A Comparative Analysis of Adverbial Clauses in Japanese and English

メタデータ	言語: eng
	出版者:
	公開日: 2015-03-01
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	キーワード (En):
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URL	https://kobe-cufs.repo.nii.ac.jp/records/1902

would be OK.

c. *[If these exams you don't pass], you won't get the degree.

(Haegeman (2010a:629))

Haegeman (2010a, b, 2012) advocates an analysis that reduces anti-topicalization in adverbial clauses to an intervention effect. It is assumed that an adverbial clause resisting topicalization involves movement of a null operator to the clause-initial position. This movement results in a minimality violation. As illustrated below, an intervening topicalized argument blocks operator movement, making the relevant sentence ungrammatical.[2]

(2)   [$_{CP}$ OP If [$_{TopP}$ this book [$_{FinP}$ OP [$_{IP}$ you ⋯ [$_{VP}$ find this book]]]]]

(Haegeman (2010a:636))

The operator movement analysis is partly motivated by an argument-adjunct asymmetry with respect to their interaction with operator movement. As illustrated schematically below, while a fronted argument prevents a *wh*-phrase from moving across it, a fronted adjunct does not exhibit this kind of intervention effect.

(3)   a. **wh* (⋯) argument   ⋯   t$_{wh}$

b. *wh* (⋯) adjunct   ⋯   t$_{wh}$

Concrete examples of these patterns are given below.

(4)   a. *Robin knows [**where**, the birdseed, you are going to put].

b. All that happens to quangos on this list is that we may look at [**how** administratively they are organized].

(5)   a. *This is a student [**to whom**, your book, I would recommend].

b. I met the author [**who** last year began to write this new column].

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1   Adverbial clauses do not form a homogeneous class. Haegeman (2006a) makes a distinction be-tween 'central' and 'peripheral' adverbial clauses. Central adverbial clauses such as temporal and conditional clauses in (1a-c) are more closely associated with the event denoted by the matrix clause. Peripheral adverbial clauses exemplified in (ia, b) below are able to express their own propositions which provide discourse backgrounds for the proposition expressed by the matrix clause. In contrast to central adverbial clauses, peripheral adverbial clauses allow topicalization.

(i) a. We don't look to his paintings for common place truths, [though truths they contain none the less].

b. I think we have more or less solved the problem for donkeys here, [because those we haven't got, we know about].   (Haegeman (2006:33))

This paper focuses on central adverbial clauses.

2   Haegeman (2010a) assumes that the operator in question is base-generated in FinP. The original position of the operator, however, is tangential to the main point of the discussion here.

(6)   a. ***On which table** did Lee say [that <u>these books</u> she will put]?

b. ?**How** did they say [that <u>two weeks ago</u> John had travelled to France]?

(7)   a. ??*These are the patients **to whom** Mary suggested [that <u>the cooked vegetables</u> we should give in the present circumstances].

b.   These are the patients **to whom** Marty suggested [that <u>in the present circumstances</u> we should give the cooked vegetables].

(Haegeman (2012:196-197))

The a-examples in (4)-(7) indicate that a *wh*-phrase, whether it is interrogative or relative, cannot move across a fronted argument. By contrast, *wh*-movement takes place freely across a fronted adjunct, as illustrated by the b-examples. What these examples suggest is that argument fronting is sensitive to *wh*-, or more generally, operator movement, while adjunct fronting is not.

The argument-adjunct asymmetry is not restricted to interrogative and relative constructions. As illustrated below, temporal and conditional clauses exhibit the same asymmetry.

(8)   a. *[When <u>her regular column</u> she began to write last year], I thought she would be OK.

b.   [When <u>last year</u> she began to write her regular column], I thought she would be OK.   (Haegeman (2012:195))

(9)   a. *[If <u>these exams</u> you don't pass], you won't get the degree.

b.   [If <u>on Monday</u> the share price is still at the current level] then clearly their defence doesn't hold much water.

(Haegeman (2012:217))

Capitalizing on the parallelism between operator constructions and adverbial clauses with respect to the argument-adjunct asymmetry, Haegeman (2010a, b, 2012) proposes that illegitimacy of argument fronting in an adverbial clause reflects the intervention effect caused by the topicalized argument.

2.2 Absence of Operator Movement in Japanese Adverbial Clauses

Temporal and conditional clauses in Japanese also exhibit anti-topicalization effect.

(10)   a. John-ga   [koohii{-o | *-wa}   nomi   -nagara] hon -o

John-Nom coffee{-Acc | -Top} drinking -while   book -Acc

yonde -iru yo.

reading-is   Prt

'John is reading a book while drinking coffee.'

b. [John{-ga |*-wa}   ie   -de hon -o   yonde -iru -tokini]

John{-Nom |-Top} home -at book -Acc reading -is   -when

denwa   -ga   natta.

telephone -Nom rang

'The telephone rang when John was reading a book at home.'

c. [Kono   kusuri {-o | *-wa}   nome -ba] zutuu   -ga

this   medicine {-Acc | -Top} take   -if   headache-Nom

naoru   yo.

is.cured Prt

'If you take this medicine, your headache will be cured.'

In Haegeman's (2010a, b 2012) analysis, anti-topicalization in Japanese adverbial
clauses would also be ascribed to an intervention effect involving the topicalized
constituent and the null operator. However, as demonstrated below, there is good
reason for thinking that the English-Japanese parallelism in question is only appar-
ent, and the illegitimacy of topicalization in Japanese adverbial clauses cannot be
reduced to an intervention effect.

If Japanese adverbial clauses are derived by operator movement, they will ex-
hibit intervention effects similar to those observed among their English counter-
parts. One diagnostic phenomenon for detecting operator movement is a weak
island effect. The embedded clause in (11a, b) below forms a *wh*-island, one of
the weak islands.

(11)   a.   Which problem$_i$ do you wonder [whether John will solve t$_i$]?

b. *How$_i$ do you wonder [whether John will solve the problem t$_i$]?

A notable property of weak islands is that they exhibit an argument-adjunct asym-
metry in that they prevent only adjunct-extraction (Rizzi (1990, 2004a)). Thus,
while argument-extraction is well-formed as in (11a), adjunct-extraction is not (see
(11b)). In (11b), an intervention effect is caused by the *wh*-operator *whether* in
the complement clause. Notice that extraction takes place freely out of a non-
island domain such as a declarative complement. The following example shows
that even an adjunct can be extracted from the declarative complement, in contrast
to (11b).

