Category Mismatch under VP-Ellipsis:

Implications for the Mophosyntax and Directionality of Conversion*

Yosuke Sato (Seisen University)

yosukes1129@seisen-u.ac.jp

1. Introduction

The (im-) possibility of various forms of "mismatches" between an ellipsis site and its antecedent has proven to be a critical litmus test for the proper identification and formulation of identity conditions on ellipsis. Three lines of approaches have been articulated in the theoretical linguistic literature to illuminate the relevant identity conditions. The first line of approach, represented by works such as Dalrymple et al. (1991), Hardt (1993), and Merchant (2001) regard tolerable mismatch cases as supporting semantic identity conditions whereas the second line of approach, espoused by various researchers, such as Chung (2013), Chung et al. (1995), Sag (1976), Hankamer (1979), and Merchant (2008, 2013a, b) focus instead on intolerable mismatch cases in favor of some version of syntactic identity conditions. The third line of approach, including Kehler (2000, 2002) and Kertz (2008, 2010), by contrast, argues that ellipsis licensing is best characterized at the level of discourse or information structure instead of syntactic or semantic structures.

With this theoretical issue as background, in this paper, I investigate a lesser-studied type of mismatch under ellipsis – category mismatch (Johnson 2001; Fu et al. 2001; Hardt 1993; Kehler 2002; Merchant 2013a; Nakamura 2013b). Our central empirical finding, first reported by Tan

(2018) to the best of my knowledge, is that deverbal nominals such as *graduate$_N$* may serve as an antecedent for VP-ellipsis headed by its verbal counterpart, *graduate$_V$*, but the verb in question cannot serve as an antecedent for NP-ellipsis headed by its nominal variant. I argue that this directionality asymmetry observed under certain cases of category mismatch under VP-ellipsis is best accounted for in terms of a morphosyntactic containment relation between the zero-related N-V pair to the effect that the syntactic structure of an antecedent must properly contain the syntactic structure of the ellipsis site. My proposed analysis, if tenable, has several important implications for the contemporary issues regarding the locus and nature of identity conditions imposed on ellipsis. Among other implications, the central finding and the analysis thereof supports the intuition that syntactic size is relevant to ellipsis so that some version of syntactic identity must be satisfied for ellipsis licensing (Merchant 2008, 2013a, b). This conclusion, in turn, allows us to shed new light on the familiar issue of directionality of conversion/zero-derivation, namely, which member of a zero-related pair is derived from the other member (N➔V or V➔N) (Kiparsky 1982a, b, Arad 2003, and much subsequent work).

2. Size Matters: Voice Mismatches under VP-Ellipsis

It is widely acknowledged in the literature (see Sag 1976, Dalrymple et al. 1991, Johnson 2001, and Kehler 2002, among others) that in VP-ellipsis, a passive antecedent can license the ellipsis of an active elliptical clause, and vice versa. Prima facie, this very possibility of "voice mismatch" throws a wrench in any strict syntactic identity-based account of VP-ellipsis since the voice specifications are different between the antecedent and elliptical clauses. Merchant (2008, 2013a, b) argues, however, that closer inspection reveals that it is actually a semantic identity-based account that is problematic in face of the VP-level voice mismatch phenomenon. Consider examples in (1–2).

(1)   VP-ellipsis: Voice mismatch ok

    a. This problem was to have been looked into, but obviously nobody did.

    b. The janitor must remove the trash whenever it is apparent that it should be.
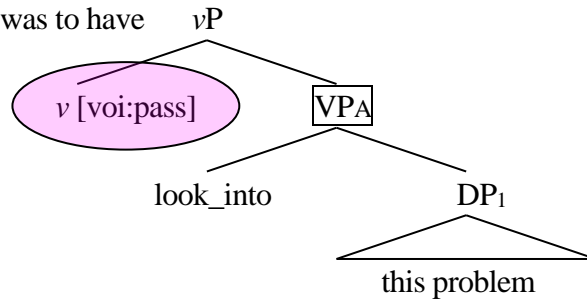
<div align="right">(Merchant 2008:169)</div>

(2)   Pseudogapping: Voice mismatch out

    a. * Roses were brought by some, and others did lilies.

    b. * Some brought roses, and lilies were by others.
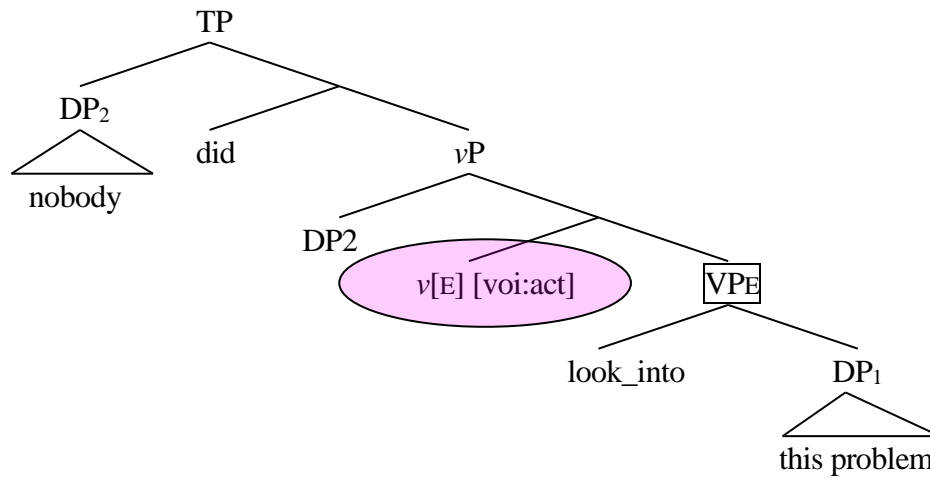
<div align="right">(Merchant 2008:170)</div>

