

The syntax of hybrid verb/affix lexemes and clause fusion in Hiaki (Yaqui)

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Abstract

We argue that verb/affix hybrids in Hiaki (Yaqui) are subject to the same conditions on clause fusion (Rude 1996) as ‘pure’ affixal verbs in spite of their different distributional behavior. We show that all verbs involved in V-V affixation under clause fusion undergo VP embedding, rather than TP embedding, whether they also have a morphologically free use or are obligatorily bound. This results in one case domain, but two binding domains, which shows clause binding sensitivity to VP and nominative case assignment at TP. The ability of these hybrids to occur in affixal ‘clause fusion’ structures, as well as to appear as free main verbs embedding an independent clause, is unusual, and enables us to investigate the conditions on V-V incorporation. As Guerrero Valenzuela (2004) points out, such verbs may show incipient grammaticalization.

Keywords: clause fusion, affixal embedding, grammaticalization

1 Introduction

Hiaki¹ displays an interesting (but not uncommon) type of complex predicate formation, in which a derivational affix is attached to an embedded verb. The affix introduces its own arguments to the construction, and takes the content of the embedded verb phrase as its semantic complement, resulting in a ‘clause-fusion’ construction (Rude 1996). In this construction, the arguments introduced by the affix and those introduced by the embedded verb are case-marked in a monoclausal pattern, despite their selectional relationships with distinct subcomponents of the complex verb. Typical examples are shown in (1a)–(1c):

- (1) a. *Anselmo* [*uusi-ta vuiti*]-*sae-k*
Anselmo-NOM [child-ACC run-DIR]-PRF
‘Anselmo told the child to run.’²
- b. *Carlos* [*uusi-ta vuiti*]-’*ii*’-*aa-k*
Carlos-NOM [child-ACC run-DES]-PRF
‘Carlos wanted the child to run.’

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¹Hiaki (Yaqui) is a Uto-Aztecan language spoken in Sonora, Mexico and Arizona, U.S.

- c. *Carlos* [uusi-ta vuiti-]tua-k
 Carlos-NOM [child-ACC run-CAU]-PRF
 ‘Carlos made the child run.’

In the examples above, the suffixes *-sae* ‘to tell’ (1a), *-ii’aa* ‘to want’ (1b), and the causative *-tua* ‘to make/have’ (1c) combine with the complement verb *vuite* ‘to run’. This produces what Rude terms ‘clause fusion’, referring to the notion that two semantically distinct clauses ‘fuse’ into a single syntactic clause. This type of construction is quite productive in Hiaki, which contains many such derivational verbal affixes (e.g. *-ii’aa*, ‘desiderative,’ *-sae*, ‘directive,’ *-tua*, ‘causative,’ *-pea* ‘to feel like’). These affixes are bound, and may never occur as main verbs on their own, either embedding an independent complement clause or taking an NP object, as the ungrammaticality of the examples in (2) indicates:

- (2) a. **Jason* [uusi-ta koowi-m am-sua-ne-vetchi’ivo] ii’aa
 Jason-NOM [child-ACC pig-PL 3P.ACC-care.for-IRR-COM] want
 ‘Jason wants the child to take care of pigs.’
 b. **Jason tahkai-m ii’aa*
 Jason tortilla-PL want
 ‘Jason wants a tortilla.’

In contrast, the Hiaki verb *mahta* ‘to teach’ exhibits hybrid behavior, as it appears both as an affix and as an independent main verb, with the same meaning in both structures in (3a) and (3b). In (3a), we see the complement verb *sua-* ‘care for’ is the stem hosting the matrix verbal affix *-mahta*. In (3b), the same form occurs as a free verb, embedding a separate complement clause introduced by the complementizer/preposition *vetchi’ivo* ‘for’:

- (3) a. *Jason* [uusi-ta koowi-m sua-]mahta-k
 Jason-NOM [child-ACC pig-PL care.for-]teach-PRF
 ‘Jason taught the child to take care of pigs.’
 b. *Jason* [uusi-ta koowi-m sua-ne-vetchi’ivo] a=mahta-k
 Jason-NOM [child-ACC pig-PL care.for-IRR-COM] 3S=teach-PRF
 ‘Jason taught the child to take care of pigs.’

