Verb compounding in Ese'eja (Takanan)[1]

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Abstract: Verb compounding in Ese'eja, a Takanan language spoken in Bolivia and Peru, is a very productive device that involves two lexical roots combining within a single verb predicate. These items are analyzed as a single unit on phonological, morphological, syntactic and semantic grounds. The verb compounding construction discussed here should not be confused with other phenomena involving verbal material, namely auxiliary constructions and affixation of the numerous verbal suffixes of verbal origin. The first component of a verb compound is always a verb, while the second one may either be a predicative adjective or another verb. Each component may come from an open or a closed semantic class, depending on the semantics of the verb compound (Path or Resultative) and its morphology (Verb-Verb or Verb-Adjective). Strict transitivity harmony (Valenzuela, this volume part 2) is observed in verb-verb compounds.

Keywords: verb-verb compounding, verb-adjective compounding, serial verb construction, transitivity harmony, lexicalization cline

1. Introduction

Ese'eja, a Takanan language of the Bolivian and Peruvian lowlands, displays productive verb compounding. In the literature the term 'verb compound' may lump together distinct phenomena such as the productive combination of several verbal roots, the lexicalized combination of two verbal roots, and the combination of a main verb and a grammaticalized verb. Alternatively, the phenomenon called 'verbal compound' here is sometimes referred to as a (subtype of) 'serial verb' construction, although

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wordhood is sometimes considered a primary criterion to distinguish one phenomenon from the other.

In this paper, the term 'verb compound' (henceforth VC) refers to two lexemes grouped together to form the *lexical* head of the predicate, and thus excludes constructions involving a grammaticalized verb form or noun incorporation. VCs in Ese'eja minimally consist of one verb root, plus another lexical element. The following examples (1a-c) illustrate the three most frequent types of VCs encountered in the language.

(1)a.   PATH VCs (verb-verb)
Mahoya=se   [nekia-'okia]-ka-ani   [neki-'oke]-ki-ani
then=1INCL.ABS   standTR-put_down-3A-PRS   stand-go_down-GO_TO_DO-PRS
'Then they make us go down (lit. in a standing position), we go down (off the truck which takes us to the main city) (lit. in a standing position).' {narr}[2]

 b.   RESULTATIVE VC (verb-verb)
...basha=a   [kekua-taja]-ka-a=kuá.
spider=ERG   pierce-squeeze-3A-RPAS=RPAS
'The spider bit me (lit. pierced-squeezed me).'   {narr}

 c.   RESULTATIVE VC (verb-adjective)
Eyaya   kachina   [chiyo-pohi]-nahe.
1SG.ERG   hen(Sp)   pluck-bald-PAS
'I plucked the hen (lit. I plucked-bald the hen).'   {vol}

This paper is organized as follows: Section 2 provides basic information on the Ese'eja people and their language. Section 3 argues that the two elements in the VCs constitute a single unit according to phonological, morphological, syntactic, and semantic criteria. Section 4 discusses the two semantic subtypes of VCs, Resultative VCs and Path VCs; these are predictable in most cases. Section 5 discusses the terminology chosen and illustrates why auxiliary constructions and predicates including grammaticalized morphemes of verbal origin are excluded from the VC phenomenon examined here. Section 6 shows that verb-adjective VCs as

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[2] This paper is based on first-hand data of five distinct types which are indicated in brackets: traditional narratives {tr.narr}, narratives {narr}, texts based on stimuli ({BOWPED} for Bowerman & Pederson (1992), {FWA} for Mayer (1969) and {TRAJ} for Ishibashi & al. (2006)), fieldnotes ({field}, all re-checked with consultants), elicited sentences {elic}, and volunteered sentences {vol}. The volunteered data come from a workshop on adjectives I organized in 2007 with a dozen Ese'eja speakers to investigate the morphology of adjectives.

found in Ese'eja seem to be specific to this language both within the Takanan family and the Amazonian area.

2. The Ese'eja language

2.1. Sociolinguistic preliminaries

Ese'eja [eseʔexa] is one of the five extant Takanan languages and the only remaining member of the Chamic branch (Girard 1971, Valenzuela & Guillaume, this volume).[3] Ese'eja is spoken in Peru and Bolivia by approximately 1,500 people in a total of 9 communities settled along the Madre de Dios, Orthon and Beni rivers. The present study is based on first hand data collected in Portachuelo Bajo and, to a minor extend, in Portachuelo Alto (department of Pando, Bolivia).

In these nearby villages, two variants, respectively called Madidi and Sonene, are spoken. They are very similar, with the exception of certain lexemes that present minor phonetic differences. Both variants show high vitality as they are transmitted to the younger generation and spoken in everyday conversations in those two villages. However, in other communities the language is more threatened, especially in Peru. A more distinct, third variant, called Baawaja, is found in one of the three Peruvian communities, where only elderly people still speak the language and people under 40 no longer understand it (Chavarría Mendoza 2003).

The main previous linguistic works on Ese'eja include a tagmemic grammar (Shoemaker & Shoemaker 1965), articles on the Ese'eja phonetics and phonology (Key & Wyma 1964; Key 1968), various lexicons (Wyma & Pitkin de Wyma 1962; Chavarría Mendoza 1980; Alvarez 2008), educational materials by the SIL and NTM (Instituto Lingüístico de Verano 1966, 1972, 1973; Machúqui & Mamío 1977; Mission Nuevas Tribus ms), a collection of oral texts (Chavarría Mendoza 1984), a Ph.D. dissertation on the Ese'eja oral tradition (Chavarría Mendoza 1996), and a recent descriptive grammar (Vuillermet 2012).

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[3] The name of the language is also written Ese Ejja (especially in Bolivia), Esse Eja, Ese Exa, Esse Ejja etc. Alternative names found in the previous literature include Chama and Huarayo; these are still used pejoratively, in Bolivia and Peru respectively.

2.2. Typological properties

Ese'eja is a polysynthetic language. It is also a pro-drop language, though it has pronouns that are mostly used to emphasize the argument they refer to. The basic word order is APV, but it is free in the sense that the verb and its arguments (full nouns or pronouns) can appear in any order without additional specific marking. However, variation in word order has pragmatic significance.

Ese'eja displays ergative case marking. Both the Unique argument (U)[4] of an intransitive verb and the Patient-like argument (P) of a transitive verb are encoded in the same way (absolutive), while the Agent-like argument (A) of a transitive verb is encoded differently (ergative). The absolutive is zero marked while the ergative case is marked by the clitic =a. In (2a), the Unique argument *esho'i* 'child' is zero-marked,[5] parallel to how it is realized when functioning as a Patient argument in (2b). This absolutive encoding contrasts with the ergative encoding of the A argument, as shown by *dokuei'aia* 'stag' in (2b).[6]

(2)a.   Intransitive clause
        E-sho'i=$\emptyset_U$ *taaa-ani*.
        NPF-child=ABS   shout-PRS
        'The child is shouting.'   {FWA}

   b.   Transitive clause
        Dokuei-'ai=a_A **e-sho'i**=$\emptyset_P$ *hia-'okia-hia-ka-ani*.
        stag-big=ERG   NPF-child=ABS   throw-put_down-away(P)-3A-PRS[7]
        'The big stag throws the child off.'   {FWA}

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[4] I follow here Creissels' (2006) conventions.

[5] The absolutive is explicitly glossed here for the purpose of the demonstration.

