Toru Ishii*

On so-called “gapless” constructions in Japanese


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1 Introduction

It has been widely assumed (Inoue 1976; Kuno 1973; Saito 1985; among others) that Japanese “gapless” topic constructions and relative clauses are derived not by movement but by base-generation. Contrary to this widely accepted view, this paper argues that the Japanese “gapless” construction is derived in terms of movement. More specifically, I argue that labeling in the sense of Chomsky (2013, 2015)

*Corresponding author: Toru Ishii, School of Arts and Letters, Meiji University, 1-1 Kanadasurugadai, Chiyoda-ku, Tokyo 101-8301, Japan, E-mail: tishii@meiji.ac.jp
enforces raising of a phrase to the topic/relative head position in the “gapless” construction, which accounts for the apparent lack of its derivational source. It is shown that the “gapless” construction exhibits island, reconstruction, and parasitic gap effects, which straightforwardly follows from a movement analysis but not from a base-generation analysis. If our analysis is on the right track, it gives further support for the Free Merge coupled with a labeling algorithm approach.

Under the base-generation analysis, the topic in the “gapless” topic construction such as sakana-wa ‘fish-TOP’ or hana-wa ‘flower-TOP’ in (1) is base-generated in the sentence-initial topic position:

(1) a. **Sakana-wa** tai-ga oisii.
    fish-TOP red.snapper-NOM delicious
    ‘Speaking of fish, red snapper is delicious.’
    (Saito 1985: 282)

    b. **Hana-wa** sakura-ga ii.
    flower-TOP cherry.blossom-NOM good
    ‘Speaking of flowers, cherry blossoms are the best.’
    (Kuno 1973: 251)

Evidence in favor of the base-generation analysis comes from the observation that there does not seem to exist any derivational source of the “gapless” topic construction. First, the topic in the “gapless” topic construction does not seem to bind any position as shown in (2–4):

(2) a. **Sakana-ga** tai-ga oisii.
    fish-NOM red.snapper-NOM delicious
    ‘Speaking of fish, red snapper is delicious.’
    b. **Hana-ga** sakura-ga ii.
    flower-NOM cherry.blossom-NOM good
    ‘Speaking of flowers, cherry blossoms are the best.’
    (Kizu 1999: 45)

(3) a. **Sakana-no** tai-ga oisii.
    fish-GEN red.snapper-NOM delicious
    Lit. ‘Red snapper of fish is delicious.’
    (Kizu 1999: 45)

    b. **Hana-no** sakura-ga ii.
    flower-GEN cherry.blossom-NOM good
    Lit. ‘Cheery blossoms of flowers are the best.’
    (Kuno 1973: 251)
In (2), the initial phrases *sakana ‘fish’ and *hana ‘flower’ are marked by the nominative case marker -ga, which brings about multiple nominative constructions; the results are deviant. In (3), the initial phrases *sakana ‘fish’ and *hana ‘flower’ are marked by the genitive case marker -no, which indicates that the initial phrase cannot have a possessive relation with the following phrase. (4) shows that the topic phrase like *sakana-wa ‘fish-TOP’ or *hana-wa ‘flower-TOP’ cannot be base-generated in a clause-internal position.

Second, one might argue that the “gapless” topic construction can be derived from a base structure with the compound particle no uti de or no naka de ‘among’. (1) would be derived from (5) by first applying topicalization (6) and then deletion of the compound particle (7) (see Muraki 1970 for details):

   fish-among red.snapper-NOM delicious
   Lit. ‘Among fish, red snapper is delicious.’

b. ?Hana-no-uti/naka-de sakura-ga ii.
   flower-among cherry.blossom-NOM good
   Lit. ‘Among flowers, cherry blossoms are the best.’

(6) a. Sakana-no-uti/naka-de-wa tai-ga oisii.
   fish-among-TOP red.snapper-NOM delicious
   Lit. ‘Among fish, red snapper is delicious.’

b. Hana-no-uti/naka-de-wa sakura-ga ii.
   flower-among-TOP cherry.blossom-NOM good
   Lit. ‘Among flowers, cherry blossoms are the best.’

(Kuno 1973: 251–2)

1 An anonymous reviewer has pointed out that the double nominative version (2), where the first nominative phrase gets focalized, can be ruled out as semantically anomalous. (2a), for example, is roughly interpreted as it is fish, not other food, that red snapper is delicious. This interpretation is anomalous, since red snapper is fish, but red snapper is not a hyponym of more than one hypernym classes.
Kuno (1973), however, presents two arguments against such an analysis. One argument is that (1) and (6) have different meanings. (1a), for example, is a statement about fish, and it says that, among fish, red snapper is delicious. (6a), on the other hand, is not a statement about fish alone. It has a contrastive meaning, i.e., if one restricts one's scope of discussion to fish, red snapper is delicious. The other argument is that the compound particles no uti de and no naka de ‘among’ cannot be deleted, as shown in (8), which casts doubt on the validity of compound particle deletion in (7):

(8) a. John-to Bill-to Mary-no-uti/naka-de-wa, Mary-ga itiban yoku dekiru.
   well does-well
   Lit. ‘Among John, Bill, and Mary, Mary does the best.’

b. ??John-to Bill-to Mary-no-uti/naka-de-wa, Mary-ga itiban yoku dekiru.
   well does-well
   (Adapted from Kuno 1973: 252)

This apparent lack of a derivational source has led to the widely-accepted view that the “gapless” topic construction should be derived by base-generation.