(12)   How$_i$ do you suppose [that John will solve the problem t$_i$]?

Since the declarative clause does not have an operator on its left periphery, noth-
ing prevents adjunct-extraction and no weak island effect arises. The contrast

between (11b) and (12), therefore, indicates that adjunct-extraction qualifies as a good diagnostics for testing whether a given clause involves a null operator.

In this connection, Hiraiwa (2010:194-5) reports that a similar paradigm obtains in Japanese.[3]

(13) a. Ken-ga [Naomi-ga   dare-kara -mo okane -o   moraw
          Ken-Nom Naomi-Nom who-from -MO money -Acc receive
          -anakat -ta   to] itta   souda.
          -Neg   -Past C   said hear.say
          'I heard Ken said that Naomi didn't receive money from anyone.'

      b. Dare-kara -mo$_i$ Ken-ga [Naomi-ga   t$_i$ okane -o
          who -from -MO Ken-Nom   Naomi-Nom   money -Acc
          moraw -anakat -ta   to]   itta   souda.
          receive -Neg   -Past C   said hear.say

(14) a. Ken-ga [Naomi-ga   dare-kara -mo okane -o   moraw
          Ken-Nom   Naomi-Nom who-from -MO money -Acc receive
          -anakat -ta   kadooka] -o   tazuneta   souda.
          -Neg   -Past whether   -Acc asked   hear.say
          'I heard Ken asked whether Naomi didn't received money from anyone.'

      b. ??Dare-kara -mo$_i$ Ken-ga [Naomi-ga   t$_i$ okane -o   moraw
          who-from -MO Ken-Nom Naomi-Nom   money -Acc receive
          -anakat -ta   kadooka] -o   tazuneta   souda.
          -Neg   -Past whether   -Acc asked   hear.say

Long-distance scrambling of a negative polarity item (NPI) *dare-kara-mo* 'from anyone' is possible out of a declarative clause (13b). On the other hand, if it takes place out of a *wh*-island, the sentence becomes degraded as in (14b). Notice that the sentence remains grammatical if the NPI stays in the subordinate clause (see (14a)). Therefore, long-distance scrambling of an NPI can be used as a criterion for weak-islandhood.

As illustrated below, an NPI is able to undergo long-distance scrambling out of adverbial clauses of various kinds.

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3 *Mo* is a particle that converts a *wh*-word into an NPI. It will be glossed as MO in this paper.

(15)   a. Ken-wa [dare-ni -mo   mitukara -zuni]   kokoni   kita.
        Ken-Top who -by-MO be.found -without here   came
        'Ken came here without being found by anyone.'

     b. Dare-ni-mo$_i$ Ken-wa [t$_i$ mitukara -zuni]   kokoni   kita.
        who-by-MO Ken-Top   be.found -without here   came

(16)   a. Ken-wa [[doko -ni -mo   kakureru   basyo -ga   nakere -ba]
        Ken-Top   where-in -MO to.hide   place -Nom   not   -if
        tukamatte   -simau   to] omotta.
        getting.caught -end.up C   thought
        'Ken thought that if he didn't find a place to hide anywhere, he
         would end up getting caught.'

     b. Doko -ni -mo$_i$ Ken-wa [[t$_i$ kakureru   basyo -ga   nakere
        where -in -MO   Ken-Top   to.hide   place -Nom   not
        -ba] tukamatte   -simau   to] omotta.
        -if getting.caught -end.up   C   thought

(17)   a. Ken-wa [Naomi-ga   dare-kara -mo okane -o   moraw
        Ken-Top Naomi-Nom who-from -MO money -Acc receive
        -anakere -ba] kanozyo -o   homeru tumori   da.
        -not   -if   her   -Acc praise   intention   Cop
        'Ken intends to praise Naomi if she doesn't receive money from
        anyone.'

     b. Dare-kara -mo$_i$ Ken-wa [Naomi-ga   t$_i$ okane -o   moraw
        who-from -MO Ken-Top Naomi-Nom   money -Acc receive
        -anakere -ba] kanozyo -o   homeru tumori   da.
        -not   -if   her   -Acc praise   intention   Cop

(18)   a. Ken-wa [sono huku -ga   dokoni -mo uttei -nakat -tara]
        Ken-Top the clothes -Nom where -MO sell -not   -if
        kauno -o   akirameru tumori   datta.
        buying -Acc give.up   intention   was
        'John intended to give up buying the clothes if it was not sold
        anywhere.'

     b. Dokoni -mo$_i$ Ken-wa [sono huku   -ga t$_i$ uttei -nakat-tara]
        where -MO   Ken-Top the clothes -Nom   sell -not -if
        kauno -o   akirameru tumori   datta.
        buying -Acc give.up   intention   was

(19) a. Ken-wa [Naomi-ga   dokoni -mo dekake -yootosi   -nai
          Ken-Top Naomi-Nom where   -MO go.out -is.about.to -not
          -node] husinni   omotta.
          -because suspicious   thought
          'Ken had suspicion because Naomi wasn't about to go out anywhere.'

      b. Dokoni -mo$_i$ Ken-wa [Naomi-ga   t$_i$ dekake -yootosi   -nai
          where -MO Ken-Top Naomi-Nom   go.out -is.about.to-not
          -node] husinni   omotta.
          -because   suspicious   thought

Given that a weak island effect is an intervention effect caused by an operator, its absence in the b-examples of (15)-(19) indicates that the adverbial clauses here do not contain a null operator. It then leads to the observation that anti-topicalization in Japanese adverbial clauses is not attributable to an intervention effect involving a null operator.

2.3 Alternative Analysis

The present paper proposes that as far as Japanese is concerned, applicability of topicalization is associated with the size of an adverbial clause. Following Rizzi (1997, 2004a) and other works in the cartographic approach to the syntactic structure (see for instance Cinque (1999) and works in Belletti (2004), Rizzi (2004b), Benincà and Munaro (2010), a.o.), the CP domain is further divided into a number of functional projections, each of which is dedicated to hosting constituents that play various scope-discourse functions such as topic, focus, and so on. On this assumption, this paper argues that while an adverbial clause tolerating embedded topicalisation has the topic field, those which do not lack it.