Affixal and free *mahta* in (3a) and (3b) embed different types of complement clauses. Because the two kinds of complement are clearly distinct syntactic objects, we conclude that this is not a simple case of cliticization under adjacency, as with clitic/free morpheme alternations such as *I’m* vs. *I am* or *isn’t* vs. *is not*. In (3a), the affixal case, no tense or aspect morphemes can intervene between the suffixed *-mahta* and the complement verb *sua-*. This is shown in (4), in contrast to the clausal complement case in (3b), which allows an embedded future tense marker *-ne*:

- (4) **Jason* [uusi-ta koowi-m sua-ne]-mahta-k
 Jason-NOM [child-ACC pig-PL care.for-IRR]-teach-PRF
 ‘Jason taught the child to keep pigs.’

²Gloss: NOM: nominative; ACC: accusative; DIR: directive; PRF: perfective; PRT: preterite; FUT: future; NEG: negation; DES: desiderative; CAU: causative; PL: plural; IMPF: imperfective; INCL: inclination; IRR: irrealis; COMP: complementizer; 3S: 3rd person singular clitic; 3P: 3rd person plural clitic; 3: 3rd person; REF: reflexive; TR: transitivizer; DET: determiner; RDP: reduplication; WH: interrogative; INST: instrumental

Despite the structural contrast displayed in (3a) and (3b), both constructions share a crucial characteristic with respect to their case and binding domains, which presumably accounts for the general behavior that non-finite complement verbs exhibit in Hiaki, an Exceptional Case Marking (ECM) language like English.

As in English, non-finite clause embedding is characterized by a single case domain, in which no nominative argument is licensed in the embedded clause. In contrast, two binding domains are licensed in such structures, which confirms the presence of two different clauses despite the complement clause's lack of a second nominative argument. The English equivalent of (3a) and (3b), in (5), shows this parallel:

- (5) a. Jason taught the child to take care of pigs.
 b. Jason_i taught the child_k to take care of himself_{*i/k}.
 c. Jason_i taught him_{*i/k} to take care of pigs.
 d. Jason_i taught him_{*i/k} to take care of himself_k.
 e. Jason_i taught himself_i to take care of pigs.

As (5) shows, the embedded subject *him/the child* may bind the embedded object *himself* ((5b) and (5d)), and the embedded subject may itself be bound by the matrix subject *Jason* (5e). Crucially, the matrix subject may not bind the embedded object (5b). Unlike verbs like 'want', the possibility of PRO as the embedded subject is not available in English with verbs such as 'teach' as the ungrammaticality of (6b) shows:

- (6) a. Jason PRO_i to take care of himself_i.
 b. *Jason_i taught PRO_i to take care of himself_i.

In (6a), the matrix subject *Jason* binds all the way into the embedded object *himself* by virtue of binding the embedded subject PRO. This is not possible in (6b) where the embedded subject is obligatorily distinct from the matrix subject. A similar pattern of variation is also the case in Hiaki, in that some affixal predicates require control of the embedded subject and some require a distinct embedded subject:

- (7) a. *Peo* [Maria-*ta bwiik*]-*'ii'aa*
 Pete.NOM [Maria-ACC sing]-DES
 'Pete wants Maria to sing.' (Escalante 1990:13(26a))
 b. *inepo bwiik-pea*
 1s.NOM sing-INCL
 'I feel like singing.' (Escalante 1990:13(26b))
 c. **inepo* [Maria-*ta bwiik*]-*pea*
 1s.NOM [Maria-ACC sing]-INCL
 'I'd like Maria to sing.' (Escalante 1990:13(26c))

The derivational affix -*'ii'aa* 'to want' in (7a) mandatorily requires that the subject of the embedded verb be distinct from the matrix subject; in contrast, other affixes such as *-pea* 'to feel like' (7b), exhibit mandatory control of the embedded subject by the matrix subject.³

Given the distribution of data described above, this paper explores the following issues:

³In other words, Hiaki -*'ii'aa*, 'want', is like English 'teach' or English ECM 'want' in requiring a non-control construction with a distinct embedded subject NP, while Hiaki *-pea* is like English 'remember' or English control 'want' in requiring a controlled embedded subject.

- (8) a. The syntax of Hiaki affixal predicates (i.e., *-sae* ‘tell’, *-ii’aa* ‘want’, and others) as instances of complex predication in this language;
 b. The ‘hybrid’ behavior of verbs such as *mahta* ‘teach’ in their roles as both free verbs and affixes
 c. The syntactic behavior of non-finite complement constructions in Hiaki as obligatorily exhibiting ECM; and
 d. the structural consequences of these affixal ECM constructions in Hiaki in terms of binding and case.

