

A Syntactic View of Head Movement: A Cartographic Approach to Adverbial Clauses

Yoshio Endo

Kanda University of International Studies

(endoling@gmail.com)

Aim: to show that a paradigm of adverbial clauses discovered by some traditional Japanese descriptive grammarians suggests the following points:

Point 1: head movement is a syntactic operation, not a PF operation.

(cf. Roberts 2010, Chomsky 2007).

Point2: Adverbial clauses are parametrized with respect to what moves in them: head or operator

(cf. Haegeman (2009))

Point 3: Mapping Hypothesis should be revised: the dividing line between assertion and presupposition is not VP but TP.

(cf. Diesing 1992)

Point 4: the paradigm supports the view that there are two subject positions: Spec, TP and above TP.

(cf. Miyagawa 2010 and Saito 2009)

Basic fact: Japanese functional heads (FHs) are strictly ordered as in (1):

(1) Voice < Aspect < Negation < Tense < Speaker's Mood < Interpersonal Mood

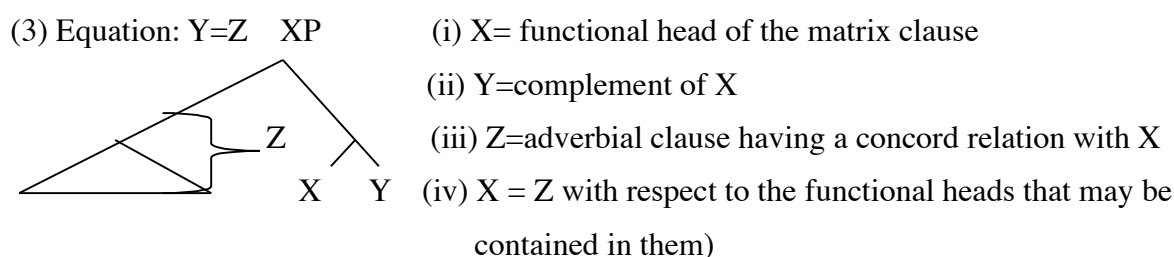
Cf. 'Interpersonal mood' requires the presence of the addressee, as can be seen in the final clause particle *ne* 'right?' in (2) below. Miyagawa (2010b) calls an interpersonal expression like *masu* the second person.

Cf. The traditional Japanese Nitta (1991) notes that when the interpersonal expression *masu* is used in a **diary** sentence, the writer expects the sentence to be read by someone else. One of the situations is such that a student expects his teacher to read his diary sentence as a homework, as illustrated below (cf. Implication 4 for further properties of the second person morpheme in adverbial clauses):

(i) Kyoo doobutuen-ni iki masi-ta.
 today zoo-to went masu-Past.
 ‘Today, I went to the zoo’

(2) hon-ga narabe-rare-tei-nai-yooda-ne
 book-Nom arrange-Passive-Aspect-Negation-speaker’s mood-interpersonal mood
 ‘The book might not have been arranged yes, right?’

By refining Minami’s (1974) study of adverbial clauses that pay attention to the ordered functional heads in (1), Noda (1989) shows the parallelism between adverbial clauses and the matrix clauses, which can be expressed in X’-scheme as in (3) below:



(4) **Type A (while-type)**: Aspectual adverbial clauses may contain only Voice head.

Voice<Aspect< ~~Negation~~<~~Tense~~<~~Speaker’s Mood~~<~~Interpersonal Mood~~<Subordinator

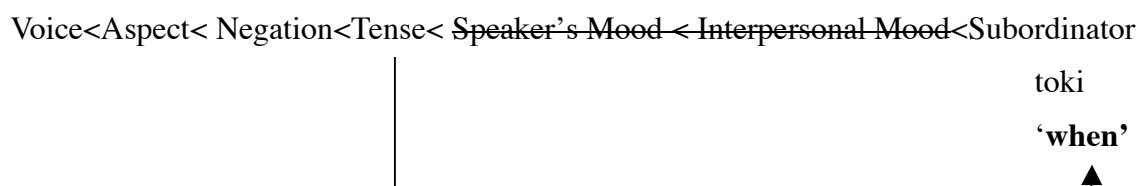
nagara
‘while’
▲

(5) **Type B (without-type)**: Negative adverbial clauses may contain only Voice and Aspect head.