“Gapless” relative clauses like (9) have also been analyzed in terms of base-generation, since they do not seem to have any derivational source either as shown in (10) and (11). In (10a) and (10b), the relative head sakana ‘fish’ is marked by -ga ‘NOM’ and -no ‘GEN’ respectively within the relative clause; they are both deviant. As argued above, a base structure with the compound particle no uti de or no naka de ‘among’ like (11) cannot be the derivational source. Note in passing that “gapless” relative clauses like (9) sound unnatural in isolation, which Kuno (1973) claims is not due to a syntactic reason but a semantic or pragmatic reason. In (9), the relative heads sakana ‘fish’ and hana ‘flower’ are generic, but one cannot characterize something generic by a specific event or state. In (9a), for example, one
cannot characterize fish in general by the specific state that red snapper is most delicious. Hence, as argued by Kuno, “gapless” relative clauses, though unacceptable in isolation, become acceptable when used in certain limited contexts like (9):

(9) a. [Relative Clause Tai-ga oisii] sakana]-wa eigo-dewa red.snapper-Nom delicious fish-TOP English-in “side dish” dewa-naku “fish” to iu.
“side dish” not “fish” as call
Lit. ‘Fish, as for which red snapper is delicious, is not called “side dish” but “fish” in English.’
“nose” not “flower” as call
Lit. ‘Flower, as for which cherry blossom is good, is not called “nose” but “flower” in English.’
(Adapted from Kuno 1973: 257)

(10) a. *[Sakana-ga tai-ga oisii] (sakana) fish-NOM red.snapper-NOM delicious fish Lit. ‘[Speaking of fish, red snapper is delicious] (fish)’
b. *[Sakana-no tai-ga oisii] (sakana) fish-GEN red.snapper-NOM delicious fish Lit. ‘[Red snapper of fish is delicious] (fish)’
(cf. Kizu 1999: 45)

(11) ?[Sakana-no-uti/naka-de tai-ga oisii] (sakana) fish-among red.snapper-NOM delicious fish Lit. ‘[Among fish, red snapper is delicious] (fish)’

It should be noted that the apparent lack of a derivational source is the only reason why the “gapless” construction has been analyzed in terms of base-generation.

This paper argues against this widely-accepted view, proposing that the Japanese “gapless” constructions are derived in terms of movement. The “gapless” constructions to be discussed in this paper are those like (1) and (9), where (i) the topic phrase/relative head and the nominative phrase constitute a hypernym-hyponym pair like sakana ‘fish’ – tai ‘red snapper’ in (1a) and (9a), (ii) the topic phrase/relative head cannot be replaced by a nominative or genitive
marked phrase as shown in (3, 4) and (10), and (iii) permutation of the topic phrase and the nominative phrase is not allowed as shown in (4). The organization of this paper is as follows. Section 2 proposes a movement analysis of the Japanese “gapless” construction. Section 3 presents supporting evidence for our analysis. It is shown that a movement analysis is supported by island, reconstruction, and parasitic gap facts. Section 4 makes a concluding remark.

2 According to these criteria of the “gapless” construction, the multiple-nominative examples like (i) do not count as “gapless” constructions to be discussed in this paper:

(i) a. Zoo-wa/ga/no hana-ga nagai.
   elephant-TOP/NOM/GEN nose-NOM Long
   ‘Elephants have a long nose.’
   b. Hana-ga zoo-wa nagai.
   nose-NOM elephant-TOP long
   Lit. ‘It is the nose that elephants have long ones.’

The multiple-nominative allows the topic phrase to be replaced by a nominative or genitive marked phrase, as shown in (ia). It also allows permutation of the topic phrase and the nominative phrase as shown in (ib). Similarly, examples like (ii) and (iii), where the nominative phrase is a hyponym of more than one super-categories, do not belong to the “gapless” construction either:

(ii) a. Butaniku-wa/ga/*no hireniku-ga oisii.
   pork-TOP/NOM/GEN filet-NOM tasty
   ‘As for pork, filet is tasty.’
   b. Hireniku-ga butaniku-wa oisii.
   filet-NOM Pork-TOP tasty
   ‘As for pork, it is filet that is tasty.’

(iii) a. Hokkee-wa/ga/*no Canada-ga tuyoi.
   hockey-TOP/NOM/GEN Canada-NOM strong
   ‘As for ice hockey, Canada is strong.’
   b. Canada-ga Hokkee-wa tuyoi.
   Canada-NOM hockey-TOP strong
   ‘As for ice hockey, it is Canada that is strong.’