We claim a syntactic consequence in terms of both case and binding for the ‘hybrid’ verb phenomenon. Case-wise, all clause fusion configurations (i.e., affixal predicates and ‘hybrids’) show a single case domain, licensing just one nominative DP. Binding-wise, all clause fusion configurations also exhibit identical behavior: they all contain two binding domains, overlapping at the embedded subject as a result of ECM.

The paper is organized as follows: in section 2, we offer an analysis where clause fusion of both ‘hybrid’ and purely affixal verbs undergoes VP (not TP) embedding. Section 2.1 illustrates the consequences of this analysis in terms of case and binding domains, which suggest the ‘hybrid’ origins of clause fusion structures. Section 3 is an application of the analysis to other verbs of the ‘hybrid’ type, followed by a conclusion in section 4.

2 The analysis: VP embedding

We claim that ‘hybrid’ verbs such as *mahta* ‘teach’ exhibit clause fusion exactly like pure affixes such as *-sae* ‘tell’. All affixal predicates in Hiaki do clause fusion by embedding a VP, instead of embedding a TP, regardless of the availability of a non-affixal construction for the affix involved.

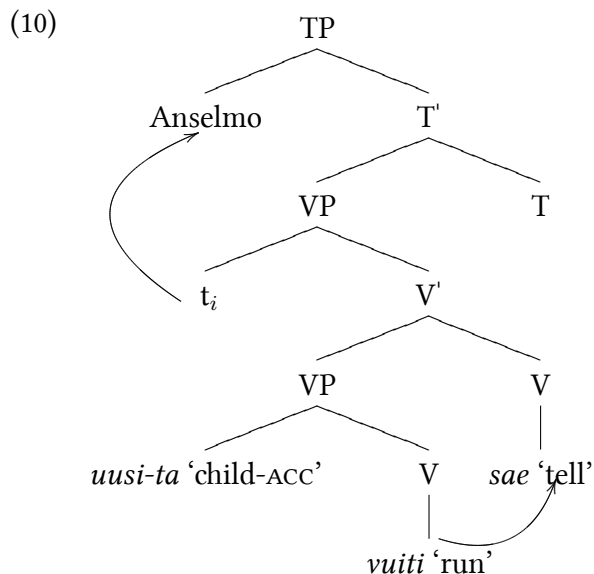
2.1 Case

Both affixes and ‘hybrid’ verbs in Hiaki subcategorize for a VP, rather than TP, complement clause. This results in one case domain, where just the matrix subject is in the nominative. Any other DP appearing in the structure is in the accusative. For ease of exposition, the examples with *-sae* ‘tell’ (1a) and *mahta* ‘teach’ (3a) are repeated in (9) and (11) respectively.

- (9) *Anselmo* [*uusi-ta vuiti*]-*sae-k*
 Anselmo-NOM [child-ACC run-DIR]-PRF
 ‘Anselmo told the child to run.’

In (10), the obligatorily affixal *-sae* combines with the complement verb *vuite* ‘run’ forming a complex predicate in which both verbs share the same TP, resulting in a single case domain.⁴ The embedded subject *uusi-ta*, ‘child-ACC’, receives its accusative case via ECM from the matrix V. (See below for more details concerning the ECM structure.)

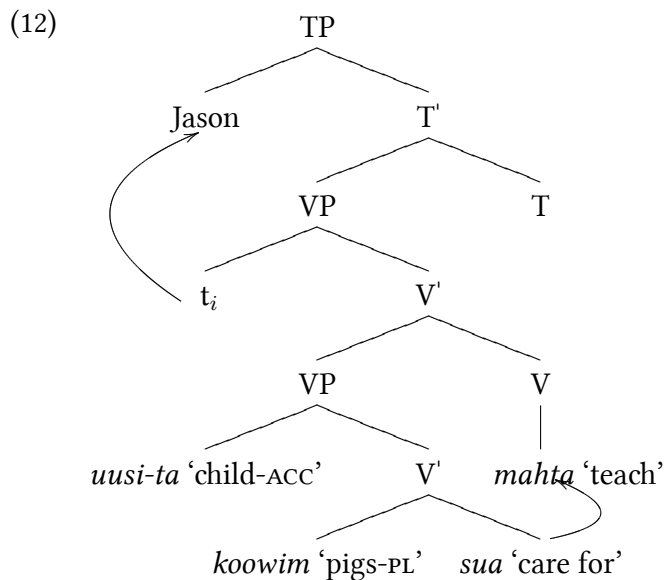
⁴We assume the VP-internal subject hypothesis (Koopman and Sportiche 1986) according to which the subject is base-generated in the specifier of its theta-assigning VP, indicated by the shaded copy of the subject in this position in the structures above. Although we do not explicitly indicate it in the structures here, the analysis is compatible with the split-VP hypothesis as well.