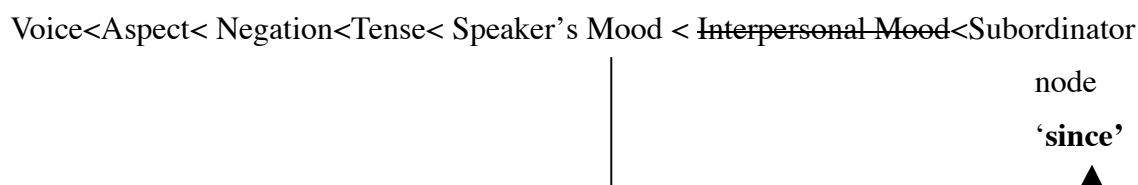
Voice<Aspect< ~~Negation~~<~~Tense~~<~~Speaker’s Mood~~<~~Interpersonal Mood~~<Subordinator

naide
‘without’
▲

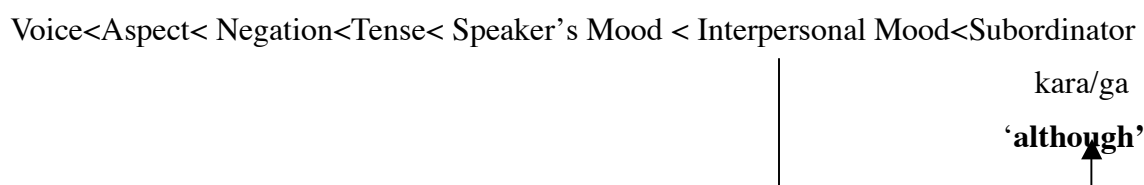
(6) **Type C (when-type)**: Tense adverbial clauses may contain only Voice, Aspect and Negation head.



(7) **Type D (since-type)**: speaker's mood adverbial clauses may contain only Voice, Aspect and Negation, and Tense head.



(8) **Type E (although-type)**: Interpersonal adverbial clauses may contain Voice, Aspect, Negation, Tense and speaker's mood head.



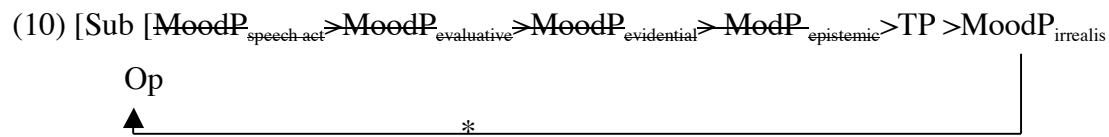
Implications

Implication 1: Head movement as a syntactic operation

Haegeman (2009) observes the fact in (9) where conditional adverbial clauses may not contain mood elements in Cinque's (1999) hierarchy:

- (9) a. *If frankly he's unable to cope, we'll have to replace him. (Speech act)
- b. *If they luckily /fortunately arrived on time, we will be saved. (Evaluative)
- c. *If George probably comes, the party will be a disaster. (Epistemic)
- d. *If the students apparently can't follow the discussion in the third chapter, we'll do the econd chapter. (Evidential)

Haegeman derives this fact from Relativized Minimality (RM): a world empty operator of the mood type moves from Cinque's functional head position of Mood (irrealais) into the clause initial Subordinate position that is headed by *if*, where skipped mood elements of the same mood type induce a RM violation.



Haegeman's approach apparently does not carry over to the Japanese adverbial clause in (4)-(8) because skipped elements are of different types of functional heads, like Voice, Aspect, Mood, etc.

Suggestion: what is moved in Japanese adverbial clause is subordinator like *if*, *when*, etc.; Head movement over another head violates RM; then, skipped elements may not appear.

Evidence: Japanese adverbial clauses, unlike English counterparts, have no long construal:

(11) I saw Mary in New York when [_{IP} she claimed [_{CP} that [_{IP} she would leave.]]]

(i) high construal: at the time that she made that claim

(ii) low construal at the time of her presumed departure

(11') Watasi-wa [[Mary-ga deteikuto] itta] tokini kanojo-ni atta.

