# Reconsidering the Nature of Particle Stranding Ellipsis in Japanese

# Hideaki Yamashita

Yokohama City University

## 1 Introduction

In this paper, I reconsider the basic properties of the so-called 'particle stranding ellipsis' (PSE) in Japanese to better understand its nature, which is used in a colloquial speech more or less frequently, especially in a conversation/dialogue. The four key observations, which is based on Yamashita 2012a, are listed in the following.

- (1) PSE needs to be accompanied with focus prosody on the stranded particles (Sato 2008).
- (2) PSE is not a matrix phenomenon (contra Yoshida 2004).
- (3) PSE cannot involve movement (contra Nasu 2010, et. seq, Goto 2012).
- (4) PSE need not be sentence-initial nor strictly utterance-initial (contra Yoshida 2004, Shibata 2014).

Building on these observation, I propose that PSE is phonologically-governed, and is subject to the licensing condition in (5).

(5) PSE is licensed in:  $(((\mathbf{X})_{\varphi}(.) (.....)_{\iota})_{\iota})_{\iota}$ , where X is a stranded particle, is prosodically focused, and aligned at an Intonational Phrase  $(\iota)$ , which can, but need not be aligned with an Utterance (u). (Yamashita 2012a:1, with modifications)

The organization of this paper is as follows. In Section 2, I will very briefly list the possible cases of PSE in Japanese reported in the previous literature. In Section 3, I will introduce the four key observations in detail and discuss its theoretical implications. In Section 4, I will propose and discuss the phonologically-governed licensing mechanism of PSE in Japanese. Section 5 is a conclusion.

## 2 PSE in Japanese

PSE, first documented by Hattori (1949, 1960), has not received much attention in the literature in the last century, but has been started to be discussed in detail in the current century, especially the literature couched under the theory of generative grammar (Yoshida 2001, 2004, Sato and Ginsburg 2006, 2007, Sato 2008, 2012, Nasu 2010, et seq., Abe and Yamashita 2011, 2012, Goto 2012, Yamashita 2012a, Shibata 2014, Sato and Maeda 2017, et. seq., Sakamoto and Saito 2018a, b, Takita 2018, a.o.; see also Vance 1993, Hayashi 2001, Arita 2009, 2015, a.o., for researches couched in functional linguistics (in a very broad sense)). These studies revealed that varieties of particle can participate in PSE, which are listed in the following.<sup>1, 2</sup>

<sup>\*</sup> I'm delighted to contribute my yet preliminary and on-going work on particle stranding ellipsis in Japanese for Yoshidasensei's festschrift who has not only introduced me to the fantastic world of linguistics (particularly, syntax), but also to the puzzling and yet significant phenomena which is now called 'particle stranding ellipsis' (Yoshida 2001). And I cannot thank more to the editors of this volume – Shigeto Kawahara, Seunghun Lee, and Yurie Hara – for coming up with such a wonderful idea to edit a festschrift for Yoshida-sensei. This paper is an updated and revised version of Yamashita 2012a. I would like to thank Norio Nasu, Yuta Sakamoto, Yoshiyuki Shibata, and Asako Uchibori, and especially Jun Abe for a fruitful discussion. I regret to note here that I was not able to incorporate their feedback in this paper. All the usual disclaimers apply.

In fact, on the day before Yoshida (2001) presented his work on PSE, one of the two high school girls appeared on *Uwasa-no! Tokyo Magazine* (TBS (Tokyo Boroadcating System Television), 2001/08/19) used PSE involving a topic particle, which was actually watched by Tomoyuki Yoshida himself, and some of the participants at the workshop, including myself.

It is pointed out that not all the particle can undergo PSE (Fujii 2016, Sakamoto and Saito 2018b), but I refrain from discussing this intriguing issue, and put it aside here.

- (6) a. Topic particle (Hattori 1949, 1960, Yoshida 2001, 2004, a.o.)
  - b. Case particle (Sato and Ginsburg 2006, 2007, Sato 2008, a.o.)
    -ga, -o, -ni, -no
  - c. Postposition (Sato and Ginsburg 2006, 2007, Goto 2012, a.o.) -kara, -de, etc.
  - d. Focus particle (Goto 2012, Shibata 2012, a.o.) -mo, -made, -shika, etc.
  - e. Complementizer (declarative) (Abe 2008)
  - f. Complementizer (interrogative) (Abe 2008) -ka. -kadooka
  - g. Semi-auxiliary expression (Sato and Maeda 2017, et. seq.)
     -mitai
  - h. Conjunction marker (Sakamoto and Saito 2018a, b)
  - i. Disjunction marker (Sakamoto and Saito 2018a, b)
  - j. Copula (Sakamoto and Saito 2018b)-da

# 3 Key Observations

This section discusses the four key observations made about PSE, which is based on Yamashita 2012a (but also observed by others), together with the theoretical implications. The four observations are re-produced here.

- (1) PSE needs to be accompanied with focus prosody on the stranded particles (Sato 2008).
- (2) PSE is not a root phenomenon (contra Yoshida 2004).
- (3) PSE cannot involve movement (contra Nasu 2010, et. seq., Goto 2012).
- (4) PSE need not be sentence-initial nor strictly utterance-initial (contra Yoshida 2004, Shibata 2014).

## 3.1 (1) PSE needs to be accompanied with focus prosody on the stranded particles (Sato 2008)

(1) is not something new, but to the best of my knowledge, this property was not taken into consideration explicitly, with the exception of Sato 2008 and Shibata 2014 (and Sato and Maeda 2017, et. seq. which bases on Shibata's observation and analysis).<sup>3, 4</sup> Following and extending Sato's (2008) observation, I take (1) as a reflection of focus and/or topic interpretation associated with all types of PSE.<sup>5</sup> And a comma intonation/pause is required for some, but not all, cases of PSE. For example, in the celebrated example of PSE reported by Hattori

(i) ... Aoi-san-ga, Yamazato-san-de, -to, kekkon-shi-yoo-to kimeta, saidai-no-riyuu-o oshiete-kudasai. Aoi-TIT-NOM Yamazato-TIT-by -with marry-LV-YOO-C decided biggest-GEN-reason-ACC tell-please 'Lit./Intended: ... please tell us the biggest reason that, made you (= Aoi) decide to marry, by Yamazato, with-(Yamazato).' (FYI: kekkon 'marry' selects -to, but not -de.)

