Chapter 12

A description of verb-phrase ellipsis in Hocąk

Meredith Johnson

In this paper, I argue that Hocąk displays verb-phrase ellipsis (VPE) and provide the first thorough description of this phenomenon. VPE in Hocąk displays the two defining characteristics of VPE cross-linguistically: it targets all VP-internal material, and it is licensed by a functional head. In the case of Hocąk, I propose that the licensing head is active *v*. Furthermore, Hocąk VPE also shows many other traits of VPE in other languages: the ellipsis site can be found in coordinated and adjacent clauses in addition to embedded and adjunct clauses, VPE is insensitive to the the contents of the VP, and VPE gives rise to both strict and sloppy readings. Lastly, I argue that VPE in Hocąk is derived by deletion of a full-fledged VP, and that the ellipsis site cannot be analyzed as a null *pro* form.

1 Introduction

This purpose of this paper is to both argue that Hocąk displays verb-phrase ellipsis (VPE) and to provide the first thorough description of this phenomenon. In VPE constructions, a VP goes unpronounced when there is an appropriate antecedent VP and a licensing head that identifies the gap. Both of these properties can be seen in the examples of VPE in Hocąk in (1) below. In each example, the VP in the second conjunct is interpreted as identical to the VP in the first conjunct, even though the former has no phonological realization. Instead, the light verb *ųų* takes the place of the VP.

(1) a. *Cecilga* [VP *wažątirehižą ruwį*] *kjane anąga nee šge* [*ha'ųų*]
        Cecil-ga *wažątire-hižą ∅-ruwį* *kjane anąga nee šge* *ha-ųų*
        Cecil-PROP car-INDEF 3s/O-buy FUT and I also 1s-do
        kjane.
        kjane
        FUT
        'Cecil will buy a car, and I will too.'

b. *Cecilga*   [$_{VP}$ *xjanąre* *waši*]   *anąga Bryanga*   *šge* [*ųų*].
   Cecil-ga   *xjanąre* *∅-waši* *anąga Bryan-ga* *šge* *∅-ųų*
   Cecil-PROP   yesterday 3s-dance and   Bryan-PROP also 3s-do
   'Cecil danced yesterday, and Bryan did too.'

Throughout this paper, I rely on the set of diagnostics of VPE established by Goldberg (2005), and subsequently used for Indonesian by Fortin (2007). Goldberg (2005) uses characteristics of English VPE to establish a typology of VPE crosslinguistically, noting that "English VP Ellipsis has a characteristic set of behavioral traits, the confluence of which is not found in other types of null anaphora" (Goldberg 2005: 27).

Goldberg developed this set of traits in order to diagnose verb-stranding verb-phrase ellipsis (VVPE) in a variety of languages, including Hebrew, Irish and Swahili. In VVPE, the verb has undergone raising before the remainder of the VP is elided. On the surface, VVPE can be ambiguous between a null object analysis or VPE analysis; thus, some of her diagnostics serve to distinguish these two approaches. An example of VVPE in Hebrew is provided in (2):

(2)   *Tazmini*   *et Dvora la-misiba? Kvar*   *hizmanti.*
      invite.2FUT Dvora   to.the-party already invite.1PST
      'Will you invite Dvora to the party? I already invited (Dvora to the party).'
      (Goldberg 2005: 14)

Hocąk VPE does not face this problem: there is an overt light verb standing in for the VP, much like English VPE. Nonetheless, the data from Hocąk are consistent with all of the characteristics that Goldberg argues are diagnostic of VPE crosslinguistically. Furthermore, I show that these traits also distinguish VPE from other elliptical phenomena found in Hocąk, including gapping, stripping and null complement anaphora.

This paper is structured as follows. In §2, I establish that putative VPE in Hocąk displays the two most important characteristics of VPE: it targets all VP-internal material, and it is licensed by a functional head. In the case of Hocąk, I propose that the licensing head for VPE is active *v*. In §3, I show that Hocąk VPE displays other traits that have been attributed to VPE crosslinguistically. §4 demonstrates that VPE in Hocąk must be analyzed as a deletion process, rather than a null *pro* form. §5 concludes the paper.

2 Establishing the presence of VPE in Hocąk

In this section, I show that the construction that I argue instantiates VPE in Hocąk displays the two defining characteristics of VPE. In §2.1, I demonstrate that the ellipsis site includes all VP-internal material. In §2.2, I show that VPE is subject to the presence of an appropriate licensing head.

2.1 *ųų* targets the VP

VPE is possible with both intransitive and transitive verbs, as seen in (3-4) below. (3a) and (3b) show that *ųų* can target intransitive VPs. In the examples in (4) with transitive verbs, the direct object is also included in the ellipsis site.

(3) a. *Cecilga* [_{VP} *kere*] *anąga Matejaga* *šge* [*ųų*].
   Cecil-ga ∅*-kere,* *anąga Mateja-ga* *šge* ∅*-ųų*
   Cecil-PROP 3s-leave and Mateja-PROP also 3s-do
   'Cecil left, and Mateja did too.'

   b. *Meredithga* [_{VP} *nįįp*] *anąga Sarahga* *šge* [*ųų*].
   Meredith-ga ∅*-nįįp* *anąga Sarah-ga* *šge* ∅*-ųų*
   Meredith-PROP 3s-swim and Sarah-PROP also 3s-do
   'Meredith swam, and Sarah did too.'

(4) a. *Matejaga* [_{VP} *waisgap sguuhižą rook'į*] *anąga Sarahga* *šge*
   Mateja-ga *waisgap sguu-hižą* ∅*-rook'į* *anąga Sarah-ga* *šge*
   Mateja-PROP cake-INDEF 3s/o-bake and Sarah-PROP also
   [*ųų*].
   ∅*-ųų*
   3s-do
   'Mateja baked a cake, and Sarah did too.'

   b. *Meredithga* [_{VP} *waaruchižą hogiha*] *anąga Bryanga* *šge*
   Meredith-ga *waaruc-hižą* ∅*-hogiha* *anąga Bryan-ga* *šge*
   Meredith-PROP table-INDEF 3s/o-paint and Bryan-PROP also
   [*ųų*].
   ∅*-ųų*
   3s-do
   'Meredith painted a table, and Bryan did too.'

VPE can also target other internal arguments. Both indirect objects and resultative phrases are typically analyzed as VP-internal (see e.g., Larson 1988 and

Levin & Rappaport Hovav 1995), and they are also subject to VPE. The ditransitive example in (5) shows that both a direct object and indirect object can be contained in the ellipsis site.

(5)   *Cecilga*   [_{VP} *Meredithga*   *wiiwagaxhižą hok'ų*]   *anąga*
      Cecil-ga   *Meredith-ga*   *wiiwagax-hižą* ∅-*hok'ų*   *anąga*
      Cecil-PROP   Meredith-PROP pencil-INDEF   3s/o-give and
      Matejaga   *šge*   [*ųų*].
      Mateja-ga   *šge*   ∅-*ųų*
      Mateja-PROP also   3s-do
      'Cecil gave Meredith a pencil, and Mateja did too.'