As shown in (iia) and (iia), the topic phrase can be replaced by a nominative marked phrase. Permutation of the topic and nominative phrases is allowed as shown in (iib) and (iib). One might claim that *hokkee-no Canada-ga ‘hockey-GEN Canada-NOM’, where the topic phrase is replaced by the genitive marked phrase, is acceptable. However, it is semantically distinct from *hokkee-wa Canada-ga ‘hockey-TOP Canada-NOM’. While the former, if acceptable at all, means a Canadian style of hockey, the latter is a simple statement about hockey. Hence, the topic phrase cannot be replaced by the genitive marked phrase in (iia). I thank an anonymous reviewer for bringing my attention to this issue.
2 A proposal

2.1 Free Merge and labeling algorithm

This paper adopts Chomsky’s (2013, 2015) Free Merge coupled with a labeling algorithm approach. Under the Free Merge system, Merge applies freely without any feature trigger, though every syntactic object constructed by Merge needs to be labeled to be interpreted at the sensory-motor (S-M) and conceptual-intentional (C-I) interfaces. There is a labeling algorithm (LA) (12) that licenses syntactic objects for interpretation at the interfaces:

(12) Labeling Algorithm (LA) (Chomsky 2013, 2015)
LA is a special case of minimal search.

Rizzi (2015) restates Chomsky’s LA (12) in terms of the notion of “closeness” as shown in (13), where “closeness” is defined as in (14):

(13) Node $\alpha$ created by merge receives the label of the closest head.

(14) $H_1$ is closest head to $\alpha$ iff
I. $\alpha$ contains $H_1$, and
II. there is no $H_2$ such that
   i. $\alpha$ contains $H_2$, and
   ii. $H_2$ c-commands $H_1$.

(Rizzi 2015: 18)

According to Chomsky’s LA (12), when a syntactic object (SO) is of {H, XP} type as in (15a), where H is a head and XP is a non-head, its label can be easily identified by minimal search; LA (12) selects H as the label. In Rizzi’s terms, H is closer to SO than X, the head of XP; H becomes the label. When a syntactic object is of symmetric {XP, YP} type as in (15b), on the other hand, its label cannot be determined by LA (12), since minimal search is ambiguous, locating the two heads X and Y. Under Rizzi’s restatement, both X and Y would qualify as “the closest head” to SO. If nothing happens to SO in (15b), it has no label and thus cannot be interpreted at the interfaces:

(15) a. SO = {H, XP}
b. SO = {XP, YP}

There are two ways in which this syntactic object can be labeled. First, a syntactic object can be modified for labeling by raising one of its immediate
constituents, either XP or YP, so that there is only one visible head, X or Y, which counts as its label. Second, when XP and YP share a prominent feature via agreement, that feature is the label.

As an illustration of how LA (12) works, let us consider (16), which is the structure of a clause under the predicate-internal subject hypothesis:

(16) a. \( SO_i = \{v, VP\} \)
    b. \( SO_j = \{\alpha\ \text{DP}, \{v, VP\}\} \)
    c. \( SO_k = \{\text{DP}, \{T, \{\alpha\ \text{DP}, \{v, VP\}\}\}\} \)

In (16a), minimal search identifies \( v \) as the label of \( SO_i \). In (16b), which is of symmetric \{XP, YP\} type, minimal search is ambiguous, locating two heads D and \( v \). As mentioned above, one way to label \( \alpha (= SO_j) \) in (16b) is to raise the subject DP, which results in (16c). At this stage, \( \alpha \) is labeled as \( v \). This is because Chomsky argues that \( \alpha \) does not contain every occurrence of the subject DP so that the subject DP is taken not to be within \( \alpha \) in (16c). In other words, the lower copy of the subject DP, part of the discontinuous element, is invisible to minimal search. Minimal search identifies the only visible head \( v \) as the label of \( \alpha \). Then, \( SO_k \) as a whole, which is also of symmetric \{XP, YP\} type, is labeled in terms of agreement; the subject DP and T share \( \varphi \)-features, which are identified as the label of \( SO_k \).

2.2 A movement analysis of the “gapless” constructions

Assuming the Free Merge coupled with a labeling algorithm approach, this subsection explicates a movement analysis of the Japanese “gapless” construction, taking the “gapless” topic construction (1a), which is repeated here as (17), as an example. I propose that its derivation proceeds as represented in (18):

(17) \textit{Sakana-wa} tai-ga oisii. \[=(1a)\]
    \textit{fish-TOP} \textit{red.snapper-NOM} delicious
    ‘Speaking of fish, red snapper is delicious.’

(18) a. \([\alpha\ [n_P1 \text{ Sakana}]\ [n_P2 \text{ tai}]\) oisii.
    fish red.snapper delicious
b. \([n_P1 \textbf{Sakana}-wa}\ [\alpha(-n_P2)\ [n_P1 \textbf{ sakana}]\ [n_P2 \text{ tai}]-ga\) oisii.
    fish-TOP fish red.snapper-NOM delicious

