ON VP ELLIPSIS AND THE IDENTITY CONDITION[*]

Michiya Kawai
Huron University College/ Western University of Canada

1.   Introduction

This paper is concerned with the licensing condition – often referred to as the *identity condition* (IC, henceforth) – on VP-ellipsis (VPE) in English; we are particularly interested in the cases of successful VPE under non-identity (VPE-N).   This paper briefly reports on preliminary results of an exploratory investigation on an alternative condition to the IC that substitutes the notion of *nondistinctness* for *identity*.

It has been recognized that successful VPE involves some sort of parallelism between the two VPs involved, as shown in (1) and (2a); the failure of this results in ungrammaticality (2b). Throughout the discussion below, we use '<…>' for the elided VP, and VP_1 and VP_2 as in (1b) are respectively referred to as *antecedent (A-)VP* and *target (T-)VP*.

(1)   a.   John will eat pizza, and Bill will, too.
       b.   John will [$_{VP_1}$ eat pizza], and Bill will <[$_{VP_2}$ eat pizza]>, too.
(2)   a.   Abby was [$_{VP_1}$betrayed], and Matt was <[$_{VP_2}$ betrayed]>, too.
       b. * Jill [$_{VP_1}$ betrayed Abby], and Matt was <[$_{VP_2}$ betrayed ~~Matt~~]>, too.

(3)   The A- and T-VP must be syntactically identical.

The most restrictive way to syntactically capture this parallelism is arguably the IC as in (3) (Quirk, Greenbaum, Leech, and Svartik 1972, reported by Sag (1976), Williams 1977, Sag and Hankamer 1984). The IC is, however, known to be too strong as VPE-N is possible. VPE-N is also demonstrated by Warner 1986, Hardt 1993, Lasnik 1995, Potsdam 1997, Arregui et. al. 2006, Merchant 2001, 2010, 2013, Nakamura 2013, among others. Attempts have been made to maintain the IC (e.g., Lasnik 1995, Merchant 2010, 2013) by claiming that the IC is satisfied at some stage of derivation.

This paper argues that this approach cannot be maintained in its strongest form; the IC must be weakened; then, an alternative condition to the IC is suggested, where the notion of *identity* is replaced by *non-distinctness*, a anti-symmetric relation. We first look at Merchant's (2013) discussion on the phenomenon called voice-mismatch and *subject/nonsubject alalternation* (SNA) (such as in *The ice melted* vs. *The sun melted ice*), a subcase of argument structure alternations (ASA). Merchant (2013) tries to defend the IC by arguing that (i) VPE with voice-mismatch is allowed because the IC is satisfied therein; and (ii) VPE is incompatible with SNA because SNA involve two distinct VP structures, thereby being unable to satisfy the IC (p. 96). This paper shows, using such predicates as *hurt* and *erode*, that the latter claim is also false; SNA is acceptable with those predicates. The successful VPE cases with SNA with those predicates involve two VPs with distinct copies in the direct object position, thus failing to satisfy the IC. Section 2.3 presents more cases of VPE-N where copies (phonetically null, referentially dependent items) evade the IC, additional evidence that the IC must be weakened. Therefore, the IC is too strong a requirement for VPE, and, it must be modified somehow. A preliminary formulation of an alternative condition to the IC and the relevance of the discourse information structure (Kertz 2008, 2010) are discussed in Section 3. Finally, a brief concluding remark will be made, in Section 4.

A few disclaimers, most of which arise from the space limitation, are in order before beginning the discussion. First, in the following discussion, we assume, without supporting arguments, VPE as syntactic deletion), not PF-deletion or LF-copying. Second, for concreteness, we follow the proposal of Aelbrecht and Harwood (2012) that VPE targets somewhere in vP, perhaps, vP_{PROG}, even though we will label it as *VP*. Third, we restrict our attention to VPE, excluding such related phenomena as sluicing, pseudo-gapping, gapping, among others (See Lasnik 2008, Merchant 2010, 2013, among others).[1] Forth, a number of studies have shown the relevance of discourse-level considerations to VPE licensing (Kehler 2000, Frazier and Clifton 2005, Arregui et. al. 2006, Kim and Runner 2011, among others); yet, discourse-related, and processing-related considerations are only minimally dealt with in this study. Fifth, and finally, VPE has recently attracted the attention of many researchers and, as such, there is a large body of knowledge on this phenomenon, which is left unaddressed in this paper.

2.   Background Issues
2.1   VP ellipsis under non-identity (VPE-N)

---

[1]   Various approaches have been proposed: for example, PF-deletion (e.g., Hankamer and Sag 1976, Sag 1976, Chomsky 1995, Potsdam 1997, Merchant 2010), syntactic-deletion (Chung et. al. 1995), and LF-copying (e.g., Williams 1977), among others. Here, we assume some version of a syntactic deletion analysis, without supporting arguments. See also Lasnik 2008, Hardt 1993, Johnson 2001, 2004, Kennedy 2003, and Thoms 2010. For the issue of recoverability of deletion, see Fiengo and Lasnik 1972. For arguments against LF-copying approaches, see Goldberg 2005.

