

Free adjunction and the distribution of Japanese *-to* adverbial clauses

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1. Introduction

- (1) Well-known fact in Japanese: *-to* as complementizer/quoter
- Control Clauses (Fujii 2006, Uchibori 2001)
 - Complement clauses (Kubo 1992)
 - Quotative clauses (Fukui 1995, cf. ReportP in Saito 2012, 2015)
- (2) Control Clauses (Fujii 2006, Uchibori 2001)
- Koi-wa [Δ_i Taro-no ie-ni ik-oo *(*to*)] si-ta.
Ko-Top Taro's house-Dat go.at-Int TO did
'*Ko tried to go to Taro's house.*'
 - Intervening Controller
*Karera-i-wa [Taro-ga [Δ_i otagai-o suisen si-a-u to]
they-Top Taro-Nom each other-Acc recommendation do-each-Pres TO
kime-ta to] omot-ta.
decide-Past TO think-Past
Lit. '*They thought that Taro decided to recommend each other.*'
 - Akira-i-wa [Kyoko-j-ga [$\Delta_{*i/j}$ eiga-o tukur-oo-to] si-ta to] omot-ta.
Akira-Top Kyoko-Nom movie-Acc make-Int-TOdo-Past TO think-Past
'*Akira thought that Kyoko attempted to make a movie.*'
- (3) Complement Clauses (Kishimoto 2006)
- Akira-wa [Kyoko-ga gakkai-no-kiboo-ni na-ru to] omotte i-ru.
Akira-Top Kyoko-Nom field-Gen-hope-Dat be-Pres TO think be-Pres
'*Akira thinks Kyoko will be a future star in the field.*'
 - The deletion of *-te* (a variant of *-to* observed in Kansai Japanese)
John-ga [[zibun-ga tansai-ya] te omotte-ru. [Complementizer Deletion]
John-Nom self-Nom genius-Copula TO think-Pres
'*John_i thought that he_i was a genius.*'
 - [[zibun-ga tansai-ya] *(te) John-ga omotte-ru.
 - It seemed [\emptyset David had left]. [C-Deletion] (Bošković and Lasnik (2003))
 - *It seemed at that time [\emptyset David had left].
- (4) Quotative Clauses (Saito 2012, 2015)
- Nobu-j-ga Kyoko-i-ni [e_i Tokyo-de watashi_{j/k}-ni a-e to] meiji-ta.
Nobu-j-Nom Kyoko-Dat Tokyo-at I-Dat meet-Imp TO order-Past
'*Nobu ordered Kyoko to meet him_j/me in Tokyo.*'
 - Nobu-j-ga Kyoko-ni [dare-ga watashi-j-ni syorui-o watas-u noka to]
Nobu-Nom Kyoko-Dat who-Nom I-Dat document-Acc hand-Pres Q TO
tazune-ta.
ask-Past
'*Nobu_j asked Kyoko who gave a document to him_j/me?*'

(5) Four Types of Japanese Adverbial Clauses introduced by *-to*

The adverbial clauses express quite diverse interpretations, showing the mysterious property of *-to* because the same particle heads embedded clauses with different functions.

i. Conditional adverbial clauses

a. [wakutin-ga hiromaru to] ooku-no hito-wa densenbyoo-ni kakar-anai.
vaccine-Nom spread-PresTO many-Gen people-Top infectious disease-Dat infected-not
'Once some vaccine spreads, many people are not subject to infectious diseases.' [generic]

b. [Sugimoto kyooju-ga daigaku-ni ko-nai to] gakusei-ga jugyoo-o sabot-ta.
Sugimoto professor-Nom university-Dat come-not TO student-Nom class-Acc skip-Past
'Whenever Prof. Sugimoto didn't come to university, students skipped classes.' [habitual]

ii. Temporal adverbial clauses

c. kyoo [watasi-ga daigaku-ni tuk-u to] gakusei-ga heya-no mae-de
today I-Nom university-Dat reach-Pres TO student-Nom room-Gen front-at
matte i-ru daroo.
wait be-Pres may