I argue that the underlying form of (17) is (18a). In (18a), \textit{sakana} ‘fish’ and \textit{tai} ‘red snapper’ are directly merged on the assumption that Merge applies freely.
This results in a structure where the topic phrase and the nominative phrase establish a hypernym-hyponym relation, with *sakana* ‘fish’ being a hypernym and *tai* ‘red snapper’ being a hyponym. This hypernym-hyponym pair is roughly interpreted as appositional modification where *sakana* ‘fish’ modifies *tai* ‘red snapper’, *i.e.*, *red snapper, which is a fish*. I claim with, Marantz (1997) and Chomsky (2013) among others, that a noun is a complex structure *n-root*. In (18a), both *sakana* ‘fish’ and *tai* ‘red snapper’ are *n*-Ps, and these two *n*-Ps are merged in the subject position α. The subject position α in (18a) is of symmetric {XP, YP} type. The label of α cannot be determined by LA (12), since minimal search is ambiguous, locating the two *n* heads. If nothing happens, it has no label and thus cannot be interpreted at the interfaces. Since there is no agreement feature sharing between the two *n*-Ps in α, we must modify α for labeling by raising one of the two *n*-Ps, which results in an asymmetric structure. It should be noted that although the two *n*-Ps share their categorial feature, only a shared agreement feature can serve as a label under Chomsky’s LA. We raise *nP*₁ *sakana* ‘fish’ to the topic position as shown in (18b). The lower copy of *nP*₁ *sakana* ‘fish’, which is part of the discontinuous element, is invisible for labeling; α receives the label of *nP*₂ *tai* ‘red snapper’ as shown in (18b). Hence, the “gapless” topic construction (17) can be derived by movement of *nP*₁ *sakana* ‘fish’, which is required by labeling. It should be noted that under the proposed analysis, obligatory raising of *sakana* ‘fish’ to the topic position, which is required by labeling, accounts for the fact that there does not seem to exist any derivational source of the “gapless” topic construction at first sight.³

“Gapless” relative clauses can be analyzed in the same way. The derivation of (9a), which is repeated here as (19), is represented in (20). Note that the proposed analysis holds irrespectively of whether “gapless” relative clauses involve movement of a relative head (Kayne 1994; Murasugi 2000) or movement of an empty operator (Chomsky 1986). For an expository purpose, we assume that “gapless” relative clauses involve movement of a relative head. In (20), *nP*₁ *sakana* ‘fish’ is required by labeling to move to the relative head position:

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³ What is significant here is that the movement analysis of the “gapless” construction presented here is only made possible under the labeling theory. Without the labeling theory, there is no principled explanation of why *sakana* ‘fish’ in (18) obligatorily raises to the topic position and thus it looks as if there is no gap in the “gapless” construction. Note that a base-generation analysis of the “gapless” construction is compatible with the labeling theory, though a base-generation analysis is tenable even without the labeling theory.
In the proposed analysis, a few remarks are in order. First, although *sakana* ‘fish’ is extracted out of the subject in (18) and (20), it is widely accepted that Japanese lacks the Subject Condition effects (Ishii 1997, 2012; Kayne 1984; Saito and Fukui 1998; Takahashi 1994 among others). Hence, extraction of *sakana* ‘fish’ out of the subject in (18) and (20) does not induce any island violation.

Second, in (18) and (20), it is *sakana* ‘fish’ rather than *tai* ‘red snapper’ that undergoes movement. This does not follow from labeling. Raising of *tai* ‘red snapper’ also resolves the labeling problem, though the results are deviant as shown in (21) and (22):

(21)* Tai-wa sakana-ga oisii.
red.snapper-TOP fish-NOM delicious
Lit. ‘Speaking of red snapper, fish is delicious.’

(22)* [[Relative Clause sakana-ga oisii] tai]-wa eigo-dewa
fish-NOM delicious red.snapper-TOP English-in
“red snapper” to iu.
“red snapper” as call
Lit. ‘Red snapper, as for which fish is delicious, is called “red snapper” in English.’

I claim with Kuno (1973) and Saito (1985) that a topic and a relative head are licensed by the aboutness condition holding between the topic and the rest of the sentence and between the relative head and the relative clause. The aboutness condition is not syntactic but semantic or pragmatic in nature. The contrast between (17, 19) and (21, 22) should be explained by the aboutness condition not by labeling. In other words, (21) and (22) are semantically or pragmatically odd albeit syntactically well-formed. Taking the “gapless” topic construction as an example, *sakana* ‘fish’ is licensed as a topic in (17), since the rest of the sentence *tai-ga oisii* ‘red
snapper is delicious’ is “about” the topic *sakana* ‘fish’. In (21), however, *tai* ‘red snapper’ cannot be licensed as a topic, since the rest of the sentence *sakana-ga oisii* ‘fish is delicious’ is not “about” *tai* ‘red snapper’. This view is supported by the fact that even with a hanging topic, which does not involve any movement, *sakana* ‘fish’ rather than *tai* ‘red snapper’ must be the topic:

(23)  

(a)  *Sakana-ni kantsite ieba/Sakana-nara* tai-ga oisii.  
fish-DAT about speak/fish-as.for red.snapper-NOM delicious  
‘Speaking of fish/As for fish, red snapper is delicious.’

(b)  *Tai-ni kantsite ieba/Tai-nara* sakana-ga oisii.  
red.snapper-DAT about speak/red.snapper-as.for fish-NOM delicious  
Lit. ‘Speaking of red snapper/As for red snapper, fish is delicious.’

