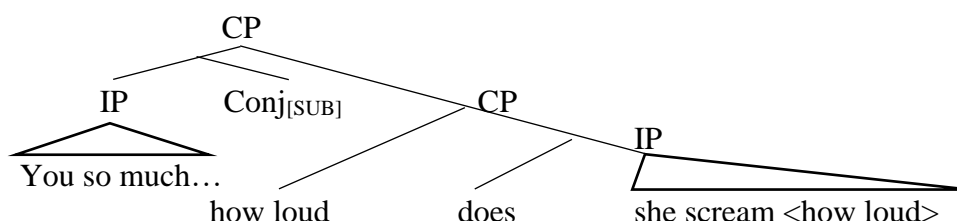
(34) 本発表の枠組みでは, Conj_[SUB]が生じる環境において, 等位項の範疇が同一である必要は無い (詳しくは次節を参照)。³

(35) LSC の統語構造 (IP-CP Coordination)

[_{IP} *Adjunct* [_{Conj}_[SUB] [_{CP} [_{CP} ...]]]]

- (36) [_{IP} You so much as mention the Minimalist Program *Adjunct* [_{Conj}_[SUB] [_{CP} [_{CP} how loud does [_{IP} she scream <how loud>]]]]]? (= (29b))

(37)



³ (29a)では, 第 2 等位項の主語が *wh*-句となっている。よって, Vacuous Movement Hypothesis (VMH) (cf. Chomsky (1986), 議論については Sakamoto (2013)等も参照)のもとでは, 当該 *wh*-移動は LF まで先延ばしにされるため, CSC に違反しない例だといえる。しかし, VMH 自体が現在でも議論の対象となっているため(e.g., Bošković (2024)) 詳細は考慮せず, 本発表では *wh*-句は全て統語内で CP 領域まで上昇すると考える。

(38) 第 1 等位項からの抜き出し

- a. Big Louie sees you with the loot _{LS} and he puts out a contract on you. (= (30b))
 b. * What does Big Louie sees you with ____ and he puts out a contract on you?

(39) 全域的規則適用 Across the Board Rule Application (ATB)

- a. Who John saw ____ and Bill hit ____? (Williams (1978:31))
 b. Who do Democrats love ____ and Republicans hate ____? (Goldsmith (1985:134))

(40) LSC における ATB 移動

- a. You just point out the thief _{LS} and we arrest her on the spot.
 b. ?? This is the thief that you just point out ____ and we arrest ____ on the spot.
 (Culicover and Jackendoff (1997:206))

(41) 考えられる要因

第 1 等位項(you just point out __)からの抜き出し

→ Adjunct Condition の違反であり, 非文法的である。

第 2 等位項(we arrest __ on the spot)からの抜き出し

→ 主節レベルの移動であり, 文法性に影響をもたらさない。

⇒ 文法性を下げる移動と, 文法的である移動間の文法性の競合か?

(42) まとめ

- ・ 意味的な非対称性を生み出す等位構造は Conj_[SUB]が形成する付加構造である。
- 付加部となっている等位項からの抜き出しはできないが, 主節の一部を形成する等位項からの抜き出しは可能である。
- ⇒ Ross (1967)の CSC は“等位構造”に対する制約のため, 本節で扱った例文は CSC の反例とはいえない。

3. Consequences

3.1. Category Mismatches in Coordination

(43) 統語範疇の非対称性 ((6)の再掲)

- a. Pat is a Republican and proud of it. (Sag et al. (1985:118))
 b. Bill could be a plumber and making a fortune. (Peterson (2004:647))
 c. Danny became a political radical and very antisocial.
 (Bruening and Al Khalaf (2020:1))

(44) 修飾部としての第 2 等位項 I ((43b)との比較)

- a. ??? Bill could be a plumber and playing soccer in the park.
 b. ??? Bill could be a plumber and on the roof.

(45) 同一の範疇が等位接続された場合の解釈関係

- a. Bill could be a plumber and a journalist.
(Intended: Bill works as a plumber and a journalist)
- b. Bill could be in the park and on the roof.
(Intended: Bill could be sometimes in the park and sometimes on the roof.)

(46) 修飾部としての第 2 等位項 II

- a. Bill could be a plumber and making a fortune. (= (43b))
- b. ??? Bill could be making a fortune and a plumber.
- c. I consider that a rude remark and in very bad taste. (Sag et al. (1985:117))
- d. ??? I consider that in a very bad taste and a rude remark.