'Today, when I reach the university, a student will perhaps be waiting in front of my office.'

d. kimyoona koto ni [watasi-ga ie-o de-ru to] ootoo-ga denwa-o
Funnily I-Nom home-Acc leave-Pres TO brother-Nom phone-Acc
kake-ta
call-Past

'Funnily, after I left home, my brother phoned.'

iii. Purpose adverbial clauses

e. Kyokoi-wa [Δ_i daigaku-ni gookakusi-yoo *(to)] kenmei-nibenkyoo site i-ru.
Kyoko-Top university-Dat passing do-Int TO hard study do be-Pres
'Kyoko studied hard in order to pass an entrance exams for a university.'

f. Akirai-wa [$\Delta_{i,j}$ gakusei-ga siken-ni uka-ru-yooni to] jugyoo-o kun-da.
Akira-Top student-Nom exam-Dat pass-Pres-Int TO class-Acc arrange-Past
'Akira arranged classes in order (for students) to pass an exam.'

iv. Adverbial quotative clauses (Miyamoto 2016, Shimamura 2018)

g. Kyoko-ga [Shogo-ga Doraemon-no eiga-ni mi-ni itte i-ru to]
Kyoko-Nom Shogo-Nom Doraemon-Gen movie-Dat see go be-Pres TO
eigakan-de kare-o sagasimawat-ta.
box office-at he-Acc look for around-Past

'Kyoko looked for Shogo at a box office, saying 'Shogo went to see a Draemon movie.'''

(6) Additional facts on *-to*

i. XP-*to* can appear in a wide variety of syntactic environments with different functions.

a. Nominal complements and clausal complements of predicates

b. Predicates of small clauses

c. Adverbial clauses (5)

d. Adjunct Adverbs

e. Adjunct nominals with a comitative marker

ii. In previous literature suggests *-to* has other usages than (1) & (5).

a. Postposition (cf. Fukui 1986)

b. Adjunct clitic attached to adverbials (Shimamura 2018)

c. Coordinator (Kasai and Takahashi 2002)

- (7) Proposal
- i. *-to* is a syntactic linker, lacking not only semantic content but any category feature.
-to [CATEGORY 0]
 - ii. The Labeling Algorithm LA: $\{\alpha, XP\}$
-to: head in $\{-to_{[0]}, XP\}$
 → LA determines the label of $\{-to, XP\}$ based on the categorial feature of *-to*, generating an unlabeled structure $\{\emptyset -to_{[0]}, XP\}$.
- (8) An unlabeled structure dims search. (cf. Goto 2016)
 Search cannot apply to internal structures of unlabeled objects.
 → Y is always selected as label in $\{\{\emptyset -to_{[0]}, XP\}, \{\underline{Y}. ZP\}\}$, which results in $\{Y \{\emptyset -to_{[0]}, XP\}, \{\underline{Y}. ZP\}\}$
 → This prevents any search into internal structures of unlabeled objects in narrow syntax. That is, no syntactic operation can apply to SOs within unlabeled objects, which literary making these SOs frozen within unlabeled structures, placing them in the secondary plane (Chomsky (2004)).
- (9) Free Adjunction is always possible when an uncategorized head is merged with XP, because unlabeled structures reject search due to (8), which allow LA to fix the label in a designated way, namely, a label of a main syntactic structure.
- ☺ This explains why *-to* functions as a syntactic linker. Its uncategorized status leads to free adjunction.