By the same token, in (11), the ‘hybrid’ verb *mahta* ‘teach’ fuses with the complement verb *sua* ‘care for’ to share the same TP, and consequently, case domain, in which only the matrix subject Jason is in the nominative:

- (11) *Jason* [*uusi-ta koowi-m sua-*]*mahta-k*
 Jason-NOM [child-ACC pig-PL care.for-]teach-PRF
 ‘Jason taught the child to take care of pigs.’

The structure involving a ‘hybrid’ matrix verb such as *mahta* in (12) shows the parallel between the analyses in (10) and (12):



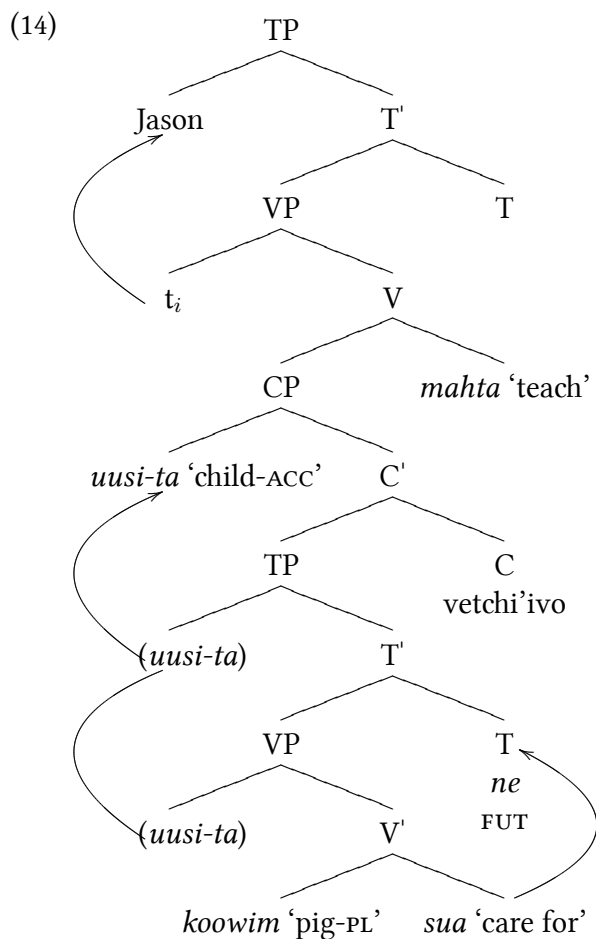
The structures in (10) and (12) show two VPs each, the matrix VPs, headed by *-sae* (10) and *mahta* (12), and the complement VPs, headed by *vuite* ‘run’ (10) and *sua* ‘care for’ (12). Both VPs in (10) and (12) share a single TP. This results in one case domain, in which just one nominative DP (i.e., *Anselmo*, *Jason*) is licensed as the subject of the matrix verb, *-sae* (10) or *mahta* (12). The complement

subjects (i.e., *uusita*, ‘child-ACC’) appear in the accusative via ECM from the matrix predicate, since a second finite TP, needed to license a second nominative case, is lacking. This behavior is typical of simplex, rather than complex, clausal configurations.

Additionally, the verb *mahta* may also occur as a free verb with clausal embedding, by taking a complement clause introduced by the preposition/complementizer *vetchi’ivo*⁵ in (3b), repeated as (13):

- (13) *Jason* [*uusita* *koowi-m* *sua-ne-vetchi’ivo*] *a=mahta-k*
 Jason-NOM [child-ACC pig-PL care.for-IRR-COM] 3S=teach-PRF
 ‘Jason taught the child to take care of pigs.’

In contrast with the clause fusion structures analyzed in (10) and (12), the configuration in (14) must include a second TP, whose head is the irrealis particle *-ne*.