The truncation analysis of this kind has been employed from time to time to account for anti-topicalization (or more broadly main clause phenomena) inside subordinate clauses. Though analyses differ in details, the gist of this approach is that a constituent fulfilling a particular scope-discourse function is moved to and licensed in an appropriate functional projection in the CP domain. A clause without such a projection is not able to offer a position for the relevant constituent. Since the constituent is left unlicensed, it cannot surface in the subordinate clause (see Haegeman (2003, 2006a, b, c), Munaro (2005), Bocci (2007), Julien (2008), a.o.).

Notice, however, that although this paper adopts a version of truncation

analysis, it is not a simple reversion. While anti-topicalization in Japanese is attributable to the absence of positions for topic elements due to the truncated structure of the relevant adverbial clauses, this does not immediately mean that the same analysis is extendable to adverbial clauses in other languages. I will argue instead that adverbial clauses in English are full CPs and anti-topicalization is caused by the intervention effect. In other words, the structure of adverbial clauses is parameterized: In some languages, they come in different sizes, whereas in others, structural reduction is not an option.

An additional observation made below is that topic phrases in Japanese are divided into several classes. They differ from each other not only in terms of their pragmatic functions as is often pointed out in the literature (e.g. Bianchi and Frascarelli (2010)), but also in terms of the sensitivity to operator movement. More specifically, I will demonstrate that among various kinds of topics, the so-called scene-setting topic alone is sensitive to operator movement. Other types do not exhibit this sensitivity. In particular, a contrastive topic does not yield an intervention effect inside a subordinate clause that involves operator movement. Nevertheless, it is excluded from certain types of adverbial clause. This suggests that anti-topicalization cannot be reduced to an intervention effect involving a null operator.

3. Topicalization and Its Interaction with Operator Movement
3.1 Topics in Japanese

As is often pointed out, topics do not form a uniform class but are divided into several sub-types (Kuno (1973, 1976), Reinhart (1981), Givón (1983), Frascarelli (2007), Frascarelli and Hinterhölzl (2007), Bianchi and Frascarelli (2010), Vermeulen (2013) a. o.). There are two major classes that have been noted in the literature. One is what is called aboutness-shift topic (Frascarelli (2007)), which denotes what the sentence is about. The expression fulfilling this function can either be newly introduced or introduced again in discourse depending on the context where it appears. The other type, known as contrastive topic, is an element that induces a contrastive interpretation. It presupposes the existence of a set of alternative propositions with which it is contrasted.

A similar classification has been made in the study of topics in Japanese. In Japanese, topics are usually marked by the particle *wa*.[4] *John-wa* in (20B) is an instance of an aboutness topic.

(20)   A: John-nituite   osiete   kudasai.

          John-about   tell.me   please

          'Tell me about John.'

       B: John-wa   kono gakkoo -no   seito   desu.

          John-Top this   school -Gen student   is

          'John is a student at this school.'

As pointed out by Vermeulen (2013), the *wa*-phrase that has an aboutness inter-pretation typically appears "in the answer to a request such as *tell me about X*" (p. 121).

    A contrastive topic also serves to indicate the topic of a sentence by con-trasting it with potential alternatives. The phrase *Bill-wa* in Speaker B's utterance in the following dialogue is this type of topic.

(21)   A: John-wa   kono gakkoo -no   seito   desu ka?

          John-Top this   school -Gen student   is   Q

          'Is John a student at this schook?'

       B: John-wa   doo -ka   sira   -nai   -kedo, Bill-wa   kono

          John-Top how -whether know -not   -but   Bill-Top this

          gakkoo -no   seito   desu.

          school -Gen   student   is

          'I don't know about John, but as for Bill, he is a student at this school.'

A notable property of contrastive topic is that it has the implicature that the speaker is not sure about the truth value of alternative propositions (Hara (2006), Tomioka (2010a, b), Vermeulen (2013), a. o.).[5]

    This categorization is arguably not exhaustive, and there might be several more classes, depending on the way classification is made.[6]   One such type rele-

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4   Not all topics are marked by *wa*. For instance, a topic phrase called Hanging Topic (see Takita
   (2014) and references therein) can appear without any particle.
(i) Sono   tokei,   dokode   katta   no?
    that   watch   where   bought   Q
    'That watch, where did you buy?'
Furthermore, a particle other than *wa* may be used. Some examples are given below.
(ii) Sono   hito   -nara kinoo   mati   -de   mikaketa yo.
    that   person -Top yesterday town -in   saw   Prt
    'Speaking of that person, I saw him/her in town yesterday.'
(iii) Avocado -tte   oisii no?
    avocado -Top   tasty Q
    'Speaking of avocados, are they tasty?'
These types of topic-marking are not discussed in this paper.

vant to the current discussion is scene-setting topic, *aka* stage topic or spatio-temporal topic (see Lambrecht (1994), Erteschik-Shir (1997, 1999, 2007), Benincà and Poletto (2004), Endo (2007), Lahousse (2010), Lipták (2010), a.o.). Usually in Japanese, an adverbial element denoting time or space and fulfilling a scene-setting function is also marked by the particle *wa*.

(22)   Kyoo -wa   gogo   Mary-wa   hima   sooda.

       today -Top   afternoon   Mary-Top   free   seem

       'Today Mary seems free/has nothing to do in the afternoon.'

(Endo (2007:82))

In this example, the sentence-initial element *kyoo-wa* 'today-Top' is a scene-setting topic. It indicates that the sentence is a statement about the state of Mary on a particular day.

3.2 (In)sensitivity to Operator Movement

In addition to the pragmatic differences, *wa*-marked phrases differ with respect to their sensitivity to operator movement. Recall that while argument fronting in English blocks operator movement, adjunct fronting does not. A similar picture emerges in Japanese, too. Scene-setting topics in Japanese behave similarly to fronted arguments in English. They induce intervention effects. On the other

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5   In this respect, a contrastive topic is different from a contrastive focus. The latter has the implicature of exhaustivity. (21B) in the text implies that the speaker is agnostic about the truth of John's being a student, though s/he is only sure about Bill's being a student. On the other hand, (iB), which involves a contrastively focused NP BILL-GA, implies falsity of the proposition that John is a student.

(i)   A: John-wa   kono   gakkoo-no   seito   desu   ka?
           John-Top   this   school-Gen   student   is   Q
           'Is John a student at this school?'