[6] Ese'eja has 7 vowel phonemes: four monophthongs *i, e, a* and *o*, and three diphthongs *jo, ja* and *we* (respectively written *io, ia* and *we*). The 17 consonant phonemes are *p, t, tʃ* (written *ch*), *k, kw* (written *ku*), *ʔ* (written *'*), *ɓ* (voiceless bilabial implosive; written *b*), *ɗ* (voiceless alveolar implosive; written *d*), *s, ʃ* (written *sh*), *x* (uvular fricative sometimes pronounced velar, and labialized after *o*; written *j*), *h, m, n, ɲ* (written *ñ*), *j* (written *y*) and *w*.

[7] Grammatical information (including grammaticalized morphemes) is glossed with small caps, while lexical information is in regular script. In Ese'eja, many grammatical morphemes are homophonous with the lexical stem they come from. In (2b), though -*hia* 'away(P)' comes from the verb *hia*- 'throw (away)', it is written in small capitals because it has grammaticalized into an 'associated motion' marker and refers to the P argument being moved or moving away from the A argument. The two morphemes do not appear in the same slot.

See also *esho'ia* 'child.ERG' in A function in example (3). Pronouns receive the same case distinction. The next subsection describes the main properties of the word categories involved in VCs.

2.3. Word categories involved in VCs

Verb compounds may either consist of two verbs or a verb and an adjective; this subsection explores these two word classes.

In Ese'eja, transitivity is straightforward: verbs are either transitive or intransitive, and require explicit morphological derivation to increase or decrease their valency. Ambitransitive verbs are extremely rare (only two are attested in my corpus).

The predicate structure of inflecting verbs has a total of fourteen slots.

Table 1: Basic structure for *inflecting* verbs

-3	-2	-1	0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+10
Tense/Mood	Valency	Incorporated Noun	**Root**	Root	Adverbials	Valency	Ass. Motion + Adv.	**Indexation**	Associated Motion	**Tense/Mood**	Adverbials	Aspect	**Tense/Mood**

While most slots are not required to be filled, tense/mood and person indexation with 3rd person singular subjects (in bold in Table 1) are obligatorily marked once.[8] Example (3) illustrates a verb with the obligatory morphology: the person indexation *-ka* '3A' (Slot +5) and the present tense marker *-ani* (Slot +10).

(3)   *E-sho'i=a*   *e-naba*   *mishi-**ka-ani***.
        NPF-child=ERG   NPF-mouth   touch-3A-PRS
        'The child is touching his own mouth.' {FWA}

Verbal indexation is only obligatory for 3A arguments as in (3) or (2b). Third person singular U arguments are never marked on the verb (*cf.* (2a)).

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8 Non-inflecting verbs require an auxiliary to bear these obligatory morphemes, as in (43a-b) in §5.2. See Vuillermet (2012: 381ff.) for more details.

Third person plural U arguments can be indexed on the verb with a homophonous morpheme *-ka* '3U.PL', but this suffixation is optional (Vuillermet 2012: 373ff.). First or second person are never indexed on the verb predicate.[9]

The predicate head can be monomorphemic, as in (4a-b), or bimorphemic, as in (5), where the transitive verb roots *poho-* 'divide' and *haha-* 'cut' combine to describe a single event.

(4)a.   *Akui **poho**-he.*
        tree   divide-FUT
        'I will chop wood.'   {elic}

   b.   *Deja-'oshe=a   akui   **haha**-ka-ani.*
        man-white=ERG tree   cut-3A-PRS
        'Ernesto (lit. white-man) is cutting wood.'   {elic}

(5)   *Mei=pa   [**haha-poho**]-ka-ani-nahe.*
        stone=REP   cut-divide-3A-IPFV-PAS
        '(They had no machete), it is said that they used to cut stones into pieces
        (lit. they used to cut-divide stones).'   {narr}

Bimorphemic stems, as illustrated in (5), are called verb compounds (VCs) and are the topic of this paper. They are given in brackets to facilitate their localization in the examples. As mentioned above, VCs may alternatively consist of a verb and a (predicative) adjective.

Ese'eja has two distinct classes of adjectives, both called after their main function: attributive adjectives and predicative ones. Attributive adjectives form a very small class and have a low functional load in Ese'eja. Predicative adjectives constitute the largest class of adjectives, and are the ones taking part in VCs. The adjectives in this subclass cover most semantic categories established by Dixon (1982), except similarity and age. As their name suggests, predicative adjectives are mostly used in predicative function in copula clauses. A copula (as in (6a)) or a posture verb in copula function (as in (6b)) may specify the tense/mood, but the tense/mood value can also remain implicit (see (10b) below).

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[9] However, the present tense marker *-ani* has an allomorph *-aña* when the A argument is a 1st or 2nd person (see an illustration in (9)).

(6)a. ***Kia-ajaja***   *ekuana*   ***po-ani.***
        APF-frightened   1EXCL.ABS   be-PRS
        'We are afraid.' {narr}

    b. *E-sho'i*   ***kia-kene-nee-nee***   *ani*.
        NPF-child   APF-angry-very-RED   sit.PRS
        'The child is (lit: sits) very angry.' {FWA}

The copula subject takes the absolutive case. Predicative adjectives also occur in adverbial function, in (the very restricted phenomenon of) noun-compounding and in VCs. The latter construction is our concern here.

Predicative adjectives involved in VCs belong to the subclass of non-derived predicative adjectives, called the *kia*-adjectives after their form. Morphologically, the *kia*-adjectives are bound roots which require one of four affixes to form independent words, as illustrated in (7a-d). The Adjectival PreFix *kia-* 'APF' is semantically neutral (a), while the other three affixes negate (b), attenuate (c), or question (d) the adjectival root.

(7)a. ***kia-kemo***   'big'
        APF-big

    b. *kemo-**ama***   'not big'
        big-PRIV

    c. ***iye**-kemo*   'not quite big'
        DEG-big

    d. ***ache**-kemo*   'how big'
        HOW-big

When participating in VCs, these predicative adjectives occur without affixes, as illustrated by *kuiachwe-* 'wet someone' in (8b).

(8)a. *kia-**chwe***   'wet'
        APF-wet

    b. *[kuia-chwe]-*   'wet someone (by squeezing/hitting him when one is wet)' {vol}
        press-wet

This section has described general properties of the sociolinguistics and grammar of the language, as well as the two word categories involved in verb compounding. The next two sections explore the reasons for considering VCs as such (§3), and their semantics and valency values (§4).

3. Basics of verb compounds in Ese'eja

VCs consist of two lexical items. The first element of a compound stem is always a verb, while the second element can be a verb, an adjective or, less frequently, a bound root (§3.1). Both elements constitute a single unit on phonological, morphological, syntactic and semantic grounds (§3.2).

3.1. Verb-Verb and Verb-Adjective compounds: an overview

Verb compounding is very productive in Ese'eja. In most cases, it involves two verbs, as was shown in (1a-b) and (5) above, or a verb and an adjective, as in (9) (see also (1c) and (8b)). In example (9), the verb *wowi-* 'tell' and the adjective *-tai* 'bad' are two lexical stems grouped together to form a single predicate. By contrast, *wowi-* 'tell' and *-tai* 'bad' are the only lexical stems of each predicate in (10a) and (10b).[10]

(9)   *Eya   miyaya   [**wowi-tai**]-aña.*
         1SG.ABS   2SG.ERG   say-bad-PRS1/2A
         'You said it wrong to me.'   {field}

(10)a.   *Pia   esowi   eyaya   **wowi**-he   hikio   jeya   viernes   poja=ho.*
         other   story   1SG.ERG   tell-FUT   DEM1   now   Friday(Sp)   day=LOC
         'I will now tell another story on this present day Friday.'   {narr}

     b. *Ekueya   ke   kia-**tai**.*
         1SG.GEN   field   APF-bad
         'My field is not in a good condition (lit. is bad).'   {vol}

Other elements are productively found in second position of VCs, although they do not exist as autonomous morphemes. For example, *pasha-* conveys the idea of being smashed or that of smashing. It can combine with many different verbs as in (11a-c), but cannot be used as a verb, an adjective, or a noun independently:

(11)a.   *[kuia-**pasha**]-* 'squeeze/smash P (e.g. a fruit), smash it by squeezing it' {field}
         press-smashed

     b. *[kekua-**pasha**]-* 'pierce/smash P with a pestle, smash P by hitting it'[11]   {narr}
         pierce-smashed

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[10] The predicative adjectives involved in the VCs require a *kia*-prefix in their 'citation form'. If Tense or Mood was to be specified, then a copula would be required, as these *kia*-adjectives cannot be directly marked for Tense/Mood (*cf.* §2.3 above).