2. More on adverbial clauses

- (10) Adverbial quotative clauses
- i. No selectional relationship
 Adverbial quotative clauses introduced by *-to* can appear even if matrix predicates never need embedded clauses semantically (cf. Miyamoto 2016, Shimamura 2018).
 - ii. Strongly oriented to direct discourse (cf. Shimamura 2018)
 - a. Akirai-wa [orei-wa omaej-ga nikui-da to] Renj-ni nabe-o nage-ta.
 Akira-Top I-Top you-Nom hate TO Ren-Dat pot-Acc threw
 ‘Akira threw a pot to Ren, saying ‘I hate you.’
 - b. Kyokoi-wa, [[watashi/oirai/*j]-ga kin medaru-o to-ru to] Pari-ni tabidat-ta
 Kyoko-Top I-Nom gold medal-Acc get-Pres TO Paris leave-Past
 ‘Kyokoi left for Korea, saying ‘I will get the gold medal.’
 - c. Akirai-wa [yoshi, boku/*j-ga tsuki-o sukutte ya-ru-yo to] hasiri dasi-ta.
 Akira-TopOk I-Nom moon-Acc rescue do-Int TO run started
 ‘Akira started to run, saying ‘Ok, I’ll protect the moon.’
- (11) Pure adjunct properties of Adjunct quotative clauses
- i. No extraction possible
 - ii. Long-distance wh-question – unavaibale
 - iii. Anaphor binding impossible from a matrix subject (cf. Saito 2022)
 - iv. NPI Licensing
- (12) No extraction Possible
- a. *Doraemon-no eiga-ni Kyoko-ga [Shogo-ga t_1 itte i-ru to] eigakan-de kare-o sagasimawat-ta. (5g)

- b. *Tsuki-o₁ Akirai-wa [boku-ga t_1 sukutte ya-ru-yo to] hasiri dasi-ta. (10c)
- c. Taro-no ie-ni₁ Ko_i-wa [Δ_i t_1 ik-oo **to**] si-ta. (2a)
- d. gakkai-no-kiboo-ni Akira-wa [Kyoko-ga t_1 na-ru to] omotte i-ru. (3a)
- e. ?Syorui-o₁ Nobu_i-ga Kyoko-ni [dare-ga Yushi-ni t_1 watas-u noka to] tazune-ta. (4b)
- cf. Doraemon-no eiga-ni₁ Kyoko-ga [Shogo-ga t_1 itte i-ru to] itte (*saying*), (12a)
eigakan-de kare-o sagasimawat-ta.
- (13) Long-distance wh-question
- a. *Kyoko-ga [Shogo-ga doko(where)-ni itte i-ru to] kare-o sagasimawat-ta-no (Q)?
Lit. 'Where did Kyoko look for him, saying 'Shogo is t_1 ?''
- b. *Akirai-wa [ore_i-wa dare (who)-ga nikui-da to] nabe-o nage-ta-no (Q)?
Lit. 'Who₁ did Akira threw a pot, saying 'I hate t_1 ?''
- c. *Kyoko_i-wa, [[watashi]-ga nani (what)-o to-ru to] Pari-ni tabidat-ta-no (Q)? (10b)
Lit. 'Kyoko_i left for Korea, saying 'I will get t_1 ?''
- d. Ko_i-wa [Δ_i Taro-no doko (where)-ni ik-oo *(**to**)] si-ta-no (Q)?
'Where did Ko try to go t_1 ?''
- e. Akira-wa [Kyoko-ga nani (what)-ni na-ru to] omotte i-ru-no (Q)?
'What do Akira think Kyoko will be a t_1 ?''
- f. Nobu_j-ga Kyoko_i-ni [e_i doko (where)-de watashi_{j/k}-ni a-e to]meiji-ta-no (Q)?
'Where Nobu order Kyoko to meet him_i/me t_1 ?''
- cf. Kyoko-ga [Shogo-ga doko-ni itte i-ru to] itte (*saying*) kare-o sagasimawat-ta-no?
- (14) Anaphor Binding (Saito 2022)
- a. *Kyoko_i-wa, [**zibunzishin (self)**_i-ga kin-o to-ru to] Paris-ni tabidat-ta.
- b. Akirai-wa [zibunzishin (self)_i-ga gakkai-no kiboo-ni na-ru to] omotte i-ru.
- c. ?Nobu_j-ga Kyoko-ni [**zibunjshin (self)**_i-ga Chomsky-ni syorui-o watas-u noka to] tazune-ta.
Lit. 'Nobu_i asked Kyoko whether he_i gave a document to Chomsky'.
- (15) NPI License
- a. Taro-wa [_{v*P} dare-mo seme]-nakat-ta.
Taro-Top who- \forall blame-not-Past
'Taro didn't blame anyone.'
- b. *Akirai-wa [ore_i-wa dare-mo (anyone) nikui-da to] nabe-o nage-**nakat**-ta.
- c. Akira-wa [dare-mo gakkai-no-kiboo-ni na-ru to] omotte i-**nai**.
Lit. 'Akira doesn't think anyone will be a future star in the field.'
- d. Ko_i-wa [Δ_i dare-ni-mo a-oo to] si-**nakat**-ta.
-Top who-Dat- \forall meet-Int TO do-not-Past
'Ko didn't try to meet anyone.'
- (16) Adjunct properties of Adjunct adverbial clauses
- i. No extraction possible
- ii. NPI Licensing
- (17) No extraction possible
- a. *daigaku-ni₁ saisyuu nendo, [Sugimoto kyooju-ga t_1 ko-nai to]
university-Dat last academic year Sugimoto professor-Nom come-not TO
gakusei-ga jugyoo-o sabot-ta.
student-Nom class-Acc skip-Past (5b)