      B: Ie,   BILL-GA   kono   gakkoo-no   seito   desu.
           no   Bill-Nom   this   school-Gen   student   is
           'No, it is BILL who is a student at this school.'

6   For example, Frascarelli (2007) observes that a constituent referring back to given information in the context is a distinct type of topic (dubbed 'familiar topic') from aboutness-shift and contrastive topics (see also Vermeulen (2013) for its Japanese equivalent). Japanese has yet another kind of topic called situational topic (Mikami (1960), Tsubomoto (1989), a.o.), as exemplified in (i)

(i)   Ame-ga   hutte-iru.   Kore-wa   siai -wa   tyuusini   naru   daroo.
      rain-Nom   falling-is   this-Top   game-Top   cancellation   become   will
      'It is raining. Judging from it, today's game will be cancelled.'

The constituent *kore-wa* refers to the circumstance under which this sentence is uttered. The speaker makes an inference from the current situation expressed by this constituent.

hand, contrastive topics in Japanese are insensitive to operator movement. Similarly to fronted adjuncts in English, they do not give rise to an intervention effect. The aboutness-shift topic in Japanese does not correspond either to argument fronting or adjunct fronting in English.

In order to see whether the occurrence of a *wa*-marked phrase is (in)sensitive to operator movement, let us examine topicalization inside relative clauses. Relative clauses in Japanese make a desirable testing ground because some involve operator movement but others do not.

Ishii (1991) argues that Japanese restrictive relative clauses are derived by operator movement. The involvement of a null operator is detected by the subjacency violation.

(23)   *$[_{NP}$ $[_{CP}$ John-ga $[_{NP}$ $[_{CP}$ Mary-ga e_i e_j ageta]   kodomo$_i$] -o

        John-Nom   Mary-Nom   gave   child   -Acc

    sikatta]   omotya$_j$]

    scolded   toy

    'the toy$_j$ [which$_j$ John scolded the child$_i$ [to whom$_i$ Mary gave e_j]].'

The head noun *omotya* 'toy' is meant to be associated with an argument position e_j inside a complex NP island.

Not all instances of relative clauses are derived by operator movement. Murasugi (1991) notes that a relative clause containing a gap equivalent to a spatio-temporal PP does not exhibit a subjacency effect.

(24) $[_{NP}$ $[_{CP}$ $[_{NP}$ $[_{CP}$ e_i e_j mensetu   -o   uketa]   gakusei$_i$] -ga

                interview -Acc received   student   -Nom

    minna ukaru   ]   { hi$_j$ | kaigisitu$_j$ }]

    all   pass   { day | conference.room }

    'the {day$_j$ | conference room$_j$}[that all the students$_i$[who$_i$ had an interview

    will pass e_j]]'   (Murasugi (1991:132))

Although the link between the head noun (*hi* 'day' or *kaigisitu* 'conference room') and its base position crosses the boundary of a complex NP island, this example remains grammatical. The absence of a subjacency effect suggests that operator movement is not involved in this type of relative clause.

A scene-setting topic behaves differently in the two types of relative clause. While it is banned in the relative clause involving operator movement, it can occur in the operator-less relative clause.

(25)   a. [$_{NP}$ [$_{CP}$ (*soto -wa) e_i dooro -o   ootteita] yuki$_i$]

          outside -Top   road -Acc covered snow

       b. [$_{NP}$ [$_{CP}$ (soto   -wa) ooyuki   -ga e_i hutte -iru]{hi$_i$ | tiiki$_i$}]

          outside -Top heavy.snow-Nom   falling-is   day | region

The relative clause in (25a) involves operator movement. As illustrated in (26a), the head noun *yuki* 'snow' cannot be linked with an argument position inside a complex NP island. On the other hand, (26b) does not exhibit a subjacency violation, indicating that operator movement does not take place in (25b).

(26)   a. *[$_{NP}$ [$_{CP}$ John-ga   [$_{NP}$ [$_{CP}$ e_i e_j ootteita] dooro$_j$] -o   aruita] yuki$_i$]

             John-Nom   covered road   -Acc walked snow

          'the snow$_i$ [that John walked the road$_j$ [that e_i covered e_j]]'

       b.   [$_{NP}$ [$_{CP}$ [$_{NP}$ [$_{CP}$ e_i e_j toreta] yasai$_i$]   -ga   Tokyo-de

                    grown vegetable-Nom   Tokyo-in

          syoohis   -areteiru   ] tiiki$_j$]

          consume -Pass   region

          'the region$_j$ [that vegetables [which are grown e_j] are consumed in Tokyo.'

The contrast in (25a, b) then indicates that a scene-setting topic is sensitive to operator movement. (25a) is in parallel to (5a), repeated here as (27), which involves argument fronting inside a relative clause.

(27)   *This is a student [**to whom**, your book, I would recommend].

Given that (27) is ruled out due to an intervention effect by the topic phrase, the parallelism suggests that the ungrammaticality of (25a) is also attributable to the intervention effect.

(28)   *[$_{NP}$ [$_{CP}$ OP$_i$ soto   -wa t_i dooro -o   ootteita] yuki$_i$]

             outside -Top   road   -Acc covered snow

Unlike scene-setting topics, aboutness-shift and contrastive topics are insensitive to operator movement. The former cannot occur in either type of relative clause.

(29)   a. *[$_{NP}$ [$_{CP}$ OP$_i$ John-wa e_i omotya -o   ageta] kodomo$_i$]

             John-Top   toy   -Acc gave   child

       b. *[$_{NP}$ [$_{CP}$ ookina ki -wa e_i uwatte -ita] kooen$_i$]

             big   tree -Top   planted -was park

The latter, on the other hand, can occur in both types of relative clause.

(30) a. (Kodomo -wa   doo -ka   sira   -nai -ga)

child   -Top how -whether   know -not -but

$[_{NP} [_{CP}$ OP$_i$ otona -wa e_i tabe -rareru]   tabemono$_i$]

adult -Top   eat -can   food

'the food which adults can eat (though I don't know about children)'

b. (Sake   -wa   doo -ka   sira -nai -ga) $[_{NP} [_{CP}$ zyuusu -wa

alcohol -Top how-whether   know-not -but   juice   -Top

e_i nom -eru] kooen$_i$]

drink -can   park

'the park where you can drink juice (though I don't know about alcohol)'

The data in (29) and (30) show that (in)applicability of the two types of topicalization (i.e. aboutness-shift and contrastive) is not influenced by operator movement. The grammaticality of (30a) is parallel with that of (5b) repeated here as (31).