In cases like this, the stranded particle only accompanies a(n obligatory) comma intonation, and does not (or at least need not) bear a focus prosody.

<sup>&</sup>lt;sup>3</sup> Arita (2009, 2015) and Nasu (2012a) observe a similar effect, noting that the stranded particle, unlike the non-stranded counterpart, is often but not necessarily pronounced with a slightly prolonged vowel. And as far as I can see, a combination of focus prosody and prolongation can take simultaneously to the stranded particles. But I will abstract away from notating a prolonged vowel.

<sup>&</sup>lt;sup>4</sup> I should note here that it is not the case that the stranded particle per se always bear a focus prosody. In the actual speech, many native speakers of Japanese make errors about the choice of particle (case, postposition, etc.), and immediately correct it to an appropriate one. (i) is taken from a question actually asked by Kozo Inoue during the press conference on Ryota Yamazato (Nankai Candies) and Yu Aoi's marriage, held at June 6<sup>th</sup>, 2019.

<sup>&</sup>lt;sup>5</sup> Shibata (2014) argues that (1) plays a crucial role for the absence of PSE in Korean (which was first pointed out to me by Chungmin Lee, during Sato and Ginsburg's (2006) presentation), building on Jun's (1993) observation that putting a focus prosody on particles is not allowed in Korean.

(8) a.

Speaker A:

(1949, 1960), the stranded particles bears focus prosody (boosting its pitch accent, which is indicated by a boldface) and followed by a comma intonation (which is indicated by a comma).<sup>6</sup>

```
(7) a. Speaker A:
    Tanaka-kun-wa?
    Tanaka-TIT-TOP
    'How about Tanaka?'
b. Speaker B:
    _-wa-ne*(,) kaisha-o yameta-yo.
    _-TOP-DISCP company-ACC quit-SFP
    'Lit./Intended: (Tanaka)-TOP-DISCP, quit his company.'
(Hattori 1960:452, with slight modifications)
```

Likewise, PSE involving case particles, e.g., (8)d, requires focus prosody and a comma intonation.

```
Ken-wa kuukoo-ni tsukimashita-ka?
    Ken-TOP airport-LOC arrived.POL-Q
    'Did Ken arrive at the airport?'
    Speaker B:
    (Hai,) ( -wa*(,)) tsukimashita.
            -TOP
                       arrived
    'Lit./Intended: Yes, ((Ken)-TOP) arrived.'
    Speaker A:
    Mari-mo tsukimashita-ka?
    Mari-also arrived.POL-O
    'Did Mari also arrived (at the airport)?'
    Speaker B:
    (Iie,) (_-ga*(,)) mada tsukimasen.
          _-NOM yet arrived
     'Lit./Intended: (No,) (Mari)-NOM, has not arrived yet.'
(Sato 2008:9, with modifications)
```

And recent examples brought up by Sakamoto and Saito (2018a, 2018b) involving PSE of the genitive case particle -no, the conjunction marker -to 'and', and the disjunction marker -ka 'or' requires focus prosody and a comma intonation, respectively.

```
(9) a. Speaker A:

Kimi-wa [DP [Possessor Chomsky]-no hon]-o yonda-no?

you-TOP Chomsky-GEN book-ACC read-Q

'Did you read [DP [Chomsky's] book]?'

b. Speaker B:

[DP [Possessor _]-no*(,) hon]-wa yon-de-nai-desu.

-GEN book-TOP read-PERF-NEG-COP

'Lit./Intended: [DP [(Chomsky)-GEN], book], I did not read.'

(Sakamoto and Saito 2018a:350, with slight modifications)
```

## (10) a. Speaker A:

```
[&P [1st Conjunct Mari]-to dare]-ga kita-n-da-kke?

Mari-& who-NOM came-NML-COP-Q

'[&P [1st Conjunct Mari]-and who] came?'

b. Speaker B:

[&P [1st Conjunct _]-to*(,) Ken]-ga kita-n-da-yo.

_-& Ken-NOM came-NML-COP-SFP

'Lit./Intended: [&P [1st Conjunct (Mari)]-and, Ken] came?'
(Sakamoto and Saito 2018a:350, with slight modifications)
```

<sup>&</sup>lt;sup>6</sup> All the Japanese examples are transcribed in the *Hepberun (Hebon)* system Romanization, except for long vowels, where I reduplicate vowels. The translations in single quotes are intended to give the (rough) structure of the examples and are not meant to be the correct English translations.

```
(11) a. Speaker A:

[orP [1st Conjunct Mari]-ka Gen(-ka)]-ga kuru-n-da-kke?

Mari-or Gen-or-NOM come-NML-COP-Q

'[orP [1st Conjunct Mary]-or Gen] is coming, right?'

b. Speaker B:

[orP [1st Conjunct _]-ka*(,) Ken]-ga kuru-n-da-yo.

_-or Ken-NOM come-NML-COP-SFP

'Lit./Intended: [orP [1st Conjunct (Mari)]-or/([1st Conjunct Mary]-or Gen])-or, Ken] is coming.'

(Sakamoto and Saito 2018a:350, with slight modifications)
```

Given this, it is reasonable to conclude that there are stranded particles that requires not only focus prosody, but also comma intonation. Note that comma intonation involved with PSE (inducing the insertion of *i*-boundary to its right) is not a quirky property associated with a stranded particle. It is also required for the so-called discourse particle, e.g., -ne, -sa (Yim and Dobashi 2016). And recall that the very first example of PSE provided by Hattori (1949, 1960) involves the combination of a topic particle and a discourse particle, with a comma intonation.<sup>7</sup>

But not all the stranded particle under PSE requires a comma intonation. Consider the recent example brought up by Sakamoto and Saito (2018b) involving PSE of copula. Although they were not aware of it, PSE involving copula requires a focus prosody but a comma intonation is not necessary (yet other usual phonological phrasing separating the PSEed XP and its following materials takes place).

```
(12) a. Speaker A:

[CPKen-ga han'nin]-da-tte.

Ken-NOM criminal-COP-SFP

'I heard that [Ken is the criminal].'

b. Speaker B:

[_-da-to](,) omotta-yo!

_-COP-C think-SFP

'Lit./Intended: ([Ken is the criminal])-COP-C(,) I thought!'

(Sakamoto and Saito 2018b, with a slight modification)
```

