

Bare Wh-stripping in Japanese

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Bare *Wh*-Stripping in Japanese

Masako Maeda and Yoichi Miyamoto

Abstract

This paper focuses on clausal ellipsis, in particular sluicing and stripping, in Japanese. In the literature, two derivational options have been proposed for Japanese sluicing: (I) the movement of the remnant, followed by TP-deletion (Takahashi in *Journal of East Asian Linguistics* 3: 265-300, 1994), and (II) the deletion of the presuppositional clause of the cleft construction (Saito in *Nanzan Linguistics* 1: 21-50, 2004). The mixed properties of sluicing suggest that Japanese sluicing has multiple derivational sources. This paper argues for this hybrid approach to sluicing, by examining another and yet-unnoticed type of clausal ellipsis: the stripping construction that includes a *wh*-remnant with focus interpretation. We argue that *wh*-stripping also has multiple derivational sources, namely, focus movement of the remnant *wh*-phrase followed by TP-deletion and the cleft construction, as in the case of sluicing. By examining negative polarity items, quantifier scope interactions, and islands, we show that *wh*-stripping in Japanese exhibits mixed syntactic properties, and we put forth our proposal that this makes it hard to narrow down its derivational path to a single construction.

Keywords: *wh*-stripping, sluicing, clefts, NPI, quantifier scope, islands

1. Introduction

Within the generative framework, ellipsis has attracted the attention of many researchers over the many years, for it is believed that elucidating the properties of this phenomenon may lead to, and in fact has led to, clarification of the true nature of Universal Grammar (UG). In this respect, it is important to examine ellipsis phenomena in Japanese because they involve intricate interactions among the ellipsis operations available in UG, including argument ellipsis, which is unavailable in languages with ϕ -features, such as English and German (Saito 2016). For this purpose, this paper focuses on clausal ellipsis in Japanese such as sluicing, as exemplified in (1).

- (1) Taro_{TOP} wa nanika_{ACC} o katta ga, boku_{TOP} wa [nani_{ACC} o (da) ka] siranai.
Taro-TOP something-ACC bought but I-TOP what-ACC COP Q know.not
'Taro bought something, but I don't know what.'

In the literature, two derivational options have been proposed for Japanese sluicing: (i) movement of the remnant, followed by TP-deletion (Takahashi 1994; Takita 2009; Takahashi and Lin 2012); and (ii) deletion of the presuppositional clause of the cleft construction (Nishiyama et al. 1996; Hiraiwa and Ishihara 2002, 2012; Saito 2004; Kizu 2005; Takita 2019; a.o.). The former analysis presupposes a mono-clausal base structure, where the TP is crossed out after the remnant such as *nani-o* ‘what-ACC’ in (2a) undergoes overt *wh*-movement to CP SPEC, whereas the latter analysis presupposes that sluicing involves a bi-clausal structure, where the presuppositional CP is deleted and the focus part acts as the remnant, as shown in (2b) (Saito 2004).

- (2) a. ... boku-wa [CP nani-o_i [~~TP Taro-ga t_i katta~~] ka] siranai.
 I-TOP what-ACC Taro-NOM bought Q know.not
- b. ... boku-wa [CP [~~CP Taro-ga e_i katta no~~]-ga nani-o ka] siranai.
 I-TOP Taro-NOM bought C-NOM what-ACC Q don’t.know

On the one hand, the cleft analysis gains support from the optional presence of the copula *da*, as shown in (3a), which is a hallmark of the cleft in Japanese, as illustrated in (3b).

- (3) a. Taro-wa [CP naze zibun-ga sikarareta ka] wakatteinai ga,
 Taro-TOP why self-NOM scolded Q understand.not though
 Hanako-wa [CP naze (da) ka] wakatteiru.
 Hanako-TOP why COP Q understand
 ‘Though Taro doesn’t understand why he was scolded, Hanako understands why he/she was scolded.’
- b. Hanako-wa [CP [TP [CP Op_i [TP zibun-ga t_i sikarareta] no]-ga naze_i (da)] ka]
 Hanako-TOP self-NOM scolded C-NOM why COP Q
 wakatteiru.
 understand
 ‘(Lit.) Hanako understands why it is that self was scolded.’

On the other hand, the movement and deletion analysis is supported, for instance, by sluicing with a remnant that is incompatible with the following copula (Oguro 2013). Oguro (2013) observes that *nandemata/nandatte* ‘why’, a synonym of *naze* ‘why’, cannot appear in the focus position of

a cleft sentence, as shown in (4a). In contrast, sluicing with *nandemata/nandatte* is acceptable if the remnant is not followed by the copula.¹ The contrast in (4) suggests that Japanese sluicing has a noncleft source.

- (4) a. John-ga kubiinatta no-ga {naze/*nandemata/*nandatte} da ka-wa humei da.
 John-NOM got.fired C-NOM why COP Q-TOP unclear COP
 ‘Why it is that John got fired is unclear.’
- b. John-ga kubiinatta ga, {nandemata/nandatte}(*da) ka-wa humei da.
 John-NOM got.fired but why COP Q-TOP unclear COP
 ‘John got fired, but why he got fired is unclear.’ (Oguro 2013: 61-2)

The mixed properties of sluicing, as exemplified in (3b) and (4b), suggest that Japanese sluicing has multiple derivational sources: a mono-clausal sentence in which the remnant undergoes overt movement to CP, followed by TP-deletion, and the cleft construction in which the presuppositional CP is deleted with the cleft focus being a remnant.

This paper aims to provide independent evidence for the hybrid approach to sluicing by examining another as-yet-unnoticed type of clausal ellipsis: the stripping construction that includes a *wh*-remnant with focus interpretation. Let us consider (5).

- (5) Ken-wa [Mai-ga dareka-o suisensita to] itta ga,
 Ken-TOP Mai-NOM someone-ACC praised C said but
 [dare-o to]-wa iwanakatta.
 who-ACC C-TOP said.not
 ‘Ken said that Mai recommended someone, but he didn’t say who.’

¹ Assuming that *nandemata/nandatte* is base-generated in CP SPEC, Oguro (2013) attributes the ungrammaticality of *nandemata/nandatte* in (4a) to the incompatibility of these elements with the complement of the copula: VP. Under this line of analysis, however, *naze* ‘why’ should be base-generated in a lower position than *nandemata/nandatte*, irrespective of their similarities in meaning. We leave a detailed discussion of the contrast in (4) for future research.