(31) I met the author [**who** last year began to write this new column].

The relevant parallelism indicates that similarly to an English fronted adjunct, a Japanese contrastive topic does not give rise to an intervention effect that blocks operator movement.

The discussion so far is summarized in the following table.

(32)

types of topic	types of subordinate clause	
	with operator	without operator
scene-setting	*	✓
contrastive	✓	✓
aboutness-shift	*	*

Among a variety of *wa*-marked elements in Japanese, only the scene-setting *wa*-phrase behaves in parallel to the fronted argument in English. Since they are both sensitive to operator movement, they are able to occur only in an operator-less environment. On the other hand, the contrastive *wa*-phrase behaves like a fronted adjunct in English in that they are able to occur in the clause containing an operator as well as in an operator-less clause. The aboutness-shift topic in Japanese does not correspond either to fronted argument or fronted adjunct in English. Similarly to the contrastive topic, it is insensitive to operator movement, but in a different sense. It is blocked both in the clause with an operator and in the operator-less clause.

4. Structural Reduction

4.1 Scene-Setting Topics in Adverbial Clauses

We have so far reached the following observations: (i) Japanese adverbial clauses do not have a null operator (section 2.2); (ii) While a scene-setting topic in Japanese cannot appear in a subordinate clause that involves a null operator, it occurs freely in an operator-less clause (section 3.2). The combination of (i) and (ii) leads to a prediction: Since adverbial clauses in Japanese are operator-less clauses, they should all be compatible with a scene-setting topic.

This prediction, however, is not borne out. A scene-setting topic is not able to occur in certain classes of adverbial clause, such as conditional and temporal clauses (see (33a, b)), though it appears in reason and concessive clauses (see (34a, b)).

(33) a. [(*Konya -wa) kion -ga sagare -ba] akegata -ni

     tonight -Top temperature -Nom drop -if dawn -at

    yuki -ga huru daroo.

    snow -Nom fall will

    'If the temperature drops tonight, it will snow at dawn.'

  b. Suzuki-kyoozyu -ga nakunatta -no -wa

   Suzuki-professor -Nom passed.away -C -Top

   [(*kinoo -wa) koogi -o site -iru -tokini] da.

    yesterday -Top lecture -Acc giving -is -when Cop

   'It is when he was giving a lecture yesterday that Professor Suzuki passed away.'

(34) a. [Soto -wa ame -ga hutte -iru -kara] kasa -o

     outside -Top rain -Nom falling -is -because umbrella -Acc

    motte -iki -nasai.

    bring -go -Imperative

    'It is raining outside, so take an umbrella with you.'

  b. [Soto -wa ame -ga hutte -ita {-ga | -kedo}]

    outside -Top rain -Nom falling -was -though

   John-wa kasa -naside dekaketa.

   John-Top umbrella -without went.out

   'Though it was raining outside, John went out without an umbrella.'

The ungrammaticality of (33a, b) is to be reduced to a factor other than an intervention effect. I would like to propose that a scene-setting topic occurs in CP and

that adverbial clauses that resist this type of topic lack the CP layer.

4.2 The Location of the Scene-Setting Topic

One diagnostic phenomenon for identifying the position of a scene-setting topic is scope of a focus particle *dake* 'only'. Kishimoto (2009) points out that when this particle is attached to a head, it takes scope over the projection of the relevant head. Consider the following examples.

(35) a. John-ga   hon -o   yomi -dake (-wa)   si -ta.
         John-Nom book -Acc read -only (-Top)   do -Past
         'John only read books.'   (Kishimoto (2009:468))

      b. John-ga   hon -o   yon -da   -dake   da.
         John-Nom   book -Acc read-Past -only   Cop
         'It is only the case that John read books.'   (Kishimoto (2009:470))

When *dake* is positioned immediately after the verbal head as in (35a), it takes VP as its scope domain. Consequently, while constituents in VP can all be focused by this particle, the subject located in Spec-TP is not. This prevents (35a) from having the reading that 'only John read books.' On the other hand, (35b) has this reading. In this sentence, *dake* is positioned immediately after the tense element, taking scope over the whole TP.

Applying the above-mentioned scope property of *dake* to a sentence involving topicalization, Kishimoto (2009) observes that a topic constituent is located in the CP domain. Consider the following sentence.

(36) John-wa   hon -o   kat -ta -dake   da.
      John-Top   book -Acc buy -Past -only   Cop
      'John only bought a book.'   (Kishimoto (2009:482))

Since the focus particle is attached to the tense head, it takes scope over TP. This sentence does not have the reading that 'only John bought a book', which indicates that the topic element *John-wa* is outside the scope of *dake*, namely, outside TP.

Notice that a scene-setting topic also comes outside the scope of *dake* when the particle is attached to the tense element. The following sentence does not have the reading that 'it is snowing only outside (but not inside)'.

(37) Soto -wa   yuki -ga   hutte -i -ru   -dake da.
      outside -Top snow -Nom   falling -be -Present -only   Cop
      'Outside it is only snowing.'

It follows then that the scene-setting topic is also located in CP.

4.3 Lack of CP in the Temporal and Conditional Clauses

Let us now turn to considering the internal structure of adverbial clauses that do not allow the scene-setting topic. For this purpose, we will examine the structure of their right periphery.

There is a curious correlation between the occurrence of a scene-setting topic and that of an epistemic modal *daroo* 'may'. An adverbial clause that is compatible with the former is able to host the latter. While conditional and temporal clauses do not allow the epistemic modal, reason and concessive clauses do.

(38) a. [Kion   -ga   { sagare | *sagaru   daroo } -ba] yuki -ga
        temperature -Nom{ drop | drop   will } -if   snow -Nom
        huru daroo.
        fall will
        'If the temperature { drops | *will drop }, it will snow.'

     b. Suzuki-kyoozyu -ga   nakunatta   -no -wa [koogi   -o
        Suzuki-professor -Nom   passed.away   -C -Top lecture -Acc
        site   -iru (*daroo) -tokini] da.
        giving -be   may   -when   Cop
        'It is when he {was | *may be} giving a lecture that Professor Suzuki
        passed away.'