(47) 動詞の範疇選択について

- a. Danny became a political radical and very antisocial.
- b. * Danny became a political radical and under suspicion.
(*become* selects NPs and APs but not PPs)
- c. The sergeant made the guards alert and better marks man.
- d. * The sergeant made the guards alert and on top of the wall.
(*make* selects NPs and APs but not PPs)
(Bruening and Al Khalaf (2020:7-8))

(48) 範疇の異なる等位構造に対する従来の分析

- ・ (43) のような等位構造は[Pred]素性を共有することで認可される(e.g., Sag et al. (1985))。
- ・ 各等位項が範疇選択制限を満たしていなければならない(e.g., Hashimoto (2024))。
- ・ 各等位項が[Pred] のような素性を共有した上で、範疇選択制限を満たしていなければならない(e.g., Bruening and Al Khalaf (2020))。
- ・ 第 1 等位項のみが範疇選択を満たす必要があり、等位項間の意味関係が等位構造の認可に影響する(Zhang (2010, 2023))。

本発表では、Zhang (2010, 2023) の考え方を支持する。⁴

(49) 本発表の枠組みにおける統語構造

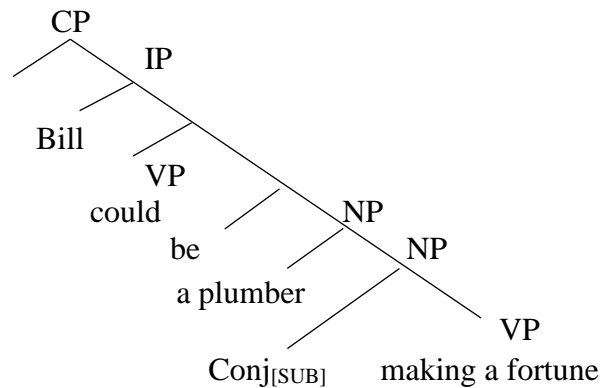
[_{XP} [_{XP} XP (Conj1)] [_{Conj}[_{SUBJ}] [_{YP} YP (Conj2)]]]

⁴ 厳密には、本発表と Zhang の間には明確な差がある。Zhang は全ての等位構造が同一の構造を共有し、実際の等位構造の認可には意味・処理上の要件(Relativized Parallelism Requirement)がかかるとする。第 1 等位項のみが選択制限を満たす必要がある点と、等位項間の意味関係を重視する点は同じだが、本発表では、範疇の異なる等位構造が通常の等位構造とは異なり付加構造を形成すると主張する(脚注 1 も参照)。

(50)(43b)の統語構造

[_{CP} [_{IP} Bill could be [_{NP} [_{NP} a plumber] [_{Conj}_[SUB] [_{VP} making a fortune *Adjunct*]]]]].

(51)



(52)第 1 等位項からの抜き出し

- a. What town is Bill a plumber of ____ and making a fortune?
- b. What did Danny become ____ and very antisocial?

(=(7))

(53)第 2 等位項からの抜き出し

- a. * What is Bill a plumber and making ____?
(Intended: Bill is making a salary/wage/fortune)
- b. * How much did Danny become a political radical and ____ antisocial?

(54)抜き出しに対する異なる振る舞いの要因

- a. [_{CP} What town is [_{IP} Bill [_{NP} [_{NP} a plumber of <what town>] [_{Conj}_[SUB] [_{VP} making a fortune *Adjunct*]]]]]? (=(52a))

- b. * [_{CP} What is [_{IP} Bill [_{NP} [_{NP} a plumber] [_{Conj}_[SUB] [_{VP} making <what> *Adjunct*]]]]]? (=(53a))

(55)第 2 等位項は第 1 等位項に対する付加部であり, 第 1 等位項を修飾する。

(56)範疇選択のデータ((47))に対する説明

- a. Danny became a political radical and very antisocial.
- b. * Danny became a political radical and under suspicion.
(become selects NPs and APs but not PPs)

- c. The sergeant made the guards alert and better marks man.
- d. * The sergeant made the guards alert and on top of the wall.
(*make* selects NPs and APs but not PPs)

- ・ (56a/b): (56a)では、第 2 等位項の *very antisocial* “非常に反社会的である” は第 1 等位項の *a political radical* “政治的な急進派” と意味的な関連があるのに対し、(56b)においてそのような関連性が確認できない(*a political radical* と *under suspicion* “容疑がかけられている”間の意味的な繋がりが無い)。

(57) 修飾部としてのステータス>統語範疇

- a. Danny became a political radical and in a mood for action.
(Intended: Danny became a political radical, which is in a mood for action.)
- b. The sergeant made the guards alert to enemies and on top of the wall.
(Intended: The sergeant made the guards alert to enemies, thereby being put a top on the wall.)

- (58) 範疇の異なる等位構造は、第 2 等位項が第 1 等位項に付加する。そのため、範疇選択制限を満たす必要は無い。しかし、修飾部として、第 1 等位項と意味的な関連性をもたなければならない。

3.2. *Selectional Violation in Coordination*

(59) 等位構造における範疇選択違反

- a. You can depend on my assistant.
- b. * You can depend on that he will be on time.
- c. You can depend on my assistant and that he will be on time.
- d. We talked about Mr. Colson.
- e. * We talked about that he had worked at the White House.
- f. We talked about Mr. Colson and that he had worked at the White House.
(Sag et al. (1985:165))

(60) 修飾部としての第 2 等位項 I

- a. ??? You can depend on my assistant and that Mary will be on time.
- b. ??? We talked about Mr. Colson and that Mary had worked at the White House.