The elliptical part of this example is interpreted as *Ken didn't explicitly say who the person that Mary recommended was*. Crucially, the elided clause does not contain the question marker *ka*, which is required in embedded interrogative clauses in Japanese, as illustrated in (6):

- (6) Ken-wa [Mai-ga dareka-o suisensita to] itta ga,
 Ken-TOP Mai-NOM someone-ACC recommended C said but
 [dare-o suisensita *(ka)] wakaranai.
 who-ACC recommended C know.not
 'Ken said that Mai recommended someone, but I don't know who he recommended.'

The absence of the question marker suggests that the embedded clause is not interrogative, which in turn indicates that the *wh*-remnant is not a *wh*-interrogative phrase.

Saito (2021) shows that *wh*-indeterminate phrases in Japanese are not necessarily associated with the interrogative complementizer *ka* or the conjunctive marker *mo*. He argues that such "bare" *wh*-phrases are in fact a kind of focus and undergo focus movement to FocP in the CP periphery. (7) is an example of the type Saito examines:

- (7) Hanako-wa [_{ReportP} [_{FocP} doko-ni [_{TP} *t_i* iku]] to](-wa) itta ga,
 Hanako-TOP where-to go C-TOP said but
 [_{ReportP} [_{FocP} itu_j [_{TP} *t_j* iku]] to](-wa) iwanakatta.
 when go C-TOP said.not
 '(Lit.)Hanako said where she is going, but she didn't say when she is going there.'
 (Saito 2021: 1)

In this example, the *wh*-phrases *doko-ni* 'which place-at' and *itu* 'when' are perfectly acceptable in the sentences without *ka*, suggesting that they are not *wh*-interrogative phrases but focus phrases. Following Saito (2021), we assume that the *wh*-remnant in (7) is also interpreted as a focus phrase, and we call the elliptical sentence an example of *wh*-stripping. We argue that *wh*-stripping like (7), just as with the case of sluicing, has multiple derivational sources, as schematized in (8).

- (8) a. [_{CP} dare-o [_{TP} ~~Mai-ga home-ta~~] to]-wa iwanakatta. (focus movement analysis)
 b. [_{CP} [_{TP} ~~Mai-ga home-ta na~~] no]-ga dare-o to]-wa iwanakatta. (the cleft analysis)

We put forth our proposal by showing that *wh*-stripping in Japanese exhibits mixed syntactic properties, which makes it difficult to narrow down its derivational paths to a single construction. We show that, in principle, these two derivational options are available to the ellipsis in question; however, these two options are not always equally available for independent reasons, which disguise its true characteristics.

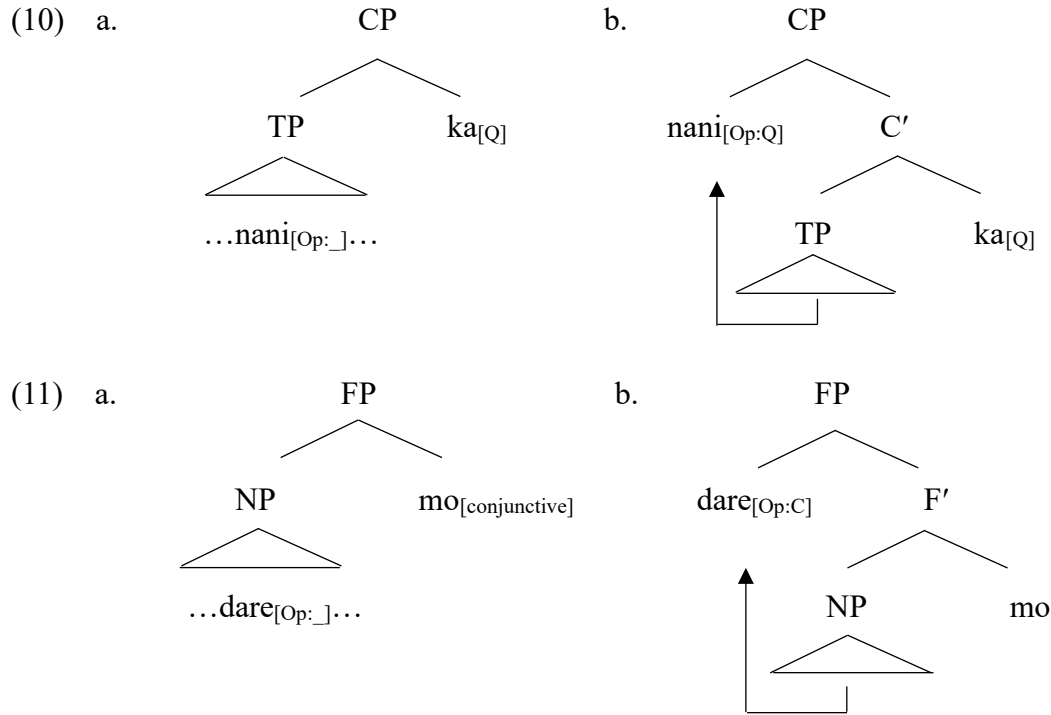
The remainder of this paper is organized as follows. In Section 2, we review Saito’s (2017) proposal on the nature of *wh*-indeterminate phrases and Saito’s (2021) analysis of bare *wh*-phrases in Japanese. Section 3 examines negative-polarity item (NPI)-licensing, islands, and scope interactions in *wh*-stripping. We show that a *wh*-stripping sentence with an NPI remnant has a property that is inconsistent with the cleft construction, which suggests that such a *wh*-stripping case is derived by movement and TP-deletion. We then consider island effects in *wh*-stripping and argue that they fit well with the cleft analysis. Finally, we examine the scope interactions of quantifier phrases in *wh*-stripping. It is shown that the presence/absence of the copula *da* significantly affects the scope interpretation. We observe the scope interaction between the remnant *wh*-phrase and another quantifier, which is difficult, if not impossible, to explain under the cleft analysis. The three phenomena examined in this paper have a characteristic in common: they can only be accounted for under one analysis, but not the other, which in turn forces us to conclude that the two analyses entertained in the literature are both necessary for Japanese sluicing. In Section 4, we examine an alternative analysis based on VP-Ellipsis. Section 5 summarizes our analysis.

2. (Bare) *wh*-indeterminate phrases in Japanese

Saito (2017) argues that *wh*-indeterminate phrases in Japanese are operators that need to be specified for quantificational force. They undergo covert movement to the specifier of the question complementizer *ka* or conjunctive marker *mo* to yield an interrogative or universal interpretation, as schematized in (9).

- (9) a. Taroo-wa [<dare-ga> [dare-ga sore-o tabeta] ka] sitteiru.
 Taro-TOP who-NOM who-NOM it-ACC ate Q know
 ‘Taro knows who ate it.’
 b. [<dare-ga> [[dare-ga kaita] hon]]-mo omosiroi.
 who-NOM who-NOM wrote book-also interesting
 ‘For every *x*, *x* a person, the book that *x* wrote is interesting.’