While the hanging phrase *sakana-ni kantsite ieba/sakana-nara* ‘speaking of fish/as for fish’ can be licensed as the topic by the aboutness condition as shown in (23a), the hanging phrase *tai-ni kantsite ieba/tai-nara* ‘speaking of red snapper/as for red snapper’ cannot as shown in (23b).

Recall that the present analysis requires that apart from the aboutness condition, the topic phrase/relative head and the nominative phrase should establish a hypernym-hyponym relation in their base positions. Kuno (1973) observes that (24) is deviant even if the comment part *boku-no apaato-no mado-ga kitanai* ‘the windows of my apartment are dirty’ is “about” the topic *U.S. Steel* in that the U.S. steel is responsible for the speaker’s windows being dirty:

(24)* U.S. Steel-wa boku-no apaato-no mado-ga kitanai.  
U.S. Steel-TOP I-GEN apartment-GEN window-NOM dirty  
‘Speaking of U.S. Steel, the windows of my apartment are dirty.’  
(Kuno 1973: 254)

I argue that (24) is deviant because the topic phrase *U.S. Steel* and the nominative phrase *boku-no apaato-no mado* ‘the windows of my apartment’ do not constitute a hypernym-hyponym pair, though (24) satisfies the aboutness condition. Note also that the appositional modification relation between the topic phrase and the nominative phrase is not sufficient to license the “gapless” construction either, as shown in (25):

(25)* Sooridaizin-wa Ikeda-si-ga sinda.  
prime.minister-TOP Ikeda-Mr.-NOM died  
‘Mr. Ikeda, Prime Minister, has died.’  
(Kuno 1973: 251)
In (25), although sooridaizin ‘prime minister’ appositionally modifies Ikeda-si ‘Mr Ikeda’, the result is unacceptable, since sooridaizin ‘prime minister’ and Ikeda-si ‘Mr Ikeda’ do not constitute a hypernym-hyponym pair.

Third, a question arises as to how the derivational output created by the present analysis (18b), which is repeated here as (26), is read off at the semantic representation (SEM), since although the desired semantic interpretation is something like (27), (26) and (27) are not straightforwardly parallel to each other:

(26) Sakana-wa [[sakana tai]-ga oisii]  
fish-TOP fish red.snapper-NOM delicious

(27) As for fish, red snapper is delicious.

The key question here is the role of the copy of sakana ‘fish’ in the original positon, i.e. the one inside the subject phrase sakana tai ‘fish red.snapper’. I argue that the copy of sakana ‘fish’ in the original position is not assigned any θ-role so that the lexico-semantic content of sakana ‘fish’ as well as its topic property is interpreted at the topic position. The θ-role of the predicate oisii ‘delicious’ is assigned to the larger constituent sakana tai ‘fish red.snapper’ and conceivably to its head tai ‘red.snapper’. The only role of the copy of sakana ‘fish’ in the original position is to ensure that sakana ‘fish’ and tai ‘red.snapper’, which are directly merged with each other, establish a hypernym-hyponym relation. Hence, (26) leads to semantic representation like (27). This analysis is reminiscent of Kayne’s (2002) analysis of pronouns, where a pronoun and its antecedent are merged together and then separated by movement. Under his analysis, (28), for example, is analyzed as shown in (29):

(28) John thinks that he is smart.

(29) a. thinks that [John he] is smart.
   b. John thinks that [John he] is smart.

In (29), John moves from within the embedded subject position to the matrix subject position. Kayne claims that John is assigned a θ-role in the matrix subject position, but not within the embedded subject position; the θ-role of smart is assigned to the larger constituent [John he] and conceivably to the head he. The only role of the copy of John in the original position is to establish an antecedent-pronoun relation between John and he.

4 I thank an anonymous reviewer for bringing my attention to this issue.
Finally, one might claim that scrambling could also resolve the labeling problem. As argued by Saito (1985), however, scrambling can apply to overtly case-marked nominals but not to non-case-marked nominals. Since neither sakana ‘fish’ nor tai ‘red snapper’ itself is overtly case-marked, it is not subject to scrambling. There is no way of resolving the labeling problem by scrambling.5

3 Supporting evidence

The previous section has argued that the Japanese “gapless” construction is derived by movement. This section presents evidence supporting our movement analysis of the Japanese “gapless” construction.

3.1 Island constraints

First, the “gapless” construction shows island effects. The “gapless” construction allows long-distance dependency as shown in (30) and (31):

(30) **Sakana-wa** John-ga [[tai-ga oisii to] omotteiru.
    fish-TOP John-NOM red.snapper-NOM delicious that think
    Lit. ‘Speaking of fish, John thinks that red snapper is delicious.’

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5 It might be possible to extend the proposed analysis to other topicalization cases like (i) and copy-raising cases like (ii):

(i) Hana-wa Mary-wa/ga tulip-o katta.
    flower-TOP Mary-TOP/NOM tulip-ACC bought
    ‘As for flowers, Mary bought tulips.’

(ii) John seems as if he has found the chocolate.