Consider in cases of tense-inflection mismatch (4) (Warner 1986, Lasnik 1995) and cases of voice-mismatch (5) in VPE (cf. Merchant 2010, 2013); therein, VPE is successful without apparently satisfying the IC.

(4)   a.   John [$_{VP}$ ate pizza], and Bill will <[$_{VP}$ eat pizza]>, too.
       b.   John [$_{VP}$ eats pizza], and Bill should <[$_{VP}$ eat pizza]>, too.

(5)   a.   The janitor must [$_{VP}$ remove the trash] whenever it is apparent that it should be <[$_{VP}$ removed]>.

       b.   The system can be [$_{VP}$ used] by anyone who wants to <[$_{VP}$ use it]>.

       c.   This information could have been [$_{VP}$ released ~~this information~~] by Gorbachëv, but he chose not to <[$_{VP}$ release this information]>.[2]

An approach to maintain the IC is by creating a more "abstract" syntactic representation at which the IC is maintained, to be referred to as the *syntactic approach* (*to salvage the IC*).

     This approach has been explored for (4) (e.g., Lasnik 1995, Kawai 2006 and Omaki 2007) and for (5) (e.g., Merchant 2010, 2013). For example, Merchant (2013) argues that the voice-mismatch is allowed in (5) because both the A- and T-VP are identical below the Voice node. In a passive construction, the passive morpheme resides is Voice^0, taking the (active) VP$_2$ as its complement, as shown in (6); the order of VP$_1$ and VP$_2$ in (6) is irrelevant.

(6)   [$_{VP1}$ verb …]   …   [$_{VoiceP}$ verb [$_{Voice}$ ed [$_{VP2}$ ~~verb~~ …]]]

Therefore, according to Merchant, voice-mismatch cases are VPE-N only at surface; the IC is satisfied by the VP$_1$ and VP$_2$ pair, despite the surface mismatch of the verbs.[3]

     Provided that the proposed abstract syntactic structure receives independent empirical support, this approach is arguably more restrictive than an approach where the IC can be arbitrarily weakened. The next subsection shows that the strict version of the IC is not maintainable, however.

2.2   Subject/Nonsubject Alternation (SNA) under Ellipsis

Merchant (2013) gives the following generalization on SNA (a case of argument structure alternations) under ellipsis, as below.

---

[2]   (5c) is from Hardt 1993, which cites NPR news as the original source.

[3]   However, Nakamura (2013) demonstrates that VPE-N may be successful without satisfaction of the IC, using cases with *sloppy* VPE; thus, the satisfaction of the IC is not a necessary condition for VPE. We will briefly see his argument in the next subsection.

> Argument structure alternations involve apparently different syntactic realization of verb's or predicate's semantic or thematic arguments. …. The first kind of alternation involves an argument appearing in some contexts as a subject of a verb (such as of an intransitive unaccusative or anticauseative, as in *The ice melted*), as in other contexts as a nonsubject of the same verb (as a direct object, for example, as in *The sun melted the ice*)… Such argument structure alternations are not found between an antecedent and an elided phrase in ellipsis in any type. (Merchant 2013: 96).

Merchant claims that certain "transitives (sometimes called causatives) alternate with intransitives (anticausatives or unaccusatives)" but such "alternations are not found under ellipsis," as illustrated in (7) (Johnson 2004, Houser, Mikkelsen, and Toosarvandani 2007, Merchant 2013).

(7) a. * The ice will [$_{VP}$ melt ~~the ice~~] in the pot, so please do <[$_{VP}$ melt the ice]>.

    b. * Maria still tried to [$_{VP}$ break the vase] even though it wouldn't <[$_{VP}$ break it]>.

    c. * This can [$_{VP}$ freeze ~~this~~] . *Please do <[$_{VP}$ freeze this]>.

    d. * Sandcastles [$_{VP}$ break eventually, so you can <[$_{VP}$ break sandcastles]> (without feeling guilty).

According to Merchant, this fact follows from the syntactic approach to the IC; the ungrammaticality of (7) arises from the failure of the IC satisfaction. That is, "[c]ausatives and anticuasative/unaccusatives differ in their v … and as may be required to state the selectional restrictions of the passive Voice head…, then Voice takes as its complement the vP, which may introduce the external argument." "Voice selects vP; Voice hosts the E-feature [being the VPE target]; vP elides; and $v_{trans} \neq v_{unacc}$, so … [the A-VP in (7)] will not license the deletion of the [T-VP in (7)]." In short, the SNA cases in (7) involve a nonidentical A-VP and T-VP, and, thus, he concludes that VPE fails by not satisfying the IC. This contrasts with the cases of voice-mismatch in (5) above, according to Merchant. There, the IC is satisfied because the passive sentences contain a VP under Voice Phrase that is identical to the A-VP. Thus, he concludes that the IC makes the desired distinction between the voice-mismatch cases and SNA cases.