(Saito 2017a: 1, slightly modified)



This covert movement analysis is supported by the fact that the scope possibilities of *wh*-indeterminate phrases obey islands (Nishigauchi 1990; Watanabe 1992; Yoshida 1999, 2016; Saito 2017). Saito (2017) demonstrates that example (12a) shows that a clause headed by *ka*, a question marker, may yield a Yes-No question reading. Example (12b), in contrast, shows that *ka* may be associated with a *wh*-phrase that has undergone covert *wh*-movement to its specifier. (12b) also shows that the covert movement may be long-distance. The crucial example is (12c), where a *wh*-phrase cannot move to the secondarily embedded interrogative clause, passing by the most embedded interrogative clause headed by *ka* (Nishigauchi 1990). Saito (2017) attributes the absence of a higher scope in (12c) to criterial freezing (Rizzi 2006), which states that an element that has satisfied a criterion cannot move to another criterial position. In (12c), the *wh*-phrase satisfies the Wh Criterion in the most embedded CP, thereby freezing in that position. This in turn suggests that *wh*-phrases in Japanese undergo covert movement.

- (12) a. [[Hanako-ga sono toki [[Taroo-ga kuru] to] itta] ka] osiete kudasai.
 Hanako-NOM that time Taro-NOM come C said Q teach please
 ‘Please tell me if Hanako said then that Taro was coming.’

- b. [[Hanako-ga sono toki [[dare-ga kuru] to] itta] ka] osiete kudasai.
 Hanako-NOM that time who-NOM come C said Q teach please
 ‘Please tell me who Hanako said then was coming.’
- c. [[Hanako-ga sono toki [[dare-ga kuru] ka] tazuneta] ka] osiete kudasai.
 Hanako-NOM that time who-NOM come Q asked Q teach please
 A. Please tell me if Hanako asked then who was coming.
 B. ??Please tell me who Hanako asked then if she/he is coming.

Saito (2021) further observes that *wh*-indeterminate phrases may appear without *ka/mo*, as shown in (13). Saito argues that such bare *wh*-phrases are instances of focus, which is licensed by moving to FocP in the CP periphery.

- (13) a. Hanako-wa [[doko-ni iku] to]-wa itta ga,
 Hanako-TOP where-to go C-TOP said though
 [[itu iku] to]-wa iw-ana-katta.
 when go-Pres. C-TOP say-NEG-PAST
 ‘Hanako said where she is going, but didn’t say when she is going there.’
- b. [[Itu taisyokusuru] to] sinkokusu-reba, moosikomi-tetuzuki-wa syuuryoo desu.
 when retire C declare-if application-procedure-TOP end COP
 ‘If you declare when you will retire, the application procedure is complete.’
- c. Kono risuto-no uti, hutatu tyuumon-deki-mas-u.
 this list-GEN within two order.do-can-HON-PRES
 [[Nani to nani-o kiboosuru] to] kaite kudasai.
 what and what-ACC want C write please
 ‘You can order two items from this list. Please write which two you want.’ (Saito 2021)

The fact that bare-*wh*-phrases also obey *wh*-islands supports the (covert) focus movement analysis; the *wh*-phrase in (14b) cannot move out of the Wh Criterion position to satisfy another criterion

(Rizzi 2006).^{2, 3}

- (14) a. Taro-wa [CP minna-ga [CP Hanako-ga doko-ni iru to] omotteiru to]
 Taro-TOP all-NOM Hanako-NOM where-at is C think C
 hakkiri iwanakatta.
 clearly said.not
 ‘Taro didn’t say clearly where everyone thought Hanako was.’

- b. ??Taro-wa [CP minna-ga [CP Hanako-ga doko-ni iru kadooka]
 Taro-TOP all-NOM Hanako-NOM where-at is whether
 siritagatteiru to] hakkiri iwanakatta.
 know.want C clearly said.not
 ‘Lit. Taro didn’t say clearly where everyone wanted to know whether Hanako was.’

(Saito 2021, slightly modified)

Furthermore, the movement in question is not simple scrambling. As shown in (15), Japanese allows scrambling of a *wh*-phrase out of a *wh*-interrogative clause; that is, scrambling shows a

² A reviewer points out that (14) argues against the choice function/unselective binding-based analysis of *wh*-in-situ (Reinhart 1997) because they would predict *wh*-indeterminate phrases to be island-nonsensitive, but the data in (12) and (14) can be accounted for by other movement-based analysis, including Watanabe’s (1992) “overt-syntactic” null operator movement analysis and Hagstrom’s (1998) Q-movement analysis (given that e.g. *wh*-indeterminates and the complementizer *to* can be directly “merged”). We leave comparison of the movement analyses for future research.

³ One might argue that such bare *wh*-phrases are in fact *wh*-interrogative phrases that move to the specifier position of the covert question complementizer *ka*. This argument, however, is not tenable, given that the embedded interrogative C head *ka* cannot be omitted in Japanese.

- (i) Boku-wa [CP Maki-ga doko-ni iru *(ka)] siritai.
 I-TOP Maki-NOM where-at is Q want.to.know
 ‘I want to know where Maki is.’

radical reconstruction effect (Saito 1989). With the (c)overt *wh*-movement analysis (Saito 2017), (15) shows that scrambling out of a criterial position is possible. There is no criterial freezing effect here because scrambling is not a movement for satisfying another criterion, and it can exhibit the radical reconstruction effect, which in effect keeps the criterial position to one.

- (15) Doko-ni_i Maki-wa [_{CP} *t_i* [Ken-ga *t_i* ikitai] ka] siritagatteiru.
 where-DAT Maki-TOP Ken-NOM wants.to.go Q want.to.know
 ‘Maki wants to know where Ken wants to go.’

On the other hand, focus movement out of a *Wh* Criterion position gives rise to the criterial freezing effect, as evidenced by the ungrammaticality of the cleft sentence in (16) (Takano 2021: 45, n25).

- (16) *[Op_i Maki-ga [_{CP} *t_i* [Ken-ga *t_i* ikitai] ka] siritagatteiru no]-wa doko-ni_i da.
 Maki-NOM Ken-NOM wants.to.go Q want.to.know C-TOP where-DAT COP
 ‘(Lit.) It is where that Maki wants to know Ken wants to go.’

With the contrast in (15) and (16) in mind, let us consider the *wh*-stripping sentence in (17).