I-Top [[Mary-Nom leave] said] when her-Dat saw

'I saw Mary in New York when she claimed that she would leave'

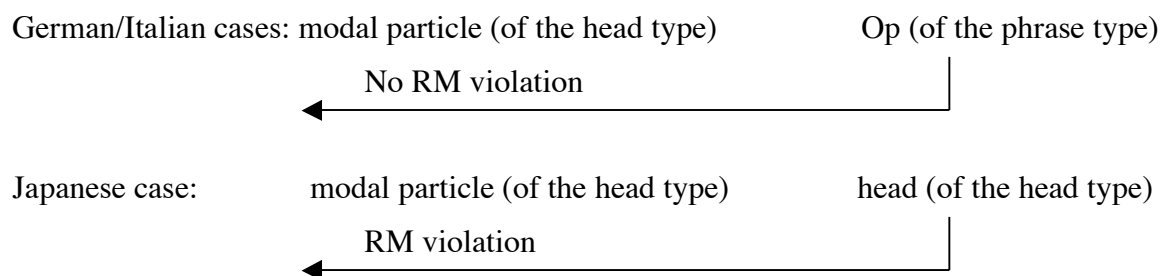
(i) high construal: at the time that she made that claim

(ii) *low construal at the time of her presumed departure

Head movement is clause bound, while operator movement may undergo long distance movement; Japanese adverbial clauses may only have a short construal since it involves head movement.

Consequence 1: Head movement should be a syntactic operation, not a PF operation, since PF operations are not subject to RM and affect only adjacent elements.

Consequence 2: The modal particles *ja* in German and *mica* in Italian may appear in adverbial clauses because empty operator movement over modal particles of the head type does not violate RM, while modal particles in Japanese may not appear in Japanese adverbial clause because head movement over modal particles of the head type violates RM. (cf. Coniglio (2009) , Cardinaletti (2009) for German and Italian modal particles, Endo (2007) and Inoue (2010) for Japanese modal particles.)

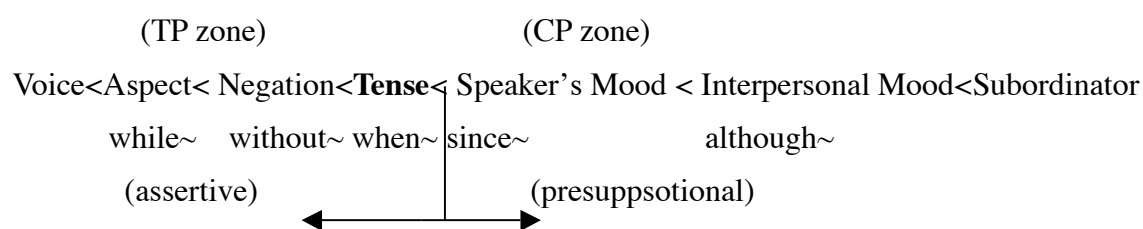


Implication 2: Revising the Mapping Hypothesis

Diesing (1992) claims that elements inside VP are interpreted as assertion, while elements outside VP are interpreted as presupposition.

...presupposition...[VP...assertion...

Important fact 1: adverbial clauses are divided into two types: presuppositional type in (4)-(6), which appears in CP, vs. assertive type in (7)-(8), which appears in TP.



Type A: **while-type**

(12) TV-o mi **nagara** gohan-o tabe masita-no? (Q>while)

TV-Acc watch **while** rice-Acc ate-Q

‘Did you eat rice while watching TV’

b. TV-o mi (*tei) **nagara** gohan-o tabe tanode wa arimasen. (Neg>while)

TVAcc watch (*Asp)- **while** eat-Acc rice it.is.not.the case.

‘I did not eat rice **while** watching TV’

- c. Gohan-o tabeta-no-wa [TV-o mi **nagara**] desu. (focus of cleft)
 rice-Acc ate-Fin-Top [TV-Acc watch **while**] is
 ‘It is while watching TV that I ate rice’

Type B: **without-type**

- (13) a. Yoku mi **naide** kai masita ka? (Q>without)
 well-examine **without** bought-Q
 ‘Did you buy it without examining it?’
 b. Yoku mi **naide** kai tta node wa nai. (Neg>without)
 well examine **without** bought it.is.not.the.case
 ‘I did not but it without examining it’
 c. Katta-no-wa [yoku mi **naide**] desu. (focus of cleft)
 bought-Fin-Top [well-examine **without**] is.
 ‘It is without examining well that I bought it’