In (6), we see examples of VPE with resultative constructions in which the direct object and result have both been elided.

(6)   a.   *Cecilga*   [_{VP} *važątirehiža šuuc hogiha*]   *anąga Bryanga*   *šge*
        Cecil-ga   *važątire-hiža šuuc* ∅-*hogiha*   *anąga Bryan-ga*   *šge*
        Cecil-PROP   car-INDEF   red   3s/o-paint and   Bryan-PROP also
        [*ųų*].
        ∅-*ųų*
        s-do
        'Cecil painted a car red, and Bryan did too.'

     b.   *Meredithga*   [_{VP} *mąąshiža*   *paras gistak*]   *anąga Matejaga*
        Meredith-ga   *mąąs-hiža*   *paras* ∅-*gistak anąga Mateja-ga*
        Meredith-PROP   metal-INDEF flat   3s/o-hit and   Mateja-PROP
        šge   [*ųų*].
        šge   ∅-*ųų*
        also   3s-do
        'Meredith hit metal flat, and Mateja did too.'

VPE also targets various adjuncts. (7) shows that VPE targets VPs containing temporal adjuncts.

(7)   a.   *Cecilga*   [_{VP} *xjanąre*   *waši*]   *anąga Bryanga*   *šge* [*ųų*].
        Cecil-ga   *xjanąre*   ∅-*waši*   *anąga Bryan-ga*   *šge* ∅-*ųų*
        Cecil-PROP   yesterday 3s-dance and   Bryan-PROP also 3s-do
        'Cecil danced yesterday, and Bryan did too.'

     b.   *Meredithga*   [_{VP} *hąąpte'e kšeehižą*   *ruuc*]   *anąga*
        Meredith-ga   *hąąpte'e kšee-hižą*   ∅-*ruuc anąga*
        Meredith-PROP   today   apple-INDEF 3s/o-eat and   Mateja-PROP

> *Matejaga šge   [ųų].*
> *Mateja-ga šge   ∅-ųų*
> also   3s-do
> 'Meredith ate an apple today, and Mateja did too.'

In (8), locative adjuncts are included in the ellipsis site.

(8) a. *Cecilga   [_{VP} hosto   eja   waši]   kjane anąga Bryanga*
  Cecil-ga   hosto   eja   ∅-waši   kjane anąga Bryan-ga
  Cecil-PROP   gathering there 3s-dance FUT   and   Bryan-PROP
  šge [ųų] kjane.
  šge ∅-ųų kjane
  also 3s-do FUT
  'Cecil will dance at the gathering, and Bryan will too.'

 b. *Cecilga   [_{VP} ciinąk eja   wažątirehižą ruwį]   anąga*
  Cecil-ga   ciinąk eja   wažątire-hižą ∅-ruwį   anąga
  Cecil-PROP   city   there car-INDEF   3s/o-buy and
  Bryanga   šge [ųų].
  Bryan-ga   šge ∅-ųų
  Bryan-PROP also 3s-do
  'Cecil bought a car in the city, and Bryan did too.'

(9) exemplifies VPE with a comitative.

(9) *Cecilga   [_{VP} hinųkra   hakižu waši]   anąga Bryanga   šge*
 Cecil-ga   hinųk-ra   hakižu ∅-waši   anąga Bryan-ga   šge
 Cecil-PROP   woman-DEF be.with 3s-dance and   Bryan-PROP also
 [ųų].
 ∅-ųų
 3s-do
 'Cecil danced with the woman, and Bryan did too.'

(10) demonstrates that various manner adverbs can also be subject to VPE.

(10) a. *Bryanga   [_{VP} teejąki nįįtašjak taaxu racgą]   anąga Sarahga*
  Bryan-ga   teejąki nįįtašjak taaxu ∅-racgą anąga Sarah-ga
  Bryan-PROP   often coffee   3s-drink and   Sarah-PROP
  šge [ųų].
  šge ∅-ųų
  also 3s-do
  'Bryan often drinks coffee, and Sarah does too.'

b. *Cecilga*   [_{VP} *pįįhį   mąąnį*] *anąga Bryanga   šge* [*ųų*].
   Cecil-ga   pįįhį   ∅-mąąnį anąga Bryan-ga   šge   ∅-ųų
   Cecil-PROP   quietly 3s-walk and Bryan-PROP also 3s-do
   'Cecil walked carefully/quietly, and Bryan did too.'

c. *Meredithga*   [_{VP} *hikųhe   nįįtašjak taaxu racgą*]   *anąga Bryanga*
   Meredith-ga   hikųhe   nįįtašjak taaxu ∅-racgą anąga Bryan-ga
   Meredith-PROP   quickly coffee   3s-drink and   Bryan

   šge [*ųų*].
   šge   ∅-ųų
   also 3s-do
   'Meredith drank coffee quickly, and Bryan did too.'

In all of the examples in (7)–(10), the adjunct in the antecedent VP is interpreted as being present in the ellipsis site, indicating that *ųų* targets the entire VP rather than just the object(s).

Lastly, complement clauses can also be included in VPE. The example in (11) has two possible interpretations: either that Meredith also bought a car, or that Meredith also said that Cecil bought a car. Under the second reading, VPE targets the matrix clause, eliding the verb and its complement clause.

(11)   *Bryanga*   [_{vp} *Cecilga   wažątirehižą ruwįže   ee*]   *anąga*
       Bryan-ga   Cecil-ga   wažątire-hižą ∅-ruwį-že   ∅-ee anąga
       Bryan-PROP   Cecil-PROP car-INDEF   3s/o-buy-COMP 3s-say and

       Meredithga   šge [*ųų*].
       Meredith-ga   šge   ∅-ųų
       Meredith-PROP also 3s-do
       'Bryan said that Cecil bought a car, and Meredith did too.'

2.2 Licensing of VPE

The main characteristic that distinguishes VPE from other elliptical processes is the presence of an overt licensing head located in the inflectional domain above the VP. VPE in English can be licensed by a variety of functional elements, such as *do* in (12a), *be* in (12b), *have* in (12c), *can* in (12d) and *will* in (12e). The obligatory presence of an inflectional head has led previous researchers to argue that VPE is licensed by T/Infl (Bresnan 1976; Sag 1976; Zagona 1988; Lobeck 1995).

(12)   a. Lily wore a skirt, and Molly **did** too.
       b. Lily is reading a book, and Molly **is** too.

    c. Lily hasn't finished the book, but Molly **has**.

    d. Lily can ride a bike, and Molly **can** too.

    e. Lily will leave, and Molly **will** too.