- (17) a. *Maki-ga [[Ken-ga dokoka-ni ikitai ka] siritagatteiru to]-wa kiita kedo,
 Maki-NOM Ken-NOM somewhere-to wants.to.go Q want.to.know C-TOP heard but
 [doko-ni to]-wa kiite-nai.
 where-to C-TOP hear-not
 ‘(Lit.) I heard Maki wants to know where Ken wants to go, I didn’t here where.’

- b. [_{CP} doko-ni_i Maki-ga [_{CP} *t_i* [Ken-ga *t_i* ikitai] ka] siritagatteiru to]-wa kiite-nai.



Here, the *wh*-phrase *doko-ni* ‘where’ satisfies the *Wh* Criterion in the most embedded clause. If the subsequent movement to the higher CP is scrambling, the movement should be allowed in the same manner as in (15). Therefore, the ungrammaticality of (17) suggests that the movement in question is not mere scrambling but focus movement, as advocated by Saito (2021).

The question now is how the elliptical sentence, *wh*-stripping, is derived. In the next section, we consider NPI, islands, and scope interactions and suggest that *wh*-stripping sentences have multiple

derivational paths; they can be derived by movement of the bare *wh*-phrase and TP-deletion or from the cleft construction.

3. *Wh*-stripping

We argue that, in principle, *wh*-stripping in Japanese allows a mono-clausal structure, where a remnant *wh*-phrase moves to CP followed by TP deletion, or a bi-clausal cleft structure, where the presuppositional CP is deleted.

- (8) a. [_{CP} dare-o [_{TP} ~~Mai-ga hometa~~] to]-wa iwanakatta. (focus movement analysis)
 b. [_{CP} [_{TP} ~~Mai-ga hometa na~~] no]-ga dare-o to]-wa iwanakatta. (the cleft analysis)

The possibility that *wh*-stripping may be derived from the cleft construction is supported by the fact that the relevant construction has a clefted, non-elided counterpart, as shown in (18).

- (18) Ken-wa [Mai-ga dareka-o hometa to] itta ga,
 Ken-TOP Mai-NOM Someone-ACC praised C said but
 [[Mai-ga hometa] no]-ga dare-o (da) to]-wa iwanakatta.
 Mai-NOM praised C-NOM who-ACC COP C-TOP said.not
 ‘(Lit.)Ken said that Mai praised someone, but he didn’t say who.’

Note that the remnant *wh*-phrase in *wh*-stripping that corresponds to (18) can be followed by the copula *da*, suggesting that *wh*-stripping in (19) can be derived from a cleft sentence.

- (19) Ken-wa [Mai-ga dareka-o hometa to] itta ga,
 Ken-TOP Mai-NOM Someone-ACC praised C said but
 [dare-o (da) to]-wa iwanakatta.
 who-ACC COP C-TOP said.not
 ‘(Lit.)Ken said that Mai praised someone, but he didn’t say who.’

Although the presence of the copula *da* indicates the cleft source, the copula *da* can be phonetically null in the embedded cleft construction. Hence, *wh*-stripping without the copula may be derived by movement and deletion or from the cleft construction. In short, no phonological cue is available to

us. Therefore, in the following, without appealing to the presence or absence of the copula, we examine empirical data revealing the differences between a mono-clausal, movement-based structure and a bi-clausal cleft structure, and thereby observe that *wh*-stripping shows mixed properties.

3.1. The NPI *-sika*

Kizu (2005) observes that the NPI *-sika* cannot attach to the focus of the cleft construction. This is because the cleft construction is a bi-clausal structure, and the NPI *-sika* in the matrix predicate and the negation in the presuppositional clause do not satisfy the clause-mate condition.

- (20) *Ken-ga [Op_i [Yuki-ga t_i awa-na-katta to] itta no]-wa Mai-ni-sika_i desu.
 Ken-NOM Yuki-NOM meet-NEG-PAST C said C-TOP Mai-DAT-SIKA COP
 ‘It is only Mai that Ken said Yuki didn’t meet.’

In light of the ungrammaticality of this example, if *wh*-stripping were derived only by the cleft construction, it is expected to be ungrammatical. This expectation is not borne out, as shown in (21a); the remnant with *sika* is allowed in *wh*-stripping.

- (21) Boku-wa [Ken-ga hitorino onnanoko-ni-sika awa-nak-tta to] kiita kedo ..
 I-TOP Ken-NOM one girl-DAT-SIKA meet-NEG-PAST C heard but
 ‘I heard that Ken met only one girl, but...’
 a. [dare-ni-sika to]-wa kiitenai.
 who-DAT-SIKA C-TOP hear.not
 ‘(Lit.) (I) didn’t hear only who.’
 b. *[dare-ni-sika atta to]-wa kiite-nai.
 who-DAT-SIKA met C-TOP hear-NEG
 ‘(Lit.) (I) didn’t hear only who (he) met.’

The grammaticality of (21a) indicates that the bracketed part is a monoclausal negative clause in which the NPI is licensed by the negation before movement. One might argue that the NPI in (21a) is licensed by matrix negation after moving to the CP SPEC in the embedded clause. However, this supposition is not plausible as shown by the ungrammaticality of (21b). The NPI *-sika* obeys the

strict clause-mate condition with negation. Therefore, it is plausible to assume that *wh*-stripping in (21a) is derived by the focus movement of a *wh*-phrase and TP-deletion.

It is striking that if the copula *da* is added to (21a), the sentence becomes ungrammatical, as shown in (22a) (Mamoru Saito, p.c.).⁴ The presence of the copula suggests that it is necessarily derived from the cleft construction. As the cleft construction has a bi-clausal structure, the remnant NPI cannot satisfy the clause-mate condition with negation, as is the case with (22b).

- (22) Boku-wa [Ken-ga hitorino onnanoko-ni-sika awa-nak-tta to] kiita kedo ..
 I-TOP Ken-NOM one girl-DAT-SIKA meet-NEG-PAST C heard but
 ‘I heard that Ken met only one girl, but...’
 a. *[dare-ni-sika da to]-wa kiitenai.
 who-DAT-SIKA COP C-TOP hear.not
 ‘(Lit.) (I) didn’t hear only who.’
 b. *[[Ken-ga awanakatta] no]-ga dare-ni-sika da to]-wa kiite-nai.
 Ken-NOM meet-NEG-PAST C-NOM who-DAT-SIKA COP C-TOP hear-NEG
 ‘(Lit.) (I) didn’t hear only who (he) met.’

Summarizing so far, given that an NPI in the focus position of a cleft sentence fails to be licensed by the negation in the presuppositional clause, as shown in (20), the grammaticality of *wh*-stripping in (21a) suggests that the *wh*-remnant cannot be considered to be in the focus position of a cleft sentence and that the *wh*-stripping sentence is derived by the movement of the *wh*-phrase attached by the NPI, followed by the deletion of the negative embedded clause. The contrast between (21a) and (22a) further suggests that *wh*-stripping with the copula *da* is derived from a cleft sentence in which the NPI fails to be licensed.