(61)修飾部としての第 2 等位項 II (cf. (59c))

- You can depend on my assistant and that he will be on time.
- You can depend on my assistant, who will be on time.
 - # You can depend on my assistant because he will be on time.
 - # You can depend on my assistant if he will be on time.

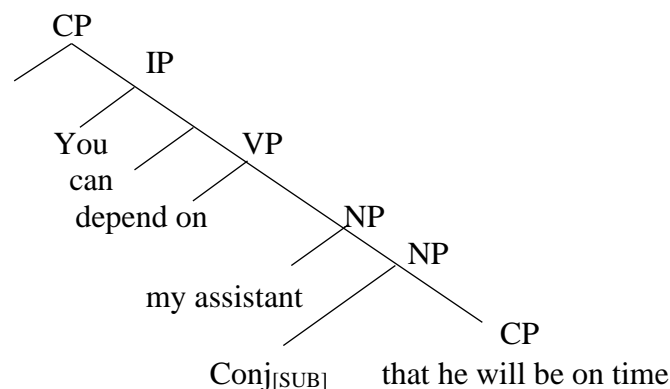
(62)修飾部としての第 2 等位項 III (cf. (59f))

- We talked about Mr. Colson and that he had worked at the White House.
- We talked about Mr. Colson, who had worked at the White House.
 - # We talked about Mr. Colson because he had worked at the White House.
 - # We talked about Mr. Colson after he worked at the White House.

(63)(59c)の統語構造

[_{CP} [_{IP} You can depend on [_{NP} [_{NP} my assistant] [_{Conj}_[SUB] [_{CP} he will be on time *Adjunct*]]]]].

(64)



(65)第 1 等位項からの抜き出し

- Who can you depend on ____ and that the man will be on time?
- Who did you talk about ____ and that the man had worked at the White House?

(66)第 2 等位項からの抜き出し

- * What time can you depend on my assistant and that he will be ____ ?
- * Which place did you talk about Mr.Colson and that he had worked at ____ ?

(67)(66a)に対する説明

[_{CP} What time can [_{IP} you depend on [_{NP} [_{NP} my assistant] [_{Conj}_[SUB] [_{CP} that he will be
 <what time> *Adjunct*]]]]]?



(68) Bruening and Al Khalaf (2020)⁵

- a. * She thinks that the world is flat and another discredited thing.
- b. * She hopes that the defending champs will win and a good result for the host country.

(Bruening and Al Khalaf (2020:16))

(69) Bruening and Al Khalaf (2020)に対する解答：第2等位項の非修飾部性

(68a): “世界が平らである”と“他の信憑性のないこと”

(68b): “防衛王者達が勝つ”と“開催国への良い影響”

(70) 根拠

- a. She thinks that the world is flat and a certainty.
(Intended: She thinks that the world is flat, which is certain.)
- b. ? She hopes that the defending chumps will win and a certainty.
(Intended: She hopes that the defending chumps will win, which is certain.)

(71) まとめ

範疇の異なる等位構造も、本発表が提案する Conj_[SUB] の観点から捉えることができる。

・範疇の異なる等位構造は、第2等位項が付加部として働き、修飾部として解釈される限り、第2等位項の範疇は文法性に影響しない。

・範疇選択を違反する等位構造だと指摘されてきたデータも、同様の枠組みで説明を与えることが可能である。

・Conj_[SUB]は付加構造を形成するため、正確には等位構造ではない。よって、Chomsky (1957)の一般化には該当せず、その妥当性を脅かす現象ではない。

4. Summary and Implications

(72) 等位接続詞 and として具現する統語主要部は Conj_[PURE] と Conj_[SUB] の2種類が存在する。

Conj_[SUB]は付加構造を形成する。よって、Ross の CSC の反例とされてきた Lakoff (1986)のデータ等は、反例といえない。同様の理由により、Sag et al. (1985)らが指

⁵ 当該文の非文法性は、従来格理論の観点で指摘されているが、本発表では立ち入らないこととする（詳しくは Oka (1986)等を参照）。

摘した範疇の異なる等位構造は, Chomsky の等位構造に対する一般化の妥当性を脅かすものではない。

(73)Chomsky (2023)

[T] All relations and structure-building operations (SBO's) are thought-related, with semantic properties interpreted at CI.

統語関係及び構造構築操作は, 全て C-I における解釈要請に沿ったものである。

“等位”を表わすのか, “修飾”を表わすのかという C-I の解釈要請によって, 統語内で用いる主要部 (Conj_[PURE] /Conj_[SUB]) が決定され, それに付随して統語構造や選択関係が変わる。

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