And the absence of comma intonation after PSE is allowed for a declarative complementizer -to when it is suffixed with a topic particle and a interrogative complementizer -ka(dooka).

```
(13) a.
         Speaker A:
                   [CPUConn-ga NCAA-ni kastu-to] itteru-rashii.
         Ken-ga
         Ken-NOM
                      UConn-NOM NCAA-in win-C
                                                      says-seems
         'It seems that [Ken says [that UConn will win the NCAA]].'
         Speaker B:
         [ -to(-wa)](,) boku(-ni)-wa omoenai-naa.
           -C-TOP
                       I-DAT-TOP think.POT.NEG-SFP
          'Lit./Intended: ([UConn will win the NCAA])-that(,) I don't think.'
     (Abe 2008:163, with slight modifications)
(14) a.
         Speaker A:
         Ken-ga
                   [CPUConn-ga NCAA-ni katsu-to] itteru-rashii.
                      UConn-NOM NCAA-in win-C
         'It seems that [Ken says[ that UConn will win the NCAA]].'
         Speaker B:
         [_-ka(dooka)(-wa)](,) boku(-ni)-wa wakaranai-naa.
           -whether-TOP
                               I-DAT-TOP know.NEG-SFP
          'Lit./Intended: ([UConn will win the NCAA])-whether(,) I don't know.'
     (Abe 2008:163, with slight modifications)
```

To sum up, the stranded particle under PSE bears focus prosody which indicates the focus and/or topic interpretation is associated with it, and which is often, but not always, accompanied with a comma intonation.<sup>8</sup>

Although discourse particles can be a part of stranded particle, discourse particles cannot under PSE by itself. Hence, discourse particles are members of unstrandable particles (recall Fn.1).

At this point I have no clue why certain PSEs require comma intonation while others do not, and must leave it for future research.

## 3.2 (2) PSE is not a root phenomenon (contra Yoshida 2001, 2004)

(2), at first glance, is at odd with Yoshida's (2001, 2004) well-known observation that PSE is a root phenomenon, as indicated by the example like (15), where the embedded topic-marked phrase fails to undergo PSE.

```
(15) a. Speaker A:
```

Ken-wa sono-toki [CPGen-o dare-ga koroshita-to] omotta-no? Ken-TOP that-time Gen-ACC who-NOM killed-C thought-Q 'Who did Ken think at that time [that killed Gen]?'

b. Speaker B:

\*Ken-wa sono-toki [CP\_-wa, Mari-ga koroshita-to] omotta(-n-da)-yo. Ken-TOP that-time \_-TOP Mari-NOMkilled-C thought-NML-COP-SFP 'Lit./Intended: Ken thought at that time [that (Gen)-TOP, Mary killed].' (Based on Yoshida 2004:297 and Sato 2012:496, with slight modifications)

Although (15)b is indeed ungrammatical, (2) is in fact not empirically warranted (see also Shibata 2014, and Sato and Maeda 2017, et. seq.), and PSE can take place within embedded clauses. There are (at least) three types of examples. The first type is where the embedded clause is scrambled above the matrix constituents (16).

```
(16) a. Speaker A:
```

```
[CPGen-o dare-ga koroshita-to]iKen-wa sono-toki ti omotta-no?
Gen-ACC who-NOM killed-C Ken-TOPthat-time thought-Q
'Who did Ken think at that time [that killed Gen]?'
```

b. Speaker B:

```
[CP_-wa, Mari-ga koroshita-to] Ken-wa sono-toki t<sub>i</sub> omotta-rashii-yo.
_-TOP Mari-NOMkilled-C Ken-TOP that-time thought-seem-SFP
'Lit./Intended: [That (Gen)-TOP, Mari killed], it seems that Ken thought at that time.'
(Yamashita 2012a:2, with slight modification)
```

The second type is where the matrix element is made null (17).

```
(17) a. Speaker A:
```

```
pro [CP Gen-o dare-ga koroshita-to] omotta-no?
Gen-ACC who-NOM killed-C thought-Q
'Who did you think [that killed Gen]?'
```

b. Speaker B:

```
pro [CP_-wa, Mari-ga koroshita-to] omoimashita.
_-TOP Mari-NOMkilled-C thought
'Lit./Intended: I thought [that (Gen)-TOP, Mari killed].'
```

The third type, provided by Shibata (2014), is where argument contained within an adjunct clause can be the target of PSE.

## (18) a. Speaker A:

```
Gen-wa shigoto-o yameru-no?
Gen-TOP job-ACC quit-Q
'Will Gen quit his job?'
```

b. Speaker B:

```
[CP2 [CP1 _-ga, yameru kadooka-wa] shira-nai-kedo], sooiu uwasa-wa aru.
_-NOM quit whether-TOP know-NEG-though such rumor-TOP exist
'Lit./Intended: Though I don't know whether (Gen)-NOM will quit his job, there is such a rumor.'
(Shibata 2014: (10) and Sato and Maeda 2019:14, with slight modification)
```

In these examples, the embedded argument can be null, stranding its particle, resulting in PSE. Thus, it is reasonable to conclude that PSE is not a root phenomenon, and any analyses that dwell on it must be reconsidered.

<sup>&</sup>lt;sup>9</sup> These examples has one thing in common: what is PSEed appears in the sentence/utterance-initial position. But as I will show in Section 3.4, this is not a crucial property involving the licensing of PSE.

## 3.3 (3) PSE cannot involve movement (contra Nasu 2010, et. seq., Goto 2012).

One might claim, however, such PSE is nonetheless a root phenomenon, by claiming that the stranded particle undergoes string-vacuous long-distance movement from embedded to matrix clause to get it licensed, extending the movement analysis of PSE, which claims that PSE is licensed by moving into the cartographic CP layers (Nasu 2010, et. seq., Goto 2012; see also Takita 2018). However, such an analysis faces a fatal problem in dealing with the following grammatical example.

```
(19) a. Speaker A:

[DP [RC Wain-o tanonda]-hito]-wa dare-desu-ka?

wine-ACC order-person-TOP who-COP-Q

'Who is [the person [that ordered wine]]?'

b. Speaker B:

[DP [RC _-o, tanonda]-hito]-wa Ken-desu-ne.

_-ACC order-person-TOP Ken-COP-SFP

'Lit./Intended: Ken is [the person [that ordered (wine)-ACC]].'

(Yamashita 2012a:2, with slight modifications)
```