⁴ Grammaticality judgments of sentences like (21) and (22) are subject to speaker variation. This suggests that some speakers derive (21) from the cleft construction and others derive sentences like (22) in terms of movement and clausal ellipsis in the *no-da* construction. However, the contrast in (21) and (22) is clear to the authors and Mamoru Saito (p.c.), and hence we follow the judgements in this paper, leaving such speaker variations for future research.

3.2. Islands

In this section, we consider island phenomena in the cleft construction and *wh*-stripping. (23) shows that the cleft construction with a single focus exhibits the island effect. This is because the movement of the null operator in the presuppositional CP obeys the island constraint.

- (23) a. ??Ken-ga [Mari-ga ____ hon-o ageta toyuu uwasa]-o
 Ken-NOM Mari-NOM book-ACC gave C rumor-ACC
 sinziteiru no-wa Masao-ni da.
 believe C-TOP Masao-DAT COP
 ‘It is to Masao that Ken believes the rumor that Mari gave a book.’ (Takano 2020: 8)
- b. *[Ken-ga [Mai-ga ____ hon-o ageta kara] kaetta no]-wa dare-ni desu ka?
 Ken-NOM Mai-NOM book-ACC gave because left C-TOP who-DAT COP Q
 ‘To whom is it that Ken left (home) because Mai gave books?’

As (24) shows, *wh*-stripping with a single remnant also exhibits the island effect. The ungrammaticality follows straightforwardly from the cleft analysis, as the cleft construction disallows movement of a null operator out of an island, as shown in (23). Under the movement and deletion analysis as well, the island effect can be accounted for because the island-repair effect by deletion (Merchant 2001) is absent when the remnant undergoes focus movement, as shown by cases of contrast sluicing (Merchant 2008, Griffiths and Lipták 2014) and, reasonably, *wh*-stripping.

- (24) *Ken-wa [[Mai-ga dareka-ni chocolate-o ageta kara]
 Ken-TOP Mai-NOM someone-DAT chocolate-ACC gave because
 kaetta to] itta kedo [dare-ni to]-wa iwanakatta.
 left C said but who-DAT C-TOP said.not
 ‘Ken said that he left (home) because Mai gave chocolate to someone, but he didn’t say to whom.’

Of interest here is the fact that the grammaticality is lifted in clefts with multiple foci, as shown in (25) (Takano 2020).

- (25) a. Ken-ga [Mari-ga ____ ____ ageta toyuu uwasa]-o
 Ken-NOM Mari-NOM gave C rumor-ACC
 sinziteiru no-wa Masao-ni hon-o da.
 believe C-TOP Masao-DAT book-ACC COP
 ‘(Lit.) It is a book to Masao that Ken believes the rumor that Mari gave.’

(Takano 2020: 9)

- b. [Ken-ga [Mai-ga ____ ____ ageta kara] kaetta no]-wa
 Ken-NOM Mai-NOM gave because left C-TOP
 dare-ni nani-o desu ka?
 who-DAT what-ACC COP Q
 ‘(Lit.) What to whom is it that Ken left (for home) because Mai gave?’

Takano (2020) argues that the absence of island effects in cleft constructions with multiple foci can be attributed to double sideward movement (SM). According to Takano, the null operators that correspond to multiple foci undergo SM and form a complex element, as shown in (26a). Then, in (26b), the presuppositional CP that includes the island is created in SO1. Then SO2, the complex element created by the SM of multiple foci, is merged with SO1, as shown in (26b, c).

(26) *double sideward movement* (Takano 2020: 18)

- a. SO1 = [_{VP} Masao-DAT book-ACC gave]
 SO2 = { Masao-DAT book-ACC }
 → Merger of null operators *Masao-DAT* and *book-ACC*, forming SO2 { Masao-DAT book-ACC } outside SO1; construction of SO1 up to CP
- b. SO1 = [_{CP} Ken-NOM [_{CNP} Mari-NOM Masao-DAT book-ACC gave ...] ...]
 SO2 = { Masao-DAT book-ACC }
 → Merger of SO1 and SO2
- c. [_{CP} { Masao-DAT book-ACC } [Ken-NOM [_{CNP} ... Masao-DAT book-ACC ...] ...]

Note that the movement and deletion analysis cannot have recourse to double SM to circumvent the island violation. SM presupposes multiple workspaces (Nunes 2004) such that copies of one element are merged at different positions simultaneously. Under the movement and deletion analysis, multiple focus movements of *wh*-indeterminate phrases occur in a mono-clausal structure.

Because there is a single workspace for the movement-and-deletion derivation, double SM cannot occur. Hence, it is expected that island effects cannot be repaired under the focus movement and deletion analysis, just as sluicing with focused correlates does not repair islands (Merchant 2001, 2008, Griffiths and Lipták 2014). In sum, if a clausal ellipsis sentence with multiple remnants is derived by the movement of the remnant followed by TP deletion, the sentence should obey island constraints. If such a sentence is derived from the cleft construction, it is expected to repair islands, as the derivation can employ double sideward movement (Takano 2020).⁵

⁵ A reviewer points out that there is an alternative proposal made by Ishii and Agbayani (2019), who argue that the grammaticality of cases like (25a) and (25b) comes from phonological phrasing of the multiple foci, followed by movement to the right edge of the intonational phrase. The reviewer suggests that given Agbayani, Golston, and Ishii's (2014) analysis that multiple scrambling occurs in a phonological component, the phonological movement and deletion analysis could also be compatible with the grammaticality of (27). Indeed, our proposal that a cleft sentence with multiple foci/*wh*-stripping with multiple remnants is not derived by syntactic movement still holds, as the phonological movement is argued to operate only when syntactic movement is not available.

However, the difference between the sideward movement analysis and phonological movement analysis is that the latter expects no semantic effect on the movement in question. Regarding this, Miyamoto and Maeda (2024) observe that the word order of the multiple foci in a cleft sentence affects grammaticality, as shown in (i).

- (i) a. *Hanako-ga syookaisita-no-wa [otagai-no kyuuyuu-ni Jun-to-Masao-o] da.
 Hanako-NOM introduced-C-TOP each.other-GEN old.friend-DAT J & M-ACC COP
 '(lit.) It is to each other's old friend J & M that Hanako introduced.'
 = It is to each other's old friend and it is J & M that Hanako introduced.
- b. Hanako-ga syookaisita-no-wa [Jun-to-Masao-o otagai-no kyuuyuu-ni] da.
 Hanako-NOM introduced-C-TOP J & M-ACC each.other-GEN old.friend-DAT COP
 '(lit.) It is J & M to each other's old friend that Hanako introduced.'
 = It is J & M and it is to each other's old friend that Hanako introduced.