[11] The gloss and translation are only approximate; see Table 4 for a more detailed account of the semantics of these action verbs.

    c.   *[kishi-**pasha**]-* 'crush P with the feet' {field}
         kick-smashed

Note however that two sister languages, Tacana and Reyesano, have an independent transitive verb *pacha-* 'trample P, kick P, squash P' (Guillaume, pc. August 2013). A verbal origin is thus likely for at least some of these non-autonomous morphemes.

    The element *wisho-* is another component of VCs whose category cannot be identified although it deserves to be considered as a morpheme. It combines with distinct verbs (see (12a-c)) and has its own semantics, conveying an idea of freeing or letting (something) loose.

(12)a.   *[kuia-**wisho**]-* 'squeeze on a bench to leave space for a newcomer' {vol}
          press-let_loose

    b.   *[kekua-**wisho**]-* 'take out the machete from where it was stuck' {vol}
         pierce-let_loose

    c.   *[iña-**wisho**]-* 'drop P' {vol}
         grab-let_loose

Some of these bound morphemes, like *pasha-* 'smashed' in (11) or *sasa-* 'destroyed', look like ideophonic particles (as is for example attested in the Yukatek VCs (Bohnemeyer 2003) and in the Yurakaré VCs (van Gijn 2010)). This idea appears to be supported by the inherent sound properties of *pasha-*, and especially of *sasa-*, which is used to describe a situation where a plastic bottle or an egg is crushed. Furthermore, in one traditional story, the storytellers hum *sasasasasa* with a low-high-low intonation to refer to the sound of hair being singed. However, a similar analysis does not hold for most of these bound elements.

    Similar compounding subtypes are frequent cross-linguistically. In Igbo (Niger-Congo), both components of most VCs are Verbs (including verbs with 'property/quality' semantics), while there are some (second position) components that do not occur elsewhere as independent verbs (Lord 1975). Lord calls them suffixes, and argues for their recognizable verbal origin (in some cases at least). In her grammar of Manambu (Papua New Guinea), Aikhenvald (2008: 338) considers similar "nonce roots […] as verb roots rather than as derivational suffixes only for the sake of a unified analysis of verb compound structures" (until more information on the lexicon of other Ndu languages becomes available). Finally, two sister languages of Ese'eja,

Cavineña and Tacana, display similar phenomena. Most (path) VCs have corresponding independent verbs, but some second elements such as *sikwa-* 'elsewhere' in Cavineña and *dera-* 'elsewhere' in Tacana, cannot appear on their own (Guillaume, pc. August 2013). Thus, having nonce roots in VCs is not specific to Ese'eja, but is frequent in verb compounding.

3.2. VC formal properties

The position of the stress on the verb is conditioned by a combination of four parameters (syllable number of the root, suffix type, absence vs. presence of person indexation and valency of the verb, see Vuillermet (2012: 224-269) and Rolle & Vuillermet (submitted) for a careful description). Its position within verb compound predicates has not been examined in full detail yet. Phonologically, simple verbs have only one stress, as shown by the two single roots *haha-* 'cut' in (13a) and *taja-* 'squeeze' in (13b).[12] When these two roots combined into a compound stem as in (13c), there is still a single stressed syllable.

(13) a. *[hahá]-ka-ani*   'he/they cut(s)'   {elic}
         cut-3A-PRS

     b. *[tajá]-ka-ani*   'he/they squeeze(s)'   {elic}
         squeeze-3A-PRS

     c. *[hahá-taja]-ka-ani*   'he/they cut(s)/chop(s)'   {elic}
         cut-squeeze-3A-PRS

Morphologically, bimorphemic verb stems require the same morphology as simple verb roots, i.e. tense/mood and, when relevant, (3A) person indexation. Note, for both elements of the verb stem, the single tense/mood marker in (14a-b) (see also (9)) and the third person A argument indexation in (14b) (see also (5) and (13c)).

(14)   VERB **STEM**: [V-X]-(indexation)-tense/mood
     a. *Ekueya   enawió   [poki-kewa]-'io-**nahe**   meka=je.*
         1SG.GEN   frog   go-opaque-TEL-PAS   night=PERL
         'My frog disappeared / went away at night.'[13] {FWA}

     b. *Hememe-so=ka   [kekua-poho]-**ka-ani**   mei=a.*
         palm_sp-seed=CTRS   pierce-divide-3A-PRS   stone=INSTR
         'One crushes *motacú* (palm *sp.*) seeds (and not something else) with a stone.' {vol}[14]

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[12] Stress is noted by an acute accent in the following examples.
[13] The two translations offered correspond to the translations suggested by two different consultants: *desapareció* and *se escapó*.

Both elements of a VC are strictly contiguous, i.e. morphological material cannot be inserted between them. Suffixation must follow the last element of the compound, as illustrated by the obligatory morphology in (14a-b). Non-obligatory suffixes such as the associated motion morpheme *-ki* 'GO_TO_DO' (Slot+4) in (15) can also only attach to the last element of the verb compound.

(15)   *E-yobo,   yokise-yobo   [haha-seja]-**ki**-aña.*
       NPF-bud   plant_sp-bud   cut-pull_apart-GO_TO_DO-PRS1/2A
       'I go to collect (lit. cut and pull apart) buds, buds of hoja redonda (plant sp.).' {narr}

See also the telic marker (Slot+9) in (14a) above.

Cases of circumfixation include the middle *ja-...-ki* (Slot-2/+3): it provides evidence for the contiguity of VC elements, since it is found around the stem, as illustrated by examples (16a-b) – see also example (19a) below.

(16)a. *Hia-hia-ka-ani=ho,   **ja**-[kuia-poho]-**ki**-he.*
        throw-P.AWAY-3A-PRS=TMPDS   MID-press-divide-MID-FUT
        'When one throws (a bottle), it shatters.'   {vol}

   b. ***Ja**-[doho-saha]-**ki**-ani   e-jaja=ho.*
        MID-take_away-break_in_two-MID-PRS   NPF-fruit=LOC
        '(The branch) breaks because of the fruits.'   {vol}

The same applies to the circumfixed nominalizer *e-...-ji*:

(17)   ***E**-[kekua-isho]-**ji**=a   daki   [kekua-isho]-ka-ani.*
       NMZ-pierce-scrub-NMZ=INSTR   clothes   pierce-scrub-3A-PRS
       '(They) scrub/wash the clothes with a (clothes) brush (lit. with something to pierce-scrub X).'   {elic}

There are also cases of prefixed elements. For instance, the derivational morpheme *e-* 'RESultative' is found to the left of the compound, while it has scope over both stems.

(18)   *Hikio   papeni   **e**-[kekua-wosho]   ba'e.*
       DEM1   paper(Sp)   RES-pierce-slip_on   float.PRS
       'This paper is skewed (lit. floats pierced-slipped on).'   {BOWPED}

Noun incorporation (Slot-1) provides another case of elements to the left of the compound, as illustrated in (19a). Example (19b) shows that the incorporated noun cannot appear in between the two roots.