The presence of a second TP, however, does not guarantee the licensing of a second nominative DP, evidenced by the accusative *uusita* ‘child-ACC’ as the complement subject. This is a consequence of the non-finite status of the complement clause, as only finite tense heads have the ability to license nominative case in languages such as Hiaki (or English). The accusative case on the embedded subject comes from the preposition/complementizer *vetchi’ivo* itself, which assigns accusative to the

⁵The postposition *vetchi’ivo* ‘for’ (as well as the postposition *-po*, ‘in’) seem to have complementizer-like uses, as here, which are apparently syntactically and semantically distinct from their postpositional uses. We will investigate this in future research.

complement subject in its specifier, in the same way as the English preposition/complementizer *for* may assign accusative case to the subject of the complement clause introduced by it (15):

(15) Jason hopes [**for the child/him** to take care of the pigs]

In (15), the English preposition/complementizer *for* assigns accusative case to the complement subject *the child/him*, since the non-finite verb *to take care of* lacks the ability to do so. In other words, *for* is required as a case assigner to the complement subject in order to prevent a violation of the Case Filter (Chomsky 1981:49). In the same way, the Hiaki preposition/complementizer *vetchi'ivo* ((13) and (14)) assigns accusative case to the complement subject *uusi-ta* 'child-ACC'. (We assume a Spec-Head configuration for this assignment, but this is not necessary.) This DP would remain caseless otherwise, given the lack of an appropriate case assigner in the complement TP.⁶

Escalante (1990) distinguishes between complex and compound verbs in Hiaki. Affixes such as *-sae* are classified by this author as complex, whereas *mahta* falls into the compound class. Among the properties shared by the verbs falling into either class is the obligatoriness of independent overt subjects of the matrix and complement clause,⁷ regardless of the embedding configuration. The requirement of the 'inner' subject to be in the accusative case, as exemplified in the analysis above, is another characteristic shared by both verb classes in either of their configurations. This behavior is contrasted with conjoined clauses, where both verbs are tensed and each verb takes a nominative subject as in (16):

(16) *empo ye'eka, aapo into bwiika-k*
 2S.NOM sing-PRF 3S.NOM and dance-PRF⁸
 'You sang and he danced.' (Escalante 1990:12(6))

In (16), two separate matrix clauses are conjoined while keeping their separate case domains (i.e., both finite verbs take a nominative subject).

In terms of case domain, however, it is not always true in Escalante's examples that apparently tensed verbs take nominative arguments as their subjects, as the existence of sentences such as (17) shows:

(17) *aapo [apo'ik siika']-tia-n*
 3S.NOM [3S.ACC leave.PRF]-say-IMPF
 'He_i said he_j was leaving.' (Escalante 1990:12(12))

In this sentence, the perfective embedded stem verb *siika* 'left' takes an accusative subject (e.g. *apo'ik* 'him'). The phonology of the stem and the syntactic behavior of the complex predicate indicate affixation.⁹ Syntactically, it is impossible to separate the compound form with adverbial or other intervening material, again clearly indicating affixation. The accusative case exhibited by the complement

⁶We assume that the head of the complement TP, the irrealis particle *-ne*, is tenseless and hence lacks the ability to assign case to its subject.

⁷As noted above, other verbs such as *-pea* require that the matrix subject and (null) embedded subject are coreferential. According to Escalante (1990:13), a complex sentence is not produced in this case. We have not yet observed any cases of optionality between subject-control and ECM structures in Hiaki.

⁸Relation of glosses used in Escalante (1990) and their equivalents in the present paper: PERF = PRF; INCLINATION = INCL; IMPF = IMPERF/PAST IMPF; FUTURE = FUT; REFL = REF.

⁹In Hiaki, long vowels in stems are shortened when a derivational affix or compounding element is added, and occasionally a glottal stop may be inserted at the end of the first member of the verbal complex to introduce a hiatus.

subject is evidence of a single case domain regardless of whether the verb heading the complement clause is tensed (e.g. the perfective *siika-*).¹⁰

Despite the apparently doubly tensed complex predicate just shown in (17), combinations of ‘hybrid’ verbs in their affixal form directly composing with embedded heads do not normally allow any tense or aspect morphemes between the two members of the compound, as (4) [repeated here as (18)] shows:

- (18) *Jason* [*uusi-ta koowi-m sua-(*ne-)*] *mahta-k*
 Jason-NOM [child-ACC pig-PL care.for-(*IRR-)]teach-PRF
 ‘Jason taught the child to keep pigs.’