    While the unacceptability of the sentences in (7) appears uncontroversial, this explanation does not seem correct. Observe that this explanation does not extend to (8).[4]

---

[4]   From *depressionhurts.ca*. I owe to Ileana Paul (personal communication) her expertise on ergative constructions and many examples of this type, including (5b).

(8) a.   Depression hurts, but you don't have to < hurt >.
     b.   Waves erode, but the coast lines shouldn't < erode >.
(9) a.   Who does depression hurt? – Everyone.
     b.   Depression hurts everyone.
     c.   Depression [$_{VP}$ hurts *pro*] but you don't have to <[$_{VP}$ hurt ~~you~~]>.
     d.   Op depression [$_{VP}$ hurts ~~Op~~] but you don't have to <[$_{VP}$ hurt ~~you~~]>.

Take (8a), for example. The subject of the second clause (*T(arget)-clause*), for short) originates in the direct object position, as in the unaccusative subjects in (7). In (8a), the V of the A-VP contains a phonetically null object, thus it is transitive; it also has a prominent causative interpretation. This sentence is taken from an advertisement; it opens with (9a), which is equivalent to (9b); it is thus reasonable to posit a phonetically null object in the A-VP in (8a). It would plausibly be a referentially arbitrary pronoun *pro* (9c) or, more plausibly, a trace of (discourse-oriented) topicalization operator (Chung et. al. 1995) (9d). The situation is the same with (8b), as well.

　　　Observe that Merchant's analysis incorrectly rules out the sentences in (8) as it rules out those in (7). In both cases, the A-VP is transitive ($v_{transtive}$) whereas the T-VP is unaccusative (v_{unacc}). The VPs in (8) contain two distinct empty categories in the direct object position, as in (9c) or (9d); thus, the IC is not satisfied. Therefore, the data in (8) are problematic for Merchant's account for VPE with SNA. The most problematic is the fact that VPE with SNA can be acceptable even when the IC is violated.

　　　Independently, Nakamura (2013) shows another problem with Merchant's attempt to maintain the IC for VPE. Consider an example of so-called *sloppy VPE*, as in the conversation in (10).

(10) A: When John had to [$_{VP}$ praise a student], he didn't want to
             <[$_{VP}$ praise a student]>.

      B: ? When John had to be scolded by a dean, he didn't <[$_{VP1}$ want to
             be [$_{VoiceP}$ scold-[$_{Voice}$ ed] [$_{VP2}$ ~~scold John~~] by a dean]]>, either.

According to Nakamura (2013), in (10B), responding to (10A), deletion applies to both VP$_1$ and VP$_2$; the deleted VP$_2$ embedded in VP$_2$ can be "assigned a sloppy interpretation with respect to the antecedent VP." That is, the deleted VP in (10B) can be interpreted as either (i) *want to be scolded by a dean*, or (ii) *want to praise a student*. Assuming this is correct, VPE in (10B) does not respect the IC, a problem with Merchant's (2013) account. The data in (10B) strongly makes the same point that the acceptability of (8) does: namely, the IC be weakened in such a way that (8) and (10) satisfy the parallelism requirement for VPE.

　　　The discussion thus far has established that VPE-N is possible without satisfying the IC. Naturally, a question arises as to how to account for the contrast between (7) and (8), if the IC is not operative. I defer this question to Section 3, since there are some unanswered question at this stage of the

research. In what follows, additional empirical evidence against the IC is given below.

2.3 Copies as Non-Distinct Items for VPE

Recall that the *parallelism* needed in the A- and T-VP for VPE is successfully established in (8). Yet, the IC is not satisfied because the A- and T-VP contain, as the direct object, distinct empty categories (9c) or copies. This seems to show that copies are not *distinct* enough. This subsection offers three additional examples of successful VPE-N with distinct copies in VPs. We will consider cases from V- and DP-raising in Section 2.3.1 (Lasnik 1995, Omaki 2007), topicalization in Section 2.3.2 (Potsdam 1996)), and comparatives in Section 2.3.3 (Merchant 2010, Bos and Spenadar 2011).

2.3.1 Copies: Omaki 2007

Omaki (2007) shows that assuming the copy(ing) theory of movement (Chomsky 1993/1995, 1995), the IC is too strong for VPE involving head movement (11a) and A-movement (11b).

(11)   a.   Jo was [$_{VP}$ was here] and her sisters were <[$_{VP}$ were here]>, too.

       b.   Jo [$_{VP}$ seemed [$_{IP}$ ~~Jo~~ to enjoy the party] and Sue did <[$_{VP}$ seemed [$_{IP}$ ~~Sue~~ to enjoy the party]>, too.

In order to maintain the IC, Omaki suggests that head movement does not leave a copy, just as A-movement, as argued by Lasnik (1999a). Omaki's solution is problematic for (at least) two reasons. First, theory-internally, under the current theoretical assumptions (Chomsky 2000, 2008), movement as *internal merge* (IM) and the prohibition against *term erasure* (Chomsky 1995) together make it impossible to *move without leaving a copy*. Second, as we will see next, VPE-N is successful with topicalization, a classic case of A´-movement. Unlike A-movement and head movement, A´-movement is widely accepted a copy-leaving operation. Therefore, the success of VPE-N in (11) should not be attributed to the absence of copies. [5]

2.3.2 Topicalization

VPE is successful in (12) (from Potsdam 1997), with non-identical VPs with A´-copies of topicalization.