Type C: **when**

- (14) a. Syukudai-o suru- **toki** cookie-o taberu no? (Q > when)
 homework-Acc do **when** cookie-Acc eat Q
 ‘Did you eat cookies when you do homework?’
 b. Syukudai-o suru- **toki** cookie-o tabe ta no? (Neg > when)
 homework-Acc do **when** cookie-eat Neg
 ‘I did not eat cookies when I do homework’
 c. Cooki-o tabeta-no-wa [syukudai-o sita **toki**] desu. (cleft of focus)
 cookies-Acc ate-Fin-Top [homework-Acc did **when**] is.
 ‘It is when I did homework that I ate cookies’

Type D: **since**

- (15) a. Isogasikatta **node** ie-ni ita no? (*Q>since)
 be,busy **since** because be.busy Q
 ‘Were you at home since you were busy?’
 b. Isogasikatta **node** ie-ni ita no dewa nai. (*Neg > since)
 be,busy **since** be.busy Neg
 ‘I was not at home since you were busy.’

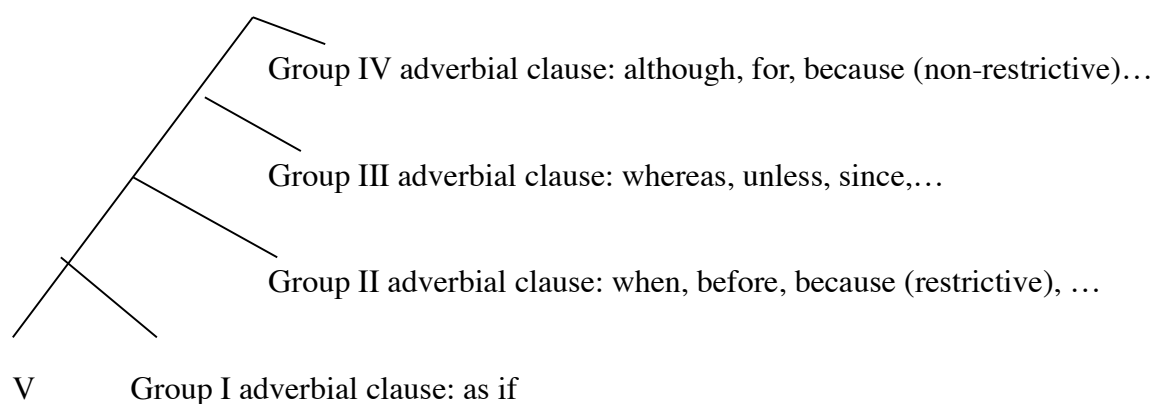
- c. *Ie-ni ita-no-wa [isogasikatta **node**] desu. (cleft of focus)
 'home-at stay-Fin-Top [was.busy **since**] is.
 '*It was since I was busy that I stayed home'

Type E: **although**

- (16) a. Ame-ga hutteiru **ga** dekakeru no? (*Q>although)
 rain-Nom falling **although** go.out-Q'
 'Are you going out although it is raining?'
 b. Ame-ga hutteiru **ga** dekakeru no de wa nai. (*Neg >although)
 rain-Nom falling **although** go.out-Neg
 'I am not going out although it is raining.'
 c. Dekakeru-no-wa [ame-ga hutteiru **ga**] desu. (*focus of cleft)
 go.out-Fin-Top [raini-Nom fall **although**] is.
 '*It was [although it is raining that I am going out'

Important fact 3: Presuppositional vs. focus adverbial clauses in English

Nakajima (1982) identifies four types of adverbial clauses:



Group I: those adverbial clauses that may not appear outside *do so*:

- (17) *John treated us as if we were beggars, but Mary did so as if we were aristocrats.

Group II: those adverbial clauses that may appear outside *do so*, and **may be focus** of cleft
 And focus of negation.

- (18) a. John came here before I arrived, but Mary did so after I arrived.
 b. It was because it rained heavily that they stayed home all the day.
 c. They have not been living here since their father died.

Group III: those adverbial clauses that may appear outside *do so*, **may not be focus** of cleft and focus of negation, but may appear in the clause initial position.

- (19) a. *It was while she resembles her mother that her sister resembles her father.
b. *She is not beautiful whereas her sister is beautiful.
c. While I agree with you up to this point, I cannot agree to your point as a while.