That the word order of the multiple foci has an effect on the binding condition argues for syntactic movement. Therefore, in this paper we adopt Takano's sideward movement analysis, leaving the

Now let us turn to *wh*-stripping with multiple remnants in Japanese. As shown in (27), *wh*-stripping with multiple remnants moving out of the island also obviates island effects. This indicates that *wh*-stripping in (27) is derived by the cleft construction. Note also that the copula *da* is optional in (27), which suggests that *da* may be omitted in the derivation of the embedded cleft construction.

- (27) Ken-wa [[Mai-ga dareka-ni nanika-o ageta kara]
 Ken-TOP Mai-NOM someone-DAT something-ACC gave because
 kaetta to] itta kedo [dare-ni nani-o (da) to]-wa iwanaktta.
 left C said but who-DAT what-ACC COP C-TOP said.not
 ‘Ken said that he left (home) because Mai gave someone something, but he didn’t say
 what to whom.’

In sum, the grammaticality of *wh*-stripping with multiple remnants reveals the underlying cleft construction in the construction in question.

3.3. Scope

In this section, we turn to the scope interaction between *wh*-remnants and universal quantifiers in *wh*-stripping, as shown in (28a, b):

- (28) a. Ken-wa [minna-ga dareka-o hometa to] itta kedo,
 Ken-TOP all-NOM someone-ACC praised C said but
 [dare-o to]-wa ittenai.
 who-ACC C-TOP say.not
 ‘(Lit.) Ken said that everyone praised someone, but he didn’t say who.’
 b. Ken-wa [dareka-ga minna-o hometa to] itta kedo,
 Ken-TOP someone-NOM all-ACC praised C said but
 [dare-ga to]-wa ittenai.
 who-NOM C-TOP say.not
-

phonological movement analysis for future research.

‘(Lit.) Ken said that someone praised everyone, but he didn’t say who.’

In agreement with one of the reviewers for WAFL16, we observe that (28a) is ambiguous between the surface and inverse scope readings.⁶ In contrast, (28b) only permits a surface scope reading.

This contrast is reminiscent of the contrast between (29a) and (29b) in English (e.g., May 1977, 1985).

- (29) a. Who did everyone see?
b. Who saw everyone?

Only (29a) permits the inverse scope reading. Chierchia (1992, 1993, 2020) argues that the unavailability of the inverse scope reading in (29b) is due to weak crossover, where scoping out the quantifier involves crossing over the trace of the *wh*-phrase. Chierchia proposes that *wh*-phrases have the structure shown in (30).

- (30) [NP [NP *wh*-phrase][NP *e*]]

The empty element *e* is coindexed with a c-commanding NP and acts like a bound pronoun. The evidence for this complex structure comes from the availability of the functional reading/response in interrogatives like (29a)—for example, *his mother*. According to Chierchia, the interrogative in (29a) is understood to ask which function *f* makes “for every *x*: *x* saw *f*(*x*)” true, and thus, *His mother* can be an appropriate response, paraphrased as (31):

- (31) {*p*: *p* is true and for some *f*, *p* = every *x* saw *f*(*x*)}

⁶ As noted by one of the reviewers, to whom we are indebted, it is not obvious how the ambiguity in question arises in (28a). What appears to be an inverse scope reading in this example may be an instance of surface scope reading with *dareka* ‘someone’ having the same referent by chance. The reader will see, however, that the question of how the inverse scope reading in point is realized is immaterial for the point to be made in the text.

The question is how (29a) is mapped compositionally into such a function. Chierchia proposes that in the structure given in (30), the *wh*-phrase and the empty element *e* realize the function *f* and the argument *x* respectively. What is crucial here is that the empty category *e* must be co-indexed with a *c*-commanding NP to obtain the functional reading. It is also important to note for the present purpose that, according to Chierchia, listing pairs is merely an instance of functional readings.

Bearing Chierchia's proposal in mind, we first examine (29a, b) with respect to the availability of the inverse scope (pair-listing) reading. (29a, b) should have the following LF representations, where the QP *everyone* has been raised to a TP-adjoined position to take scope (May 1977, 1985) and permit the interpretation under question:

- (32) a. [CP *who*₁ did [TP *everyone*₂ [TP *t*₂ see [NP *t*₁ [NP *e*]₂]]]]
- ↑
- └──────────┘
- b. [CP *who*₁ [TP *everyone*₂ [TP[NP *t*₁ [NP *e*]₂] saw *t*₂]]]
- ↑
- └──────────────────────────┘

Notice that (32b) results in a weak crossover violation. Therefore, this LF representation should be unavailable in (29b). Consequently, no inverse scope reading is permitted in this example. (32a), in contrast, does not form a weak crossover configuration; thus, the subject trace in TP SPEC can bind the empty element *e* in (32a). As a result, the reading in question is available in (29a).

Under Chierchia's account, the contrast in (28a, b) can be explained by the movement and deletion analysis. To see why, let us examine (33a, b), where we represent their structures after the relevant focus movement has occurred. It should be noted that, as argued by Kuroda (1970) and Hoji (1985), Japanese, unlike English, is a scope-rigid language, in which we assume that no covert scope-taking operation is available in Japanese.

- (33) a. Ken-wa [minna-ga dareka-o hometa to] itta kedo,
 Ken-TOP all-NOM someone-ACC praised C said but
 [CP dare-o₁ [TP minna-ga₂ [NP *t*₁ [NP *e*₂]]] hometa] to]-wa ittenai.
 who-ACC all-NOM praised C-TOP say.not
 ' (Lit.) Ken said that everyone praised someone, but he didn't say who everyone praised.'
 (= (28a))

- b. Ken-wa [dareka-ga minna-o hometa to] itta kedo,
 Ken-TOP someone-NOM all-ACC praised C said but
 [_{CP} dare-ga₁ [_{TP} [_{NP} t₁ [_{NP} e]₂] minna-o₂ hometa]] to]-wa ittenai.
 who-NOM all-ACC  praised C-TOP say.not
 ‘(Lit.) Ken said that someone praised everyone, but he didn’t say who praised everyone.’
 (= (28b))

Note that (33b) creates a configuration in which the object QP cannot bind the empty element *e* in the subject position, and thus no functional (inverse) scope reading is available. However, the binding issue at hand does not arise in (28a), as illustrated in (33a). Thus, under the movement and deletion analysis, the contrast between the two examples naturally arises.