---

[5]   Omaki (2007) acknowledges a problem with his proposal on independent grounds (viz., Potsdam's (1997) data on British English (i)), and offers two additional alternatives. Neither alternative solves the problem discussed in this subsection, however.

(i)   I haven't [$_{VP}$ ~~have~~ a real friend] unless you are <[$_{VP}$ ~~are~~ a real friend]>.

(12) a. *Chicken*, she'll [$_{VP}$ eat ~~chicken~~], but *ostrich*, she won't <[$_{VP}$ eat ~~ostrich~~]> .

  b. *Ketchup*, I put ~~ketchup~~ on my eggs all the time, but *Tabasco*, I never do <[$_{VP}$ put ~~Tabasco~~ on my eggs]>.

(13) a. *Chicken*, she'll [$_{VP}$ eat ~~t~~], but *ostrich*, she won't <[$_{VP}$ eat ~~t~~]> .
  b. *Ketchup*, I put ~~t~~ on …, but *Tabasco*, I never do <[$_{VP}$ put ~~t~~]>.

The problem is that unlike A-traces and traces of head movement, existence of A´-copies is widely accepted (Lasnik 1999a). Interestingly, the problem vanishes, *visually* at least, if we use the traditional trace notation, instead of copies, as in (13).[6] Perhaps, the desirable way is to treat those copies in (12) as metaphorical short-hand of *traces*. That is, they were created as the exact copy of their antecedent, but, after agreement with its antecedent, they may be a bundle of features not identical to those of their antecedents (e.g., phonetic- and referential features missing), following in the spirit of Nunes's (1995) complementary deletion of features in traces. If this view is on the right track, then it supports an anti-symmetrical view of agree and copies; this view is incompatible with the view where copies are completely identical with their antecedent throughout the derivation.

2.3.3 Comparatives

VPE-N in comparative constructions also involves VPE-N (e.g., Merchant 2001, Bos and Spenader 2010). The data in (14) are from Bos and Spenader 2011. The *identity* of the T-VP to A-VP obtains, if (i) the degree modifiers are taken as operators, and (ii) the copies of the operators are *traces t* (15). Observe the familiar pattern, in that the copies of the A- and T-VP are nonidentical, but they are apparently *similar enough* for VPE; both are the trace of a comparative operator, although being bound by a distinct operator.

(14) a. Japanese offices tend to [$_{VP}$ use computers less efficiently] than American offices do <[$_{VP}$ use computers efficiently]>.

  b. He did not [$_{VP}$ go as far] as he could have <[$_{vP}$ gone far]> in tax reduction…

(15) a. Japanese offices tend to [LESS [$_{VP}$ use computers [t-efficiently]]] [THAN [American offices do <[$_{VP}$ use computers [t-efficiently]]]]>.

  b. He did not [AS [$_{VP}$ go t-far] [AS he could have <[$_{vP}$ gone t-far]> in tax reduction….

---

[6] For this reason, Potsdam (1977) did not find the example in (12) as a problem for the IC, since he used *t* for the copies therein.

3. Alternative to the IC
3.1 *Nondistinctness*

In Section 2.2. and 2.3., we saw cases where the violation of the IC in terms of copies in the relevant VPs does not affect the acceptability of VPE. This strongly suggests that the IC for VPE needs to be weakened somewhat. At the same time, it is prudent to make the revision of the IC to the minimum so as to avoid arbitrarily watering down the IC to the point where it becomes a summary of descriptive generalization.

Let us posit the first approximation of an alternative condition to the IC as in (16).

(16)   VPE is successful when the T-VP is *nondistinct* to the A-VP.

Nondistinctness is an anti-symmetric binary relation; *identity* is a subcase of nondistinctness: viz., mutual nondistinctness. Defining this notion precisely is an empirical question, and it is rather a difficult one; I only suggest a working definition here. Certainly, the morphological and syntactic differences related to voice and the argument structures of SNA are *nondistinct* elements.[7] From what we observed in Sections 2.2 and 2.3, phonetically null copies (i.e., traces) in the T-VPs are *nondistinct* to the copies in the A-VPs. With the Inclusiveness condition (Chomsky 1995), we assume that copies are not physically converted into *t'*s; rather, they should be identifiable as traces in the derivation, borrowing the idea of complementary feature deletion of Nunes 1995. That is, after the internal-merge, the antecedent *agrees* with the copy, establishing the antecedent-trace relation by deleting some features of the latter, such as phonetic features, referential features, etc. If this is the right view of *agree*, then the copies are not simply the occurrences of their antecedent, and syntax (and semantics) can identify the antecedent-copy relations without referring to their entire derivational history. If this is on the right track, copies of distinct antecedents may be seen by syntax as *nondistinct* (i.e., similar enough) items. A similar view was entertained by Hartman (2011), although details of his analysis differ from the approach entertained here.[8] Naturally, *nondistinctness* must be spelled out further; I leave the task for future research.