Merchant (2008) observes that the contrast between (1) and (2) is problematic for a purely semantic identity condition based on mutual entailment. More specifically, since passive and active clauses entail each other, the voice mismatch pattern shown in the pseudogapping examples in (2a, b) should be just fine on a par with that shown in the VP-ellipsis examples in (1a, b), a wrong result. Merchant (2008, 2013a, b) argues, then, that the asymmetry between VP-ellipsis and pseudogapping is explained instead with specific reference to strict syntactic identity – the size of the target of ellipsis – if the latter targets a vP constituent that properly contains a v-head specified for voice whereas the former targets a smaller VP constituent to the exclusion of the relevant vP. To illustrate this size-based analysis of the asymmetry in question, consider the relevant parts of the syntactic derivations for the examples in (1a) and (2a), shown in (3a, b) and (4a, b), respectively, where VPA and VPE denote the antecedent and elliptical VPs, and E stands for the [E]-feature which licenses the ellipsis of its sister constituent under the condition of mutual entailment between VPA and VPE (see Merchant 2001, 2008, 2013a, b for details).

(3) a. … [DP this problem]₁ was to have   *v*P

$$v \text{ [voi:pass]}$$ VP$_A$

look_into   DP₁

this problem

b.   TP

DP₂   did   *v*P

nobody

DP2

v[E] [voi:act]   VP$_E$

look_into   DP₁

this problem

(adopted from Merchant 2008:171−172)

(4) a.   TP

DP₁   were   *v*P

roses

t$_{were}$ *v*P

*v*P$_A$ PP

v [voi:pass]   VP

bring   *t*₁

4

b.

TP

DP$_2$

others

did

X[foc]P

DP$_3$

L

lilies
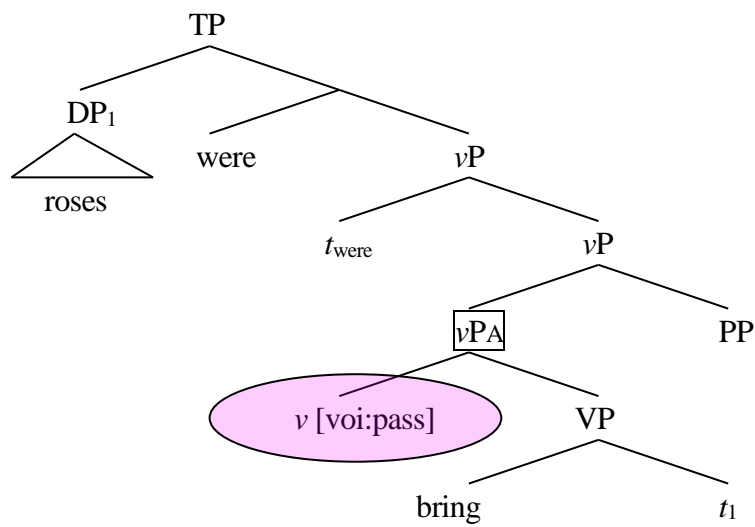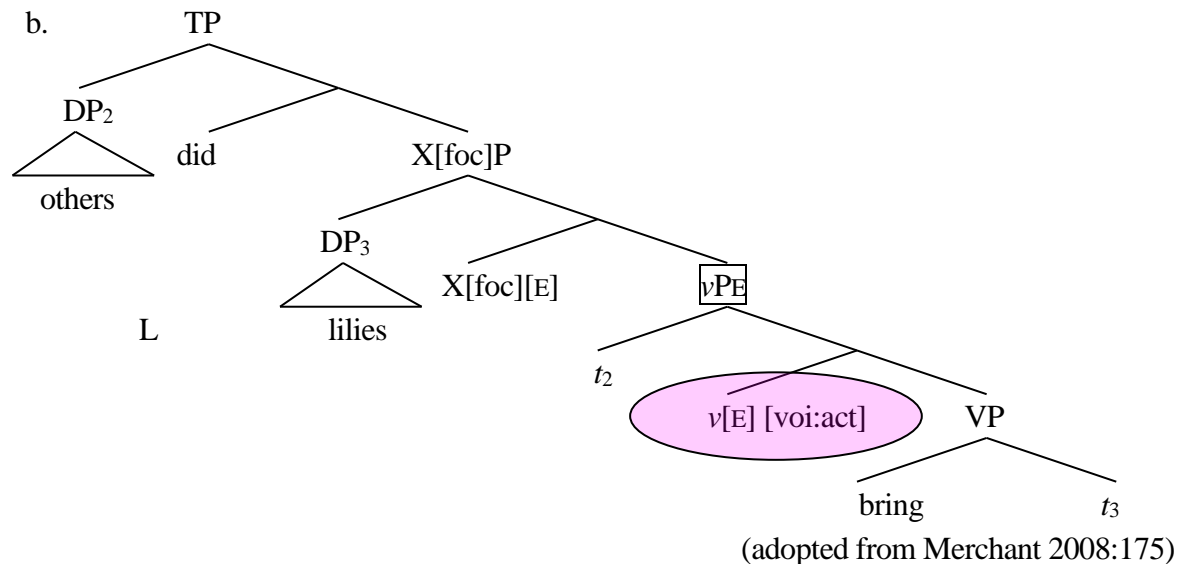
X[foc][E]