In (i), under the present analysis, *hana* ‘flower’ and *tulip* ‘tulip’ would be directly merged within the object position, and then move *hana* ‘flower’ to the topic position, which is enforced by labeling. In (ii), *John* and *he* would be directly merged within the embedded subject position, and then the labeling requirement would force *John* to undergo movement out of the embedded subject position to the matrix subject position. Since assessing the consequences of the present analysis to other constructions is beyond the scope of this paper, I leave this important issue for future research. I thank an anonymous reviewer for bringing my attention to this issue.
(31) [[John-ga [t tai]-ga oisii to] omotteiru] sakana]  
John-NOM red.snapper-NOM delicious that think fish  
Lit. ‘Fish, as for which John thinks that red snapper is delicious’

The “gapless” construction, however, obeys the Complex NP Constraint and the Adjunct Condition as shown in (32) and (33) respectively:

(32) Complex NP Constraint  
\[ a. *?Sakana-wa \text{John-ga [Complx NP} [t tai]-ga oisii}\]  
fish-TOP John-NOM red.snapper-NOM delicious mise]-o sitteiru.  
restaurant-ACC know  
Lit. ‘Speaking of fish, John knows a restaurant where red snapper is delicious.’  
\[b. *?[\text{John-ga [Complx NP} [t tai]-ga oisii mise]-o} \text{John}\text{-NOM red.snapper-NOM delicious restaurant-ACC sitteiru] sakana}\]  
know fish  
Lit. ‘Fish, as for which John knows the restaurant where red snapper is delicious’

(33) Adjunct Condition  
\[ a. *?Sakana-wa \text{John-ga [Adjunct} [t tai]-ga oisii kara}\]  
fish-TOP John-NOM red.snapper-NOM delicious because totemo manzoku siteiru.  
very be-satisfied  
Lit. ‘Speaking of fish, John is very satisfied because red snapper is delicious.’  
\[b. *?[\text{John-ga [Adjunct} [t tai]-ga oisii kara} 
\text{totemo [John-NOM red.snapper-NOM delicious because very manzoku siteiru] sakana}\]  
be-satisfied fish  
Lit. ‘Fish, as for which John is very satisfied because red snapper is delicious’

Sakana ‘fish’ is moved out of the complex NP in (32) and the adjunct in (33). (32) and (33) are all deviant, which indicates that the “gapless” construction involves movement. The existence of the island effects with the “gapless” construction
thus constitutes evidence in favor of our movement analysis and against a base-
generation analysis.\textsuperscript{6,7}

This is in contrast with the lack of the island effects with hanging topics and
relative clauses with resumptive pronouns, which do not involve movement
(Kuno 1973; Saito 1985):\textsuperscript{8,9}

\textsuperscript{6} This paper accepts the widely-accepted view that sensitivity to islands is a diagnostic for the
existence of syntactic movement. See Boeckx (2003) and Postal (1998) against this standard view,
claiming that sensitivity/insensitivity to islands does not necessarily indicate the existence/absence
of syntactic movement. For alternative approaches to islands, see, among others Szabolcsi and

\textsuperscript{7} The “gap” constructions such as (i), which can be derived either by movement or base-
generation (Saito 1985), are immune from the island effects, which is in contrast with the island-
sensitivity of the “gapless” constructions, which are unambiguously derived by movement:

\begin{enumerate}
\item a. \textbf{Sakana-wa} John-ga \textit{[e oisii mise]-o} sitteiru.
  fish-TOP John-NOM delicious restaurant-ACC know
  Lit. ‘Speaking of fish, John knows the restaurant where it is delicious.’

\item b. \textbf{Sakana-wa} John-ga \textit{[e oisii kara]} totemo manzokusiteiru.
  fish-TOP John-NOM delicious because very be.satisfied
  Lit. ‘Speaking of fish, John is very satisfied because it is delicious.’
\end{enumerate}

\textsuperscript{8} Note that (34b) and (35b), which belong to the “gap” constructions, are still acceptable even
if the resumptive pronouns are omitted. What (34b) and (35b) intend to show is that the relative
clauses with resumptive pronouns, which can only be derived by base-generation, do not
exhibit any island effects. I thank an anonymous reviewer for bringing my attention to this
issue.

\textsuperscript{9} An anonymous reviewer has raised the question why the base-generation analysis of hanging
topics cannot be extended so as to accommodate the “gapless” construction. The present
analysis claims that unlike the hanging topic construction, the “gapless” construction requires
that the topic phrase and the nominative phrase should be directly merged to constitute a
hypernym-hyponym pair in their base positions so that the topic phrase undergoes movement
from its original position to the topic position. Evidence in support of this view comes from the
fact that hanging topics, whose only licensing requirement is the aboutness condition, do not
require the topic phrase and the nominative phrase to be a hypernym-hyponym pair. Hence, (i)
and (ii), though there is no hypernym-hyponym relation between the hanging topic and the
nominative phrase, are marginally acceptable, which is in contrast with the total unaccept-
ability of their “gapless” construction counterparts (24) and (25):

\begin{enumerate}
\item a. ?U.S. Steel-ni kansite ieba boku-no apaato-no mado-ga kitanai.
  U.S. Steel-DAT about speak I-GEN apartment-GEN window-NOM dirty
  ‘Speaking of U.S. Steel, the windows of my apartment are dirty.’