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14 These very hard pits are crushed apart and 'opened' so as to collect small almond-like seeds.

(19)a.   *E-sho'i*   *ja-**dojojaniji**-[kuia-saha]-ki-nahe*
         NPF-child   MID-rib-press-break_in_two-MID-PAS
         'The child broke his rib.'   {elic}

   b.   **ja-kuia-**dojojaniji**-saha-ki-nahe*
         MID-press-rib-break_in_two-MID-PAS
         Intended: 'The child broke his rib.'   {elic}

Syntactically, the two elements of the VC at least partially share the same argument structure.[15] When the two elements share the same valency value, the syntactic arguments are shared. In example (20a) (repeated from (14a) above) containing an intransitive verb and a monovalent adjective, the frog is the U argument that 'goes' and that is 'opaque'. In (20b) (repeated from (5) above) containing two transitive verbs, the ancestors and the stones are respectively the A and P arguments of each of the two transitive verbs, 'cut' and 'divide'.

(20)a.   U
         *Ekueya   enawió   [**poki-kewa**]-'io-nahe   meka=je.*
         1SG.GEN   frog   go-opaque-TEL-PAS   night=PERL
         'My frog disappeared / went away at night (lit. it went-opaque).'   {FWA}

   b.   P   (A)
         *Mei=pa   [**haha-poho**]-ka-ani-nahe.*
         stone=REP   cut-divide-3A-IPFV-PAS
         '(they had no machete), it is said that they used to cut stones into pieces (lit. they cut-divided stones).'   {narr}

When a transitive verb and an adjectival root form a VC, the P argument of the transitive verb is the unique/single argument of the predicative adjective. In example (21a), the one who gets 'pressed' (P argument of *kuia-* 'press') is the one who gets 'wet' (U argument of *-chwe* 'wet'). In example (21b), the skirt is sewn (P argument of *kekua-* 'pierce') and becomes wrinkled/pleated (U argument of *-shiwi* 'wrinkled').

(21)a.   *Eyaya   Marina   besa-maje   [**kuia-chwe**]-he   oha=daki.*
         1SG.ERG   M.   bathe-TMPSS   press-wet-FUT   3GEN=clothes
         'After bathing I will wet Marine and her clothes (by 'hugging' her against me).' (lit: After bathing I will press-wet Marina and her clothes)   {vol}

   b.   *E-naese=a   [**kekua-shiwi**]-ka-nahe   daki.*
         NPF-mother=ERG   pierce-wrinkled-3A-PAS   clothes
         'The mother makes pleated clothes.' (lit: The mother pierce-wrinkled the clothes.)   {vol}

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[15] As will be shown later VCs involving 'value' adjectives may be an exception, as the adjective refers then to the event rather than to the argument(s) of the first verb.

The argument structure of VCs is summarized in the table below: V stands for the first element of the compound (which is always a verb), while X stands for the second element of the compound (which is not always a verb). The capital letters U, A, P stand for the compound's core arguments and $_i$ and $_j$ signal coreference relations between the arguments.

Table 2: Argument sharing in verb compounds

monovalent + monovalent	$V_{Ui} + X_{Ui}$	$\rightarrow [V\text{-}X]_U$
bivalent + bivalent	$V_{Ai/Pi} + V_{Ai/Pi}$	$\rightarrow [V\text{-}V]_{A/P}$
bivalent + monovalent	$V_{A/Pi} + X_{Ui}$	$\rightarrow [V\text{-}X]_{A/P}$

The combination 'monovalent + bivalent' is not productive and is only attested in two highly lexicalized forms, *haadoho-* (lit. lie-take_away) 'spy on X' and *haawana-* (lit. lie-lay) 'care after X (a baby)'.[16] Compounds consisting of three verb roots are also attested, but they are rare and very specific, as they tend to involve a manner-motion verb (e.g 'run') and a lexicalized posture-path verb compound, such as *kuahi-kuahi-neki-sowa-ani* (run-RED-stand-go_up-PRS) 'he quickly goes (e.g. out of the canoe)'. This instance and others are discussed in §4.2.1 (see (34-36); Vuillermet 2012: 416, 422).

Reduplication in Ese'eja is a productive valency-changing mechanism, which derives intransitive stems from transitive verb roots: *ijia-* 'eat X', *ijia-ijia-* 'eat'; *kuihi-* 'bark at X', *kuihi-kuihi-* 'bark' (Vuillermet 2012:525). This mechanism also applies to VCs; in this case, only the second root is reduplicated.

(22)a. *[ijia-seja]-* 'cut[17] X (e.g. meat) with the teeth'
       eat-pull_apart

    b. *[ijia-**seja-seja**]-* 'cut with the teeth'
       eat-pull_apart-RED

(23)a. *[ijia-pohi]-* 'pull out X (e.g. hair, feather) with the teeth (and make X bald)'
       eat-bald

    b. *[ijia-**pohi-pohi**]-* 'pull out (white hair) with the teeth'
       eat-bald-RED

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[16] There is a third case of an intransitive root associated to a transitive root, where a middle marker seems to make the resulting stem intransitive. This situation requires further investigation.

[17] *ijia-* usually refers to the action of eating, but can also only refer to the movement of the jaws, and can even more generally refer to a (reiterated) action of two entities getting close together, e.g. the two blades of a pair of scissors.

Reduplication makes the whole stem intransitive, as shown in (23b) and in (24b). This proves again that the VC is a unit.

Note that there are no spontaneous examples of the reduplication mechanism on VCs (all the instances were elicited), and that not all VC types (especially not the Path VCs) have been tested with that particular mechanism.

Semantically, a VC conveys a single 'event structure': a macro-event denoted by the VC is a merger of two sub-events denoted by the VC components. In (22a), the macro-event denoted by *kiyo-biso-* 'heat_up-little' is the evaporation of the water, not the two single events of heating up (manner/cause) and of becoming little (result). Similarly in (22b), the macro-event denoted by *dawa-wo'o-* 'grill X-red' is sunburning, not the two single events of grilling (manner/cause) X and of becoming red (result).

(24)a. *Ena   [kiyo-biso]-nahe.*
        water   heat_up-little-PAS
        'The water evaporated (lit. became little from heating up).'   {vol}

   b. *Esheki=a   [dawa-wo'o]-ka-nahe.*
        sun=ERG   grill-red-3A-PAS
        'The sun burned (him) (lit: the sun grilled-red him).'   {elic}

All the arguments presented before strongly suggest that a VC formally consists of two distinct elements grouped together to constitute a single unit. The next section presents the semantic properties of the VCs in Ese'eja.

4. Semantic properties: result and path

Resultative VCs (§4.1) and Path VCs (§4.2) are two subtypes of VCs based on semantics. The former include Verb-Verb and Verb-Adjective compounds, while the latter are always Verb-Verb compounds. Both subtypes display distinct and similar combinations that are summarized in Table 3 and explored in the following subsections.

Table 3: Combination possibilities in VCs according to their semantic type

		Resultative VCs	Path VCs
V-ADJ	V_{INTR}-Adj	§4.1.1	-
	V_{TR}-Adj	§4.1.2	-
V-V	V_{INTR}-V_{INTR}	-	§4.2.1
	V_{TR}-V_{TR}	§4.1.3	§4.2.2

4.1. Resultative VCs

Most Resultative VCs display a cause-effect or manner-result relation, while a minority shows an action-manner relation.[18] Resultative VCs can be further subdivided into two (or three) subtypes on a morphological basis: Verb-Verb and Verb-Adjective compounds (and Verb plus the bound morphemes briefly mentioned in §3.1, not further described in this paper). Resultative VCs can also be subdivided in terms of transitivity: intransitive Resultative VCs only consist of Verb-Adjective compounds (§4.1.1), while transitive Resultative VCs include both Verb-Adjective (§4.1.2) and Verb-Verb compounds (§4.1.3).