In this grammatical example, the argument (which is Accusative-marked) contained inside the relative clause undergoes PSE. The key point is that there is no island effect whatsoever. This contradicts with well-known observation that extraction out of relative clause induces (at least some kind of) island effect (Saito 1985, Sohn 1994, a.o.). Under the movement analysis, a phrase targeted for PSE must undergo movement. If so, it should exhibit island effect. However, there is absolutely no island effect. Hence this argues against the movement analysis and encourages the analysis that does not make use of movement.<sup>10</sup>

## 3.4 (4) PSE need not be sentence-initial nor strictly utterance-initial (contra Yoshida 2004, Shibata 2014)

Although it is indeed the case that PSE sounds best when it takes place at the sentence/utterance-initial position, it need not be either (i) sentence-initial (Yoshida 2004) and (ii) strictly utterance-initial (Shibata 2014). Many speakers allow and use it, and it is not difficult to come up with, and/or come across with actual examples of PSE appearing after a phonological content, such as argument DPs, adverbs, interjections, and clausal adjuncts, i.e., non-utterance-initial PSE is in principle possible.

First of all, Abe (2008)/Abe (2015: Ch.5) observes the following examples, originally discussed by Takahashi (1994) and judged as ungrammatical, to be grammatical, on which I concur.

```
(20) a.
         Speaker A:
         Ken-ga
                   [CPUConn-ga NCAA-ni katsu-to] itteru-rashii.
                      UConn-NOM NCAA-in win-C
                                                      says-seems
         'It seems that [Ken says [that UConn will win the NCAA]].'
         Speaker B:
         Boku(-ni)-wa, [ -to(-wa)](,) omoenai-naa.
         I-DAT-TOP
                         -C-TOP
                                     think.POT.NEG-SFP
         'Lit./Intended: I can't think ([UConn will win the NCAA])-that(-TOP).'
     (Abe 2008:164, with modifications; contra Takahashi 1994:275)
(21) a.
         Speaker A:
         Ken-ga
                   [CPUConn-ga NCAA-ni katsu-to] itteru-rashii.
         Ken-NOM
                      UConn-NOM NCAA-in win-C
                                                      says-seems
         'It seems that [Ken says [that UConn will win the NCAA]].'
         Speaker B:
         Boku(-ni)-wa, [ -ka(dooka)(-wa)](,) wakaranai-naa.
         I-DAT-TOP
                         -whether-TOP
                                              know.NEG-SFP
          'Lit./Intended: I don't know ([UConn will win the NCAA])-whether(-TOP).'
     (Abe 2008:164, with modifications; contra Takahashi 1994:275)
```

<sup>&</sup>lt;sup>10</sup> But see Nasu (2012b:Sec.3–4) for arguments for the movement analysis of PSE which target the designated position in the cartographic CP system. See footnote 14 below for relevant discussion.

In (20)b and (21)b, speaker B's utterance begins with an argument referring to himself (which is accompanied with a comma intonation), and followed by a PSE involving complementizers.

Second, Nasu (2012b) offers following example with non-utterance-initial PSE preceded by an adverb.

#### (22) a. Speaker A:

Mari-wa Ken-kara-ja-naku-te Gen-kara meeru-o moratta-no? Mari-TOP Ken-from-COP-NEG-TE Gen-from mail-ACC received-Q

'Mari received a mail from Gen, and not Ken?'

Speaker B:

Tabun, -kara, moratta-n-daroo-ne. probably -from received-NML-DAROO-COP

'Lit./Intended: Probably, (Gen)-from, Mari received (a mail).'

b'. Speaker B:

Tabun, Gen-kara moratta-n-daroo-ne. probablyGen-from received-NML-DAROO-COP 'Lit./Intended: Probably, from Gen, Mari received (a mail).'

(Nasu 2012b:7, with slight modifications)

In (22)b, speaker B's utterance begins with an adverb (which is accompanied with a comma intonation), and followed by a PSE involving a postposition -kara.

Third, the following example, modelled on Sakamoto and Saito's (2018b) data, with non-utterance-initial PSE preceded by an argument, sounds fine.

#### Speaker A: (23) a.

CPKen-ga han'nin]-da-tte. Ken-NOM criminal-COP-SFP

'I heard that [Ken is the criminal].'

Speaker B:

Boku(-ni)-wa, [ -da-to(-wa)](,) omoenai-naa. I-DAT-TOP -COP-C-TOP think.POT.NEG-SFP

'Lit./Intended: I don't think ([Ken is the criminal])-COP-C-TOP.'

(Sakamoto and Saito 2018b, with a slight modification)

Furthermore, it is not so difficult to find actual examples of non-utterance-initial PSE on TV, YouTube, conversation/dialogue, and so on. First, examples with non-utterance-initial PSE preceded by an interjection.

## (24) (Talking about someone you have crush on.)

Ryuichi Kosugi (Black Mayoneise):

Sasshii-wa Yamazaki Kento-kun ...?

Sasshi-TOP Yamazaki Kento-TIT

'Sasshi, (you have a crush on) Kento Yamazaki?'

Rino Sashihara/Sasshi (HKT48):

N-, \_-to, Fukushi-kun, ... dotchi-ka .... well -and Fukushi-TIT which-Q(OR)

'Lit./Intended: Well, ... (Yamazaki)-and, Fukushi, one of them ...'

b'. Non-elliptical utterance of Rino Sashihara:

N-, [Yamazaki Kento-kun]-to(,) Fukushi-kun[-no] dotchi-ka-ga ki-ni-natteru. well Yamazaki Kento-TIT-and Fukushi-TIT-GEN which-Q(OR)-NOM have.crush.on

'Well, I have a crush on Kento Yamazaki and Sota Fukushi, one of them.'

(Sashihara Rino & Buramayo-no Koi-suru Saitee Otoko So-senkyo. AbeMa TV, #13, 2017/07/04.)11

## (25) (Talking about one's favorite food.)

Sho Hirano (King & Prince)):

Nure-okaki-mitaina shokkan-no-mono-ga suki-desu. nure-okaki-like texture-GEN-thing-NOM 'I like those food with the texture like nure-okaki.'

The relevant episode is no longer available on AbeMa TV. But see the following page that contains the relevant conversation. http://music-book.jp/music/news/news/148304

```
Sanma Akashiya:
```

Nama-kuriimu-toka whipping.cream-TOKA Q 'Like whipping cream?'

Sho Hirano (King & Prince)):

Aa, \_-wa, suki-desu. ah \_-TOP like-COP

'Lit./Intended: Ah, (whipping cream)-TOP, I like.'