---

[7]   We may adapt Chung's (2006) morphological subset principle, although the actual implication of such adaptation is an empirical question. Namely, A T-VP is *nondistinct* to the corresponding A-VP if each morpheme in T-VP has a corresponding morpheme in the A-VP, if it is the right generalization. Or, perhaps, *nondistinctness* must be made insensitive to voice differences in an obvious way.

[8]   Hartman's (2011) argues that all types of movement "leave traces that feed interpretation", and "A-traces, A′-traces, and traces of head movement are all interpreted as bound variables" (p. 367): i.e., just a bunch of x's at LF. Therefore, he argues that VPE cares about *semantic identity* at LF, where all the traces are seen equally as *formal variables*.

(i) Op_y Depression λx [$_{vP}$ x hurt y], but you λx don't have to [$_{vP}$ x hurt x].

3.2   *Nondistinctness* **and Discourse Information**

Thus far, we have been preoccupied by the need for weakening the IC as a formal constraint on the parallelism in VPE. Observe, however, that (16) overgenerates; given that (16) lets in the sentences in (8), it also lets in those in (7). I believe that this is a desirable consequence, since the contrast between (7) and (8) may be independently accounted for in terms of an additional parallelism constraint on discourse information structure. It has been noted (Kehler 1995, 2000, Rinnel 2007, Kertz 2008) that VPE is sensitive to discourse information structure, in particular, a type of parallelism in contrastive topic-focus structure. If so, then it suffices for (16) to let in both (7) and (8). In order to pursue this line of analysis, let us now return to the question raised earlier: how to account for the contrast between (7) and (8). This is an on-going research project, and, as such, I can only offer a tentative solution; yet, the following line of explanation seems promising.

Recall Nakamura's (2013) argument against Merchant's (2013) analysis of VPE with the IC, reviewed briefly in Section 2.2. Nakamura appeals to Kertz's (2008, 2010) discourse information structure account for distinguishing the acceptable and nonacceptable VPE-N cases, stating that

> When the subject is focused and becomes a contrastive topic…, its correlate cannot be demoted via passive formation but must occupy the same subject position to form a well-formed contrastive topic discourse. …On the other hand, auxiliary focus … does not have such a parallelism requirement and permits voice mismatch… (Nakamura 2013: 525)

Consider the contrast between (17a/c) and (17b).

(17) a.   The driver reported the incident, and *THE PEDASTRIAN* did, too.

     b. #   The incident was reported by the driver, and *THE PEDASTRIAN* did, too.

     c.   The incident was reported by the driver, although he didn't *NEED* to.

In (17a/b), the *FOCUSED EXPRESSIONs* for the contrastive topic has the contrastive focus structure in the subject position of the T-clause. In (17a), *the driver* and *the pedestrian* form the contrastive topic relation, resulting in an acceptable sentence. In (17b), on the other hand, the contrastive topic relation is the same with (17a), but *the driver* is not a sentence topic, being "demoted by

---

Observe, however, that (i) does not appear to satisfy either semantic identity (or the LF-formal identity) of the two vPs. This seems to be a problem for Hartman's (2011) analysis. Also problematic for Hartman's (2011) semantic approach is the lack of island amelioration effects with VPE (see Lasnik 2008, 2011). Further research is needed on this matter.

passive formation"; the resulting sentence is unacceptable. (17c) is acceptable because the focus of the T-clause falls on the auxiliary, instead.

Let us apply this account to (7) and (8a) to see how well it works. Consider (8a), first, repeated here in (18a). Kertz' account seems promising with this case. In (18a), the transitive subject is not involved in a contrastive topic; rather, the relevant contrast falls on Op (i.e., *everyone*) and *you*. That is, the statement makes a contrast between *you* and *everyone else*. Further, (18a) involves an auxiliary *not* as an additional focus, much like (17c); thus, the raising of the object to the subject of the T-clause is predicted as licit. The same can be said about (18b).

(18) a. Op depression [$_{VP}$ hurts ~~Op~~] but you don't have to <[$_{VP}$ hurt ~~you~~]>.
      b. Op depression [$_{VP}$ hurts ~~Op~~] but you won't <[$_{VP}$ hurt ~~you~~]> with a proper treatment.

      c. *? Depression [$_{VP}$ hurts everyone], so you will <[$_{VP}$ hurt ~~you~~].
      d. * Depression [$_{VP}$ hurts everyone], but I won't <[$_{VP}$ hurt ~~I~~]>.

Interestingly, by eliminating the phonetically null object in the T-clause, sentences (18c/d) degrade, and transitive readings become prominent. This suggests the parallelism requirement at the discourse information structure level at work. Perhaps, the presence or absence of the empty category in the *A(ntecedent)*-clause affects the discourse information structure – in particular, contrastive topic relation.

Now, consider (7), repeated here as (19a–d); the result is mixed.