The fact that it is impossible for the irrealis morpheme *-ne* to appear within the verbal compound is evidence of VP embedding instead of TP embedding. This may suggest that in cases such as (17), we are not likely to be dealing with tense/aspect morphemes intervening between the two members of the verbal compound. Rather, we are dealing with a complex predicate in which the verbal stem is in the participial form, and hence tenseless despite its homophony with the suppletive past form. This would entail that for all the suppletive past tense forms in which the verbal participle is indistinguishable from the past tense, we would see the suppletive form here. For any suppletive past tense forms in which the participle and past tense are distinct (if any such exist), the participle should appear in these constructions, rather than the past tense form.¹¹

Furthermore, in most cases of V-V affixation where reduplication is applied to indicate habitual tense, only the ‘outer’, affixal verb reduplicates as shown below, whether it is a mandatorily affixal one like *-sae* (19a) or the ‘hybrid’ *mahta* (19b):¹²

- (19) a. *inepo* [*a=nok-*] *sas-sae*
 1S.NOM [3S.ACC=talk]-RED-DIR
 ‘I tell him to speak up.’ (Escalante 1990:14(41))
 b. *Maria* [*yee hiak-nok-*] *mah-mahta*
 Maria [people Hiaki-speak]-RED-teach
 ‘Maria teaches people to speak Hiaki.’

Finally, further evidence that the constructions at hand do not involve separate TPs comes from negation, since only the ‘outer’ verb can be negated, as in (20):

¹⁰Escalante admits that this construction in which a ‘hybrid’ matrix verb combines with a perfective complement verb is limited to combinations involving *tia* ‘to say’. All such examples in this paper exhibit the ‘hybrid’ lexeme *-tia* affixed to a complement verb which suppletes, rather than inflects, for tense. This fact may be an indication that, in this case, the head of the complement TP may be participial instead of finite, which would in turn explain the absence of a second nominative DP as the complement subject, as we speculate below. The example in (i), however, poses a problem to this hypothesis, as the embedded verb appears inflected for the future tense by means of the future inflectional affix *-ne*:

- (i) *aapo* [*au siim-ne'*] *-tia-n*
 3S.NOM [3S.REFL leave-FUT]-say-IMPF
 ‘He_i said he_i will leave.’ (Escalante 1990:13(30))

In this case, we suggest that the verb *-tia* may subcategorize for TP embedding, as opposed to the rest of verbs studied here, which subcategorize for VP embedding. This issue is still under investigation.

¹¹We will investigate this in future work. See footnote 10 for problems related to this point.

¹²In fact, there are a few embedding purely affixal verbs (e.g. *-tua*, *-pea*, among others) that may not themselves reduplicate, the only reduplication possible being on the embedded verb stem. This class may involve ‘light’ verbs rather than full verb roots, which might be further indication of the grammaticalization process already suggested for these constructions.

- (20) *inepo kaa [enchi siim]-sae-n*
 1S.NOM NEG [2S.ACC leave-DIR]-IMPF
 'I didn't tell you to leave.' (Escalante 1990:13(29a))

In (20), the negation *kaa* can only take scope over the verbal complex *siim sae* 'tell to leave' as a whole, negating only the tensed matrix predicate *-sae* 'tell'. It cannot mean 'I told you not to leave'.

In order to negate the 'inner' verb *siim-* (bound form of *siime* 'leave'), Escalante argues that the clause containing the compound must be made explicitly subordinate, introduced by the complementizing lexeme *-kai*, the 'outer' verb becoming semantically redundant (21):

- (21) *nee enchi tehhoa-kan, [kaa enchi siim-sae-kai]*
 1S.NOM 1S.ACC tell-PRF [NEG 2S.ACC leave-DIR-COMP]
 'I told you not to go.' (Escalante 1990:13(29b))

In (21), the semantic content of *-sae* is contributed to the structure by the matrix full verb *tehwa* 'to tell'. As (20) shows, the absence of this additional full verb in the structure would result in the impossibility of negating the embedded member of the complex predicate, which in turn is further evidence of the single TP-multiple VP analysis of clause fusion in Hiaki put forward in this paper.

Thus far, this section has argued in favor of the simplex status of clause union structures as they result in just one, rather than two, tense, case and negation domains. This is because such structures involve VP rather than TP embedding, and have just one [Spec,TP] position licensing just one nominative DP (the matrix subject) and one tense marking. The fact that just one sentential negation is possible in these structures has been offered as further evidence. Section 2.2 explores the consequences clause fusion has in terms of the correct characterization of binding domains. The conclusions we draw from the binding facts further suggest the grammaticalization process undergone by the verbs participating in this structure.

2.2 Binding

Unlike conventional simplex structures, configurations involving clause fusion display two, rather than one, binding domains. This fact, in combination with the simplex behavior in terms of case, reflects both the peculiar 'hybrid' syntactic status of the structure and its 'transitional' typological status.

These structures are characterized by the fact that the nominative subject of the matrix verbal affix cannot bind a reflexive in the object position of the embedded verb domain. This behavior is typical of complex rather than simplex structures.