In contrast, there is no such inflectional head found with stripping or gapping. Stripping is an elliptical phenomenon in which an entire clause is elided except for a single element that is stranded. This is illustrated in (13a). In gapping constructions, the verb (and other potential material) is left unpronounced, while there are two elements that are stranded. An example of gapping can be seen in (13b).

(13)   a. Lily came over, and Molly too.

         b. Lily brought bagels, and Molly danishes.

In Hocąk, the licensing requirement on VPE is different: VPE is conditioned solely by the presence of the light verb *ųų*. We have seen this in all of the instances of VPE given above. The examples in (14)–(18) illustrate that *ųų* is indeed a light verb: it productively combines with both nouns and verbs to create complex predicates. Based on its distribution, I assume that *ųų* realizes the functional head *v* (Hartmann 2012: Examples 14–18).

(14)   a. *mąąnąąpeja*   b. *mąąnąąpeja ųų*
           'warrior'   'be in the military'

(15)   a. *nąąwąǧoǧo*   b. *nąąwąǧoǧo ųų*
           'fiddle'   'play the fiddle'

(16)   a. *waruc*   b. *waruc ųų*
           'food'   'cook, prepare food'

(17)   a. *waagax*   b. *waagax ųų*
           'paper, letter'   'write (a letter)'

(18) a. *hooxiwi*   b. *hooxiwi ųų*
          'cough' (verb)   'have a cold'

Tense and modals can be present in VPE constructions; however, they are never obligatory. When present, tense and modals always co-occur with the light verb *ųų*. (19a) shows that the future tense marker *kjane* can follow *ųų*, while (19b) and (19c) demonstrate that the modals *ną* and *s'aare* can also appear after *ųų*. When *ųų* is omitted, the result is ungrammatical.

(19) a. *Cecilga   wažątirehižą ruwį   kjane anąga nee šge   *(ha'ųų)*
          Cecil-ga   wažątire-hižą ∅-ruwį   kjane anąga nee šge   ha-ųų
          Cecil-PROP car-INDEF   3s/o-buy FUT   and   I   also 1s-do
          ***kjane**.*
          kjane
          FUT
          'Cecil will buy a car, and I will too.'

      b. *Meredithga   hąąke wažątirera pįį'ų ruxuruknį   nųnįge*
          Meredith-ga   hąąke wažątire-ra ∅-pįį'ų ruxuruk-nį nųnįge
          Meredith-PROP NEG car-DEF   3s/o-fix-NEG   but
          *Matejaga   *(ųų) **ną**.*
          *Mateja-ga   ∅-ųų **ną***
          Mateja-PROP 3s-do can
          'Meredith can't fix the car, but Mateja can.'

      c. *Meredithga   hąąke nįįtašjak taaxu ruwįnį   nųnįge*
          Meredith-ga   hąąke nįįtašjak taaxu ∅-ruwį-nį   nųnįge
          Meredith-PROP NEG   coffee   3s/o-buy-NEG but
          *Matejaga   *(ųų) **s'aare**.*
          *Mateja-ga   ∅-ųų **s'aare***
          Mateja-PROP 3s-do must
          'Meredith didn't buy coffee but Mateja must have.'

Thus, we see that T/Infl does not play the same role in VPE licensing in Hocąk as it does in other languages. However, VPE in Hocąk is constrained by the type of predicate. As the examples in (20) show, VPE is not licensed with non-agentive verbs:

(20) a. * *Meredithga   kšee gipį   anąga Bryanga   šge ųų.*
          Meredith-ga   kšee ∅-gipį anąga Bryan-ga   šge ∅-ųų
          Meredith-PROP apple 3s-like and   Bryan-PROP also 3s-do
          (Intended: 'Meredith likes apples, and Bryan does too.')

b. * *Cecilga*   *wįįxra*   *waaja*   *anąga Meredithga*   *šge*   *ųų.*
    Cecil-ga   *wįįx-ra*   *wa-∅-haja*   *anąga Meredith-ga*   *šge*   *∅-ųų*
    Cecil-PROP duck-DEF 3O.PL-3s-see and   Meredith-PROP also 3s-do
    (Intended: 'Cecil saw the ducks, and Meredith did too.')

c. * *Meredithga*   *hoišą*   *anąga Bryanga*   *šge*   *ųų.*
    Meredith-ga   *∅-hoišą*   *anąga Bryan-ga*   *šge*   *∅-ųų*
    Meredith-PROP 3s-busy.STAT and   Bryan-PROP also 3s-do
    (Intended: 'Meredith is busy, and Bryan is too.')

d. * *Cecilga*   *hįįcge*   *nųnįge Bryanga*   *hąąke ųųnį.*
    Cecil-ga   *∅-hįįcge*   *nųnįge Bryan-ga*   *hąąke ∅-ųų-nį*
    Cecil-PROP 3s-tired.STAT but   Bryan-PROP NEG 3s-do-NEG
    (Intended: 'Cecil is tired, but Bryan isn't.')

Like other Siouan languages, Hocąk exhibits an active-stative alignment pattern: the active set of verbal person markers is used to index the subject of transitive verbs and active intransitive verbs, while the stative set is used to index the object of transitive verbs and the subject of stative intransitive verbs. This alignment pattern interacts with VPE in revealing ways. While VPE is banned with most stative intransitive verbs, such as those in (20c) and (20d), VPE is possible with certain stative intransitives when they have an agentive reading. *Hokąre* 'to fall in' is normally a stative intransitive verb, but it is possible to use it in VPE contexts if the subject falls *deliberately*, as in (21). In this context, *ųų* takes the *active* person marker set. In (21b), the verb takes the second person active marker *š-*; the stative marker *nį-* is not permitted. The marker *nį-* is the one that would typically be found on the verb *hokąre*, as shown in (22).

(21) a. *Meredithga*   *nįį*   *eeja hokąre*   *anąga Bryanga*   *šge ųų.*
       Meredith-ga   *nįį*   *eeja ∅-hokąre anąga Bryan-ga*   *šge ∅-ųų*
       Meredith-PROP water there 3s-fall.in and   Bryan-PROP also 3s-do
       'Meredith fell into the water (deliberately), and Bryan did too.'

    b. *Meredithga*   *nįį*   *eeja hokąre*   *anąga (nee) šge š'ųų/*nį'ųų.*
       Meredith-ga   *nįį*   *eeja ∅-hokąre anąga nee*   *šge š-'ųų/nį-'ųų*
       Meredith-PROP water there 3s-fall.in and   you also 2s-do
       'Meredith fell into the water (deliberately), and you did too.'