\item b. ? Sooridaizin-ni kansite ieba Ikeda-si-ga sinda.
  prime.minister-DAT about speak Ikeda-Mr.-NOM died
  ‘Speaking of Prime Minister, Mr. Ikeda has died.’
\end{enumerate}
(34) No Complex NP Constraint Effects

a. **Sakana-ni kansite ieba/Sakana-nara** John-ga
   fish-DAT about speak/fish-as.for John-NOM
   [Complx NP tai-ga oisii mise]-o sitteiru.
   red.snapper-NOM delicious restaurant-ACC know
   Lit. ‘Speaking of fish/As for fish, John knows a restaurant where red
   snapper is delicious.’

b. [John-ga [Complx NP sore-ni takane-o tuketa nakagai]-o
   John-NOM that-DAT high.price-ACC gave middle.trader-ACC
   sitteiru] sakana
   know fish
   Lit. ‘Fish, as for which John knows [the middle trader who priced it high]’

(35) No Adjunct Condition Effects

a. **Sakana-ni kansite ieba/Sakana-nara** John-ga
   fish-DAT about speak/fish-as.for John-NOM
   [Adjunct tai-ga oisii bara] totemo manzoku siteiru.
   red.snapper-NOM delicious because very be-satisfied
   Lit. ‘Speaking of fish/As for fish, John is very satisfied because red
   snapper is delicious.’

b. [John-ga [Adjunct nakagai-ga sore-ni takane-o
   John-NOM middle.tradier-NOM that-DAT high.price-ACC
   tuketa bara] otemo manzoku siteiru] sakana
   gave because very be-satisfied fish
   Lit. ‘Fish, as for which John is very satisfied [because the middle trader
   priced it high]’

3.2 Reconstruction

Second, the “gapless” construction shows reconstruction effects for variable
binding:

(36) [Soko]-no sakana]-wa nakaorosi-sae-[t1 nisin]-ga
    that place-GEN fish-TOP middle.trader-even-NOM herring-NOM
    itiban oisii to] omotteiru.
    most delicious that think
    Lit. ‘Speaking of its1 fish, [even the middle trader],1 thinks that herring is
    most delicious.’
In (36) and (37), the pronoun *soko* ‘that place’ can be interpreted as a variable bound by the quantificational expression *nakaosrosi-sae* ‘even the middle trader’ through reconstruction into its original position. This indicates that the “gapless” construction involves movement. Under a base-generation analysis, however, since the quantificational expression *nakaosrosi-sae* ‘even the middle trader’ does not c-command the pronoun within the topic/relative head position, there is no straightforward way of accounting for the bound variable reading of the pronoun. This is in contrast with the lack of the reconstruction effects with hanging topics and relative clauses with resumptive pronouns. In neither (38) nor (39), the bound variable interpretation of *soko* ‘that place’ is allowed:

(37) *[Nakaorosi-sae]-ga 
[t2 tai]-ga itiban yoku ur eru to]
middle.trader-even-NOM red.snapper-NOM most well sell that
omoikondeiru] *[soko]-no sakana]*
believe that.place-GEN fish
Lit. ‘Its fish, as for which [even the middle trader] believes that red
snapper sells best’

10 An anonymous reviewer observes that (36) and (37) sound deviant, pointing out that if they are acceptable at all, it might be attributed to the fact that the subject can “weakly” c-command the topic phrase to the left or the relative head to the right. I have consulted seven native speakers of Japanese and five of them find (36) and (37) acceptable. Note also that reconstruction with variable binding is also allowed for those five native speakers even when a QP appears in an embedded clause as shown in (i), which suggests that movement is involved in the “gapless” construction:

(i) *[Soko]-no sakana]-wa John-ga 
[nakaorosi-nitotte-sae]-la 
[t2 nisin]-ga that.place-GEN fish-TOP John-NOM middle.trader-for-even herring-NOM
itiban oisii to] omotetiru.
most delicious that think
Lit. ‘Speaking of its fish, John thinks that [even for the middle trader] herring is most
delicious.’

I leave for future research why there exist variations with the acceptability judgments among speakers.
3.3 Parasitic gaps

Finally, the “gapless” construction licenses a parasitic gap. Abe and Nakao (2009) and Abe (2011) claim that although Japanese does not seem to have parasitic gaps at first sight, there are instances of parasitic gap in Japanese as exemplified by (40):

(40) $Op_i \, [e_1 \, \text{mita} \, [\text{subete-no hito}]_2 \, \text{-ga} \, [\text{Mary}_3 \, \text{-ga} \, t_i \, \text{kiniitteiru to}] \, \text{saw} \, \text{every-GEM person-NOM} \, \text{Mary-NOM like that}\,$

$\text{itta no]-wa} \, [\text{zibun}_2/*3 \, \text{-no donna syasin-o}]_1 \, \text{desu ka.} \,$

Lit. ‘What kind of pictures of self$_2$/$^*3$ was it that everyone$_2$ [who saw $e_1$] said that Mary$_3$ liked $t_i$.’