4.1.1. Intransitive Verb – Adjective

The intransitive roots attested with the *kia*-adjectives are mostly change-of-state verbs (*tii-* 'grow', *shepa-* 'get wet', *kiyo-* 'heat up', in (25a-c)), but also include the motion verb *poki-* 'go' in (25d), repeated from (20a), the state verb *kawi-* 'sleep' in (25e) or the locution verb *mimi-* 'speak', in (25f).[19]

(25)   Intransitive verbs
    a. *Mikie=bakua   [**tii-'ao**]-nahe*.
       2SG.GEN=child   grow-big-PAS
       'Your child grew up (lit. your child grew-big).'   {vol}

    b. *Michi   sha-hia-ka-je   [**shepa-sawi**]-hia-nahe.*
       cat(Sp) throw_into_water-DEPR-3A-TMPOS   get_wet-thin_long-DEPR-PAS
       'When they threw the cat into water it became thin from being wet.'   {vol}

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[18] I follow the tradition in Mandarin Chinese with this terminology (see e.g. Chen 2008), but other terms may be used. For instance, Aikhenvald (2008: 344) describes similar VCs in Manambu (Dnu), which she refers to as symmetrical (one-word) compounds and subdivides into (sequential), cause-effect and manner compounds.

[19] These semantic verb classes do not entail specific syntactic behaviors; the two classes of verbs distinguished on morphosyntactic and syntactic grounds are the transitive vs. the intransitive verbs. Posture verbs constitute a subclass of intransitive verbs because of some morphosyntactic specificities (see Vuillermet 2012: 634-8).

  c. *[Kiyo-weya]-hia-nahe*   *e-sheki=ho.*
      heat_up-lazy;tired-DEPR-PAS   NPF-sun=LOC
      'I became tired from the heat of the sun.'   {vol}

  d. *Ekueya enawió [poki-kewa]-'io-nahe   meka=je.*
      1SG.GEN frog   go-opaque-TEL-PAS   night=PERL
      'My frog disappeared / went away at night (lit. it went-opaque).'   {narr}

  e. *[Kawi-bame]-kue!*
      sleep-beautiful-IMP
      'Sleep nice / have a good rest!'   {field}

  f. *Kia-wiso-nee-nee=kuana   [mimi-hahi]-nahe.*
      APF-many-VERY-RED=3PL   speak-happy-PAS
      'Many many people gossiped (lit. spoke-happy).'   {narr}

The adjectives involved in these VCs are exclusively predicative *kia*-adjectives, as was mentioned above in §2.3. The adjectival components in (25a-f) have the following 'autonomous' counterparts (with the (positive) Adjectival PreFix 'APF'):

(26)a. *kia-'ao*   'APF-big'
    b. *kia-sawi*   'APF-thin and long'
    c. *kia-weya*   'APF-lazy; tired'
    d. *kia-kewa*   'APF-opaque; difficult'
    e. *kia-bame*   'APF-beautiful'
    f. *kia-hahi*   'APF-happy'

The first four VCs in (25) above have a clear cause-effect relation ('grow-big', 'get wet-thin', 'heat up-tired' and 'go-opaque', in (25a-d)), while 'sleep-beautiful' and 'speak-happy' in (25e-f) exhibit an action-manner relation. These last two adjectives may rather refer to the event as a whole than to the U argument of the verb, though the two readings in (25f) (the people or the whole event being happy/funny) are acceptable. According to Aikhenvald (2006: 18), such VCs have been called 'modifying' serialization (Bamgbose 1974: 36), 'adverbial' serialization (Bradshaw 1983), 'ambient' serialization (Crowley 1982: 40-41) and also 'event-argument serial verb constructions', because the two verbs do not share arguments and because one of the verbs is described as a kind of modifier to describe the other, like in 'do+be right' = 'do in the right way'. I analyze the cases in (25e) and (25f) as a specificity of the VALUE semantic category (according to Dixon's (1982) semantic categorization). The specific semantics would have allowed the semantic extension of the regular cause-effect / manner-result pattern.

4.1.2. Transitive Verb – Adjective

Transitive VCs can be either Verb-Adjective compounds, as described in this subsection, or Verb-Verb compounds, as discussed in §4.1.3. The variety of (semantic) verb classes involved in Resultative VCs is much larger within the Resultative Verb-Adjective types examined in this subsection. The transitive verb roots found in the Verb-Adjective Resultative VCs are often highly transitive and typically involve an animate A argument and an affected P argument: action verbs such as *kekua-* 'pierce P' or *haha-* 'cut P' in (27a), caused motion verbs like *hia-* 'throw P' in (27b), or caused posture verbs like *iya-* 'sit P' in (27c). Nevertheless, locution or perception verbs like *wowi-* 'speak to P' and *shaja'aja-* 'hear P' in (27d) and (27e) respectively can also enter compounds.

(27)a. *Eyaya   emehe [haha-pi]-nahe.*
         1SG.ERG   arrow   cut-straight-PAS
         'I cut my arrow straight.'   {vol}

   b. *Enashaho=a bishé   [hia-peewe]-ka-nahe.*
       wave=ERG   canoe   throw-askew-3A-PAS
       'The wave overturned the canoe (lit. threw-askew).'   {vol}

   c. *Pia=a   ekue=ekí   [iya-bame]-ka-nahe, weja-má-nee-nee.*
       other=ERG 1SG.GEN=house sitTR-beautiful-3A-PAS hole-PRIV-VERY-RED
       'Other people built my house very well, without a hole.'   {vol}
       (lit. They sat-well my house)

   d. *Eya   miyaya   [wowi-tai]-aña.*
       1SG.ABS 2SG.ERG say-bad-PRS1/2A
       'You said it wrong to me.'   {field}

   e. *[Shaja'aja-tai]-aña.*
       listen-bad-PRS1/2A
       'I hear you poorly.'   {field}

The adjectival components of the VCs in (27) are the following: *kia-pi* 'APF-straight', *kia-peewe* 'APF-askew', *kia-bame* 'APF-beautiful' and *kia-tai* 'APF-bad'. Again, the last two VCs, which consist of the VALUE adjective 'bad', exhibit 'action-manner' semantics. Their scope covers the whole event rather than the P argument only.

Some combinations are more conventionalized and less transparent, like *kuia-pohi-* and *kuia-behe-*.

(28)a. *[kuia-**pohi**]-*   'scorch an animal'   {narr}
            press-bald
     b. *[kuia-**behe**]-*   'fry (eggs)'   {field}
            press-thin

In (28a), *[kuia-pohi]-* refers to the action of removing the hair of an animal (result/goal) by scorching it (manner). However, *kuia-* 'press' rather refers to a *correlated* action (manner), not to the main action (passing the animal over a flame): the 'pressing/hitting' occurs to smother the fire. In (28b), *[kuia-behe]-* refers to the action of *frying* eggs (result/goal) rather than to the action of '*pressing* them *thin*', but one has to break the eggs into the pan, where they turn flat as if pressed.

In general, verb-adjective compounds seem to be the most productive type of VCs in Ese'eja. This is likely due to the wide range of semantic domains covered by the *kia-* adjectives (DIMENSION, VALUE, COLOUR, PHYSICAL PROPERTY, HUMAN PROPENSITY and DIFFICULTY), which are easily compatible with many verbs. PHYSICAL PROPERTY, HUMAN PROPENSITY, and DIMENSION adjectives seem to be the most frequent adjectives found in Ese'eja VCs. Verbs that involve a transformation (e.g. heat up, grow, burn) seem to be the best candidates for forming VCs with adjectives, as they are easily associated with a change of property expressed by the adjective.