(22) *Honįkąre.*
    <nį>hokąre
    <2s>fall.in.STAT
    'You fell in(to something).' (Hartmann 2012)

This restriction on VPE is not due to lexical properties of *ųų*: when *ųų* functions as a light verb, it can form non-agentive verbs, as in (23):

(23)   a.   *hooxiwi ųų* 'have a cold' (stative intransitive)

      b.   *roo taakac ųų* 'have a fever' (stative intransitive)

      c.   *paaxšišik ųų* 'have an upset stomach' (stative intransitive)
         (Hartmann 2012)

To formalize this restriction on VPE in Hocąk, I adopt Merchant's (2001) proposal that ellipsis takes place when a so-called "[E]-feature" is present on the relevant licensing head. In the case of Hocąk, I propose that an [E]-feature is present only on the agentive *v* head.[1] This accounts for the fact that VPE is solely conditioned by the presence of the light verb (or *v*) *ųų*, and furthermore that only agentive verbs can be elided: if there is a non-agentive *v* present, then ellipsis will not be licensed.

This conclusion is in line with other research that argues that *v* is responsible for licensing VPE crosslinguistically. Many recent approaches to ellipsis have argued for a link between phases and elliptical phenomena (Holmberg 2001, van Craenenbroeck 2004, Gengel 2007, Yoshida & Gallego 2008, Gallego 2009, among others). Specifically, they propose that ellipsis results when a phasal head (e.g. *v*, C, D) licenses deletion of its complement. These theories are a natural development of Chomsky's (2000; 2001; 2004) theory of phases: if ellipsis is PF-deletion, it follows that the units that are sent cyclically to the PF interface are precisely the ones that can be targeted for deletion. More concretely, Rouveret (2012) adopts the phasal analysis of ellipsis, and puts forward a theory to predict which languages permit VPE. He argues that *v* always has an uninterpretable [tense] feature, and that, in languages with VPE, the [tense] feature is valued on *v* phase-internally. Rouveret proposes that the elements that license VPE are all merged in *v*, and subsequently move to Infl. All of these approaches are compat-

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[1] This agentivity requirement on a process that affects the VP is not completely unique to Hocąk. For example, Hallman (2004) notes that English *do so* replacement is restricted to agentive VPs, even though other uses of *do* are not subject to this constraint (e.g., *Max loves studying French, and Mary does (*so) too.*) Rouveret (2012) also shows that VPE in Welsh is licensed uniquely by the light verb *gweund*, and furthermore that VPE is not permitted with stative predicates. The only possibility with stative VPs is VVPE. However, Rouveret also shows that *gweund* is also incompatible with stative predicates in its non-elliptical uses. This contrasts with the behavior of *ųų* in Hocąk and *do* in *do so* in English.

ible with the Hocąk data, with the caveat that VPE is more restricted in Hocąk: it is only licensed by active *v*.

3 Crosslinguistic characteristics of VPE

In the previous section, I demonstrated that Hocąk displays the two defining characteristics of VPE: the elliptical process in question targets the entire VP, and is conditioned by the presence of a licensing head. Goldberg (2005) discusses five other characteristics of VPE that are not shared by other elliptical phenomena, which are listed in (24):

(24) a. Possible in both coordinated and adjacent CPs
      b. Insensitive to contents of elided VP
      c. Ellipsis site can be in a syntactic island
      d. Ellipsis site can be embedded
      e. Presence of strict and sloppy readings

In the subsections that follow, I show that Hocąk VPE also generally conforms to this typology. In the areas where Hocąk appears to differ from English, I demonstrate that this is due to other differences between the two languages that are independent of ellipsis.

3.1 Ellipsis licensed in both coordinated and adjacent CPs

Goldberg (2005) notes that English VPE is possible with a variety of sentence types. VPE is licit when the antecedent VP and elided VP are found in conjoined CPs (25a), in adjacent CPs uttered by the same speaker (25b), and when the antecedent is in a question and the ellipsis site in the answer (25c). In this section, I show that the same is true in Hocąk.

(25) a. Lily hates beets, but Molly doesn't.
      b. Lily hates beets. Molly does too.
      c. Who hates beets? Molly does.

All of the examples of VPE we saw in §2 involved two clauses joined by the coordinator *anąga* 'and'. VPE is also possible with disjunction, as seen in (26) with *nųnįge* 'but'.

(26)   a. *Cecilga   wažątirehižą ruwį   nųnįge nee hąąke ha'ųųnį.*
           Cecil-ga   wažątire-hižą ∅-ruwį   nųnįge nee hąąke ha-ųų-nį
           Cecil-PROP car-INDEF   3s/o-buy but   I   NEG 1s-do-NEG
           'Cecil bought a car, but I didn't.'

       b. *Sarahga   hąąke haas gihinį   nųnįge Matejaga   ųų.*
           Sarah-ga   hąąke haas ∅-gihi-nį   nųnįge Mateja-ga   ∅-ųų
           Sarah-PROP NEG   berry 3s-pick-NEG but   Mateja-PROP 3s-do
           'Sarah didn't pick berries, but Mateja did.'

(27) shows that VPE is also licit in adjacent CPs. In each example, the antecedent VP is found in the first sentence while the ellipsis site is in the second sentence.

(27)   a. *Meredithga   waaruchižą hogiha.   Bryanga   šge ųų.*
           Meredith-ga waaruc-hižą ∅-hogiha Bryan-ga   šge ∅-ųų
           Meredith-PROP table-INDEF 3s/o-paint Bryan-PROP also 3s-do
           'Meredith painted a table. Bryan did too.'

       b. *Meredithga   hąąke waisgap sguu xuwuxuwuhižą ruucnį.*
           Meredith-ga   hąąke waisgap sguu xuwuxuwu-hižą ∅-ruuc-nį
           Meredith-PROP NEG   cookie-INDEF   3s/o-eat-NEG
           Bryanga   ųų.
           Bryan-ga   ∅-ųų
           Bryan-PROP 3s-do
           'Meredith didn't eat a cookie. Bryan did.'

Lastly, VPE also occurs in question-answer pairs in Hocąk. In (28a), a yes-no question contains the antecedent VP and the answer contains the gap. (28b) demonstrate that the same holds of *wh*-questions.

(28)   a. Question: *Nįįtašjak taaxu šuruwį?* Answer: *Ha'ųų.*
                 nįįtašjak taaxu   šu-ruwį   ha-ųų
                 coffee   2s-buy   1s-do
           Q: 'Did you buy coffee?' A: 'I did.'

       b. Question: *Peežega Cecilga   gišja hii?* Answer: *Bryanga   ųų.*
                 peežega Cecil-ga   ∅-gišja hii   Bryan-ga   ∅-ųų.
                 who   Cecil-PROP 3s/o-visit   Bryan-PROP 3s-do
           Q: 'Who visited Cecil?' A: 'Bryan did.'