*v*P$_E$

t_2

v[E] [voi:act]

VP

bring

t_3

(adopted from Merchant 2008:175)

In (3b), VP$_E$ may undergo ellipsis because it is identical to VP$_A$ in (3a). The syntactic identity is ensured because the specifications of voice features born by the *v* heads are outside the ellipsis site. In (4b), by contrast, *v*P$_E$ may not undergo ellipsis because the active voice feature contained within this *v*P clashes with the passive voice feature contained within the antecedent *v*P$_A$ in (4a). This way, the voice mismatch contrast between VP-ellipsis and pseudogapping receives a structural explanation in terms of syntactic identity once we take the size of the ellipsis site in the two elliptical constructions into account.

I will henceforth assume this syntactic identity-based approach to VP-ellipsis as my general heuristic for my exploration into the morphosyntax and directionality of conversion.[1]

---

[1] I am aware of various controversies revolving around Merchant's (2008, 2013a, b) analysis of the paradigmatic contrast exhibited in (1) vs. (2). Merchant (2008) himself points out certain grammatical pseudogapping examples with voice mismatches. Furthermore, Tanaka (2011a) claims that said asymmetry does not exist. Thus, Tanaka reports (ia, b) as grammatical cases of pseudogapping with voice mismatches and (ii) as an ungrammatical case of VP-ellipsis with voice mismatches.

(i) a. The arms were hidden by the rebels as a woman would (do) her most precious jewels.
    b.? That should be explained to individual students by the TA, but the professor will to the class in general.

(Tanaka 2011:476)

(ii) * Roses were brought by some boys, and some girls did, too.

(Tanaka 2011:475)

Tanaka claims that Merchant's examples such as those in (1) and (2), as well as his own examples in (i) and (ii) can be accommodated through discourse-level relations in Kehler's (2000, 2002) sense. Concretely, the examples in (2a, b) and (ii) involve resemblance relations between the antecedent and elliptical clauses whereas

3. A Directional Asymmetry in the V→N Type Conversion under VP-Ellipsis

Hardt (1993) was the first to observe that an NP can serve as an antecedent for VP-ellipsis; see also Johnson (2001), Kehler (2002), Nakamura (2013b) and Tanaka (2011b) for further examples of this type. Two of Hardt's examples to illustrate this observation are shown in (5) and (6).

(5)   People say that Harry is an excessive <u>drinker</u> at social gatherings. Which is strange, because he never does <drink> at my parties.

(Hardt 1993:35)

(6)   Today there is little or no OFFICIAL <u>harassment of lesbians and gays</u> by the national government, although autonomous governments might <harass lesbians and gays>.

(Hardt 1993:35)

Fu et al. (2001) and Merchant (2001, 2013a) also note other cases where category mismatch is tolerable between the elliptical and antecedent clauses, as illustrated in (7) and (8).

(7)   a. Sue's exploration of Easter Island was impressive, then Amy's doing so was a real surprise.

         b.* Sue's trip last May surprised us, Amy's doing so annoyed us.

(Fu et al. 2001:550)

(8)   a.? That man is a robber, and when he does, he tries not to make any noise.

         b.* That man is a thief, and when he does, he tries not to make any noise.

(Merchant 2013a:447)

---

the examples in (1a, b) and (ia, b) instantiate cause-effect relations between the two clauses. Nakamura (2013a:525) also follows the spirit of the information structure-based theory of VP-ellipsis articulated by Kertz (2008, 2010) and contends that "… focus marking, rather than voice mismatch per se… affects the acceptability of VP-deletion and pseudogapping." See also note 5 for relevant discussion on the focusing effect on VP-ellipsis.

Merchant (2013a:447) points out that the semantics of (8a) and (8b) is identical, yet only the latter is ungrammatical. This contrast leads him to suggest that (morpho)syntactic identity, not semantic identity, plays a role in licensing VP-ellipsis. Under this suggestion, one may say that the noun *robber*, but not the noun *thief*, has an embedded VP so that only the former noun has the VP in its morphosyntactic derivation, which, in turn, licenses the ellipsis of the overly identical VP in the elliptical clause.

Our central finding in this paper is a directional asymmetry in conversion under VP-ellipsis, a pattern noted by Tan (2018). Tan (2018) observes that the configuration of the clauses which yield grammatical cases of conversion under VP-ellipsis is the one where the antecedent clause contains an NP, followed by the VP-ellipsis site. The acceptability of a configuration with their roles and positions reversed has been mixed, ranging from marginality to complete unacceptability. Examples in (9a, b) illustrate this directional asymmetry.