Group IV: those adverbial clauses that may not be focus of cleft or focus of negation and may not appear in the clause initial position.

- (20) a. *It was for he conceded his defeat on TV that his defeat was sure.
b. *He can't speak Japanese well, because he loved in the U.S. for a long time.
c. *So that they are now in Paris, they used an airplane.

Suggestion: In English, adverbial clauses of Group I ~ II are within the TP zone and are interpreted as assertive, while Group III to IV are in CP zone and adverbial clauses are interpreted as presuppositional.

Important fact 4: The activation of the CP zone in the English adverbial clauses, especially topic and focus heads, affects the attachment site of adverbial clauses to the matrix clause: Preposing of a modal element into the CP zone in adverbial clauses makes it impossible for the adverbial clause to be associated with focus of negation or question of the matrix clause as illustrated in (21)-(22). (I am grateful to Richard Larson (personal communication) for discussing this point.)

NB. Haegeman (2010) groups together topic elements and modal elements as the same type, which I take to be the source of presuppositional interpretation of (21b) and (22b); Haegeman (2006) identifies the landing site of preposed adverbial elements as ModP which is assumed to be located immediately above TP, which I suggest would be below the CP zone.

Cf. Larson and Sawada (2010) on the semantics adverbial clauses.

- (21) a. Sam is not going out for dinner because his wife is cooking Japanese food.
b. Sam is not going out for dinner because *apparently/probably* his wife is cooking Japanese food. (because > Neg, *Neg > because)

- c. Sam is not going out for dinner because his wife is *apparently/probably* cooking Japanese food. (because > Neg, Neg > because)

- (22) a. Is Sam going out for dinner because his wife is cooking Japanese food.
 b. Is Sam going out for dinner because *apparently/probably* his wife is cooking Japanese food. (because > Q, *Q > because)
 c. Is Sam going out for dinner because his wife is *apparently/probably* cooking Japanese food. (because > Q, Q > because)

Cf. The 'Q > because' interpretation in (22c) is paraphrased as "Is it because his wife is cooking Japanese food that Sam is going out for dinner?"

since vs. *because* (Iatridou 1991)

- (23) a. Did John go out because his wife was cooking Japanese food?
 b. Did John go out since his wife was cooking Japanese food?
- (24) It was {because/*since} John was absent that the party was not fun.
- (25) a. He didn't like them because they are always helpful but because they never complain.
 b. *He didn't like them since they are always helpful but since they never complain.
- (26) a. [Hit his dog because he loves her] though he hasn't
 b. *[Leave the party early since he has to be home by 9 p.m.] though John did, Bill will still find something to complain about.

Revised Mapping Hypothesis: Adverbial clauses with only the TP layer are interpreted as assertion and are licensed in the matrix TP zone, while adverbial clauses with the CP layer are interpreted as presupposition and are licensed in the matrix CP zone.

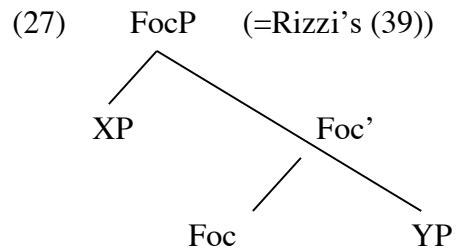
➡Presuppositional adverbial clauses with the CP layer may not be associated with focus of negation and question in English and Japanese, as shown below.

Intuition 1: the more functional heads adverbial clauses have, at the higher site the adverbial clauses are licensed in the matrix clause.

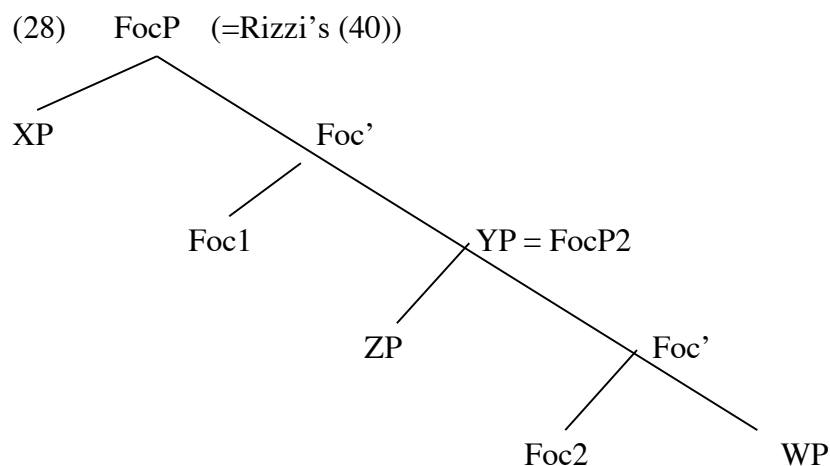
Intuition 2: at the higher site adverbial clauses are licensed in the matrix clause, the more presuppositional the adverbial clauses are interpreted as.