(Abe 2011: 206)

(40) is an instance of subject parasitic gap in the cleft construction with a case-marked focused element, which has been assumed to involve empty operator A’-movement, as argued by, among others, Hoji (1985). In (40), the reflexive pronoun zibun ‘self’ can refer to subete-no hito ‘everyone’ but not to Mary. In other words, (40) allows Condition A reconstruction into the parasitic gap but not into the real gap.

Abe and Nakao present evidence to support for their claim that (40) is an instance of parasitic gap. First, the Condition A reconstruction pattern is also observed in the English subject parasitic gap construction as shown in (41). While himself can refer to every boy in (41a), herself cannot refer to Mary in (39b) (Munn 1994: 407):

(41) a. [Which picture of himself$_1$] did [every boy$_1$ who saw e] say Mary$_2$ liked t?
   b. *[Which picture of herself$_2$] did [every boy$_1$ who saw e] say Mary$_2$ liked t?

Second, such cases as (40) show the case-matching effect, which is one of the properties of the parasitic gap construction. In (40), both the real and parasitic
gaps carry accusative Case, since *miru* ‘see’ and *kiniiru* ‘like’ both require accusative objects. The Case of the parasitic gap matches that of the real gap; (40) is acceptable. (42), however, is ruled out by the Case-matching requirement:

(42) *?*[Op₁ [e₁ mita [subete-no hito]₂]-ga [Mary-ga t₁ kisisita saw every-Gen person-NOM Mary-NOM kiss to] itta no]-wa zibun₂-no donna syasin-ni₁, desu ka. that said COMP-TOP self-GEN what picture-DAT be Q Lit. ‘What kind of pictures of self₁, was it that everyone₂ [who saw e₁] say that Mary kissed t₁?’ (Abe 2011: 207)

In (42), the parasitic gap carries accusative Case, since the predicate *miru* ‘see’ requires an accusative object. The real gap, on the other hand, carries dative Case, since the predicate *kisusuru* ‘kiss’ requires a dative object. The Case of the parasitic gap does not match that of the real gap; (42) is deviant.

Adopting Abe and Nakao’s view that examples like (40) are parasitic gap constructions in Japanese, let us consider the “gapless” construction with a subject parasitic gap:

(43) [Zibun₂-no mise-no sakana-wa]₁ [e₁ sabaita [subete-no self-GEN shop-GEN fish-TOP cooked every-GEN nakagai]₂]-ga [[t₁ maguro]-ga itiban oisii to] omotteiru. middle.tradier-NOM tuna-NOM most delicious that think Lit. ‘Speaking of [fish at self₂’s shop], every middle trader₂ [who cooked e₁] thinks that [t₁ tuna] is most delicious.’

(44) [[e₁ sabaita [subete-no nakagai]₂]-ga [[t₁ maguro]-ga cooked every-GEN middle.tradier-NOM tuna-NOM itiban oisii to] omotteiru] [zibun₂-no mise-no sakana]₁ most delicious that think self-GEN shop-GEN fish Lit. ‘[Fish at self₂’s shop], as for which every middle trader₂ [who cooked e₁] thinks that [t₁ tuna] is most delicious’

In (43) and (44), the reflexive pronoun *zibun* ‘self’ can refer to *subete-no nakagai* ‘every middle trader’. In other words, Condition A reconstruction into the empty category within the subject phrase is allowed. According to Abe and Nakao’s view, (43) and (44) count as parasitic gap constructions. This shows that the “gapless” construction licenses a parasitic gap. Given that parasitic gaps are only licensed by movement, this constitutes evidence in support of our movement analysis and against a base-generation analysis.
This is in contrast with the hanging topic construction (45) and the relative clause with a resumptive pronoun (46), which do not involve movement. The unacceptability of (45) and (46) shows that they do not license parasitic gaps:

(45)*? [Zibun2-no mise-no sakana]1-ni kansite ieba/
   self-GEN shop-GEN fish-DAT about speak
   [Zibun2-no mise-no sakana]1-nara [e1 sabaita
   self-GEN shop-GEN fish-as.for cooked
   [subete-no nakagai]2]-ga
   every-GEN middle.tradier-NOM
   [ maguro-ga itiban oisii to] omotteiru.
   tuna-NOM most delicious that think
Lit. ‘Speaking of [fish at self2’s shop]1/As for [fish at self2’s shop]1, every middle trader2 [who cooked e1] thinks that tuna is most delicious.’

(46)*? [e1 sabaita [subete-no nakagai]2]-ga [sore1-ni takane-o
   cooked every-GEN middle.tradier-NOM that-DAT high.price-ACC
tuketa-no]-o kookaisita [zibun2-no mise-no sakana],
gave-fact-ACC regretted self-GEN shop-GEN fish
Lit. ‘[Fish at self2’s shop]1, as for which [every middle trader2 [who cooked e1]] regretted that he priced it high’

4 Conclusion

This paper has proposed a movement analysis of the Japanese “gapless” construction, where a topic phrase or a relative head is derived in terms of movement required by labeling. It was shown that our movement analysis is supported by island, reconstruction, and parasitic gap facts. If our analysis is on the right track, it gives further support for the Free Merge coupled with a labeling algorithm approach.

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