3.2 Ellipsis and the contents of the VP

Goldberg (2005) distinguishes VPE from null complement anaphora (NCA) based on the type of constituent that is elided. In NCA, a matrix verb is stranded and its complement is elided. However, NCA is constrained by the contents of the VP: only propositions can be elided. This is illustrated by the contrast between the grammatical NCA examples in (29a) and (29c) and the ungrammatical examples in (29b) and (29d):

(29) a. Pat doesn't know **that Terry is moving to Japan**, but Robin knows.

     b. * Pat doesn't know **how to speak Inuktitut**, but Robin knows.

     c. Pat forgot **to close the door**, but Robin remembered.

     d. * Pat forgot **the answer**, but Robin remembered. (Fortin 2007: 245)

In contrast, the grammaticality of VPE is not dependent on the contents of the VP. The examples in (30) show that VPE is possible regardless of whether the complement of the VP expresses a proposition or not.

(30) a. Pat doesn't know **that Terry is moving to Japan**, but Robin does.

     b. Pat doesn't know **how to speak Inuktitut**, but Robin does.

     c. Pat forgot **to close the door**, but Robin didn't.

     d. Pat forgot **the answer**, but Robin didn't.

As Fortin (2007) points out, this diagnostic does not serve to distinguish VPE from NCA in languages with null objects. Hocąk allows both null subjects and objects, as seen in (31b):

(31) a. *Wijųkra šųųkra hoxataprookeeja   haja.*
            Wijųk-ra šųųk-ra hoxatap-rook-eeja   ∅-haja
            cat-DEF   dog-DEF woods-inside-there 3s/o-see
            'The cat saw the dog in the woods.

     b. *Hoxataprookeeja   haja.*
            hoxatap-rook-eeja   ∅-haja
            woods-inside-there 3s/o-see
            '[The cat] saw [the dog] in the woods.' (Johnson, Rosen & Schuck 2013: 7)

Thus, it is not surprising that both propositional and non-propositional verbal complements can be null in Hocąk. In (32), the complement of the verb *hiperes* 'know' can be null both when it is a proposition (32a) or an embedded question (32b). Likewise, both propositional (33a) and DP object (33b) complements of *wakikųnųnį* 'forget' surface as null.

(32) a. *Sarahga   Meredithga   rookhožura ruucra   hiperes,*
      Sarah-ga   Meredith-ga   rookhožu-ra ∅-ruuc-ra   ∅-hiperes
      Sarah-PROP Meredith-PROP pie-DEF   3s/o-eat-COMP 3s-know

      anąga Matejaga   šge hireperesšąną.
      anąga Mateja-ga   šge ∅-hiperes-šąną
      and   Mateja-PROP also 3s-know-DECL
      'Sarah knows that Meredith ate the pie, and Mateja knows too.'

   b. *Sarahga   jaagu'ų Meredithga   kerera   hiperes, anąga*
      Sarah-ga   jaagu'ų Meredith-ga   ∅-kere-ra   ∅-hiperes anąga
      Sarah-PROP why   Meredith-PROP 3s-leave-COMP 3s-know and

      Matejaga   šge hiperesšąną.
      Mateja-ga   šge ∅-hiperes-šąną
      Mateja-PROP also 3s-know-DECL
      'Sarah knows why Meredith left, and Mateja knows (why Meredith left) too.'

(33) a. *Bryanga   nįįtašjak taaxu ruwįra   wakikųnųnį, nųnįge*
      Bryan-ga   nįįtašjak taaxu ∅-ruwį-ra   ∅-wakikųnųnį nųnįge
      Bryan-PROP coffee   3s-buy-COMP 3s-forget   but

      Meredithga   hąąke wakikųnųnįnį.
      Meredith-ga   hąąke ∅-wakikųnųnį-nį
      Meredith-PROP NEG   3s-forget-NEG
      'Bryan forgot to buy coffee, but Meredith didn't forget.'

   b. *Bryanga   waisgap sguura wakikųnųnį, nųnįge Meredithga*
      Bryan-ga   waisgap sguu-ra ∅-wakikųnųnį nųnįge Meredith-ga
      Bryan-PROP cake-DEF   3s/o-forget   but   Meredith-PROP

      hąąke wakikųnųnįnį.
      hąąke ∅-wakikųnųnį-nį
      NEG   3s/o-forget-NEG
      'Bryan forgot the cake, but Meredith didn't forget (the cake).'

Thus, this particular diagnostic does not work for Hocąk due to independent factors. The complement of verbs like 'know' and 'forget' can always be null, presumably due to the availability of object *pro* drop.[2]

3.3 Ellipsis in syntactic islands

Goldberg (2005) notes that the ellipsis site in VPE constructions can be inside an adjunct island, while gapping is not permitted in adjuncts. This is shown by the contrast between (34a) and (34b) below:

(34) a. Lily finished her sandwich before Molly did.
      b. * Lily finished the sandwich before Molly the pizza.

The same contrast is found in Hocąk. The examples in (35) show that the gap in VPE constructions can be found inside adjunct clauses (which precede the main clause in these examples). In (35a), the ellipsis site is in the clause headed by 'if', in (35b) the ellipsis site is in the clause headed by 'because', and in (35c) it is in the clause headed by 'before.'

(35) a. *Bryanga   ųų   kjanegi Meredithga   Hunterga   (nišge)*
          Bryan-ga   ∅-ųų kjane-gi Meredith-ga   Hunter-ga   (nišge)
          Bryan-ᴘʀᴏᴘ 3s-do ꜰᴜᴛ-if   Meredith-ᴘʀᴏᴘ Hunter-ᴘʀᴏᴘ also
          gišja hii   kjane.
          ∅-gišja hii kjane
          3s/ᴏ-visit ꜰᴜᴛ
          'Meredith will visit Hunter if Bryan will.'

      b. *Bryanga   hąąke ųųnįge   Meredithga   (nišge) hąąke*
          Bryan-ga   hąąke ∅-ųų-nį-ge   Meredith-ga   (nišge) hąąke
          Bryan-ᴘʀᴏᴘ ɴᴇɢ 3s-do-ɴᴇɢ-because Meredith-ᴘʀᴏᴘ also   ɴᴇɢ
          Hunterga   gišja hiinį.
          Hunter-ga   ∅-gišja hii-nį
          Hunter-ᴘʀᴏᴘ 3s/ᴏ-visit-ɴᴇɢ
          'Meredith didn't visit Hunter because Bryan didn't.'

---

[2] A full comparison of NCA and VPE is not possible in Hocąk. VPE with verbs like 'know' and 'forget' is ungrammatical (examples omitted for space purposes) since these verbs are non-agentive.

c. *Keenį Sarahga   ųųnį   Matejaga*
    keenį Sarah-ga   ∅-ųų-nį   Mateja-ga
    before Sarah-PROP 3S-do-NEG Mateja-PROP
    waisgap sguu xuwuxuwuhižą ruucšąną.
    waisgap sguu xuwuxuwu-hižą ∅-ruuc-šąną
    cookie-INDEF   3S/O-eat-DECL
    'Mateja ate a cookie before Sarah did.'

In contrast, gapping is ungrammatical in adjuncts. (36) illustrates that the the gap cannot be located in an adjunct clause headed by 'if' (36a), 'because' (36b) or 'before' (36c).