Question: Why are adverbial clauses with the CP layer not allowed to be focus of cleft or focus of negation?

Suggestion: Presupposition is not consistent with focus. (Rizzi (1997))



Rizzi (1997: 296-297) "The specifier is the focal element, while the complement of Foc is the presupposition, the given information. Consider now a recursion of FocP, i.e. the option of realizing YP itself as as FocP.



Such a structure would contain a focus position, the specifier of the lower focal head. But this would be inconsistent with the proposed interpretation: YP is the presupposition of the higher focal head Foc1, and as such it can only specify given information. So, the structure of FocP is banned by the interpretive clash that would arise. "

Implication 3: α P

Saito (2006) and Miyagawa (2010a) observes that a quantified subject may not scope inside negation of the basic SOV word order in the root sentence, but a quantified subject may scope inside negation in the embedded clause. They attribute this asymmetry to the fact that

there is an extra subject position above TP, which may only appear in the root clause.

- (29) a. Zen'in-ga siken-o uke-nakat-ta.
all-NOM test-ACC take-NEG-PAST
'All did not take the test.' (all>not, *not>all)
- b. Zen'in-ga siken-o erab-anai to omou.
all-NOM exam-ACC choose-NEG-PRS that think
'I think that all will not choose an exam (over a term paper).' (all > not, not > all)

Miyagawa (2010a) also observes that when O is scrambled over S in the root sentence, then S may scope inside negation. (Cf. Endo (2007) for the word order and scope relations)

- (30) Siken-o zen'in-ga uke-nakat-ta.
test-ACC all-NOM take-NEG-PAST
'All did not take the test.' (all>not, not>all)

Saito suggests that the scope of negation somehow extends to TP.

Suggestion: Miyagawa/Saito's paradigm follows from the Revised Mapping Hypothesis, i.e. elements inside TP is assertive and is consistent with focus of negation, while elements outside TP are presuppositional and are not consistent with focus of negation.

What is happening here should not be captured by scope but by the association with focus.
cf. Kawamura (2006) for the association with focus approach for adverbials.

Implication 4: Two reason adverbial clauses

The reason adverbial clause headed by *kara* 'because' is ambiguous in Japanese between presuppositional and assertive usages. The assertive usage is forced by the presence of the interpersonal modal or the second person morpheme *masu*. When this morpheme appears in a *kara* 'because' adverbial clause, the adverbial clause is interpreted as presupposition, and then is hard to be focalized as shown below:

- (31) a. ??Ame-ga huttei **masu kara** ieni iru no desu ka? (*Q > when)
rain-Nom fall masu because stay home.polite Q
‘Are you staying home because it is raining?’
- b. ??Ame-ga huttei **masu kara** ie-ni iru nodewa arimasen. (*Neg > when)
rain-Nom fall masu because stay.home Neg.polite
‘I am not staying home because it is raining?’
- c. ??Ie-ni iru -no-wa [ame-ga huttei **masu kara**] desu. (*cleft of focus)
stay.home-Fin-Top [rain-Nom fall masu because] is.
‘It is because it is raining that I am staying home’

Conclusion

Point 1: head movement is a syntactic operation, not a PF operation.

(cf. Roberts 2010, Chomsky 2007).

Point2: Adverbial clauses are parametrized with respect to what moves in them: head or operator

(cf. Haegeman (2009))

Point 3: Mapping Hypothesis should be revised: the dividing line between assertion and presupposition is not VP but TP.

(cf. Diesing 1992)

Point 4: the paradigm supports the view that there are two subject positions: Spec, TP and above TP.