(9) a. Allow us to treat you like a [$_N$ graduate] before you do [$_{VP}$ Ø].

　　b. ?? You must [$_V$ graduate] before we end up treating you like one [$_{NP}$ Ø].
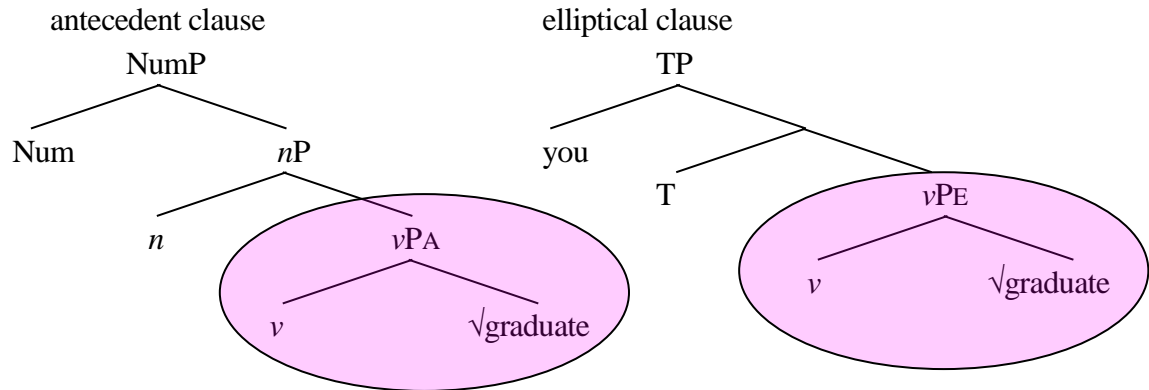
(Tan 2018)

A strict semantic identity-based account is doomed to failure in face of the contrast between (9a) and (9b): since a graduate is someone who graduates, the antecedent and elliptical clauses mutually entail each other. So is a root identity-based account (cf. Arad 2003) because such an account would predict both (9a) and (9b) to be grammatical, but only the N⇒V pattern in (9a) is actually grammatical.

4. An Analysis of Category Mismatch under VP-Ellipsis and Morphosyntactic Identity

I propose that *graduate*$_N$ has the *v*P layer in its morphosyntactic derivation which properly contains the derivation of *graduate*$_V$, thereby advocating a word-based syntax of conversion/zero derivation (Kiparsky 1982a, b) as opposed to a root-based syntax (Arad 2003). According to this analysis, the examples in (9a) and (9b) are analyzed as shown in (10) and (11), respectively.

(10) ^{OK} graduate$_N$ → graduate$_V$

antecedent clause

NumP
- Num
- *n*P
  - *n*
  - *v*PA
    - *v*
    - √graduate

elliptical clause

TP
- you
- T
- *v*PE
  - *v*
  - √graduate

(11) * graduate$_V$ → graduate$_N$

antecedent clause

*v*PA
- *v*
- √graduate

elliptical clause

NumP
- Num
- *n*PE
  - *n*
  - *v*P
    - *v*
    - √graduate
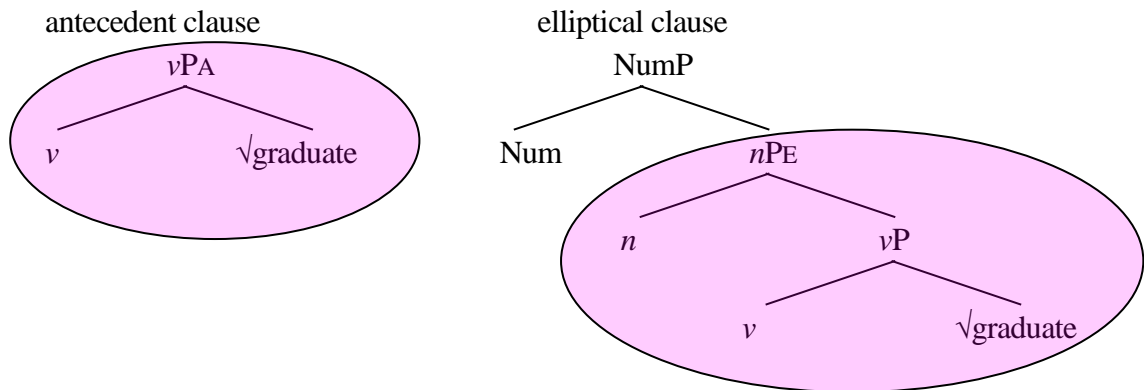
In (10), the ellipsis of the *v*P constituent in the elliptical clause is licensed because it has an identical *v*P in the antecedent c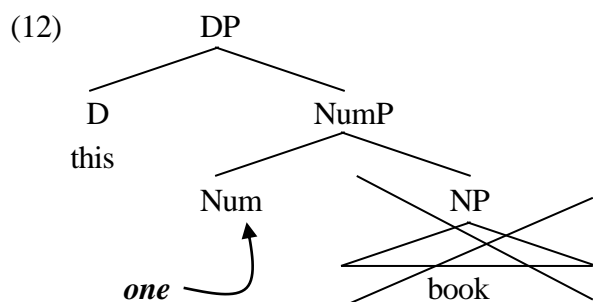lause. Such is not the case with the derivation in (11), where the to-be elided *n*P constituent in the elliptical clause has no syntactically parallel *n*P in the antecedent clause. This analysis of the directional asymmetry exhibited by the examples in (9a, b) then crucially entails that eventitive nouns such as *graduate*$_N$ are deverbal, deriving its verbal counterpart from the nominal base, not vice versa. As stated above, then, this result presents a new type of evidence against deriving zero-related pairs through the common root and speaks in favor of a word-based syntactic derivation of such pairs, as originally envisioned in Kiparsky's (1982a, b) theory of conversion (see also section 5 for a relevant discussion on Kiparsky's model and the directionality of conversion).