(36) a. * *Matejaga   rookhožuhižągi Meredithga   waisgap sguuhižą*
          Mateja-ga   rookhožu-hižą-gi Meredith-ga   waisgap sguu-hižą
          Mateja-PROP pie-INDEF-if   Meredith-PROP cake-INDEF
          rook'į   kjane.
          ∅-rook'į   kjane
          3S/O-bake FUT
          (Intended: 'Meredith will bake a cake if Mateja will bake a pie.')

      b. * *Sarahga   ważą honąkipįnįhižąge Matejaga   ważątirehižą*
          Sarah-ga   ważą honąkipįnį-hižą-ge Mateja-ga   ważątire-hižą
          Sarah-PROP bicycle-INDEF-because   Mateja-PROP car-INDEF
          ruwį.
          ∅-ruwį
          3S/O-buy
          (Intended: 'Mateja bought a car because Sarah bought a bicycle.')

      c. * *Keenį Bryanga   waisgap sguu xuwuxuwuhižąnį Meredithga*
          keenį Bryan-ga   waisgap sguu xuwuxuwu-hižą-nį Meredith-ga
          before Bryan-PROP cookie-INDEF-NEG   Meredith-PROP
          kšeehižą   ruucšąną.
          kšee-hižą   ∅-ruuc-šąną
          apple-INDEF 3S/O-eat-DECL
          (Intended: 'Meredith ate an apple before Bryan ate a cookie.')

3.4 Ellipsis in embedded clauses

Goldberg (2005) also shows that the ellipsis site in VPE constructions can be inside an embedded clause, while this is not true of other types of ellipsis. (37a)

demonstrates that VPE is licit in an embedded clause, while (37b)–(37c) illustrate that neither gapping nor stripping are possible in an embedded clause.

(37)   a. Lily went to the zoo, and I think (that) Molly did too.
       b. * Lily went to the zoo, and I think (that) Molly the aquarium.
       c. * Lily went to the zoo, and I think (that) Molly too.

In Hocąk, VPE is licit in the complement clause of various matrix verbs, including 'know' (38a), 'want' (38b), 'think' (38c) and 'say' (38d).

(38)   a. *Bryanga   hąąke nįįtašjak taaxu ruwįnį,   nųnįge Meredithga*
           Bryan-ga   hąąke nįįtašjak taaxu ∅-ruwį-nį   nųnįge Meredith-ga
           Bryan-PROP NEG coffee   3s-buy-NEG but   Meredith-PROP

           ųųra   yaaperesšąną.
           ∅-ųų-ra   <ha>hiperes-šąną
           3s-do-COMP <1s>know-DECL
           'Bryan didn't buy coffee, but I know Meredith did.'

       b. *Meredithga   hąąke Hunterga   gišja hiinį   nųnįge*
           Meredith-ga   hąąke Hunter-ga   ∅-gišja hii-nį   nųnįge
           Meredith-PROP NEG   Hunter-PROP 3s/O-visit-NEG but

           Bryanga   ųų   roogų.
           Bryan-ga   ∅-ųų ∅-roogų
           Bryan-PROP 3s-do 3s-want
           'Meredith didn't visit Hunter, but Bryan wants to.'

       c. *Matejaga   hąąke wažą honąkipįnįhižą ruwįnį,   nųnįge*
           Mateja-ga   hąąke wažą honąkipįnį-hižą ∅-ruwį-nį   nųnįge
           Mateja-PROP NEG bicycle-INDEF   3s/O-buy-NEG but

           Cecilga   ųųže   yaare.
           Cecil-ga   ∅-ųų-že   <ha>hire
           Cecil-PROP 3s-do-COMP <1s>think
           'Mateja didn't buy a bicycle, but I think Cecil did.'

       d. *Sarahga   hąąke waarucra hogihanį,   nųnįge Meredithga*
           Sarah-ga   hąąke waaruc-ra ∅-hogiha-nį   nųnįge Meredith-ga
           Sarah-PROP NEG table-DEF 3s/O-paint-NEG but   Meredith-PROP

           ųųže   ee.
           ∅-ųų-že   ∅-ee
           3s-do-COMP 3s-say
           'Sarah didn't paint the table, but Meredith said she did.'

Unlike English, Hocąk does not exhibit any constraint on gapping in embedded contexts. (39a) and (39b) show that the gap can be embedded under the verbs *hire* 'think' and *ee* 'say', respectively.

(39)   a.   *Meredithga*   *wažą honąkipįnįhižą*   *ruwį*   *anąga Bryanga*
            Meredith-ga   *wažą honąkipįnį-hižą* ∅-*ruwį*   *anąga Bryan-ga*
            Meredith-PROP bicycle-INDEF   3s/o-buy and   Bryan-PROP
            wažątirehižą   *yaare.*
            wažątire-hižą *<ha>hire*
            car-INDEF   <1s>think
            'Meredith bought a bicycle, and I think that Bryan bought a car.'

       b.   *Meredithga*   *kšeehižą*   *ruuc*   *anąga Matejaga*
            Meredith-ga   *kšee-hižą*   ∅-*ruuc*   *anąga Mateja-ga*
            Meredith-PROP apple-INDEF 3s/o-eat and   Mateja-PROP
            wažązihižą   *hihe.*
            wažązi-hižą   *<ha>ee*
            orange-INDEF <1s>say
            'Meredith ate an apple and I said that Mateja ate an orange.'

The examples in (40) show that Hocąk exhibits stripping. (40a) illustrates stripping with an object remnant after the coordinator 'and', while the example in (40b) has an object remnant with disjunction. (40c) shows that stripping is also possible with a subject remnant after the coordinator.

(40)   a.   *Sarahga*   *šųųkhižą*   *haja,*   *anąga wijukhižą*   *šge.*
            Sarah-ga   *šųųk-hižą* ∅-*haja*   *anąga wijuk-hižą* *šge*
            Sarah-PROP dog-INDEF 3s/o-see and   cat-INDEF   also
            'Sarah saw a dog, and a cat too.'

       b.   *Meredithga*   *hąąke kšeehižą*   *ruucnį,*   *nųnįge*
            Meredith-ga   *hąąke kšee-hižą*   ∅-*ruuc-nį* *nųnįge*
            Meredith-PROP NEG   apple-INDEF 3s/o-eat   NEG
            waisgap sguu xuwuxuwuhižą.
            waisgap sguu xuwuxuwu-hižą
            but
            'Meredith didn't eat an apple, but a cookie.'

       c.   *Bryanga*   *nįįtašjak taaxu racgą,*   *anąga Matejaga*   *šge.*
            Bryan-ga   *nįįtašjak taaxu* ∅-*racgą* *anąga Mateja-ga*   *šge*
            Bryan-PROP coffee   3s-drink and   Mateja-PROP also
            'Bryan drank coffee, and Mateja too.'