(cf. Miyagawa 2010 and Saito 2009)

References

- Cardinaletti, Anna. 2009. German and Italian Modal Particles and Clause Structure. Ms., Università Ca' Foscari di Venezia.
- Chomsky, Noam. 2008. On phases. In Robert Freidin, et.al. eds., *Foundational Issues in Linguistic Theory*, 133–166. Cambridge, Mass.: MIT Press.
- Coniglio, Marco. 2009. Italian modal particles as root phenomena. Paper read at Root Phenomena ZAS, Schützenstr. Berlin.
- Endo, Yoshio. 2007. *Locality and information structure: A cartographic approach to Japanese*. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Inoue, Kazuko. 2010. *Seisei bunpoo to nihongo kenkyuu* [Generative grammar and the study of Japanese] Taishukan, Tokyo.
- Iatridou, Sabine. 1991. Topics in conditionals , diss., MIT
- Kawamura, Tomoko. 2006. Some Interactions of Focus and Focus Sensitive Elements Ph.D. dissertation, Stony Brook University.

- Larson, Richard and Miyuki Sawada. 2010. Root transformations and quantificational structure. talk of this workshop.
- Miyagawa, Shigeru. 2010a. *Why Agree? Why Move?*. Cambridge, Mass.: MIT Press.
- Miyagawa, Shigeru. 2010b. Agreements that occur mainly in the main clause. Paper read at GIST 2, University of Ghent.
- Nitta, Yoshio. 1991. *Nihongo-no modality to ninsyoo* [Japanese modality and person] Tokyo: Hituji-syoboo.
- Rizzi, Luigi. 1997. The fine structure of the left periphery. In Liliana Haegeman, ed., *Elements of grammar: Handbook in generative syntax*, 281–337. Dordrecht: Kluwer.
- Rizzi, Luigi. 2004. Locality and left periphery. In A. Belletti ed. *Structures and beyond: The cartography of syntactic structures*, Volume 3. 223–251. Oxford: Oxford University Press
- Saito, Mamoru. 2006. Optional A-scrambling. In *Japanese/Korean Linguistics 16*, 44–63. Stanford: CSLI Publications.

Appendix : Internal structure of Japanese adverbial clauses

Type A: while

- (1) a. TV-o mi nagara gohan-o tabe ta/tabe-hajimeta.
 TV-Acc watch **while** rice-Acc ate/*began eating
 ‘I ate rice while watching TV’
- b. Taro-wa TV-o mi-(*tei) **nagara** benkyoosita.
 Taro-Top TV-Acc watch (*Asp)- **while** studied
 ‘Taro studied while he is listening to the radio’

Type B: without

- (2) a. Yoku mi naide katta/*kawanakatta.
 well-examine without bought/bout-not
 ‘I bought it without examining it’
- b. sonna tokoro-ni tat te i (*na) **naide** kotira-ni kinasai.
 Sych.a.place-at stand Asp (*not) without come.here
 ‘Come here without standing here’

Type C: when

- (3) a. Boku-**ga** syukudai-o si-**tei-nakat-ta toki** Aki-wa sude-ni owaraseteita.
I-Nom homework-Acc do-Asp-Neg-Past mood **when** Aki-Top already finished
'When I was not finished with my homework, Aki had already finished it'
(only reference time reading available)
- b. John-ga mada umare tei na i **toki**, watsi-wa Tokyo-ni sundeita.
John-Nom yet was.orn. Asp T **when** I-Top Tokyoo-in live
(I lived in Tokyo when John wss not born yet')

Type D: since

- (4) a. Yasui node kat ta/*kau **rasii**
is.inexpensive since bought/***seem.to**.buy
'He bought it since it is inexpensive/*He seems to buy it since it is inexpensive'
- b. Yasui rasii node katta.
inexpensive seem since bought
'I bought it since it seems inexpensive'

Type E: although

- (4) a. Kankyoo-wa yoi **ga** hubendesu/*desu-ka
Environment-Top **although** inconveniently-situated/ conveniently-situated-Q
'Although the environment is good, it inconveniently situated, it'
- b. John-ga made ki tei nai daroo (*ne) ga party-o hajime yoo
John-Nom yet come Asp Neg may (*you know) although party-Acc start.
'Although John has not been arrived yet, let's begin the party'