(39) a. [Ame -ga   hutte -iru   daroo -kara]   kasa   -o
          rain -Nom   falling -be   may   -because   umbrella -Acc
        motte -iki -nasai.
        bring -go -Imperative
        'It may be raining, so take an umbrella with you.'

     b. [Ame -ga   hutte -iru   daroo {-ga | -kedo}] boku -wa
          rain -Nom   falling -be   may   -though   I   -Top
        kamawa -nai.
        care   -not
        'Though it may be raining, I don't care.'

The modal in question must be positioned after tense, and this order is not interchangeable.

(40)   John-wa   sono ronbun -o   {yon -da   -daroo | *yon -daroo -ta}.
       John-Top the   paper   -Acc read-Past -may | read -may   -Past
       'John may have read the book.'

The tense is positioned more closely to the verb stem than the modal. Given
Baker's (1988) Mirror Principle, which states that the more closely to the predi-
cate an element is positioned, the lower projection it belongs to, the contrast in
(40) indicates that the functional head hosting the modal is located higher than T,
which hosts tense. Viewed in this light, the data (38a, b) indicate that conditional
and temporal clauses lack the domain above TP.

   The same conclusion can be drawn from the distribution of the morphemes
no da. Kuwabara (2013) points out that when a constituent other than the predi-
cate is focused, the predicate must be followed by *no da* (see also Masuoka
(1997) for the same observation). Consider the following example.

(41)   Context: The speaker is talking with his/her friend in the house. Two lit-
       tle boys John and Bill are playing in the next room. After a while the
       speaker hears a cry from that room and s/he says:
   a.   ***JOHN-GA***   naite   -i -ru   **no   desu**   ka?[7]
        John-Nom   crying -be -Present   C   Cop   Q
        'Is it John that is crying?'
   b.   ****JOHN-GA***   naite   -i -masu   ka?
        John-Nom   crying -be -Polite.Present   Q

In (41a, b), the subject *John-ga* is the focus of the question. Since the speaker
already hears someone cry, it does not make sense to ask whether crying is tak-
ing place. S/he also knows in this context that either John or Bill is crying but
no one else is. The question is asked for the purpose of singling out the cryer
from the two candidates. The subject *John-ga* is assigned an exhaustive-listing in-
terpretation and carries an identificational focus in É Kiss's (1998) sense. The
contrast in (41a, b) indicates that the occurrence of a focused constituent requires
the morphemes *no da*.

   According to Kuwabara (2013), the morpheme *da* is a focus particle and oc-
cupies the head position of FocP, one of the functional projections in the articu-
lated CP structure (Rizzi (1997), et seq.).[8] The obligatory co-occurrence of a
focused element and this morpheme just seen above supports this characterization.

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7   *Desu* in this example is a polite form of the copula *da*.
8   See Hiraiwa and Ishihara (2012) and Saito (2013), for similar proposals.

Additionally, the distributional restriction on this morpheme indicates that *da* is in fact positioned in the CP domain. The morphemes *no da* must be positioned after the tense morpheme, and the order *no da* cannot be changed.

(42)   a. naite   -i-   ru   no   da
            crying -be- T   C   Cop

        b.*naite   -i-   no   ru   da

        c.*naite   -i-   no   da   ru

        d.*naite   -i-   ru   da   no

        e.*naite   -i-   da   ru   no

        f.* naite -i-   da   no   ru

Given the Mirror Principle (Baker (1988)), this ordering reflects hierarchical relations between these morphemes: *no* and *da* are both located outside TP, and *da* is located in a higher projection than the one headed by *no*. This characterization matches the fact that *no da* is obligatory in the sentence with a focused constituent.

It is worth noting that *no da* does not appear in temporal and conditional clauses.

(43)   a. [Kion   -ga   {sagare | *sagaru   no   da} -ba]
            temperature -Nom {drop | drop   NO   DA} -if

           yuki -ga   huru daroo.
           snow -Nom   fall   will

           'If the temperature drops, it will snow.'

        b. Suzuki-kyoozyu -wa [koogi -o   site   -iru   (*no   da)
           Suzuki-professor -Top lecture -Acc giving -be   NO   DA

           -tokini] nakunatta.
           -when   passed.away

           'Professor Suzuki passed away when he was giving a lecture.'

The non-occurrence of *no da* in these adverbial clauses indicates that they lack positions for these morphemes. More specifically, they lack the CP layer.

A caveat may be in order at this point as to the correlation between *da* and focus. Although temporal and conditional clauses cannot contain the focus particle as discussed above, a constituent in these adverbial clauses can be focused.

(44)   a. [(Situdo   dewanaku) ***KION   -GA*** sagare -ba]
            humidity   rather.than temperature -Nom drop   -if

yuki -ga   huru no desu.

snow -Nom fall   NO DA

'If the temperature (rather than humidity) drops, it will snow.'

b. Suzuki-kyoozyu -wa [(kaigi   dewanaku) ***KOOGI -O***

Suzuki-professor -Top   meeting rather.than lecture -Acc

site -iru -tokini] nakunatta   no desu.

giving-is -when   passed.away NO DA

'Professor Suzuki passed away when he was giving a lecture (rather than attending a meeting).'

(44a) has an exhaustive-listing reading, in which temperature is chosen rather than humidity as the cause of snowfall. Likewise, the lecture is contrasted with the meeting in (44b). If the occurrence of a focused constituent must be accompanied by the focus particle *da* as discussed above, and if temporal and conditional clauses lack the position for this particle, it is not clear why focalization is possible in the adverbial clauses in (44a, b).

(44a, b) suggest that although a focused constituent is required to be licensed by the focus particle *da*, they do not have to be in the same clause. The focused constituent appearing in the adverbial clause without the position for the focus particle (i.e. Foc^0) can be licensed as long as the focus particle appears in the higher clause. Thus, (44a, b) can be felicitously uttered in the contexts given below.

(45)   A: Situdo -ga   sagare -ba yuki -ga   huru rasii yo.

humidity -Nom drop -if snow -Nom fall   I.hear Prt

'I hear that it snows if the humidity drops.'