Of particular interest for our present concern is that if the cleft analysis is taken, no matter whether the *wh*-phrase is subject or object, it is base-generated in FocP SPEC, and Op-movement takes place within the presuppositional CP clause.

With this background in mind, we first consider (34a-c). Here, we focus on the so-called internal reading (Carlson 1987). Specifically, (34a, c) can describe the situation where the book John bought is different from the one Bill bought, whereas (34b) cannot mean that the teacher who praised John is different from the one who praised Bill.

- (34) a. John to Bill-ga tigau hon-o₁ katta(-koto).
 John and Bill-NOM different book-ACC bought(-fact)
 ‘John and Bill bought different books.’
 b. * Tigau sensei-ga John to Bill-o hometa(-koto).
 different teacher-NOM John and Bill-ACC praised(-fact)
 ‘Different teachers praised John and Bill.’
 c. Tigau hon-o₁ John to Bill-ga t₁ katta(-koto).
 different book-ACC John and Bill-NOM bought(-fact)
 ‘(Lit.) Different books, John and Bill bought.’

The (un)availability of the internal reading in (34) is reminiscent of a typical binding paradigm in (35) (Saito 1992):

- (35) a. John to Bill-ga otagai-no hon-o₁ katta(-koto).
 John and Bill-NOM different book-ACC bought(-fact)
 ‘John and Bill bought each other’s books.’
- b. * Otagai-no sensei-ga John to Bill-o hometa(-koto).
 each other-GEN teacher-NOM John and Bill-ACC praised(-fact)
 ‘Each other’s teachers praised John and Bill.’
- c. John to Bill -o₁ otagai-no sensei-ga *t*₁ hometa(-koto).
 John and Bill-NOM each other-GEN teacher-ACC bought(-fact)
 ‘(Lit.) John and Bill, each other’s teachers praised.’

Given the parallelism between (34) and (35), it is reasonable to assume that the A-binding is required for the licensing of *tigau* ‘different’, parallel to anaphor binding (see Kitagawa 1986 for a discussion on *tigau*). We also assume, following Saito (1992), that the object *John to Bill-o* is A-scrambled to the sentence-initial position in (34c) and (35c).

Given this background, consider the following cleft examples:

- (36) a. ?*[_{TP} Op₁ [_{TP} otagai-no sensei-ga *t*₁ hometa]]-no-wa
 each other-GEN teacher-NOM praised-C-TOP
 [John to Bill (-o)]₁ da.
 John and Bill(-ACC) COP
 ‘It was John and Bill that each other’s teachers praised.’
- b. ?*[_{TP} Op₁ [_{TP} *tigau* sensei-ga *t*₁ hometa]]-no-wa [John to Bill (-o)]₁ da.
 different teacher-NOM praised-C-TOP John and bill(-ACC) COP
 ‘It was John and Bill that different teachers praised.’

In (36a, b), where Op-movement is required within the presuppositional CP clause, no A-binding is possible with the intended antecedent *John to Bill-o* since Op, which has no phonological content, cannot undergo A-scrambling (Takahashi 2001). Therefore, these two examples are correctly predicted to be ungrammatical.

For the present purpose, it is significant that (37a, b) are unambiguous, with the *wh*-indeterminates taking scope over the QP *minna*:

- (37) a. Ken-ga [minna-ga e hometa to] itta no-wa dare-o desu ka.
 Ken-NOM all-NOM praised C said C-TOP who-ACC COP Q
 ‘Who is it that Ken said that everyone praised?’
- b. Ken-ga [e minna-o hometa to] itta no-wa dare-ga desu ka.
 Ken-NOM everyone-ACC praised C said C-TOP who-NOM COP Q
 ‘Who is it Ken said praised everyone?’

Note that Op lacks not only phonological content, but also internal structure. Therefore, the empty element *e* involved in *wh*-indeterminates should not be available for the intended binding by the QP *minna* within the presuppositional CP clause in both examples. This results in the absence of the intended functional reading, not only in (37b) but also in (37a). Crucially, if the copula is added to (28a), as shown in (38), the observed ambiguity also disappears:

- (38) Ken-wa [minna-ga dareka-o hometa to] itta kedo,
 Ken-TOP all-NOM someone-ACC praised C said but
 [dare-o da to]-wa ittenai.
 who-ACC COP C-TOP say.not

‘(Lit.) Ken said that everyone praised someone, but he didn’t say who.’

The fact that this example is unambiguous indicates that (28a, b) are not derived from cleft constructions with a covert copula. Rather, these two examples must be formed by the movement and deletion analysis.

3.4. Section summary

In this section, we showed that *wh*-stripping has multiple derivational paths: a mono-clausal structure in which the remnant undergoes focus movement to CP, followed by TP-deletion, and a cleft construction in which the presuppositional CP is deleted and the focus pivot is regarded as a remnant. The data regarding NPI-licensing and scope ambiguities count as supporting evidence for the mono-clausal, movement- and deletion-based derivation. The data regarding islands with multiple remnants show that *wh*-stripping may have a cleft source.

4. Comparison with an alternative analysis

Before concluding, we would like to consider one possible alternative to the current analysis. We have assumed that clausal ellipsis is the source of *wh*-stripping, as in (39), either TP-deletion (40a) or presuppositional CP-deletion (40b). However, one might argue that *wh*-stripping is derived by the ellipsis of a smaller part, that is, VP-Ellipsis, in conjunction with *pro*/argument ellipsis of the subject, as shown in (40c).

- (39) Ken-wa [Mai-ga dareka-o hometa to] itta ga, [dare-o to]-wa iwanakatta.
 Ken-TOP Mai-NOM someone-ACC praised C said but who-ACC C-TOP said.not
 ‘(Lit.)Ken said that Mai praised someone, but he didn’t say who.’
- (40) a. [_{CP} dare-o [_{TP} ~~Mai-ga hometa~~] to]-wa iwanakatta. (movement + TP-deletion)
 b. [_{CP} [_{TP} ~~Mai-ga hometa na~~] no]-ga dare-o to]-wa iwanakatta. (the cleft construction)
 c. [_{CP} dare-o [_{TP} *pro* [_{VP} ~~hometa~~] to]-wa iwanakatta. (movement + vP/VP-deletion)

In this light, it is instructive to note that sluicing does not allow voice mismatches, whereas VP-ellipsis does allow voice mismatches in English.