(19) a. * The ice will [$_{VP}$ melt ~~the ice~~] in the pot, so please do <[$_{VP}$ melt the ice]>.

      b. * Maria still tried to [$_{VP}$ break the vase] even though it wouldn't <[$_{VP}$ break it]>.

      c. * This can [$_{VP}$ freeze ~~this~~]. *Please do <[$_{VP}$ freeze this]>.

      d. * Sandcastles [$_{VP}$ break ~~sandcastles~~ eventually], so you can <[$_{VP}$ break sandcastles]>.

      e. ? Sandcastles [$_{VP}$ break ~~sandcastles~~ eventually], so you don't have to <[$_{VP}$ break sandcastles]> (without feeling guilty).

      f. * You should [$_{VP}$ break sandcastles], even though sandcastles will <[$_{VP}$ break ~~sandcastles~~]> eventually.

In (19a–d), the transitive subjects seem to want to be the contrastive topic, while the ergative clauses make it impossible to do so. (19b) involves negation in the T-clause, so the auxiliary focus should be like (17c), contrary to the fact.

Interestingly, however, (19e) seems better than (19d), so the auxiliary focus does have some effect on the outcome. I am not sure what the relevant difference is between (19b) and (19e). Perhaps, as the contrast in (19e) and (19f) shows, the discourse information relation is not symmetric; the order of A- and T-clauses has some effects on the outcome of VPE, as is argued for by Arregui et. al. (2006). More extensive research is needed to settle this issue.

4. Summary

I have argued that the identity condition (IC) on VPE must be minimally weakened, and offered a preliminary formulation of the *nondistinctness* condition. A precise formulation of such a condition is beyond the scope of this paper. We saw in Section 2.2 that SNA cases are compatible with VPE, contrary to Merchant's (2013) claim. We also saw in Section 2.3 that copies seem to evade the IC in a wide range of constructions, provided that some kind of parallelism holds. A range of constructions share this property, supporting the idea of treating *copies* as nondistinct *traces* (a phonetically null, referentially dependent DP) with respect to measuring the parallelism. Thus, a VP can be nonidentical to another as long as they are *nondistinct* – e.g., when two distinct copies are present in the VPE context.

Nondistinctness has a potential advantage over *identity* in capturing the asymmetrical nature of VPE. It has been reported that the acceptability of VPE is not always symmetrical. For example, "Arregui et. al. (2006) … find that Acitve-Passive [cases of VPE] is rated worse than Passive-Active [cases of VPE]" (Kim and Runner 2011). Kim and Runner's (2011) experimental results confirm that the Active-Passive cases tend to degrade more easily than Passive-Active cases, such as in (25) and (26), respectively. They also show that this becomes evident in VPE in Cause-Effect type constructions, as in (27). Given the subtlety of the judgment pattern, it is reasonable to assume discourse/processing factors are at work here; yet, at the same time, there is no *a priori* reason to assume that these contrasts arise solely from the discourse factors. If syntactic structure is also relevant for such asymmetries, then the IC is clearly inadequate since *identity* is a symmetric notion. Arregui et. al. (2006) and Frazier (2008) both take those cases above as ungrammatical by virtue of violating the IC. In order to capture the cases above, they need to posit a repair operation specifically applying to VPE-N cases; with the nondistinctness condition, such a repair strategy is unnecessary.

If the conjecture made in this paper is on the right track, the kind of discourse information structure approach, discussed in Section 3.2, may be explicitly represented in the formal device of syntax. Such languages as Japanese grammatically mark the discourse-related information, such as topic, focus, and contrastive topic, among others. Thus, it is reasonable to assume that some discourse-related syntactic processes, such as VPE, are sensitive to both syntax and discourse. The configuration of discourse(-related) operators may be a formal way to represent the felicitous topic contrast (Rooth 1992). (See also Merchant 2001 for a related suggestion).

Consider the following examples in (20). Topicalization highlights the direct objects of the A-clauses, thus creating a contrastive topic structure with the direct objects in the T-clauses.

(20) a. Shoes, my son [~VP~ refuses to wear ~~shoes~~]. Of course, I do <[~VP~ refuse to wear shoes]>, too.

b. Linguistics, I [~VP~ like ~~linguistics~~]. I can't imagine who wouldn't <[~VP~ like linguistics]>.

(21) a. Shoes, my son [~VP~ refuses to wear ~~shoes~~]. Of course, [Op [I do <[~VP~ refuse to wear ~~Op~~]]>, too.

b. Linguistics, I [~VP~ like ~~linguitics~~]. I can't imagine [Op [who wouldn't <[~VP~ like ~~Op~~]]>.

The contrastive topic relation in those examples can be represented by the configuration of a discourse operator raised from the direct object of the T-VPs; that is, as shown in (21), the objects in the T-VPs themselves as traces of operator (Op) picking up the reference of the most prominent reference in the discourse – *shoes* and *linguistics*.