(Odoru Odoru! Sanma Goten! NTV (Nippon Television Network Corporation), 2017/09/04, around 19:58.)

In (24)b, Rino Sashihara's utterance begins with an interjection n- 'well' (which is accompanied with a comma intonation), and followed by a PSE involving a coordinate marker -to. Likewise, Sho Hirano's response in (25)c contains PSE involving a topic particle (which is accompanied with a comma intonation) followed by an interjection.

Second, an example with non-utterance-initial PSE preceded by a clausal element, an adjunct clause.

#### (26) a. Directer of TV show:

Go-jishin-ga netto-joo-de wadai-ni natteita-no-wa shitteimashita-ka? HON-you-NOM on.internet topic-DAT became-NML-TOP knew-Q

'Did you know that you became a popular topic of conversation on the net?'

Amin Khaleda:

Twitter-de wadai-ni natteita-no-de, -wa, shitteimashita-ne. on.twitter topic-DAT became-NML-BECAUSE -TOP knew-SFP

'Lit./Intended: Because it became a popular topic of conversation on the twitter, I did know (that I became a popular topic of conversation on the net)-TOP.'

(Futto Word 10, NTV (Nippon Television Network Corporation), 2018/07/20, around 19:52)

Amin Khaleda's utterance in (26)c is quite interesting, since it shows that PSE involving a topic particle (which is accompanied with a comma intonation) follows the adjunct because-clause.

Note in passing that Sato and Maeda (2019) discuss similar example, reporting it to be ungrammatical.

#### (27) a. Speaker A:

Ken-wa kuru-no?

Ken-TOP come-Q

'Will Ken come?'

Speaker B:

\* Tashika-de-wa-nai-kedo, \_-wa, ki-masen-yo.

certain-COP-TOP-NEG-though -TOP come-POL.NEG-COP

'Lit./Intended: I am not completely certain, but (Ken)-TOP won't come.'

b'. Speaker B:

Tashika-de-wa-nai-kedo, Ken-wa ki-masen-yo. certain-COP-TOP-NEG-though Ken-TOP come-POL.NEG-COP

'Lit./Intended: I am not completely certain, but Ken won't come.'

(Sato and Maeda 2019:371–372, with slight modifications)

To my ear, (27)b is no different from Amin Khaleda's actual utterance in terms of grammaticality, and I take it be grammatical as an instance of PSE.

Finally, an example with non-utterance-initial PSE preceded by an argument DP(which is accompanied with a comma intonation).

## (28) (Talking about plastic surgeries.)

Junki Yoshida (Founder of Yoshida Source):

Miss Universe-wa zen'in seikei-shiteiru-n-ja-nai-ka-na?, nihonjin-igai-wa. plastic.surgery-LV-NML-COP-NEG-Q-SFP Japanese-except-TOP Miss Universe-TOP all 'All of Miss Universe is doing a plastic surgery, except Japanese.'

Boku-wa, \_-to, omou-ne.

-C think-SFP

'I think that-(all of Miss Universe is doing a plastic surgery, except Japanese).' (Bara-iro Dandy! Tokyo MX TV, 2019/01/15.)

Note that Junki Yoshida's utterance in (28)b is essentially same as the example in (20)b, which is judged as grammatical by Abe (2008).

These examples are only some of the actual example one can find which shows that (i) PSE need not appear in the sentence-initial or strictly utterance-initial position (contra Yoshida 2004 and Shibata 2014) and (ii) there are speakers who readily allow (or at least utter), non-utterance-initial PSE. And to my ear, these sounds fine and natural. Although there are speakers (e.g., Sato and Maeda (2019) and their informants) who do not allow nonutterance-initial PSE, I presume that there are additional factors, be it phonological, pragmatic (Nasu 2012a, b), and/or processing, that make certain speakers that constrain them to forbid (or dislike) non-utterance-initial PSE. One such phonological conjecture can be found in Sato and Maeda 2019:Fn.6, which deals with the speaker variation involving interjection. But as far as I can see, their conjecture will not cover cases like Abe's and Nasu's examples as well as Amin Khaleda's and Junki Yoshida's utterance. Thus, any analyses that dwell on the sentenceinitial or strictly utterance-initial position need to be reconsidered.

## **PSE** is Phonologically-governed

Building on the four key observations I provided in the previous section, I propose that PSE is phonologicallygoverned, and is subject to the licensing condition in (5), reproduced here as (29), 12 which is more or less in line with what Shibata (2014) proposed on independent grounds (30), in the sense that PSE is sensitive to phonological properties, such as prosodic focus and phonological phrasing.

- (29) PSE is licensed in:  $(((X)_{\emptyset}(,))_{\emptyset}(,))_{\emptyset}(,)$ , where X is a stranded particle, is prosodically focused, and aligned at an Intonational Phrase (i), which can, but need not be aligned with an Utterance (u). (Yamashita 2012a:1, with modifications)
- (30) PSE is licensed in: (( X .....)<sub>ip</sub>)<sub>u</sub>, where X is a stranded particle and is focused, and aligned both at an Intermediate Phrase (ip) and Utterance (u). (Based on Sato and Maeda 2019:363, and Shibata 2014 (15), with slight modification)

Despite the similarity, there is a crucial difference between these two phonologically-governed conditions regarding the possible position where the stranded particle is licensed. Whereas (29) requires the stranded particle to be aligned with only Intonational Phrase (i), (30) requires the stranded particle to be aligned with Utterance (u)as well. Note that while the former accounts for the data involving the four key observations, 13 the latter fails to account for all of them, especially the non-utterance-initial PSE.

In addition, note that the current analysis predicts that, contrary to the previous observation (Yoshida 2001, 2004, Sato 2008, a.o.), it is in principle possible for PSE to occur multiply, since unlike u, t can appear multiply in one's utterance. This prediction is indeed borne out. Consider the following examples taken from Nasu 2012b, where PSE involving -wa and -ni take place simultaneously.

```
Osaka-ja-naku-te Tokyo-ni
     Ken-wa/-ga
                                                       itta-no?
     Ken-TOP/-NOM Osaka-COP-NEG-TE Tokyo-LOC went-Q
     'Ken went to Tokyo, and not Osaka?'
     Speaker B:
     _-wa/-ga,
      -wa/-ga, _-ni, itta-n-desu.
-TOP/-NOM _-LOC went-C-COP
     'Lit./Intended: (Ken)-TOP/-NOM, to (Tokyo)-LOC, went.'
b'. Speaker B:
```

Speaker A:

(31) a.