In the sister languages Tacana and Araona, Verb-Adjective compounds have not been reported. In his grammar of Cavineña, Guillaume (2008: 345-6) briefly mentions a Verb-Adjective construction that behaves like non-inflecting verbs, requiring an auxiliary. The construction in Cavineña retains the adjectival suffix (the cognate negative suffix *-ama* in the illustrative example given in the grammar).

4.1.3. Transitive Verb – Transitive Verb

The transitive verbs found in Verb-Verb Resultative VCs are highly transitive action verbs. The verbs *saha-* 'break in two' and *poho-* 'divide' both appear as independent verbs, but they also frequently appear as the second element of a VC, as illustrated by the following examples. They occur with *kuia-* 'press' in (29a-b), *haha-* 'cut' in (30a-b) and *ijia-* 'eat' in (31a-b).

(29)a. *[kuia-**saha**]-*   'press and break (e.g. hard plastic or drawing pencil)'
        press-break_in_two

  b. *[kuia-**poho**]-*   'squeeze and break (e.g. an egg or a bottle with a stone)'
        press-divide

(30)a. *[haha-**saha**]-*   'cut and break (e.g. firewood with a machete)'
        cut-break_in_two

  b. *[haha-**poho**]-*   'cut and divide (e.g. firewood with an axe or (5) above)'
        cut-divide

(31)a. *[ijia-**saha**]-*   'break (e.g. with teeth)'
        eat-break_in_two

  b. *[ijia-**poho**]-*   'peel (e.g. a tender fruit with the teeth)'
        eat-divide

The most frequent action verbs are given in Table 4. Their general glosses are also provided, while a tentative, more detailed description follows to give a better idea of their basic semantics. The first six verbs are V1 verbs, the next four are V2 verbs, while the last one appears in both positions.

Table 4: Frequent action verbs and their tentative general semantic description

	Action verb	General gloss	(tentative) General description of the verb event
V1	*iña-*	'grab'	do / affect with the hands
	ijia-	'eat'	squeeze between two identical tools (such as jaws), clench, tighten
	haha-	'cut'	cut, slice
	kekua-	'pierce'	hunt (originally with spears), hit in a vertical movement and/or with an elongated instrument and/or with a strong impact
	kishi-	'kick'	trample, affect with the feet
	kuia-	'press'	press, squeeze (e.g. with one's body), hit in horizontal movement and/or with a round/large instrument
V2	*isho-*	'scrub'	rub, scrub, scour (recurring movement)
	poho-	'divide'	tell apart, separate out
	saha-	'break in two'	break in two, into small pieces
	seja-	'pull apart'	tear up, rip off, rip up, pull apart, collect (fruits)
V1/V2	*taja-*	'squeeze'	hit in a repeated movement with a strong impact and with an instrument; wash the laundry

Order rules iconically reflect the temporal sequence, and there is a tendency to have first elements conveying a 'hit' meaning – "an entity potentially comes into contact with another entity" (McKoon & Love 2011: 313), e.g. *iña-* 'grab', *ijia-* 'eat, squeeze', *kishi-* 'kick, trample' and *kuia-* 'press' – while second elements tend to convey a 'break' meaning –

"an entity changes state as the result of some external force" (ibid), e.g. *seja*- 'pull apart', *poho*- 'divide' and *saha*- 'break in two'.

However, the 'hit-break' order is only a tendency: both *haha*- 'cut' and *kekua*- 'pierce' are 'break' verbs and appear in Slot +0 (see (30b) and (31a-b)). Conversely, *taja*- 'squeeze, hit in vertical and repeated movement' and *isho*- 'scrub/rub' are 'hit' verbs and appear as second elements in Slot+1 (see (13c) and (17)). Note that *taja*- 'squeeze' occurs as a second element in (13c) and as a first element in *taja-pasha*- 'hit and smashed'.

Not any combination is possible: *[haha-taja]*- 'cut and squeeze' and *[kuia-taja]*- 'squeeze (e.g. clothes with a stone)' are acceptable, whereas **[ijia-taja]*- 'eat and squeeze' is ungrammatical. This is probably due to semantic restrictions, as specific actions may be incompatible: *ijia*- refers to an action carried out by two parallel 'squeezing' elements (like jaws) while *taja*- seems to involve a vertical hitting motion (and the 'squeeze' meaning).

The sister languages Araona and Tacana also display *Verb-Verb* compounds. Emkow (2006: 664) describes very similar (symmetrical) serial verb constructions in Araona, following Aikhenvald's (2006) terminology. In Tacana, Guillaume (2013a) describes productive *Verb-Verb* compounds that are very different from the resultative VCs in Ese'eja: the inventory of the potential second verbs in the Tacana VCs mostly consists of posture verbs, while action verbs are infrequent. Consequently, the semantic outcome is very different too (e.g. *risi-netia-* (tie X+ standTR) 'tie X in a standing position'. Part of the Tacana VCs look like the Ese'eja path VCs described below.

4.2. Path VCs

The verb components found in Path VCs mostly come from closed semantic classes: one of the four (caused) path verbs – go/put in, out, up, down – in the V2 position, and a (caused) posture verb or (caused) motion verb in V1. Path VCs illustrate the phenomenon of 'transitivity harmony' very well, described in detail in Panoan and Takanan languages by Valenzuela (2010, this volume part 2). Intransitive Path VCs are exclusively made of intransitive roots (§4.2.1), while transitive Path VCs only consist of transitive verb roots (§4.2.2).

4.2.1. Intransitive Path VCs

The four path verbs – *dobi-* 'go in', *kuaya-* 'go out', *sowa-* 'go up' and *'oke-* 'go down'[20] – most often combine with one of the four posture verbs: *ani-* 'sit', *neki-* 'stand', *haa-* 'lie' and *ba'e-* 'float, hang', as illustrated in (32a-d).[21]

(32)   Posture + path verbs
    a. *Towaa-ani ena=asije [ani-dobi]-ki-ani.*
        jump-PRS   water=ALL   sit-go_in-GO_TO_DO-PRS
        'He jumps and enters into the water (sitting).'   {TRAJ}

    b. *E-neki   akui=ho, [neki-sowa]-ani.*
        RES-stand   tree=LOC   stand-go_up-PRS
        'Being (lit. standing) in a tree, he stands up.'   {FWA}

    c. *Kojatewe hikio=je   oya   kia-koja-tewe-nee e-sho'i=nei-nei*
        Ermelina   DEM1=PERL 3ABS   APF-eye-black-very   NPF-child=REAL-RED

        [haa-kuaya]-a=pwá.
        lie-go_out-RPAS=RPAS
        'Ermelina *(black-eye)*, she had a black eye (lit. was black-eyed) (when) she was a newborn, (when) she was born (lit. she went out lying).'   {narr}

    d. *Kibi=ho   ba'e [ba'e-'oke]-ki-ani   meshi=asije.*
        hammock=LOC   float   float-go_down-GO_TO_DO-PRS   earth=ALL
        'He gets down from the hammock (floating).'   {elic}

The U argument of the path verb and that of the posture verb is the same, i.e. the Figure follows a specific path in a specific posture. The semantics of both verbs is thus transparent.[22]

Lexicalized Path VCs also exist. In *haa-sowa-* 'lie-go up' and *haa-'oke-* 'lie-go down', the posture verb *haa-* 'lie' cannot possibly refer to a lying position, as only standing people can *haasowa-* '(lie)go up' or *haa'oke-* '(lie)go down'. This is illustrated in examples (33a-b) – see Vuillermet (2009) for more details.