'In their last academic year, whenever Prof. Sugimoto didn't come to university, students skipped classes.'

b. *ie-o₁ kimyoona koto ni [watasi-ga t₁ de-ru to]otooto-ga denwa-okake-ta. (5d)

c.??daigaku-ni₁ Kyoko_i-wa [Δ_i t₁ gookakusi-yoo to]kenmei-ni benkyosite i-ru. (5e)

(17) NPI license

a. *[dare-mo] (anyone) daigaku-ni ku-ru (come)to] gakusei-ga jugyoo-o sabor-anaka-ta.

Lit. 'Students didn't skip classes, whenever no one came to university.'

b. *Ootoo-wa (Top) [dare-mo] (anyone) ie-ni i-ru (stay) to] denwa-o kak-enaka-tta.

Lit. 'My brother never made a call, when no one stay home.'

c. *Akira-wa [dare-mo(-ga)] (anyone) siken-ni uka-ru-yooni to]jugyoo-o kum-anaka-tta.

Lit. 'Akira never arranged classes in order for anyone to pass an exam.'

(18) Long-distance wh-interrogative – available

a. [dare-ga] (who) daigaku-ni ko-nai to] gakusei-ga jugyoo-o sabo-tta-no (Q)?

Lit. 'Who₁ did students skip classes, whenever t₁ came to university.'

b. Ootoo-wa (Top) [dare-ga] (who) ie-o de-ru to] denwa-okake-ta-no?

Lit. 'Who₁ did my brother make a call, after t₁ stay home.'

c. Akira-wa [dare-ga] (who) siken-ni uka-ru-yooni to]jugyoo-o kun-da-no (Q)?

Lit. 'Who₁ did Akira arrange classes in order for t₁ to pass an exam.'

(19) No CNPC & Adjunct Condition in Japanese (Large-scale pied-piping in Watanabe 1992)

a. Ko-wa [kinoo Kyoko-ni nani-o age-ta hito]-ni at-ta-no?

Ko-Top yesterday Kyoko-Dat what-Acc give-Past person-Dat see-Past-Q

Lit. 'What₁ did Ko meet a person that gave t₁ to Kyoko?'

b. Akira-wa [Ren-ga nani-o tabe-ta kara] okot-ta-no?

Akira-Top Ren-Nom what-Acc eat-Past because get anger-Past-Q

Lit. 'What₁ did Akira get angered, because Ren ate t₁?'

3. Analysis

(20) *-to*: lacking any categorial feature, without semantic content.