This binding pattern is illustrated in the examples below. The complement subject *Art-ta* 'Art-ACC' binds the third person reflexive anaphor *au* from the embedded subject position (22a), in accordance with Principle A of the Binding Theory (Chomsky 1981:6), which states that anaphors must be bound in their binding domain. The matrix subject *Heidi* may not bind this reflexive. In contrast, in (22b), the matrix subject *Heidi* binds the embedded object pronominal clitic *a=* (22b). The embedded subject *Art-ta* may not bind this clitic as pronouns must be free within their binding domain, according to Principle B of this theory.

- (22) a. *Heidi [Art-ta au sua]-mahta*
 Heidi-NOM [Art-ACC 3.REF care.for]-teach
 'Heidi teaches Art to take care of himself/*her.'

- b. *Heidi* [Art-ta a=sua]-mahta
 Heidi-NOM [Art-ACC 3S=care.for]-teach
 ‘Heidi teaches Art to take care of her /*himself.’

The lack of ambiguity of reference in (22a) and (22b) is a consequence of the presence of the two binding domains in clause fusion structures in Hiaki. Crucially, this same pattern of binding is found with the purely affixal verbs, illustrated in (23), where only (23a) is grammatical:

- (23) a. *Nee* [Art-ta ne sua]-tua
 I-NOM [Art-ACC 1S care.for]-CAU
 ‘I make Art take care of me.’
 b. **Nee* [Art-ta ino sua]-tua
 I-NOM [Art-ACC 1.REF care.for]-CAU
 ‘I make Art take care of myself.’

The findings in (23) suggest, once again, a similar analysis for both purely affixal and ‘hybrid’ verbs, where the main pattern is that of complex matrix-embedded configuration despite its single case domain.

Escalante (1990) also notices this pattern, shown in example (24), which influences his classification of sentences involving affixal verbs as complex:

- (24) *aapo* [Peo-ta au vekta]-tua-ne
 3S.NOM [Pete-ACC 3S.REF shave]-CAU-FUT
 ‘He will make Pete shave himself.’ (Escalante 1990:12(17))

In (24), as in the sentences above, the reflexive *au* ‘him/her/itself’ is bound by the complement subject, not by the matrix subject, in accordance with Principle A of the Binding Theory. This shows the presence of clausal boundaries established by this configuration. In (25), however, Escalante gives an example of coreference between the subjects of the matrix and embedded clauses, as the anaphor *ino* ‘myself’ indicates:

- (25) *inepo* [ino bwiik]-tua-vae-n, taa=ne kaa aa bwiika-k
 1S.NOM [1SREF sing]-CAU-PROSP-IMPF but=1S.NOM NEG able sing-PRF
 ‘I wanted to make myself sing, but I wasn’t able to sing.’ (Escalante 1990:12(16))

Here, we see that the matrix subject may bind a reflexive in the the embedded subject position. This indicates that the embedded subject participates both in the embedded clause’s binding domain (binding lower reflexives, as in (22a)) and in the matrix clause’s binding domain (available for binding by the matrix subject). This is the usual consequence of the ECM configuration in English (see (5e), for example), and is consistent with our claim that clause fusion is an ECM configuration in Hiaki as well. In the theory of ECM as raising-to-object proposed in Lasnik (1999), this double participation on the part of the embedded subject is the consequence of its base-generation in the embedded clause, followed by raising into the matrix clause to receive accusative case from the matrix case-assigning position associated with the matrix verb. This analysis could apply to the Hiaki clauses as well, if we accept the presence of an additional functional projection in the matrix clause to provide a landing site for the embedded subject; for now, we simply conclude that the dual domain-membership of the embedded subject is consistent with an ECM analysis.

This subsection has explored binding facts involved in clause fusion structures in Hiaki. The data offered suggests that, in terms of binding, such structures behave like complex rather than simplex

sentences, despite the ‘simplex sentence’ behavior with respect to case assignment. This is contrasted with the alternative configuration in which ‘hybrid’ verbs participate (e.g. the one involving a subordinate clause introduced by the preposition/complementizer *vetchi’ivo*). This syntactic contrast exhibited by ‘hybrid’ verb-affixes in Hiaki just described ultimately suggests an incipient grammaticalization process from full to purely affixal verbs.¹³ The following section offers an illustration of other verbs which, like *mahta*, exhibit a ‘hybrid’ verb-affix behavior.

3 Other verbs like *mahta*

There are other verbs in Hiaki which display a ‘hybrid’ verb-affix behavior. These verbs normally denote perception events (e.g. ‘see’, or ‘hear’) or movement (e.g. ‘go’).