As is the case in English and other languages, stripping is ungrammatical in embedded clauses in Hocąk. This is shown in (41a) for an object remnant with conjunction, (41b) for an object remnant with disjunction and (41c) for a subject remnant with conjunction.

(41)   a. * *Matejaga   wažahe gipį,   anąga kšeexete   šge   yaare.*
           Mateja-ga   wažahe ∅-gipį   anąga kšeexete   šge   <ha>hire
           Mateja-PROP banana 3s-like and   pineapple also <1s>think
           (Intended: 'Mateja likes bananas, and I think (she likes) pineapple too.')

       b. * *Bryanga   hąąke wažątirehižą ruwįnį,   nųnįge Cecilga*
           Bryan-ga   hąąke wažątire-hižą ∅-ruwį-nį   nųnįge Cecil-ga
           Bryan-PROP NEG   car-INDEF   3s/o-buy-NEG but   Cecil-PROP
           wažą honąkipįnįhižą   ee.
           wažą honąkipįnį-hižą ∅-ee
           bicycle-INDEF   3s-say
           (Intended: 'Bryan didn't buy a car, but Cecil said (he bought) a bicycle.')

       c. * *Sarahga   waisgap sguuhižą rook'į,   anąga Bryanga*
           Sarah-ga   waisgap sguu-hižą ∅-rook'į   anąga Bryan-ga
           Sarah-PROP cake-INDEF   3s/o-bake and   Bryan-PROP
           Meredithga   šge ee.
           Meredith-ga   šge ∅-ee
           Meredith-PROP also 3s-say
           (Intended: 'Sarah baked a cake, and Bryan said Meredith (baked a cake) too.')

To conclude, the possibilities of having an ellipsis site in embedded contexts differ between English and Hocąk: VPE and gapping are not differentiated by embedding, but VPE and stripping are. However, gapping and VPE are still distinguished in adjunct clauses: as we saw in 3.3, VPE is grammatical in adjunct clauses (35) while gapping is not (36).

3.5 Presence of strict and sloppy readings

Another characteristic of VPE is the fact that elided pronouns and anaphors give rise to two different identity readings. The English example in (42) is ambiguous. Under the so-called "strict" reading, the referent of the pronoun is identical in both the antecedent and elided VP. Under the "sloppy" reading, the pronoun

behaves like a variable, and the referent of the anaphor is different for each conjunct.

(42) Lily saw herself in the mirror, and Molly did too.
      Strict reading: Molly saw Lily in the mirror.
      Sloppy reading: Molly saw herself in the mirror.

Fortin (2007) shows that stripping also gives rise to both strict and sloppy readings, as in the example in (43). However, there is another possible interpretation for the second conjunct: the remnant can be interpreted as the object of the stripped clause. Fortin terms this additional reading the "object reading." This third reading is unique to stripping constructions, as the remnant DP in VPE is always interpreted as the subject of the elided constituent.

(43) Lily saw herself in the mirror, and Molly too.
      Strict reading: Molly saw Lily in the mirror.
      Sloppy reading: Molly saw herself in the mirror.
      Object reading: Lily saw Molly in the mirror.

In Hocąk, strict and sloppy readings are available with both VPE and stripping, while the additional "object reading" is possible only with stripping. In the examples in (44), the antecedent VP contains a possessed object. (44a) is an instance of VPE, and the second conjunct has two possible interpretations: either Hunter visited Bryan's mother (strict reading) or Hunter visited his own mother (sloppy reading). In (44b), the second conjunct contains a stripping ellipsis site. Both the strict and sloppy readings are available, but the object reading is also possible: the sentence could mean that Bryan visited Hunter.

(44) a. *Bryanga   hi'ųnį hiira   homąkįnį   anąga Hunterga   šge*
          Bryan-ga   hi'ųnį ∅-hii-ra   ∅-homąkįnį anąga Hunter-ga šge
          Bryan-PROP mother 3s-POSS-DEF 3s/O-visit and   Hunter-PROP also
          ųų.
          ∅-ųų
          3s-do
          'Bryan visited his mother, and Hunter did too.'

      b. *Bryanga   hi'ųnį hiira   homąkįnį   anąga Hunterga   šge.*
          Bryan-ga   hi'ųnį ∅-hii-ra   ∅-homąkįnį anąga Hunter-ga šge
          Bryan-PROP mother 3s-POSS-DEF 3s/O-visit and   Hunter-PROP also
          'Bryan visited his mother, and Hunter too.'

The examples in (45) show that the same readings are possible with reflexives. The second conjunct of (45a) contains a VPE gap, and it has two interpretations: either Meredith hit Mateja (sloppy) or Meredith hit herself (strict). In the stripping example in (45b), both strict and sloppy readings are possible, but so is the "object reading" under which Mateja hit Meredith.

(45) a. *Matejaga   hokijį   anąga Meredithga   šge ųų.*
        Mateja-ga   ∅<kii>hojį   anąga Meredith-ga   šge ∅-ųų
        Mateja-ᴘʀᴏᴘ 3s<ʀᴇғʟ>hit and   Meredith-ᴘʀᴏᴘ also 3s-do
        'Mateja hit herself, and Meredith did too.'

      b. *Matejaga   hokijį   anąga Meredithga   šge.*
        Mateja-ga   ∅<kii>hojį   anąga Meredith-ga   šge
        Mateja-ᴘʀᴏᴘ 3s<ʀᴇғʟ>hit and   Meredith-ᴘʀᴏᴘ also
        'Mateja hit herself, and Meredith too.'

Thus, while strict and sloppy readings are available with both VPE and stripping, stripping constructions have the additional reading that Fortin (2007) calls the "object reading".

4 Deletion vs. pro-form analysis

In the previous two sections, I presented arguments that Hocąk exhibits VPE. In this section, I further argue that VPE in Hocąk is derived by a deletion process. There are two main approaches to any given elliptical phenomena: the ellipsis site is either a deleted phrase or a null *pro*-form. Here, I extend two arguments in favor of a deletion approach of English VPE to Hocąk. First, I show that extraction from the ellipsis site is possible. Second, I demonstrate that ellipsis sites can contain the antecedent to a pronoun outside of the gap.

Fiengo & May (1994) argue that English VPE is best analyzed as VP deletion. Their argument is based on cases of object extraction from the ellipsis site. In (46a), we see that the object of the second clause has undergone *wh*-movement out of the ellipsis site. (46b) illustrates the phenomenon known as antecedent-contained deletion (ACD). In ACD constructions, the ellipsis site is found inside of a relative clause and is licensed under identity with the matrix VP. The head of the relative clause (here, *everyone*) is the object of the elided VP. In both (46a) and (46b), movement of the object in the elided VP has taken place. This is not expected under a *pro*-form analysis of VPE: a *pro*-form has no internal structure, and thus there should be no object position inside the ellipsis site that the extracted object could have originated in. In contrast, a deletion analysis posits a

full-fledged VP in the ellipsis site which undergoes deletion at a later stage in the derivation. In the examples in (46), the object originated inside the elided VP, and underwent movement before deletion took place.