Before leaving this section, it is important to make sure that the example in (9b) indeed involves NP-ellipsis so that the directional asymmetry indeed holds true for conversion along the lines suggested thus far in this section. Llombart-Huesca's (2002) analysis provides independent

evidence in favor of this analysis. Llombart-Huesca argues that *one*-constructions of the sort illustrated in (9b) involve NP-deletion in the PF component, as schematically represented in (12).

(12)

```
              DP
           /      \
         D          NumP
        this       /    \
                Num        NP
                 ↑      (book)
              one ───┘
```

According to this analysis, *one* is inserted under Num as Last Resort to give phonological support to the head which otherwise would remain stranded due to the deletion of the host NP on its right. This deletion analysis is supported by her observation that the relevant construction permits strict/sloppy ambiguities, as shown in (13b), on a par with bona fide cases of NP-ellipsis such as the one in (13a).

(13) a. I saw Janet's picture of her cat and Jack saw Julie's.

(strict: Julie's picture of Janet's cat, sloppy: Julie's picture of Julie's cat)

b. I saw Janet's beautiful picture of her cat and Jack saw Julie's ugly one.

(strict: Julie's ugly picture of Janet's cat, sloppy: Julie's ugly picture of Julie's cart)

(Llombart-Huesca 2002:60)

See also Saab and Lipták (2015) for their analysis of NP-ellipsis as *n*P-ellipsis in the framework of Distributed Morphology based on the possibility of number (as opposed to gender) mismatches between antecedent and elliptical clauses in Hungarian and Spanish. [2]

---

[2] See also Yoshida et al. (2012) for various supporting arguments for NP-ellipsis in English in "nominal gapping".

5. Category Mismatch in Conversion under VP-Ellipsis and the Directionality of Conversion

I have argued in the previous section that the directional asymmetry with respect to V→N conversion exhibited by *graduate* under VP-ellipsis in English receives a straightforward explanation in terms of the morphosyntactic containment condition once we assume an abstract word-based morphosyntactic structure for deverbal nouns such as *graduate*$_N$ which postulates a hidden *v*P in it. Taking this result a step further, I investigate a couple of empirical implications of the proposed analysis for the so-called directionality problem raised by conversion: which member of a particular zero-related N-V pair is the base from which the other member is derived. More concretely, I show that the proposed syntactic identity condition allows us to make certain empirical predictions, when coupled with Kiparsky's (1982a, b) classic stratum-based theory of conversion, which turn out to be borne out.

As is well-known, Kiparsky (1982a, b) develops the theory of Lexical Phonology, which postulates that the lexicon is organized as a series of ordered lexical strata/layers/cycles which function as the domain of application of a restricted range of phonological and morphological rules characteristic of each stratum. As one of the primary motivations for this stratum-based approach to word formation, Kiparsky develops an eclectic analysis of conversion in English (see Arad 2003 for a re-analysis of the same phenomenon in English and Modern Hebrew in terms of the dichotomy between root-derived and word-derived morphosyntactic derivation within the framework of Distributed Morphology). More specifically, Kiparsky provides evidence from bisyllabic word stress placement, relative productivity and the degree of segmental phonological rules to show that nouns are formed from verbs at Stratum 1, yielding deverbal nouns, whereas verbs are formed from nouns at Stratum 2, yielding denominal verbs. Kiparsky shows that deverbal nouns is accompanied with primary stress change, as shown by such zero-related word pairs as *torment*$_V$→*torment*$_N$, *protest*$_N$ →*protest*$_V$, *digest*$_V$→ *digest*$_N$, *progress*$_V$→*progress*$_N$, *convict*$_V$→*convict*$_N$, and *survey*$_V$→ *survey*$_N$. The reason that stress shift occurs in these word pairs is because a word stress rule in English at Stratum 1 places the main stress on the final syllable of a verb, but not on the first

syllable of a noun. By contrast, denominal verbs illustrated by such word pairs as *pattern*$_N$→*pattern*$_V$, patent$_N$→patent$_V$, lever$_N$→lever$_V$ do not exhibit any stress shift because the nominal members are derived from their verbal counterparts at Stratum 2, with the correct result that these words escape the application of the word stress shift rule which belongs to Stratum 1.

Then, Kiparsky's (1982a, b) analysis of conversion in English just reviewed above makes two empirical predictions, when coupled with the morphosyntactic containment condition I proposed to account for the directional asymmetry with conversion under VP-ellipsis. One prediction is that a deverbal nominal antecedent should license ellipsis of its verbal base because the morpho-syntactic derivation of the deverbal noun properly contains that of the underlying verb that feeds the noun. We have shown in section 4 that this prediction was already indeed verified by the asymmetrical distribution of VP-ellipsis exhibited by *graduate*$_N$ as a deverbal nominal. Another prediction, which neither Tan (2018) nor this paper has yet tested, is that a denominal verbal antecedent, in turn, should also allow ellipsis of its nominal base because the former is derived through the latter by means of an abstract morphosyntactic derivation. These two key predictions are indeed borne out by the grammaticality of the examples in (14) and (15) which involve several deverbal and denominal verbs identified by Kiparsky (1982) as being formed at Stratum 1 and Stratum 2, respectively.[3]

(14)   Stratum 1: Deverbal noun formation (V → N pairs)

   a. The [protest]$_N$ was supposed to take the form of a petition, but many did [$_{VP}$ Ø] by taking to the streets instead.

   b. Understanding the [progress]$_N$ made by their predecessors would prove necessary before they could [$_{VP}$ Ø] too.

   c. ? The conditions were perfect for a [survey]$_N$ of the terrain but we were told we couldn't [$_{VP}$ Ø].

   d. ? A [digest]$_N$ of the materials was given to the students so they didn't have to [$_{VP}$ Ø] on their own.