Lasnik's (2008: 21) suggests a similar solution in handling sluicing cases where an indefinite antecedes a wh-trace. He points out that a "WH expression combines an interrogative and an indefinite" (cf. Stockwell et. al. 1973:63).

> Suppose, following Chung et. al. (1995) that the indefinite must be bound by existential closure in a way that is parallel to the *wh*-dependency in the sluicing clause…Formal parallelism is obtained since "the variables in the antecedent and the elided clause are bound by parallel operators and form parallel positions.

Thus, Kertz's (2008, 2010) constraints, as reported by Nakamura (2013), on contrastive topic-focus may be captured in formal structural terms, once such constraints and the formal devices for the topic-focus articulation in English are spelled out more fully.

This study dealt with a limited range of data, and, thus, the suggestions made therein are tentative at best. However, it seems clear that the strictly IC-based account has a serious problem, and the *nondistinctness*-based account appears to be promising. Naturally, the details must be spelled out further before evaluating its success.

References

Aelbrecht, L., and W. Harwood. 2012. *To be or not to be elided: VP ellipsis revisited.* Paper presented at Swiss Generative Linguistics Workshop. Handout available at: www.gist.ugent.be/file/290

Arregui, A., C. Clifton, L. Frazier and K. Moulton. 2006. Processing elided verb phrases with flawed antecedents: the recycling hypothesis. *Journal of Memory and Language* 55: 232–246.

Bos, J., and J. Spenader. 2011. An annotated corpus for the analysis of VP Ellipsis. *Language Research and Evaluation*. Accessible at: www.Springerlink.com.

Chomsky, N. 1993/1995. A minimalist program for linguistic theory. Originally published in K. Hale and S. J. Keyser eds., 1993. *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, 1–52. Reprinted in Chomsky 1995, 167–217. Cambridge, Mass: MIT Press.

Chomsky, N. 1995. Categories and transformations. In *The Minimalist Program*, 219–394. Cambridge, Mass: MIT Press.

Chomsky, N. 2000. Minimalist inquiries: The framework. In R. Martin, D. Michaels, and J. Uriagereka. *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, 89–155. Cambridge, Mass: MIT Press.

Chomsky, N. 2001. Beyond explanatory adequacy. In *MIT Occasional Papers in Linguistics* 20, 1–28. Reprinted in A. Belletti ed. 2004. , *The Cartography of Syntactic Structure* Vol 3, 104–131. Oxford: Oxford University Press.

Chomsky, N. 2008. On phases. In R. Freidin, C. Otero, and M.-L. Zubizaretta (eds.) *Foundational Issues in Linguistic Theory*. Cambridge, MA: MIT Press.

Chung, S. 2006. Sluicing and the lexicon: The point of no return. In R. T. Cover and Y. Kim, eds. *Proceedings of BLS 31: General Session and Parasession on Prosodic Variation and Change*, 73–91. Berkeley Linguistics Society, Berkeley, CA.

Chung, S. W. Ladusaw, and James McCloskey. 1995. Sluicing and logical form. *Natural Language Semantics* 3: 1–44.

Fiengo, R., and H. Lasnik. 1972. On nonrecoverable deletion in syntax. *Linguistic Inquiry* 13: 528.

Frazier, L. 2008. Processing ellipsis: A processing solution to the undergeneration problem? In C. B. Change and H. J. Haynie eds. *Proceedings of the 26th West Coast Conference on Formal Linguistics*, 21–32. Somerville, Ma: Cascadilla Proceeding Project.

Frazier, L., and C. Clifton. 2005. The syntactic-discourse divide: Processing ellipsis. *Syntax* 8: 121–174.

Goldberg, L. M. 2005. *Verb-Stranding VP Ellipsis: A Cross Linguistic Study*. Ph.D Dissertation. McGill University, Montreal, QC.

Hale, K., and J. Keyser. 1993. "On Argument Structure and the Lexical Expression of Syntactic Relations." In K. Hale and J. Keyser eds. *The View from Building 20: Essays in Linguistics In Honor of Sylvain Bromberger,* 53-109. Cambridge, Mass: MIT Press.

Hankamer, J., and I. Sag. Deep and surface anaphora. *Linguistic Inquiry* 7: 391–428.

Hardt, D. 1993. VP *Ellipsis and Contextual Interpretation*. Department of Computer and Information Science, University of Pennsylvania, Pittsburg, PA.
http://repository.upenn.edu/cis_reports/417

Hardt, D. 1997. An empirical approach to VP ellipsis. *Computational Linguistics* 23: 525–541.

Hartman, J. 2011. The semantic uniformity of traces: Evidence from ellipsis parallelism. *Linguistic Inquiry* 42: 367-388.

Houser, M. J., L. Mikkelsen, and M. Toosarvandani. 2007. Verb phrase pronominalization in Danish: Deep or surface anaphora? In *Proceedings of the Twenty Fourth Western Conference on Linguistics,* ed. by E. Bainbridge and B. Agbayani, 183–195. Fresno: California State University, Department of Linguistics.