(46) a. I know which book Max read, and **which book** Oscar didn't.

   b. Dulles suspected everyone who Angleton did. (Fiengo & May 1994: 229, 257)

Likewise, Hocąk constructions with *ųų* cannot be analyzed as a *pro*-form, as object extraction is permitted. (47a) shows that focused elements can be extracted from the ellipsis site, and (47b) exemplifies the movement of *wh*-words from the ellipsis site.[3]

(47) a. *Meredithga   waagaxra ruwį,   nųnįge **wiiwagaxra** hąąke*
        Meredith-ga   waagax-ra ∅-ruwį,   nųnįge wiiwagax-ra hąąke
        Meredith-PROP paper-DEF 3s/O-buy but   pencil-DEF NEG
        ųųnį.
        ∅-ųų-nį
        3S-do-NEG
        'Meredith bought the paper, but the pencil, she didn't.'

   b. *Jaagu Bryanga   ruwįra   yaaperesšąną,   nųnįge **jaagu***
        Jaagu Bryan-ga   ∅-ruwį-ra   <ha>hiperes-šąną nųnįge jaagu
        what Bryan-PROP 3s/O-buy-COMP <1s>know-DECL but   what
        Hunterga   ųųra   hąąke yaaperesnį.
        Hunter-ga   ∅-ųų-ra   hąąke <ha>hiperes-nį
        Hunter-PROP 3s-do-COMP NEG   <1s>know-NEG
        'I know what Bryan bought, but I don't know what Hunter did.'

As the example in (48) shows, ACD is also grammatical in Hocąk. ACD would not be possible if *ųų* were a *pro*-form, since the head of the relative clause is the object of the elided VP.

(48) *Bryanga   ruwį,   jaagu Meredithga   ųųra.*
     Bryan-ga   ∅-ruwį jaagu Meredith-ga   ∅-ųų-ra
     Bryan-PROP 3s/O-buy what Meredith-PROP 3s-do-COMP
     'Bryan bought what(ever) Meredith did.'

---

[3] Like other Siouan languages, Hocąk is a *wh*-in-situ language. However, *wh*-words can undergo focus driven movement.

The second argument in favor of a deletion analysis of VPE in Hocąk comes from so-called "missing antecedents." Hankamer & Sag (1976) demonstrate that the gap in English VPE constructions can contain the antecedent to a pronoun. In the non-elliptical example in (49a), the DP *a camel* in the second conjunct serves as the antecedent for the pronoun *it* in the third conjunct. In (49b), the VP in the second conjunct is elided, resulting in a missing antecedent for the pronoun *it*. Nonetheless, the sentence is still grammatical. It is important to note that the instance of *a camel* in the first conjunct cannot be the antecedent for the pronoun *it*: as (50) shows, DPs under the scope of negation cannot serve as antecedents for pronouns.

(49)   a.   I've never ridden a camel, but Ivan's ridden a camel$_i$, and he says it$_i$
             stank horribly.

        b.   I've never ridden a camel, but Ivan has, and he says it$_i$ stank horribly.
             (Hankamer & Sag 1976: 403)

(50)   *I've never ridden a camel$_i$, and it$_i$ stank horribly. (Hankamer & Sag 1976:
        404)

Hankamer & Sag (1976) argue that the grammaticality of the example in (49b) points to a deletion analysis of VPE. These facts are not readily explained under a *pro*-form analysis: since the ellipsis site would not have internal structure at any point in the derivation, the elided VP in (49b) would never contain the antecedent for the following pronoun.

Examples of VPE with missing antecedents are also grammatical in Hocąk. In (51a), the DP *kšeexetehižą* 'a pineapple' in the second conjunct is the antecedent for the null pronominal subject of the verb *sguu* 'sweet'. In (51b), the VP containing the antecedent is elided, and the resulting sentence is grammatical. Like English, a pronoun cannot find its antecedent in a negated clause (52).

(51)   a.   *Hąkaga kšeexetehižą   haacnį,   nųnįge Matejaga*
             hąkaga kšeexete-hižą   ∅<ha>ruuc-nį   nųnįge Mateja-ga
             never   pineapple-INDEF   3s<1s>eat-NEG but   Mateja-PROP

             kšeexetehižą   ruuc,   anąga sguu   ee.
             kšeexete-hižą   ∅-ruuc   anąga ∅-sguu   ∅-ee
             pineapple-INDEF   3s/O-eat and   3s-sweet 3s-say
             'I never ate a pineapple, but Mateja ate a pineapple, and she said it
             was sweet.'

b. *Hąkaga kšeexetehižą   haacnį,   nųnįge Matejaga   ųų,*
   hąkaga kšeexete-hižą   ∅<ha>ruuc-nį nųnįge Mateja-ga   ∅-ųų
   never   pineapple-INDEF 3s<1s>eat-NEG but   Mateja-PROP 3s-do
   anąga sguu   ee.
   anąga ∅-sguu   ∅-ee
   and   3s-sweet 3s-say
   'I never ate a pineapple, but Mateja did, and she said it was sweet.'

(52) *Hąkaga kšeexetehižą   haacnį   anąga sguu.*
     hąkaga kšeexete-hižą   ∅<ha>ruuc-nį anąga ∅-sguu
     never   pineapple-INDEF 3s<1s>eat-NEG and   3s-sweet
     'I never ate a pineapple, and it was sweet.'

Both the extraction facts and pronoun antecedent facts point to an analysis in which the contents of elided VPs in Hocąk are present syntactically, and that the omission of elided VPs is due to a deletion process.

5 Conclusion

In this paper, I examined an elliptical phenomenon that I argue instantiates VPE in Hocąk. This process targets all VP-internal material, including direct objects, indirect objects, result phrases, temporal adjuncts, locative adjuncts, comitatives, manner adverbs and complement clauses. VPE is conditioned by the presence of a licensing head, which I showed is the light verb *ųų* in Hocąk. However, Hocąk VPE is constrained in that the antecedent verb must be active. I propose that this restriction is due to the fact that active *v* is the licenser. This elliptical process displays many other traits that Goldberg (2005) and Fortin (2007) demonstrate are characteristic of VPE crosslinguistically. I also briefly discussed that Hocąk VPE should be analyzed as VP deletion, rather than a VP *pro*-form. This paper constitutes the first in depth description of VPE in Hocąk, and contributes to the literature on the properties of VPE crosslinguistically.

Acknowledgment

Abbreviations

1, 2, 3	first, second, third person	PL	plural
		POSS	possessive
COMP	complementizer	PROP	proper name
DECL	declarative		
DEF	definite	PST	past tense
FUT	future	REFL	reflexive
INDEF	indefinite	S	subject agreement
NEG	negative		
O	object agreement	STAT	= stative verb.

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