---

(15) Stratum 2: Denominal verb formation (N → V pairs)

    a. He applied to [patent]$_V$ his five inventions but was only awarded three [$_{NP}$ Ø].

    b. He gave many of what they [desired] $_V$, but he never could fulfill any of his own [$_{NP}$ Ø].

    c. He [loved]$_V$ his children even though he never got any [$_{NP}$ Ø] in return.

    d. They wish to [tattoo] $_V$ their forearms but unsure of which [$_{NP}$ Ø] to get.

6. Further Evidence for the Containment Condition: Causative Alternation under VP-Ellipsis

Sugimoto's (2008) recent findings regarding the causative alternation mismatch under VP-ellipsis provides independent supporting evidence in favor of my proposed morphosyntactic containment condition developed as an account for the directional asymmetry with conversion under VP-ellipsis.[4]

    Examples in (16a, b) illustrate the causative alternation in English (Levin and Rappaport-Hovav 1995), where change of state verbs such as break and melt can be used either as a transitive verb or an intransitive verb. In this alternation, the subject of the intransitive variant (i.e., *the snow* in (16a)) is characteristically identical to the object of the transitive variant (i.e., *the snow* in (16b)).

(16)   a. The snow melted.

      b. The heat melted the snow.

Under more or less orthodox syntactic approaches to the causative alternation, including Pesetsky (1995), Folli and Harley (2005, 2006) and Harley (2008), the inchoative verb phrase in (16a) and its causative variant in (16b) would be assigned the partial structures in (17a) and (17b), respectively.

(17)   a. [$_{VP}$ melt the snow]   (inchoative variant)

      b. [$_{vP}$ the heat [$_{v'}$ vcause [$_{VP}$ melt the snow]]   (causative variant)

Sugimoto (2018:146) further assumes that "… the structures in (17a, b) are embedded under Voice and the target of VP-ellipsis". Under this assumption, the target/size of verb phrase ellipsis is different between the inchoative and causative variants: the VP vs. vP. Given the morphosyntactic containment condition proposed above to the effect that the morphosyntactic structure of an ellipsis site must be properly contained within the morphosyntactic structure of its antecedent, we predict that the causative alternation should also be subject to the directional asymmetry of the kind we observed with conversion under VP-ellipsis. Specifically, we predict that the causative variant should permit ellipsis of the inchoative VP, but not vice versa, since only in the former context, is the to-be-elided VP of the latter properly contained within the antecedent VP. One can verify the asymmetrical licensing situation with regard to the containment condition by means of the schematic representation shown in (18a, b) for the causative antecedent-inchoative elliptical pair and that shown in (19a, b) for the inchoative antecedent-causative elliptical pair.

(18) Causative Antecedent → Inchoative Ellipsis

    a. Antecedent: [$_{VoiceP}$ Voice $_{[+active]}$ [$_{vP}$ Causer [$_{v'}$ v_{cause} [$_{VP}$ V Theme]]]] (causative structure)

    b. Ellipsis site: [$_{VoiceP}$ Voice $_{[+active]}$ [$_{VP}$ V Theme]] (inchoative structure)

<div align="right">(Sugimoto 2018:146)</div>

(19) Inchoative Antecedent → Causative Ellipsis

    a. Antecedent: [$_{VoiceP}$ Voice $_{[+active]}$ [$_{VP}$ V Theme]] (inchoative structure)

    b. Ellipsis site: [$_{VoiceP}$ Voice $_{[+active]}$ [$_{vP}$ Causer [$_{v'}$ v_{cause} [$_{VP}$ V Theme]]]] (causative structure)

<div align="right">(Sugimoto 2018:146)</div>

The prediction stated above is indeed borne out by the contrast in grammaticality between (20) and (21) reported by Sugimoto (2018). In (20), the causative vP structure in the antecedent clause

licenses the ellipsis of the inchoative VP ellipsis in the elliptical clause. The ungrammaticality of (21), on the other hand, shows that the inchoative VP structure in the antecedent clause cannot allow the causative *v*P to undergo ellipsis.

(20)   John believed that the sunshine would melt the big snowballs$_i$, but they$_i$ didn't <melt>.

<div align="right">(Sugimoto 2018:146)</div>

(21) *John believed that the big snowballs$_i$ would not melt, but the sunshine did <melt them$_i$>.

<div align="right">(Sugimoto 2018:147)</div>

These results reported by Sugimoto (2018), therefore, provide further credence to the view that abstract syntactic identity is necessary for ellipsis of verb-sized constituents in the syntax.[5]

A question arises at this juncture as to how causative-inchoative pairs with partially or completely different roots such as *rise-raise* and *kill-die*, as illustrated in (22) and (23), play out with respect to the causative-inchoative alternation mismatch under VP-ellipsis.

---

[5] Sugimoto's (2018) finding reported here appears to run counter to Merchant's (2013b:97) observation that causative-inchoative alternations, or any argument structure alternations, for that matter, are blocked under VP-ellipsis. Merchant's examples to illustrate his observation are based on the ungrammaticality of the examples shown in (ia) and (ib) from the previous literature on this topic (Sag 1976; Houser et al. 2007).