\_-wa/-ga, Tokyo-ni(,) itta-n-desu. -TOP/-NOM Tokyo-LOC went-C-COP 'Lit./Intended: (Ken)-TOP/-NOM, to Tokyo, went.' (Nasu 2012b:9, with slight modifications)<sup>14</sup>

I note here that for non-utterance-initial PSE to be grammatical, it must be strictly  $\iota$ -initial; in other word, it must be preceded by a comma intonation.

However, the 1-boundary-based phonologically-governed condition alone cannot rule out Yoshida's (2004) example. This suggests that whatever actual ellipsis operation involved PSE is at work here to rule it out.

I should hasten to note here that Nasu (2012b) observes that there is an ordering restriction of multiple PSE shown in (i), which constitute a minimal pair with (31), which he argues can be accounted for by his movement-based analysis involving a cartographic CP.

```
(32) a.
         Speaker A:
         Ken-wa/-ga
                        Osaka-ja-naku-te Tokyo-ni
                                                       itta-no?
         Ken-TOP/-NOM Osaka-COP-NEG-TE Tokyo-LOC went-Q
         'Ken went to Tokyo, and not Osaka?'
         Speaker B:
         _-wa/-ga,
                               _-ni, itta-n-daroo.
                     tabun,
          _-TOP/-NOM probably _-LOC went-C-DAROO
         'Lit./Intended: (Ken)-TOP/-NOM, I guess, went (to Tokyo)-LOC.'
     b'. Speaker B:
         _-wa/-ga,
                               Tokyo-ni(,) itta-n-daroo.
                     tabun,
          -TOP/-NOM probably Tokyo-LOC went-C-DAROO
         'Lit./Intended: (Ken)-TOP/-NOM, I guess, to Tokyo, went.'
         Speaker B:
                     _-ni, tabun,
         _-wa/-ga,
                                      itta-n-daroo.
          -TOP/-NOM -LOC probably went-C-DAROO
         'Lit./Intended: (Ken)-TOP/-NOM, (to Tokyo)-LOC, I guess, went.'
     c'. Speaker B:
         _-wa/-ga,
                      Tokyo-ni(,) tabun,
                                            itta-n-daroo.
          -TOP/-NOM Tokyo-LOC probably went-C-DAROO
         'Lit./Intended: (Ken)-TOP/-NOM, to Tokyo, I guess, went.'
     (Nasu 2012b:9, with slight modifications)
```

And I happened to come across with a following utterance, which shows that there is a speaker who actually utters multiple PSE.

(33) (You're helping a student trying to log-in using free wi-fi at Starbucks for the first time.)

a. Speaker A:

Passward-wa sakki atarashiku-shita-no-o ireta? passward-TOP a.while.ago new-LV-NML-ACC enter 'Password, did you enter the new one you just made it?'

```
a. Speaker A: (=(31)a)
(i)
         Ken-wa/-ga
                        Osaka-ja-naku-te Tokyo-ni itta-no?
         Ken-TOP/-NOM Osaka-COP-NEG-TE Tokyo-LOC went-Q
         'Ken went to Tokyo, and not Osaka?'
     b. Speaker B: (cf. (31)b)
        *_-ni, _-wa/-ga, itta-n-desu.
_-LOC _-TOP/-NOM went-C-COP
         'Lit./Intended: To (Tokyo)-LOC, (Ken)-TOP/-NOM, went.'
     b'. Speaker B: (cf. (31)b')
        *Tokyo-ni,
                      _-wa/-ga,
                                    itta-n-desu.
         Tokyo-Loc
                        -TOP/-NOM went-C-COP
         'Lit./Intended: To Tokyo-LOC, (Ken)-TOP/-NOM, went.'
     (Nasu 2012b:9, with slight modifications)
```

Although (i)b (and (i)b') is indeed ungrammatical as a reply to (i)a, it will become grammatical as a reply to (ii)a, where the order between a subject and locative phrases are reversed, which parallels with the word order in (ii)b (and (ii)b').

```
a. Speaker A: (cf. (31)a)
    Osaka-ja-naku-te Tokyo-ni Ken-wa/-ga
                                              itta-no?
    Osaka-COP-NEG-TE Tokyo-LOC Ken-TOP/-NOM went-Q
    'Ken went to Tokyo, and not Osaka?'
b. Speaker B: (=(31)b/(i)b)
    _-ni, _-wa/-ga, itta-n-desu.
     -LOC -TOP/-NOM went-C-COP
    'Lit./Intended: To (Tokyo)-LOC, (Ken)-TOP/-NOM, went.'
b'. Speaker B: (=(31)b'/(i)b')
               _-wa/-ga,
                           itta-n-desu.
    Tokyo-ni,
    Tokyo-Loc
                -TOP/-NOM went-C-COP
    'Lit./Intended: To Tokyo-Loc, (Ken)-TOP/-NOM, went.'
```

This indicates that a parallelism, a hallmark of ellipsis phenomena in general, is at work in PSE, rather than the movement constraints involving cartographic CP.

```
b. Speaker B:

_-wa, -o, iremashita-yo.

_-TOP _-ACC enter-SFP

'Lit./Intended: (passward)-TOP, (new password)-ACC, I entered.'
(Feb. 24, 2015)
```

Thus, there are in fact crucial data that supports the proposed phonology-governed licensing mechanism of PSE which allow not only non-utterance-initial PSE, but also multiple PSE.<sup>15</sup>

Before concluding the paper, I must admit that the proposed phonologically-governed PSE-licensing mechanism leaves open the exact ellipsis operation involved, as pointed out by Sato and Maeda (2017, et. seq.), as a problem to Shibata's 2014 phonologically-governed licensing mechanism. I hope to contribute to a lively ongoing debate about this issue (for PF-deletion analysis, see Sato and Maeda 2017, et. seq., and for LF-copying analysis, see Sakamoto and Saito 2018a, b) on a separate occasion, which can account for the interesting array of data involving PSE I compiled and introduced in this paper, especially, cases of non-utterance-initial PSE and multiple PSE.

## 5 Conclusion

Building on the four key observations in (1)–(4), which is based on ample data, that is made by linguists and gathered from actual speech, I have proposed that PSE is subject to the phonologically-governed condition in (5).