B: Ie, [situdo   dewanaku ***KION   -GA*** sagare -ba]

no   humidity rather.than temperature -Nom drop   -if

yuki -ga   { huru no   desu | *hurimasu }.

snow -Nom fall NO DA   fall

'No, if the temperature rather than the humidity drops, it snows.'

(46)   A: Suzuki-kyoozyu -wa kaigi -o   site -iru -tokini

Suzuki-professor -Top meeting-Acc doing -is   -when

nakunatta   rasii   yo.

passed.away I.hear Prt

'I hear that Professor Suzuki passed away when he was attending a meeting.'

B: Ie, [kagi   dewanaku   ***KOOGI -O***   site -iru -tokini]

no   meeting rather.than lecture -Acc   doing -is -when

{nakunatta   no   desu | *nakunarimasita }

passed.away NO DA   passed.away

'No, he passed away when he was giving a lecture (rather than at-
tending a meeting).'

Notice that (45B) and (46B) become ungrammatical without *no da* attached to the
matrix predicate. This indicates that the focus particle plays a crucial role in li-
censing the focalization of arguments inside an adverbial clause.

The present analysis successfully accounts for the restricted distribution of *no
da* in the following example.

(47)   A: Kyoo   sukii dekiru ka na.

today   ski   can   Q Prt

'I wonder if we can ski today.'

B: [Kinoo   -kara   yuki zyanakute   ***AME-GA***   hutte -iru

yesterday -since   snow rather.than   rain-Nom   falling-is

n   da -kara]   sukii -wa deki -nai (*n da) yo.

NO DA -because   skiing -Top can -not   NO DA Prt

'We can't ski because it has been raining rather than snowing since
yesterday.'

The reason clause in (47B), which refers to the grounds for the assertion made
in the main clause, is able to host the focus particle. Notice that the matrix predi-
cate cannot be marked by *no da* in this case. This indicates that the licensing of
the focused constituent by the focus particle can take place only once under the
local relation.

When the reason clause denotes a causal relation (i.e., when it refers to the
cause of the event expressed by the main clause), the focus particle cannot occur
in the adverbial clause but instead it must occur in the higher clause.

(48)   A1: Sukii-wa   tyuusi   -nisimasu.

skiing-Top cancellation -make

'We will cancel skiing.'

B: Doosite   tyuusi   -nisuru no?

why   cancellation -make Q

'Why do we cancel it?'

A2: a.*[Yuki   dewanaku   ***AME-GA***   hutte -iru (n   da)

　　　　snow   rather.than   rain-Nom   falling-is   NO DA

　　　　-kara]   tyuusi   -nisimasu.

　　　　-because cancellation -make

　　　　'We will cancel it because it is raining rather than snowing.'

　　b. [Yuki   dewanaku   ***AME-GA***   hutte -iru (*n da)

　　　　snow   rather.than   rain -Nom   falling-is   NO DA

　　　　-kara]   tyuusi   -nisuru   n   desu.

　　　　-because   cancellation -make   NO DA

The a-sentence of (48A2) does not have *no da* in the main clause. It is ungrammatical regardless of the presence of *no da* in the adverbial clause. The b-sentence, which has *no da* in the main clause, is grammatical. The contrast here indicates that what is crucial in licensing the focused constituent in the adverbial clause is the presence of the focus particle in the main clause. As a matter of fact, the focus particle cannot appear in the adverbial clause in the b-example. This means that the reason clause denoting a causal relation lacks FocP similarly to temporal and conditional clauses.

In summary, the focused constituent in the adverbial clause is licensed by the closest focus particle. Adverbial clauses denoting temporal, conditional, and causal relations lack FocP and consequently, a focused constituent inside them must be licensed by the focus particle in the main clause. It would not be the case that these adverbial clauses have FocP headed by a phonologically empty *da*.

(49)   [Adverbial clause ⋯ focused constituent ⋯ [FocP   ∅Foc] ⋯]

Such an assumption would contradict the locality requirement on the focus licensing. Therefore, it is reasonable to conclude that adverbial clauses that are not able to host the focus particle *da* lack FocP and projections located above it.

5. Cross-linguistic Variation in Anti-Topicalization

The previous section has revealed that Japanese adverbial clauses come in different sizes and that anti-topicalization within them results from the absence of a topic position due to structural reduction. However, this does not hold cross-linguistically. In this section, I will argue that languages differ in the factors causing anti-topicalization. More specifically, while adverbial clauses in Japanese show variations with respect to their size, those in English are uniformly CPs.

As discussed earlier, while argument fronting is sensitive to operator move-ment, adjunct fronting is not. The representative examples are repeated here.

(50)   a. *This is a student [**to whom**, <u>your book,</u> I would recommend].

       b.   I met the author [**who** <u>last year</u> began to write this new column].

Contrastive topicalization in Japanese behaves in parallel to English adjunct front-ing. It takes place both in a subordinate clause with operator movement (see (51a)) and in an operator-less clause (see (51b)).

(51)   a. (Kodomo -wa   doo -ka   sira   -nai -ga)

         child   -Top how -whether   know -not -but

        $[_{NP} [_{CP}$ OP_i otona -wa e_i tabe -rareru] tabemono$_i$]

                    adult -Top   eat -can   food

        'the food which adults can eat (though I don't know about children)'

       b. (Sake -wa   doo -ka   sira   -nai -ga)

         alcohol -Top how -whether   know -not -but

        $[_{NP} [_{CP}$ zyuusu -wa e_i nom -eru]   kooen$_i$]

                juice   -Top   drink -can   park

        'the park where you can drink juice (though I don't know about

        alcohol)'

Under the analysis that derives anti-topicalization from an intervention effect, the insensitivity to operator movement means that fronted adjuncts and contrastive topics are not interveners that cause anti-topicalization. This leads to the predic-tion that they freely occur in adverbial clauses.

This prediction is borne out at least in English. Adjunct fronting is possible in reason and concessive clauses (see (52a) and (53a)), which tolerate argument fronting as well (see (52b) and (53b)). Moreover, it is applicable in temporal and conditional clauses (see (54a) and (55a)), though they resist argument fronting (see (54b) and (55b)).

(52)   a. This is not a list drawn up by people sitting night after night reading

         to babies and toddlers, [because <u>then</u> it would include books such as

         Boing! by Sean Taylor (Walker Books) which expand the child's ex-

         perience along with his or her joy of reading].