(i)   a.* Bill melted the copper vase, and the magnesium vase did [$_{VP}$ Ø], too.   (Sag 1976:160)
    b.* Maria still tried to break the vase even though it wouldn't [$_{VP}$ Ø].   (Houser et al. 2007:188)

Taichi Nakamura (June 2018, personal communication) suggested that auxiliary focus is a prerequisite for VP-ellipsis. In fact, some of the native speakers I consulted found (ib) (with auxiliary focus) much more acceptable than (ia) (without auxiliary focus). See Nakamura and Sugimoto (2015) for relevant discussions on this auxiliary focusing effect imposed on VP-ellipsis.

(22) a. Oil prices rose.

b. The war raised oil prices.

<div align="right">(Sugimoto 2018:149)</div>

(23) a. The patient died.

b. The virus killed the patient.

<div align="right">(Sugimoto 2018:149)</div>

Sugimoto (2018) shows that with the *rise-raise* pair, the causative VP antecedent headed by the transitive *raise* licenses the VP-ellipsis of the inchoative variant headed by the intransitive rise, but not vice versa, as witnessed by the contrast in grammaticality between (24a) and (24b). In this regard, the behavior exhibited by the relevant verb pair is entirely parallel to that exhibited by more standard causative alternation verbs with the identical root such as $melt_{inch}$-$melt_{caus}$.

(24) a. John believed that the war would raise oil prices$_i$, but they$_i$ didn't <rise>.

b.* John believed that oil prices$_i$ would not rise, but the war did <raise them$_i$>.

<div align="right">(Sugimoto 2018:149)</div>

This is not the case with the *die-kill* pair, however, as evidenced by the ungrammaticality of both (25a) and (25b).

(25) a.* John believed that the virus would kill the patient$_i$, but he$_i$ didn't <die>.

b.* John believed that the patient$_i$ would die, but the virus didn't <kill him$_i$>.

<div align="right">(Sugimoto 2018:150)</div>

Sugimoto (p.150) himself notes that "one way to account for the facts above is to say that causative-intransitive pairs must share a common root when deletion is applied…", but this doesn't seem to need to be stipulated as such, since this particular constraint imposed on roots is exactly what we predict as a natural consequence of my proposed morphosyntactic identity condition on ellipsis.

6. Conclusions

In this paper, I have investigated a directional asymmetry in configurations involving category mismatch, a pattern first noted to the best of my knowledge by Tan (2018), in order to shed light on contemporary debates regarding the locus and nature of identity conditions imposed on VP-ellipsis. The asymmetry states that complex event nominals such as $graduate_N$ can license ellipsis of a VP-sized constituent headed by its verbal counterpart, $graduate_V$, but not vice versa. I have argued that this asymmetry can only be accounted for by a morphosyntactic containment condition to the effect that the syntactic structure of an antecedent must properly contain that of an elided constituent. I have further shown that this position receives independent support from Sugimoto's (2018) recent discovery of a similar asymmetry observed with causative alternation verbs such as *break* and *melt*, in which the causative vP structure allows the ellipsis of the inchoative VP structure, but not the other way around. The asymmetry under investigation and the analysis thereof, therefore, furnish an excellent testing ground in favor of an abstract morphosyntactic derivation for zero-derived noun-verb pairs in contemporary syntactic theory, while retaining the important sights from the level-ordering hypothesis of Kiparsky (1982a, b) within his framework of Lexical Phonology. The analysis developed, I have also shown, has important implications for the so-called directionality issue with respect to conversion in languages like English from a new angle of syntactic identity, together with word stress placement, relative productivity vis-à-vis the particular strata, and semantic/phonological idiosyncrasies identified in Kiparsky's seminal works as well as in more recent cyclic derivational approaches to conversion, including Arad (2003) and Marantz (1997, 2000, 2007, 2013).

References

Arad, Maya. 2003. Locality constraints on the interpretation of roots: The case of Hebrew denominal verbs. *Natural Language & Linguistic Theory* 21:737–778.

Chung, Sandra. 2013. Syntactic identity in sluicing: How much and why. *Linguistic Inquiry* 44:1–44.

Chung, Sandra, William A. Ladusaw and James McCloskey.1995. Sluicing and logical form. *Natural Language Semantics* 3:239–282.

Dalrymple, Mary, Stuart M. Shieber and Fernando Pereira. 1991. Ellipsis and higher order unification. *Linguistics and Philosophy* 14:399–452.

Folli, Raffaella and Heidi Harley. 2005. Flavors of *v*: Consuming results in Italian and English. *Aspectual Inquiries*, ed. by Paula Kempchinsky and Roumyana Slabakova, 95–120. Dordrecht: Springer.

Folli, Raffaella and Heidi Harley. 2006. On the licensing of causatives of directed motion: Walzing Matilda all over. *Studia Linguistica* 60:121–155.

Fu, Jingqi, Thomas Roeper and Borer Hagit. 2001. The VP within process nominals: Evidence from adverbs and the VP anaphor *do-so*. *Natural Language & Linguistic Theory* 19:549-582.

Hankamer, Jorge. 1979. *Deletion in coordinate structures*. New York: Garland.

Hardt, Daniel. 1993. *Verb phrase ellipsis: Form, meaning and processing*. Philadelphia, PA: University of Pennsylvania dissertation.

Harley, Heidi. 2008. On the causative construction. *The Oxford handbook of Japanese linguistics*, ed. by Shigeru Miyagawa and Mamoru Saito, 20–53. Oxford: Oxford University Press.