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[20] Two other (rare) morphemes attested in second position may also be candidates: *besa-* 'cross (a river)' and *towa-* '(move) horizontally?'.

[21] For more details on the omnipresence of posture verbs in the grammar of Ese'eja, see Vuillermet (2009, 2012: Chap. 14).

[22] In (32), *kuaya-* 'go out' presents a semantic extension into 'be born', just like in the sister language Cavineña with the (non-cognate) term *kwinana-* 'emerge, go out, be born'. Takana distinguishes two roots, *kwina-* 'llegar, nacer' and *kwinana-* 'go out'.

(33)a. *Mahoya ekuana   haasowa-'io-nahe.*
        then   1EXCL.ABS (lie?)go_up-TEL-PAS
        'Then we went up back home (context: they were walking, i.e. not in a lying position).' {narr}

   b. ***Haa'oke**-ki-ani   ehioji=asije   ba'=asije.*
        (lie?)go_down-GO&DO-PAS path;port=ALL   lake=ALL
        'We go down to the port, to the lake.'   {narr}

A further type of compound with three verbs (manner-motion/posture/path) should perhaps be added; it is however very rare in my corpus and needs to be checked with other informants. The most natural occurrence, in example (34a), comes from a video stimulus (Ishibashi *et al.* 2006),[23] and (34b-c) are elicited. However, the posture verb *haa-* 'lie' involved in the VC in all three examples is not productive, as is the case of the posture verb in example (33).

(34)a. *[**Kuahi-kuahi-haasowa**]-ani.*
        run-RED-(lie)go_up-PRS
        'He goes up running.'   {TRAJ}

   b. *[**Hio-hio-haasowa**]-ani.*
        walk-RED-(lie)go_up-PRS
        'He goes up walking.'   {elic}

   c. *[**Towaa-haasowa**]-ani.*
        jump-(lie)go_up-PRS
        'He goes up jumping.'   {elic}

The following example might be somewhat more productive – though *nekisowa-* may also be lexicalized as 'to get out of the canoe'.

(35)   *[**Kuahi-kuahi-neki-sowa**]-ani.*
        run-RED-stand-go_up-PRS
        'He quickly goes out (e.g. out of the canoe).'   {elic}

Note that path verbs are also attested without posture verbs, i.e. the posture is often specified but need not be. The first sentence (36a) below comes from a myth and refers to the Sloth-woman that used to go up into a tree once her husband had left; the second sentence (36b) warns the hearer that snakes enter all kind of objects inside houses.

(36)a. *Mahoya=ahe=pa   **sowa**-ki-a=pwá   eya=asije.*
        then=DISC=REP   go_up-GO_TO_DO-RPAS=RPAS sky=ALL
        'Then it is said that she went back up (lit. up in the sky) (in the tree).' {tr.narr}

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[23] This visual stimulus was elaborated within the research program Trajectoire, funded by the Fédération de Typologie et Universaux Linguistiques (*www.**ddl**.ish-lyon.cnrs.fr/**trajectoire**/*).

b. *Peyo **dobi**-ki-he   kuamaya.*
    viper   enter-GO_TO_DO-FUT   there
    'Vipers will enter there (into carton boxes, bags etc.).'   {narr}

The (deictic) motion verb *poki-* 'go (away)' is also attested with *sowa-* 'go up(river)'; the verb *poki-* may be better translated as 'depart' in that combination.

(37)   *E-sheki   e-haasowa=ho,   [**poki-sowa**]-ki-ani.*
       NPF-sun   RES-(lie)go_up=TMPDS   go(away)-go_up-GO_TO_DO-PRS
       '(Only) when the sun is already up in the sky, some people go upriver (or leave in the upriver direction).'   {narr}

The productivity of this compound type should be checked; *poki-sowa-* 'go-go up(river)' may be better analyzed as a case of lexicalization, which would mean 'go *upriver*' or '*depart* in the *upriver* direction'. An alternative analysis is to consider *-sowa* as a grammatical morpheme which would belong to Slot+6, that is, *poki-sowa-* would not be a VC, but a verbal root combined with an associated motion suffix *-sowa* 'GOING UPRIVER'.

The next subsection deals with the transitive counterparts of these intransitive Path VCs.

4.2.2. Transitive Path VCs

Transitive Path VCs may consist of a caused posture or caused motion verb in V1, and a path verb in V2. The first example below comes from a spontaneous text where Kanono first describes an action from the point of view of the truck driver, who makes the people that were standing on his truck go down – transitive verb *nekia-'okia-* '(standTR-)put down'. In the second example, the action is now seen from the point of view of the people themselves, who get down from the truck (standing) – intransitive verb *neki-'oke-* '(stand-)go down'. In the two subsequent examples (38b-c), the transitive posture verbs refer to the sugar that you 'sit (in)' the *chicha* and to a corpse that you 'lay' into a hole (in burials).

(38)a. *Mahoya=se   [**nekia-'okia**]-ka-ani   [**neki-'oke**]-ki-ani*
        then=1INCL.ABS   standTR-put_down-3A-PRS   stand-go_down-GO_TO_DO-PRS
        'Then they make us go down (lit. in a standing position), we go down (off the truck which took us to the main city) (lit. in a standing position).'   {narr}

b. *Ekueya chicha   bikia-bikia-nahe eya=asoka   [**iya-dobia**]=aje.*
    1SG.GEN alcoholic_drink(Sp) sweet-RED-PAS   1SG.ERG=sugar(Sp) sit-put_in=TMPOS
    'My chicha got sweet when I put (lit. sit-put in) sugar into it.'   {vol}

   c. ***Wana-dobia**-ka-nahe   jani=asije.*
      lay-go_inTR-3A-PAS   hole=ALL
      'They laid (the corpse) into the hole.'   {narr}

As can be observed in the examples immediately above, *-a* (possibly a former productive morpheme) turns some intransitive roots into transitive ones: *neki-* (> *nekia-*), *'oke-* (> *'okia-*) and *dobi-* (> *dobia-*) (see Vuillermet (2012: 511) for more details on this morpheme **-a,* and also Valenzuela, this volume, for transitive counterparts with *(w)a* in Panoan and other Takanan languages).

     The intransitive verbs *sowa-* 'go up' and *kuaya-* 'go out' have only one form, used both with an intransitive and a transitive V1. This may be explained by a rule of coalescence, as the two roots end in *a,*[24] or may be considered as a case of transitivity disharmony.

     The two verbs *ani-* 'sit' and *haa-* 'lie' have suppletive transitive forms: their transitive counterparts are *iya-* 'sitTR' (39a) (see also (27c) and (38b) above) and *wana-* 'lay' (39b) respectively (see also (38c)).

(39)a. *Motorcito=a*   *ekuana*   *[**iya**-sowa]-ka-nahe.*
      little_motorboat(Sp)=ERG   1EXCL.ABS   sitTR-put_up-3A-PAS
      'The small motor boat brought us up (sitting).'   {narr}

   b. *…e-[**wana**-sowa]-'io-ji,*   *velado*   *y-a-ji.*
      PURP-lay-put_up-TEL-PURP   wake(Sp)   PURP-do-PURP
      '(we were looking for a table) to lay (the corpse) (up) for the wake.'   {narr}

Finally, the transitive counterpart of *ba'e-* 'float, hang' is the compound *ba'e-wana-* 'float-lay', as shown in (40a). It still can be the first element of a compound (40b).