- (41) a. *Joe was murdered, but we don’t know who [~~murdered Joe~~].
 b. *Someone murdered Joe, but we don’t know who by [~~Joe was murdered~~].
 (Merchant 2013: 81)
- (42) a. The system can be used by anyone who wants to [~~use it~~].
 b. The janitor must remove the trash whenever it is apparent that it should be [~~removed~~].
 (Merchant 2008: 169)

Merchant (2013) attributes this contrast to the ellipsis of Voice, arguing that any elided Voice head will necessarily be the same (that is, have the same value for the feature Voice[_{Active/Passive}]) in the elided structure and in its antecedent. In the case of sluicing, Voice is included in the elided part; hence, voice mismatches are not allowed. In contrast, in the case of VP-ellipsis, Voice is outside the ellipsis site; therefore, Voice in the antecedent and elided clauses can have different values.

- (43) a. [_{CP} wh C [_{TP} T [_{VoiceP} ~~Voice~~ [_{VP} —]]]] (sluicing: TP-deletion)
 b. [_{CP} wh C [_{TP} T [_{VoiceP} Voice [_{VP} —]]]] (VPE: vP/VP-deletion)

Extending Merchant's (2013) analysis, Sugisaki (2016) argues that sluicing in Japanese also includes TP-deletion, not VP-ellipsis. Sugisaki supports his analysis by observing that voice mismatch in sluicing is not allowed in Japanese, as is the case with English.

(44) *voice mismatch is not allowed in Japanese sluicing* (Sugisaki 2016)

- *Dareka-ga John-o yatotta rasii ga, boku-wa [dare-ni ka] siranai.
 someone-NOM John-ACC hired seem but I-TOP who-by Q know.not
 'Someone hired John, but I don't know by whom.'
 (Sugisaki 2016: 352)

Crucially, voice-matching *wh*-stripping is grammatical, as shown in (45), whereas *wh*-stripping with voice-mismatch is not allowed, as shown in (46).

(45) *voice-matching cases of wh-stripping*

- a. Boku-wa kimi-ni [Yuki-ga dareka-o hometa to]-wa itta kedo,
 I-TOP you-DAT Yuki-NOM someone-ACC praised C-TOP said but
 [dare-o {~~Yuki-ga~~ ~~hometa~~} to]-wa iwanakatta (hazuda).
 who-ACC Yuki-NOM praised C-TOP say.not should
 'I said to you that Yuki praised someone, but I didn't say who (Yuki praised).'
- b. Boku-wa kimi-ni [Yuki-ga dareka-ni home-rare-ta to]-wa itta kedo,
 I-TOP you-DAT Yuki-NOM someone-by praise-PASS-PAST C-TOP said but
 [dare-ni {~~Yuki-ga~~ ~~home-rare-ta~~} to]-wa iwanakatta (hazuda).
 who-by Yuki-NOM praise-PASS-PAST C-TOP say.not should
 'I said to you that Yuki was praised by someone, but I didn't say by whom (Yuki was praised).'
- c. Boku-wa kimi-ni [dareka-ga Yuki-o hometa to]-wa itta kedo,
 I-TOP you-DAT someone-NOM Yuki-ACC praised C-TOP said but
 [dare-ga {~~Yuki-o~~ ~~hometa~~} to]-wa iwanakatta (hazuda).
 who-NOM Yuki-ACC praised C-TOP say.not should
 'I said to you that someone praised Yuki, but I didn't say who (praised Yuki).'

(46) *voice-mismatching cases of wh-stripping*

- a. *Boku-wa kimi-ni [Yuki-ga dareka-o hometa to]-wa itta kedo,
 I-TOP you-DAT Yuki-NOM someone-ACC praised C-TOP said but
 [dare-ga {~~Yuki-ni~~ ~~home-rare~~-ta} to]-wa iwanakatta (hazuda).
 who-NOM Yuki-by praise-PASS-PAST C-TOP say.not should
 ‘I said to you that Yuki praised someone, but I didn’t say who (was praised by Yuki).’
- b. *Boku-wa kimi-ni [Yuki-ga dareka-ni home-rare-ta to]-wa itta kedo,
 I-TOP you-DAT Yuki-NOM someone-by praise-PASS-PAST C-TOP said but
 [dare-ga {~~Yuki-o~~ ~~hometa~~} to]-wa iwanakatta (hazuda).
 who-NOM Yuki-ACC praised C-TOP say.not should
 ‘I said to you that Yuki was praised by someone, but I didn’t say who (praised Yuki).’
- c. *Boku-wa kimi-ni [dareka-ga Yuki-o hometa to]-wa itta kedo,
 I-TOP you-DAT someone-NOM Yuki-ACC praised C-TOP said but
 [dare-ni {~~Yuki-ga~~ ~~home-rare~~-ta} to]-wa iwanakatta (hazuda).
 who-by Yuki-NOM praise-PASS-PAST C-TOP say.not should
 ‘I said to you that someone praised Yuki, but I didn’t say by whom (Yuki was praised).’

For instance, in (46a), the antecedent indefinite pronoun *dareka-o* ‘someone-ACC’ is an object marked with the accusative Case, and the sentence bears the active voice. In contrast, the following *wh*-stripping sentence contains the nominative-marked *wh*-phrase, *dare-ga* ‘who-NOM’, suggesting that the underlying sentence for the *wh*-stripping sentence is a passive sentence, meaning *who was praised by Yuki*. The same type of voice mismatch is observed in (46b, c). The ungrammaticality of the sentences in (46) suggests that *wh*-stripping does not allow voice mismatch. This suggests that what is elided in *wh*-stripping is a large constituent including Voice, which should have the same active/passive Voice as that in its antecedent sentence. This in turn indicates that *wh*-stripping is derived from TP-deletion, not from *vP/VP*-deletion. This can be attributed to Max Elide (Merchant 2008, Kimura 2013), but we leave a detailed discussion for future research.

5. Conclusion

In this paper, we introduced an as-yet unnoticed type of clausal ellipsis in Japanese, *wh*-stripping, in which a bare *wh*-phrase remnant is regarded as a focus. We have argued that *wh*-stripping has multiple derivational paths: a mono-clausal structure in which the remnant undergoes focus

movement to CP, followed by TP-deletion, and the cleft construction in which the presuppositional CP is deleted and the focus pivot is regarded as a remnant. The data regarding NPI-licensing and scope ambiguities count as supporting evidence for the mono-clausal, movement and deletion-based derivation. The data regarding islands with multiple remnants show that *wh*-stripping may have a cleft source. Furthermore, we have shown that *wh*-stripping is an instance of clausal ellipsis and that it is implausible to assume that *wh*-stripping is derived by argument ellipsis.

To the extent that the present analysis is accurate, this study suggests that constructions such as sluicing and *wh*-stripping may have multiple derivational sources. Hence, what should be at issue is the absence of an option and the reason thereof. It is instructive to consider other elliptical constructions such as argument ellipsis, fragment answers, and verb-echo answers in this light, which we will leave for future research.

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