This captures the fact that *XP-to* can appear in a wide variety of syntactic environment, suggesting that *-to* is utilized to conjoin syntactic elements to another syntactic structure.

Namely, it is a linker:

(21)a. [Akira-to Mai]-ga kenkyuusitu-ni ki-ta. [NP-coordinator]

Akira-TO Mai-Nom research room-Dat come-Past

'Akira and Mai came to a laboratory separately/together/ by two.'

b. Ko-ga gengo gaku-o [kagaku-to] bunrui si-ta. [Predicate of SC]

Ko-Nom linguistics-Acc science-TO classification Do-Past

'Ko classified linguistics as science.'

c. Yu-wa [Mai-to] tukiatte i-ru. [Nominal complement]

Yu-Top Mai-TO go aroundbe-Pres

'Yu goes around with Mai.'

d. Kyoko-ga pan-o choko-to tabe-ta. [NP with a comitative marker]

Kyoko-Nom bread-Acc chocokate-TO eat-Past

'Kyoko ate some bread with chocolate.'

- e. Yui-ga [hayabaya-to] ne-ta. [NP with a comitative marker]
 Yui-Nom heavy-TO sleep-Past
 ‘Yui slept soon.’
- f. Yui-wa [nan-to] subarashi-i [Exclamative Marker]
 Yui-Top what wonderful-Pres
 ‘How wonderful Yui is!’
- g. Yui-wa [sunnari-to] baiorin-o hii-ta. [Adverbial Particle/Shimamura 2018]
 Yui-Top smoothly violin-Acc play-Past
 ‘Yui smoothly played a violin’.

3.1 When are SOs hidden from LA?

(22) The Labeling Algorithm (Chomsky 2015)

Labeling is necessary for syntactic objects to be interpreted at the interfaces.

- i. $\{H, YP\} \rightarrow \{_H H, YP\}$
 ii. a. $\{XP \{Y Y, ZP\}\} \text{ IM of } XP \rightarrow \{Y XP \{Y Y, ZP\}\}$
 b. $\{\{X X_{[F]}, \alpha P\}, \{Y Y_{[F]}, \beta P\}\} \text{ Agree in } F \rightarrow \{F \{X X_{[F]}, \alpha P\}, \{Y Y_{[F]}, \beta P\}\}$

(23)i. Sorida (2021, 2022)

$\{\{NP, K\}, \{YP, v^*\}\} \text{ K: no semantic content} \rightarrow \{v^* \{\{NP, K\} \{YP, v^*\}\}$

ii. Saito (2018)

$\{\{DP, K_{[Case: _]}\}, \{vP, T\}\} \text{ K: Weak head} \rightarrow \{T \{DP, K_{[Case: _]}\}, \{vP, T\}\}$

(24) Generalization of Extraction under Labeling (Goto 2016)

An unlabeled syntactic object is opaque for extraction but becomes transparent if it is labeled.

- The search is designed to be targeted at relevant features or heads containing those. Then, search has to stop when it finds unlabeled SOs, because it shows that the relevant head lacks necessary information at all. though it fixes an uncategorized head as the label, since it hits this head first. Also, (22i) is always prioritized most due to the fact that it is the easiest way to find heads.

(25) Search cannot apply to internal structures of unlabeled objects.

(26) LA & Free Adjunction (cf. Otsuka 2022)

i. *-to*: Category [0]

ii. $\{\emptyset XP, -to_{(0)}\}$

(22i) Label: *-to*, Head (22i) → *-to*: no categorial feature (28i), unable to provide a label

→ $\{\emptyset XP, -to_{(0)}\}$: unlabeled structure

iii. $\{Y \{\emptyset XP, -to\}, \{Y, ZP\}\}$

(25): search cannot enter into an unlabeled structure → The label is always fixed to Y.

- ⊙ Free adjunction is derived from set-merge. Also, the uncategorized status of *-to* derives its function as syntactic linker.