Houser, Michael J., Line Mikkelsen and Maziar Toosarvandani. 2007. Verb phrase pronominalization in Danish: deep or surface anaphor? *Proceedings of the Thirty-Fourth Western Conference on Linguistics*, ed. by Erin Bainbridge and Brian Agbayani, 183–195. Fresno, CA: California State University, Department of Linguistics.

Johnson, Kyle. 2001. What VP ellipsis can do, and what it can't, but not why. *The handbook of contemporary syntactic theory*, ed. by Mark Baltin and Chris Collins, 439–479. Oxford: Blackwell Publishers.

Kehler, Andrew. 2000. Coherence and the resolution of ellipsis. *Linguistics and Philosophy* 23:533–575.

Kehler, Andrew. 2002. *Coherence, reference, and the theory of grammar*. Stanford, CA: CSLI Publications.

Kertz, Laura. 2008. Focus structure and acceptability in verb phrase ellipsis. *WCCFL27: Proceedings of the 27th West Coast Conference on Formal Linguistics*, ed. by Natasha Abner and Jason Bishop, 283–291. Somerville, CA: Cascadilla Proceedings Project.

Kertz, Laura. 2010. *Ellipsis reconsidered*. San Diego, CA: University of California, San Diego dissertation.

Kiparsky, Paul. 1982a. From cyclic phonology to lexical phonology. *The structure of phonological representations, Part 1 (linguistic models)*, ed. by Harry van der Hulst and Norval Smith, 131–175. Dordrecht: Foris.

Kiparsky, Paul. 1982b. Lexical morphology and phonology. *Linguistics in the morning calm*: *Selected papers from SICOL-1981, vol.1*, 3–91. Seoul: Hanshin Publishing Company.

Levin, Beth and Mala Rappaport Hovav. 1995. *Unaccusativity: At the syntax-lexical semantics interface*. Cambridge, MA: MIT Press.

Llombart-Huesca, Amalia. 2002. Anaphoric *one* and NP-ellipsis. *Studia Linguistica* 56:59–89.

Marantz, Alec. 1997. No escape from syntax: Don't try morphological analysis in the privacy of your own lexicon. *UPenn Working Papers in Linguistics 4.2, Proceedings of the 21st Annual Penn Linguistics Colloquium,* ed. by Alexia Dimitriadis, Hikyoung Lee, Christine Moisset and Alexander Williams, 201–225. Philadelphia: University of Pennsylvania.

Marantz, Alec. 2000. Roots: The universality of root and pattern morphology. Paper presented at the conference on Afro-Asiatic languages, University of Paris VII.

Marantz, Alec. 2007. Phases and words. *Phases in the theory of grammar*, ed. by Sook Hee Choe, 191–220. Seoul: Dong In.

Marantz, Alec. 2013. Locality domains for contextual allomorphy across the interfaces. *Distributed Morphology Today: Morphemes for Morris Halle*, ed. by Ora Matushansky and Alec Marantz, 95–116. Cambridge, MA: MIT Press,

Merchant, Jason. 2001. *The syntax of silence: Sluicing, islands, and the theory of ellipsis*. Oxford; NY: Oxford University Press.

Merchant, Jason. 2008. An asymmetry in voice mismatches in VP-ellipsis and pseudogapping. *Linguistic Inquiry* 39:169-179.

Merchant, Jason. 2013a. Polarity Items under ellipsis. *Diagnosing syntax*, ed. by Lisa Lai-Shen Cheng and Norbert Corver, 441-462. Oxford: Oxford University Press.

Merchant, Jason. 2013b. Voice and ellipsis. *Linguistic Inquiry* 44:77–108.

Nakamura, Taichi. 2013a. Voice mismatches in sloppy VP-ellipsis. *Linguistic Inquiry* 44:519–528.

Nakamura, Taichi. 2013b. Semantic identity and deletion. *English Linguistics* 30:643–658.

Nakamura, Taichi, and Kenji Sugimoto. 2015. Argument structure alternations and verb phrase ellipsis: Two case studies. *Explorations in English Linguistics* 29:63–83.

Pesetsky, David. 1995. *Zero syntax: Experiencers and cascades*. Cambridge, MA: MIT Press.

Saab, Andrés, and Anikó Lipták. 2015. Movement and deletion after syntax: Licensing by inflection reconsidered. *Studia Linguistica* 70:66–108.

Sag, Ivan. 1976. *Deletion and logical form*. Massachusetts Institute of Technology, doctoral dissertation.

Sugimoto, Kenji. 2018. An argument structure alternation of change-of-state verbs under VP-deletion. *JELS* 35:145–151.

Tan, Hansel Jian Xin. 2018. Category mismatch in VP-ellipsis. Ms., National University of Singapore.

Tanaka, Hidekazu. 2011a. Voice mismatch and syntactic identity. *Linguistic Inquiry* 42:470–490.

Tanaka, Hidekazu. 2011b. Syntactic identity and ellipsis. *The Linguistic Review* 28:79–110.

Yoshida, Masaya, Honglei Wang and David Potter. 2012. Remarks on "gapping" in DP. *Linguistic*

    Inquiry 43:475–494.

Contact Information:

Yosuke Sato
Department of English Language and Literature
Seisen University
3-16-21 Higashi Gotanda, Shinagawa-ku
Tokyo, Japan 141-8642
yosukes1129@seisen-u.ac.jp