(26) **vicha**

- a. *Nee o’oo-ta vicha-k*
I-NOM man-ACC see-PRF
‘I saw the man.’ (Lindenfeld 1973:68(13))
- b. *Inepo enchi vicha ke hibwa-su-k*
I-NOM you-ACC see that eat-PRF-PRT
‘I see that you already ate.’ (Lindenfeld 1973:102(10))
- c. *Hu hamut hu-ka vachi-ta hinu-vit-wa-k*
DET-NOM woman-NOM DET-ACC corn-ACC buy-see-PAS-PRF
‘The woman was seen buying corn.’ (Rude 1996:511(68))

The verb *vicha* ‘see’ behaves as a full verb in (26a) and (26b) as well as an affix in (26c). The phonological stem form (e.g. from *vicha* to *-vit*) is additional evidence of affixation.

(27) **siime**

- a. *Yoko=ne potam-meu sim-nee*
tomorrow=I Potam-TO go-FUT
‘I’m going to Potam tomorrow.’ (Dedrick and Casad 1999:293(1))
- b. *Inepo ili hu’unee-sime*
I little know-go
‘I’m beginning to understand a little bit.’ (Dedrick and Casad 1999:294(7))
- c. *Hita=sa empo hoo-si-sime*
what=WH you do-RDP-go
‘What are you going around doing?’ (Dedrick and Casad 1999:294(9))

Here the verb *siime* ‘go’ also displays hybrid behavior, as a full verb in (27a) and as an affix in (27b) and (27c). Note the semantic bleaching undergone by the verb *sime* in (27b) (e.g. just inceptive meaning is contributed to the structure) with respect to the occurrence of this verb in (27a) and (27c). This is another sign of the grammaticalization process experienced by ‘hybrids’ in Hiaki.

¹³Escalante (1990:12) already suggests a historical evolution from full verb into purely affixal to what he calls ‘complex’ verbs (e.g. *-’ii’aa*, *-sae*, and the like).

- (28) **naate**
- a. *Ume pahkola-m i'an huubwa naate*
the.PL pascola-PL just now start
'The pascolas are just starting now.'
 - b. *Santos i'an huubwa hippon-naate-k*
Santos now just play-start-PRF
'Santos is just now starting to play.'

The verb *naate* 'start' also appears as a main verb (28a) and an affixal verb (28b). Very similar in meaning are the hybrid (-)hapte, 'start/stand (plural subject)', and the mandatorily affixal -taite, 'start' (see Harley and Haugen (2007) for discussion of these). The aspectual type of meaning contributed by these verbs to the structures they appear in suggests that these verbs are natural candidates for reanalysis and grammaticalization as purely aspectual markers.

Finally, the verb *maachi* 'appear' is another 'hybrid':

- (29) **maachi**
- a. *Hai=sa maachi huu'u 'em sa'awa*
how=WH appear that you sore
'How does your sore seem?' (or 'How is your sore?') (Dedrick and Casad 1999:67(39))
 - b. *Kaita-e mo'iti-machi*
nothing-INST plow-appear
'There is nothing with which to plow' (Dedrick and Casad 1999:67(40))

The contrast is between (29a), in which *maachi* appears as a full verb heading the clause, and (29b), where *-machi* appears affixed to the embedded verb *mo'iti* 'plow'.

The semantic contrast in the examples above suggests that the verbs conforming to the hybrid type may be exhibiting different stages/degrees of grammaticalization, as some verbs such as *siime* 'go' appear to be more semantically bleached than other verbs such as *mahta* 'teach' or *vicha* 'see'. Although semantic development from full to light verb is a strong indication of grammaticalization, not all hybrid verbs exhibit such semantic contrast in their affixal forms. It is the syntactic parallel between hybrids in their affixal uses and the pure affixes that clearly suggests the grammaticalization process these verbs are undergoing.

4 Conclusion

The data and analysis shown in this paper suggest that all verbs involved in clause fusion in Hiaki undergo VP embedding, not TP embedding. This clause configuration produces one case and two binding domains in an ECM configuration. Thus, the case pattern exhibited by hybrids explains the restriction to just one nominative and multiple accusative arguments in structures of this kind whenever the verb appears in its affixal form. The two-binding domain pattern exhibited by these verbs, however, shows the underlyingly complex structure involved in clause fusion constructions in Hiaki.

The key to such grammaticalization processes seems to be the different behavior displayed by verb/affix hybrids when clause fusion does not take place. To what extent grammaticalization in these terms is a fact, and what factors lead to this result is a question that needs to be further explored.

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