(27) Label information may be sometimes unnecessary.

i. Syntactic composition is enough.

Given a θ -grid of predicates, it is enough that the interfaces know internal structures of derived SOs and relevant syntactic relations involving syntactic compositions in order to

- determine whether {H (0) XP} is adjoined to another SO.
- ii. The duty of H₀ is simply to link XP to YP in syntax, resulting in adjunction.
- (28) When an unlabeled SO occupies the θ -slot of the argument structure, Theta System (Reinhart 2016) licenses it, giving an appropriate label based on the θ -grid.
- (29) I assume an unlabeled SO receives its label, when they are merged with embedding predicates, following Reinhart who claims θ -slot is available in the application of EM.
- (30) Interpretation of Predication at C-I
An unlabeled syntactic structure is semantically interpreted within a syntactic domain where it is merged, when it is semantically selected or given a semantic role.

4. Analysis

- (31) Control clauses in (2) and complement clauses in (3-4) are always given the CP-Status and Theme by embedding predicates that select these clauses.
→ Given (25), search can apply to elements inside these *-to* clauses, which makes extractions, long distance wh-questions, anaphor binding (see Saito 2022 in details), and NPI possible.
- (32) An SC predicate in (21b) and a nominal complement in (21c) are given Theme, receiving the status of Pred and NP/DP respectively.
- (33) Nominals in (21d-e) and adverbials in (21f-g) are semantically interpreted vP/VP domains where they are merged, modifying events (in manner or degree) that predicates express.
- (34) Quotative adjunct *-to* clauses are not selected by embedding predicates, because these occur unrestrictedly without selection.
→ The status of this type of *-to* clauses remains unlabeled adjuncts. Due to (25), no search cannot apply to its internal syntactic structure, prohibiting embedded SOs from establishing syntactic/semantic relations across *-to* clauses, as shown in (11), though it freely adjoins to matrix SOs without selectional relationships due to its unlabeled status and (26).
- (35) Quotative adjunct clauses are unconnected from speaker contexts (indirect discourse), forced to be located in direct discourse.
- (36) Due to a compositional relationship made by the syntactic linker *-to*, quotative adjunct clauses are compelled to be interpreted as a part of verbal domains, expressing relevant thoughts and utterances.
- (37) The interpretation of *-to* adverbial clauses is determined depending on where they are adjoined.
- (38) Though all types of *-to* adverbial clauses are given semantic role at C-I, it is not syntactically selected. This makes these *-to* clauses unlabeled, prohibiting search from entering into the internal structures of these clauses in (16), given (25).
- (39) It may be possible that wh-elements within *-to* adverbial clauses in (18) are interpreted at C-I. Interestingly, variable binding is possible across *-to* adjunct adverbial clauses, as in (b-c), though it cannot be achieved across quotative *-to* adjuncts in (a).
- a. *Doi-no kaisya-mo [soko_i-no masukotto-ga eiga-ni dete i-ru to]
which-Gen company- \forall it-Gen mascot-Nom movie-Dat appear be-Pres TO
syain-ni masukotto-no mokei-o kaw-ase-ta.
employee-Dat mascot-Gen tokei-Acc buy-force-Past