- (1) PSE needs to be accompanied with focus prosody on the stranded particles (Sato 2008).
- (2) PSE is not a root phenomenon (contra Yoshida 2004).
- (3) PSE cannot involve movement (contra Nasu 2010, et. seq., Goto 2012).
- (4) PSE need not be sentence-initial nor strictly utterance-initial (contra Yoshida 2004, Shibata 2014).
- (5) PSE is licensed in:  $(((\mathbf{X})_{\varphi}(.) (.....)_{\iota})_{\iota})_{\iota}$ , where X is a stranded particle, is prosodically focused, and aligned at an Intonational Phrase  $(\iota)$ , which can, but need not be aligned with an Utterance (u). (Yamashita 2012a:1, with modifications)

Crucially, I have argued that the licensing mechanisms of PSE in Japanese requires (not only whatever syntactic conditions that is responsible for the ellipsis operation, but also) non-syntactic condition, namely the phonologically-governed condition. The result thus provides further credence to, and is in accords with the line of research that paid close attention to the phonological and prosodic aspects of the so-called 'focus prosody bearing items' (FBIs) in Japanese, e.g., Wh-phrases, *shika*-NPIs, and split indeterminate NPIs. <sup>16</sup> I hope to have shown that the phonological and prosodic factors are necessary and indispensable for the proper understanding of FBIs, which now include PSE, calling for the necessity of an interdisciplinary approach to the theory of grammar, which is couched in terms of Kitagawa's (2005) research guidelines in (34).

(34) "the study of formal aspects of grammar should be conducted with much more careful attention to a larger context of language such as prosody, processing, and pragmatics than usually done" (Kitagawa 2005: p.303)

As I see it, we must pay serious attention to the non-syntactic properties when conducting the syntactic analyses and making grammaticality judgments, especially of those phenomena involving the FBIs, including PSE in Japanese, which obligatorily exhibit focus prosody. Although the exact syntactic operation involving ellipsis that lies behind the PSE is not articulated, I hope to have contributed to a better understanding of PSE in Japanese.

As far as I have checked, all the data which indicated that multiple PSE is impossible involves the sequence of "...\_wa(-ne), \_-wa, ..." where the stranded particles are of the same type (Yoshida 2001, 2004, Sato 2008, Arita 2015, a.o.). This is in contrast with the possible multiple PSE reported here, where the stranded particles are of the different type. This distinction may play a role (e.g., the former case may be ruled out as an instance of the OCP effect (broadly construed); see Hiraiwa 2010), but I must leave its exact nature for future research.

See Yamashita 2009a, b, c, 2012b, and reference cited therein for researches on FBIs in Japanese.

## References

- Abe, Jun. 2008. Embedded Sluicing in Japanese. In *Pragmatic Functions and Syntactic Theory: In View of Japanese Main Clauses, Report for Grants-in-Aid for Scientific Research*, 121–174. Chiba: Kanda University of International Studies.
- Abe, Jun. 2015. *The In-Situ Approach to Sluicing*. Linguistik Aktuell Linguistics Today 222. Amsterdam: John Benjamins.
- Abe, Jun and Hideaki Yamashita. 2011. Particle stranding meets parasitic gaps in Japanese. Poster presented at *Japanese/Korean Linguistics* 21, Seoul National University, Oct. 20–22.
- Abe, Jun and Hideaki Yamashita. 2012. The null operator movement analysis of parasitic gap-type particle stranding in Japanese. *The 7<sup>th</sup> International Workshop on Theoretical East Asian Linguistics (TEAL-7)*, Hiroshima University, Feb. 18–19.
- Arita, Setsuko. 2009. 'Hadaka-no -wa' ni-tsuite no oboegaki [Notes on 'bare -wa']. Reports of the Osaka Shoin Women's University Japanese Language Research Center 16, 95–106.
- Arita, Setsuko. 2015. Nihongo gimonbun-no ootoo-no-bootoo-ni arawareru 'wa'-ni-tsuite kakari-joshi-kara kandō-shi-e [On the utterance-initial wa of responses to interrogatives: The transition from topic marker to discourse marker] Kokuritsu Kokugo Kenkyujo Ronshu (NINJAL Research Papers) 9, 1–22. Tokyo: NINJAL.
- Fujii, Tomohiro. 2016. Fuku-bun-no koozoo-to umekomi-hobun-no bunrui [The structure of complementation and the classification of embedded complements]. In *Nihongo Bumpo Handobukku: Gengo-riron to gengo-kakutoku-no kanten-kara [The Handbook of Japanese Grammar: From the Perspectives of Linguistic Theory and Language Acquisition*], eds. Keiko Murasugi, Mamoru Saito, Yoichi Miyamoto, and Kensuke Takita, 2–37. Tokyo: Kaitakusha.
- Goto, Nobu. 2012. A note on particle stranding ellipsis. In *Proceedings of the 14th Seoul International Conference on Generative Grammar (SICOGG 14): Three Factors and Syntactic Theory*, ed. Bum-Sik Park, 78–97. Seoul, South Korea: The Korean Generative Grammar Circle.
- Hattori, Shiro. 1949. Gutai-teki gengo tan'i to chuushoo-teki gengo tan'i [Concrete linguistic units and abstract linguistic units]. *Kotoba* 2, 16–27.
- Hattori, Shiro. 1960. Gengogaku-to Hoohoo [Linguistics and Methodology]. Tokyo: Iwanami Shoten.
- Hayashi, Makoto. 2001. Postposition-initiated utterances in Japanese conversation. In *Studies in Interactional Linguistics*, eds. Margaret Selting and Elizabeth Couper-Kuhlen, 317–343. Amsterdam: John Benjamins.
- Hiraiwa, Ken. 2010. Spelling out the Double-o Constraint. Natural Language & Linguistic Theory 28:723-770.
- Jun, Sun-Ah. 1993. The phonetics and phonology of Korean prosody. PhD diss., Ohio State University.
- Kitagawa, Yoshihisa. 2005. Prosody, syntax and pragmatics of Wh-questions. *English Linguistics* 22(2): 302–346. Tokyo: Kaitakusha.
- Nasu, Norio. 2010. The distribution of particles in Japanese and the structure of CP. Paper presented at GIST 2 Conference: Main Clause Phenomena. Generative Initiatives in Syntactic Theory (GIST), Ghent University, Sept. 29–Oct. 1.
- Nasu, Norio. 2012a. Topic particle stranding and the structure of CP. In *Main Clause Phenomena: New Horizons*, eds. Lobke Aelbrecht, Liliane Haegeman, and Rachel Nye, 205–228. Amsterdam: John Benjamins Publishing Company.
- Nasu, Norio. 2012b. Joshi-zanryu-ga okoru buntoo-no ichi-ni-tsuite [On the sentence-initial position where particle stranding occurs]. *CLAVEL* 2, 1-12. [Downloadable: https://core.ac.uk/download/pdf/48512589.pdf]
- Saito, Mamoru. 1985. Some asymmetries in Japanese and their theoretical consequences. MIT Dissertation.
- Sakamoto, Yuta and Hiroaki Saito. 2018a. Overtly stranded but covertly not. In *Proceedings of the 35th Annual Meeting of the West Coast Conference on Linguistics (WCCFL 35)*, eds. Wm. G. Bennett, Lindsay Hracs, and Dennis Ryan Storoshenko, 349–356. Somerville, MA: Cascadilla Proceedings Project.
- Sakamoto, Yuta and Hiroaki Saito. 2018b. Some notes on stranded particles in Japanese. Talk given at *the 5th Workshop of the NINJAL Collaborative Research Project*, Tohoku University, Sendai, Miyagi, Japan, Dec. 1
- Sato, Yosuke. 2008. Case-stranding nominal ellipsis in Japanese: a preliminary sketch. Snippets 17: 9-10.
- Sato, Yosuke. 2012. Particle-stranding ellipsis in Japanese, Phase Theory and the Privilege of the Root. *Linguistic Inquiry* 43: 495–504.
- Sato, Yosuke, and Jason Ginsburg. 2006. A new type of nominal ellipsis in Japanese: Further evidence for the LF Copy analysis. In *Proceedings of the 8th Seoul International Conference on Generative Grammar: Minimalist Views on Language Design*, ed. Changguk Yim, 293–300. Seoul, South Korea: The Korean Generative Grammar Circle.