Johnson, K. 2001. What VP ellipsis can do, and what it can't, but not why. In M. Baltin and C. Collins (eds.) *The Handbook of Contemporary Syntactic Theory*, 439–479. London: Blackwell Publishers.

Johnson, K. 2004. How to be quiet. In *Proceedings from the 40th Annual Meeting of the Chicago Linguistic Society,* N. Adams, A. Cooper, F. Parrill, and T. Wier, eds. 2: 1–20. Chicago: University of Chicago, Chicago Linguistic Society.

Kawai, M. 2006. Verbal morphology of Japanese. In C. Gurski and M. Radisic (eds.) *Proceedings of the 2006 Canadian Linguistics Association Annual Conference*. Canadian Linguistic Association. Available at: http://westernlinguistics.ca/Publications/CLA2006/CLA-ACL2006.htm

Kehler, A. 1995. *Interpreting Cohesive Forms in the Context of Discourse Inference*. Ph.D thesis. Harvard University, Cambridge, MA.

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

Kennedy, C. (2003). Ellipsis and syntactic representation. The Syntax-Semantics Interface: Interpreting (Omitted) Structure. Amsterdam: John Benjamins.

Kertz, L. 2008. Focus structure and acceptability in verb phrase ellipsis. In N. Abner and J. Bishop eds., *WCCFL 27: Proceedings of the 27th West Coast Conference on Formal Linguistics*, 283–291. Somerville, Ma: Cascadilla Proceedings Project.

Kertz, L. 2010. *Ellipsis Reconsidered*. Doctoral Dissertation, University of California, San Diego, San Diego, CA.

Kim, C., and J. Runner. 2011. Discourse structure and syntactic parallelism in VP ellipsis.   In J. A. Harris and M. Grant eds., *University of Massachusetts Occasional Papers 38: Processing Linguistic Structure*, 75–102. Amherst, Mass: GLSA.

Lasnik, H. 1995. Verbal morphology: *Syntactic structures meets the minimalist program.* In H. Campos and P. Kempchinsky (eds.), *Evolution and revolution in linguistic theory*, 251–275. Washington, DC: Georgetown University Press. Reprinted in Lasnik. 1999b, 97–119.

Lasnik, H. 1999a. Chains of arguments. In S. D. Epstein and N. Hornstein (Eds.), *Working Minimalism,* 189-215, Cambridge, Mass: MIT Press.

Lasnik, H. 1999b. *Minimalist Analysis*. Oxford: Blackwell.

Lasnik, H. 2008. Repair by ellipsis revisited. Lecture note from the Summer Workshop at Nanzan University, Nagoya, August, 2008.

Lasnik, H. 2011. Another look at island repair by deletion. Talk given at the University of the Basque Country, Citoria-Gasteiz. Islands in Contemporary Linguistic Theory. November 16−18, 2011.

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

Merchant, J. 2010. Voice mismatches and the dark side of ellipsis. Paper presented at the 2010 Syntax Fest, Indiana University. www.indiana.edu/~lingdept/SyntaxFest/iu.3.voice.pronouns.NPIs.pdf

Merchant, J. 2013. Voice and ellipsis. *Linguistic Inquiry* 44: 77−108.

Nakamura, T. 2013. Voice mismatches in sloppy VP-ellipsis. *Linguistic Inquiry* 44: 519−529.

Nunes, J. M. 1995. The Copy Theory of Movement and Linearization of Chains in the Minimalist Program. Ph.D Dissertation. University of Maryland, College Park, MD.

Omaki, A. 2007. Another look at affixal heads. Paper presented at Syntax Lunch Talk, University of Maryland, April 11.

Potsdam, E. 1997. English verbal morphology and ellipsis. In K. Kusumoto ed. *Proceedings of the 27ᵗʰ Meeting of the North Eastern Linguistic Society*, 353−368. Amherst, Mass: GLSA, University of Massachusetts at Amherst, MA.

Quirk, R., S. Greenbaum, G. Leech, and J. Svartik. 1972. *A Grammar of Contemporary English*. London: Seminar Press.

Rooth, M. 1992. A theory of focus interpretation. *Natural Language Semantics* 1: 75−116.

Sag, I. 1976. *Deletion and Logical Form*. Doctoral Dissertation. Massachusetts Institute of Technology, Cambridge, MA.

Stockwell, R., P. Schachter, and B. H. Partee. 1973. *The major syntactic structure of English*. New York: Holt, Rinehart and Winston.

Takahashi, S. and D. Fox. 2006. MaxElide and the re-binding problem. In E. Georgala and J. Howell eds., *Proceedings from Semantics and Linguistics Theory 15*, 223−240. Available at Elanguage.net/journal.salt.article/view283.

Thoms, G. 2010. 'Verb floating' and VP-ellipsis: towards a movement account of ellipsis licensing. Available at www.ling.auf.net/lingbuzz/001092/current.pdf

Warner, A. 1986. Ellipsis conditions and the status of the English copula. In *York Papers in Linguistics* 12, 153−172. University of York, Heslington, England.

Williams, E. 1977. Discourse and logical form. *Linguistic Inquiry* 8: 101−139.