- Lit. *'Every_i company forced its employees to buy its mascot watches, saying 'Its_i mascot appears in the movie.'*
- b. Do-no kaisya-mo [soko-no syain-ga ie-o de-ru to]
 which-Gen company- \forall it-Gen employee-Nom house-Acc leave-Pres TO
 denwa-o kake-ta.
 phone-Acc call-Past
 Lit. *'Every company_i made a phone, whenever its employees_i left home.'*
- c. Do-no kaisya-mo [soko-no syain-ga siken-ni uka-ru-yooni to]
 which-Gen company- \forall it-Gen employee-Nom exam-Dat pass-Pres-Int TO
 jugyoo-o kun-da.
 class-Acc arrange-Past
 Lit. *'Every company_i arranged classes in order for its_i employees to pass an exam.'*
- (40) (25) and (26) explain why adjuncts are sent into the secondary plane in Chomsky (2004) in syntax, because no search cannot enter into internal structures of unlabeled SOs.
- (41) Larson and Sawada (2012)
 A *when* clause may express a conditional interpretation (a)/(a') or a temporal meaning in (b)/(b'):
 When John visited Paris, he always ate in a café.
 a. 'In all situations in which John visited Paris, he ate in a café'
 b. 'At the time John visited Paris, he ate in a café.'
 a'. ALWAYS (λe [John visited Paris (e)]) (λe [John ate in a café (e)])
 b'. SOMETIME (λe [John visited Paris (e)]) (λe [ALWAYS ($\lambda e'$ [C(e) & Π (e', e)]) ($\lambda e'$ [John ate in a café (e)])])
- (42) Following Larson and Sawada, I take the interpretations of *-to* adverbial clauses to be fixed by the scope and restrictions *-to* adjuncts take.
- (43) i. Conditional *-to* adjuncts which are merged within a CP take TP as their scope, restricting the instances of events of TP.
 ii. When temporal *-to* adjuncts are merged within a TP, it receives existential closure.
- (44) Conditional adjuncts: CP
 a. **Dare**-mo-ga gengogaku-no jugyoo-o to-ru.
 Who- \forall -Nom linguistics-Gen class-Acc take-Pres
'Everyone takes a linguistic class.'
 b. [**Dare**-ga settoku si-yoo to] gakusei-wa gengogaku-no jugyoo-o to-ru.
 who-Nom persuasion do-Int TO student-Top linguistics-Gen class-Acc take-Pres
'Whoever persuades them, students will take linguistic classes.' [generic]
- (45) Conditional adjuncts: located within CP/Temporal Adjuncts: located below CP
 a. [Sugimoto kyooju-ga daigaku-ni ku-ru to] gakusei-nara kurasu-ni it-ta.
 Sugimoto kyooju-Nom university-Dat come-Pres TO student-Prt class-Dat go-Past
'Whenever Professor Sugimoto came to university, students always went to their classes.'
 b. Gakusei-nara [Sugimoto kyooju-ga daigaku-ni ku-ru to]
 student-Prt Sugimoto professor-Nom university-Dat come-Pres TO
 kurasu-ni it-ta.
 class-Dat go-Past

'Whenever Prof. Sugimoto came to university, students always went to their classes.'

'After Prof. Sugimoto came to university, students went to their classes.'

- (46) Purpose clauses headed by *-to* are merged within verbal domains. These are selected by event structures, modifying verbal domains by adding the information of purpose of events matrix predicates express.
- (47) Purpose clauses: VP
 Ko_i-ga [Δ_i gohan-o tabe-yoo to] syokudoo-ni dekake-ta.
 Ko-Nom meal-Acc eat-Int TO restaurant-Dat go-Past
 'Ko went to a restaurant to have a meal.'
- (48) Chomsky (2021)
 Both a controlling element and a controlled element are non-distinct instances of identical lexical elements. These elements are identified as copy by Form Copy which necessitates a c-command relation.
- (49) The c-command relation requires a control element which receives a θ -role in an externally merged position (namely, a matrix v^*P -Spec) to c-command a controlled element in a θ -marked (i.e. base-generated) position.
 → A purposive *-to* adjunct is adjoined to VP, not v^*P , because a control element *Ko* in v^*P -spec is able to c-command a controlled element within VP, but unable to c-command any element in a vP -adjoined position.

5. Conclusion

- (50) The combination of an uncategorized head and LA systematically generate unlabeled structures, which in turn reject search, letting the counterpart head bear the label of merged SO. This explains how free adjunction applies under LA.
- (51) The secondary plane in Chomsky 2002 results from (25). Since unlabeled structures resist search, no syntactic operation cannot target SOs within unlabeled structures.

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