- Sato, Yosuke, and Jason Ginsburg. 2007. A new type of nominal ellipsis in Japanese: Further evidence for the LF Copy analysis. In *Proceedings of the 4th Formal Approaches to Japanese Linguistics*, eds. Yoichi Miyamoto and Masao Ochi, 197–204. Cambridge, MA: MIT Working Papers in Linguistics.
- Sato, Yosuke and Masako Maeda. 2017. Particle stranding ellipsis involves PF-ellipsis. In *Proceedings of the 19th Seoul International Conference on Generative Grammar: The Syntax-Morphology Interface in Generative Grammar*, eds. 171–190.
- Sato, Yosuke and Masako Maeda. 2018. Particle stranding ellipsis in Japanese, string deletion, and argument ellipsis. To appear in *Japanese/Korean Linguistics* 25. Stanford, CA: CSLI.
- Sato, Yosuke and Masako Maeda. 2019. Particle stranding ellipsis involves PF-deletion. *Natural Language & Linguistic Theory* 37: 357–388.
- Shibata, Yoshiyuki. 2014. A phonological approach to particle stranding ellipsis in Japanese. Poster presented at *Formal Approaches to Japanese Linguistics (FAJL)* 7, National Institute for Japanese Language and Linguistics and International Christian University, June 27–29.
- Sohn, Keun-Won. 1994. Adjunction to arguments, Free Ride, and a Minimalist Program. In *Formal Approaches* to Japanese Linguistics 1: Proceedings of the First Conference on Formal Approaches to Japanese Linguistics, eds. Hiroyuki Ura and Masatoshi Koizumi, 315–334. Cambridge, MA: MITWPL.
- Takahashi, Daiko. 1994. Sluicing in Japanese. Journal of East Asian Linguistics 3: 265-300
- Takita, Kensuke. 2018. Labeling for linearization. Ms. (Nov. 2018 / to appear in *The Linguistic Review*), Meikai University.
- Vance, Timothy. 1993. Are Japanese particles clitics? *Journal of the Association of Teachers of Japanese* 27: 3–33.
- Yamashita, Hideaki. 2009a. Prosody and the syntax of *shika*-NPIs in Tokyo Japanese and its implications for the theory of grammar. In *Proceedings of the International Conference on East Asian Linguistics*, eds. Sarah Clarke, Manami Hirayama, Kyumin Kim, and Eugenia Suh, 375–394. Toronto, ONT: University of Toronto Working Papers in Linguistics.
- Yamashita, Hideaki. 2009b. Right dislocation/scrambling (a)symmetries on Wh-scope and Syntax-Prosody Interface of Wh-questions in Tokyo Japanese. In *Proceedings of the 10<sup>th</sup> Tokyo Conference on Psycholinguistics*, ed. Yukio Otsu, 333–357. Tokyo: Hituzi Syobo.
- Yamashita, Hideaki. 2009c. "Split" indeterminate NPI pronouns in Japanese and the Syntax-Prosody Interface. In *Japanese/Korean Linguistics 17*, eds. Shoichi Iwasaki, Hajime Hoji, Patricia M. Clancy, and Sung-Ock Sohn, 343–357. Stanford, CA: Center for the Study of Language and Information
- Yamashita, Hideaki. 2012a. Reconsidering particle stranding ellipsis in Japanese. Ms. YNU.
- Yamashita, Hideaki. 2012b. What makes right dislocation (of Wh-phrases) in (Tokyo) Japanese (im)possible? In *Formal Approaches to Japanese Linguistics: Proceedings of FAJL 5*, eds. Ryan Bennett, Oliver Northrup, Anie Thompson, and Matt Tucker, 287–298. Cambridge, MA: MITWPL.
- Yim, Changguk and Yoshihito Dobashi. 2016. A prosodic account of -yo attachment in Korean. *Journal of East Asian Linguistics* 25. 213–241.
- Yoshida, Tomoyuki. 2001. Paper presented at *Workshop on Universal Grammar (WUG)*, International Christian University, Mitaka, Tokyo, Japan, Aug. 20.
- Yoshida, Tomoyuki. 2004. Shudai-no shooryaku genshoo: Hikaku-toogoron-teki koosatsu [The phenomenon of topic ellipsis: A comparative syntactic consideration]. In *Nihongo Kyoiku-gaku-no Shiten [Perspectives on Japanese Language Pedagogy]*, eds. The Editorial Committee of Annals, 291–305. Tokyo: Tokyodo.