                                 (Haegeman (2012:162))

       b. I think we have more or less solved the problem for donkeys here,

         [because <u>those we haven't got,</u> we know about].

                                   (Haegeman (2012:159))

(53) a. Bobby nodded again. Gladys and Ed enjoyed Garfield and his stories,
      [though <u>at times</u> Bobby wondered what kind of father brought his
      children to visit with a foul-mouthed Indian].[9]

   b. We don't look to his paintings for common place truths, [though
      <u>truths</u> they contain none the less].   (Haegeman (2012:159))

(54) a. [When <u>last year</u> she began to write her regular column], I thought
      she would be OK.

   b.*[When <u>her regular column</u> she began to write last year], I thought
      she would be OK.   (Haegeman (2012:195))

(55) a. [If <u>on Monday</u> the share price is still at the current level] then
      clearly their defence doesn't hold much water.

   b.*[If <u>these exams</u> you don't pass], you won't get the degree.

                                                     (Haegeman (2012:217))

In Japanese, however, although reason and concessive clauses tolerate con-
trastive topicalization, temporal and conditional clauses do not.

(56) a. [(John-wa   doo -ka   sira -nai -ga) <u>Bill-wa</u>   genki   da
          John-Top   how -whether know -not -but   Bill-Top fine   be
         (roo) -kara]   sinpaisuru   na.
         (may) -because   worry   don't
         '(I don't know about John but) as for Bill, he is fine. So, don't worry.'

   b. [(Repooto   -wa   tomokaku)   <u>siken -wa</u>   yoku dekita   -ga]
          term.paper -Top aside   exam -Top well could.do -though
         gookaku   deki -naka   -tta.
         pass   can -not   -Past
         'Term papers aside, I did well in the exam, but I couldn't pass.'

(57) a. *[(John-wa   doo -ka   sira -nai -ga)   <u>Bill-wa</u>   hirune -o
           John-Top   how -whether know -not -but   Bill-Top nap   -Acc
         site   -ita -tokini] denwa   -ga   natta.
         taking -was -when   telephone -Nom   rang
         '(I don't know about John but) when as for Bill, he was taking a
         nap, the telephone rang.'

   b. *[(Kooen -wa doo -ka   sira -nai -ga) <u>dooro-wa</u>
          park   -Top how -whether   know -not -but   road -Top

_____

9   This data is cited from the Corpus of Contemporary American English (COCA).

> tukure   -ba] kono   mati -wa hattensuru   hazuda.
>
> construct -if   this   town -Top develop   is.bound.to
>
> '(I don't know about parks but) if as for roads, we construct them, this town is bound to be developed.'

The ungrammaticality of (57a, b) is unexpected in the analysis which associates anti-topicalization with an intervention effect involving a null operator, partly because temporal and conditional clauses in Japanese are operator-less clauses (see section 2.2), and partly because a contrastive topic is insensitive to operator movement (see section 3.2).

The English-Japanese asymmetry in question can be captured successfully in the truncation analysis. While adverbial clauses in English are uniformly CPs, those in Japanese vary in size. In particular, Japanese temporal and conditional clauses lack the CP domain. If a contrastive topic is located in CP, its non-occurrence is directly linked with the absence of this part of phrase structure.

A fronted adjunct is located in CP. When adjunct fronting is accompanied by negative inversion, the fronted adjunct must precede the inverted auxiliary verb.

(58)   a.   Never again <u>over Christmas</u> **will** I eat that much Turkey.

      b.   *Never again **will** <u>over Christmas</u> I eat that much Turkey.

                         (Haegeman (2012:48); originally from Sobin (2003:198))

Given that the inverted auxiliary verb is positioned in C, the contrast here indicates that the fronted adjunct is an element in the CP domain.

Japanese contrastive topics are also positioned in CP. This is confirmed by the scope of the focus particle *dake* 'only'. Recall that *dake* takes scope over TP when it is placed immediately after the tense marker. The following sentence, which contains a contrastive topic *Bill-wa*, does not have the interpretation 'only Bill read this book'. This indicates that the contrastive topic is outside the scope domain of the particle, that is, it is positioned outside TP.

(59)   (John-wa   doo-ka   sira -nai-ga) Bill-wa kono hon   -o

      John-Top   how-whether know-not-but Bill-Top this   book -Acc

      yon-da   dake   da.

      read-Past   only   Cop

      '(I don't know about John but) as for Bill, he only read this book.'

Given that contrastive topicalization takes place in CP, its absence in temporal and conditional clauses indicates that these adverbial clauses lack the CP domain.

6. Concluding Remarks

This paper has presented arguments in favor of the truncation approach to anti-topicalization inside adverbial clauses in Japanese. The main observations are summarized as follows.

Japanese adverbial clauses do not form weak islands. From their non-islandhood, it follows that they do not involve movement of a null operator to their left periphery. Consequently, it is not possible to reduce anti-topicalization inside adverbial clauses to an intervention effect involving a topic and an operator.

Instead, the anti-topicalization effect in certain types of adverbial clause is attributable to the absence of topic positions due to structural reduction. The distribution of scene-setting topics constitutes a desirable test ground. This type of topic is sensitive to operator movement. While it is blocked in the presence of an operator, it applies freely in an operator-less clause. Nevertheless, it is blocked in temporal and conditional clauses, both of which are operator-less clauses.

The unexpected anti-topicalization results from combination of two factors. One is that a scene-setting topic occurs in CP, which is supported by its interaction with a focus particle *dake*. The other is the absence of CP in temporal and conditional clauses. These clauses are not able to host an epistemic modal *daroo* and a focus particle (*no*) *da*, both of which appear in the CP domain. These factors in combination lead to the inapplicability of scene-setting topicalization in temporal and conditional clauses because they do not have positions for a scene-setting topic.

Structural reduction, however, is not a universal property of adverbial clauses across languages. Although some Japanese adverbial clauses have reduced structure of various sizes, those in English are CPs. We have reached this conclusion by comparing contrastive topicalization in Japanese and adjunct fronting in English. They are parallel in that they are insensitive to operator movement and in that they occur in the CP domain. However, they exhibit asymmetrical behaviour in temporal and conditional clauses: while adjunct fronting is possible, contrastive topicalization is blocked in these environments. This suggests that temporal and conditional clauses in Japanese are not equipped with the CP domain while those in English are.

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