(40)a. *(**Ba'e-wana**)-ka-'io-ani,*   *oña=ho,*   *e-kuakua.*
      hangTR(float-lay)-3A-TEL-PRS   pot=LOC   RES-cook
      'She hangs the cooked (food) in a pot (to eat it later).'   {narr}

   b. *E=e-ani=ho*   *Soo'ai=ya*   *weshe* *[(**ba'e-wana**)-sowa]-ka-nahe.*
      1SG.ABS=RES-sit=TMPDS Florentina=ERG banana (hangTR/(float-lay))-put_up-3A-PAS
      'When I was at her place, Florentina suspended the bananas (on a shelf).'   {vol}

Though *ba'ewanasowa-* in (40b) appears to be an exceptional sequence of three verbal lexemes in a row, *ba'e-wana-* 'float-lay' is better analyzed as a single lexical entry ('hang TR') as it is the only possible way to transitivize

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[24] This morphophonological rule is attested elsewhere in the language, see Vuillermet (2012: 193).

ba'e-. In addition, the causative semantics of the combination is unexpected, since *wana-* 'lay' is not a causativizer elsewhere in the language.

Some caused motion verbs (V1) can also be associated with a caused path verb (V2), but this is much less frequent and may be controversial. The verbs *hia-* 'throw' and *jeki-* '(go) get' are attested with *sowa-* 'put up'.[25]

(41)a. *Oha=hiojishehe   [hia-sowa]-ka-ani.*
       3GEN=shoe   move_away-put_up-3A-PRS
       'He puts his shoe over his head.'   {narr}

   b. *[Jeki-sowa]-he.*
       (go)get-put_up-FUT
       'I will pick up X (e.g. a child from down on the earth).'   {elic}

The verb *ye-* 'bring' and *jeki-* '(go) get' are attested with *kuaya-* 'put out' as illustrated in (42a-b).

(42)a. *...[ye-kuaya]-ka-a=kuana=pwá*
       bring-put_out-3A-RPAS=3PL=RPAS
       'they went out (by the river Natawa) (lit. the river brought them...).'   {narr}

   b. *Beno'ao   [jeki-kuaya]-ka-ani   oha=awe=a.*
       fish_sp   (go)get-put_out-3A-PRS   3GEN=husband=ERG
       'His husband fishes for *cachorro* (fish sp.). (lit. go get-put out the fish)' {narr}

However, *kuaya-* in (42a) may alternatively be analyzed as an associated motion morpheme (-*kuaya* 'leave for good', see the discussion in Vuillermet (2012: 675ff.)), and *jeki-kuaya-* in (42b) may be considered as a case of lexicalization, as it refers to the action of fishing (with nets or hooks).

Similar Path compounds are reported in Cavineña, Araona and Tacana: Guillaume (2008: 320) describes them as a verb-suffix combinations in Cavineña, just like Emkow (2006: 525ff.) in Araona, who alternatively analyzes them as asymmetrical serial verb constructions (*ibid*: 666). For Tacana, Guillaume (2013a) lists very productive Path VCs that not only involve (caused) motion verbs, but also many action verbs like 'cut', 'hit', 'spill', etc. Note that Tacana displays productive VCs with posture verbs in V2, which are not attested in Ese'eja.

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[25] The verb *jeki-* 'go get' is used daily to refer to the action of going and getting water. In compounds, it tends to lose its motion meaning. The original meaning, however, involved motion, as demonstrated by Guillaume's (2013b: 145) reconstruction of this morpheme in Proto-Takanan.

As for Panoan languages, similar VC constructions are not reported. However, the possible existence of serial verb constructions at an earlier stage of the Matses language is mentioned by Fleck (2003: 367) in Matses with regard to directionals (that actually also include 'associated motion' morphemes), while Valenzuela (2010: 190) describes serial verb constructions in Shipibo-Konibo involving a dozen of bound morphemes (among them the directional 'go up').

5. Other verbal constructs

In addition to the VCs described above, Ese'eja displays other verbal constructs, namely auxiliary constructions (§5.2) and predicates made of a verb root plus a grammaticalized verb – synchronically analyzed as aspect or Aktionsart markers (§5.3). Because terminology varies a lot across authors, language families and continents, a terminological note is first in order (§5.1).

5.1. Terminological note

Many current descriptions favor the term 'serial verbs' over VCs. These authors often suggest an inclusive definition of 'serial verbs' which embraces any "sequence of verbs which act together as a single predicate" (Aikhenvald 2006: 1) (see also Durie 1997 and the various authors' positions in Aikhenvald & Dixon's 2006 volume on serial verbs). According to Aikhenvald (2006: 1), this definition "[avoids] undue differentiation between 'compounding' and 'serialization'" and thus includes 'serial verbs' that form one word – and not only those that are distributed over several phonological and/or grammatical words.[26]

Compounds and serial verbs are indeed often distinguished on the basis of phonological and/or morphological wordhood (one *vs.* two morphological words, as in Aikhenvald 1999: 470-1). For example, in African languages with little or no verbal morphology, linguists tend to consider only multi-word sequences serial verb constructions and discard one-word constructions. This view is also shared by other authors who have worked on languages

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[26] See Guillaume (2013c: 21-26) for an interesting discussion of the evolution of the term Serial Verb Construction since it was coined, and the theoretical and analytical issues associated to this evolution.

with a more complex verbal morphology such as Crowley (1987: 60) for Oceanic languages (see also Payne 1997: 233, 307).

Australian classificatory verbs are usually referred to as 'compound verb constructions' (McGregor 2002); this term is used for two-word constructions that consist of a (classificatory) inflecting verb and an uninflecting verb. The semantics of these constructions are sometimes similar to the semantics of the resultative V-V compounds found in Ese'eja. Nevertheless, they remain distinct in many ways, e.g. with regard to the inherent classificatory function of the systems described in some Australian languages.

When the notion of 'compound verbs' is restricted to single words that combine several (verb) roots, it still might merge very different classes of compound verbs, from highly lexicalized forms learned as units by speakers, to most integrated verb forms that only supply grammatical information (see e.g. Ospina Bozzi 2002: 344ff. or Epps 2008: 387ff.). Such a stance would amalgamate the grammaticalized (former) verbs from Slots +2, + 4, +6, +8, +9 and +10 that are discarded here (see §5.3). On the other hand, verb compounding is sometimes associated to lexicalization (see e.g. the discussion in Durie 1997: 303). As has been shown in the previous section, what is called VC here is in most cases a productive and compositional construction involving at least one verb root and another predicating element.

5.2. Auxiliary constructions

Auxiliary constructions in Ese'eja consist of two verbal elements, a non-inflecting verb plus an auxiliary that bears the obligatory morphology (person and tense/mood markers). The non-inflecting verb roots may be loanverbs (borrowed from Spanish, as in (44b)), inflecting verbs derived by an auxiliary-triggering morpheme (e.g. with the desiderative -*sa* 'DES' in (43a)), or inflecting verbs used in a specific construction (like in the passive construction, see (43b)). The auxiliary is either *a-* 'do' (transitive) as in (43a) or *po-* 'be' (intransitive) in (43b).[27] Auxiliary constructions must however be distinguished from VCs because they are made of two separate words, each one bearing its own stress, as illustrated in (43) below.

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[27] Note that the intransitive auxiliary *po-* 'be' has two other allomorphs, *pwa-* and *kua-*.

(43)a. ***Ijiá**-heyo-hia-'io-sa   **á**-ka-ani.*
         eat-FINISH-DEPR-TEL-DES   do-3A-PRS
         'He wants to finish to eat them completely carelessly.'   {elic}

   b. *Ahia=shai   **háha**-hia **kuá**-nahe?*
         QGEN=ON_EARTH   fell-DEPR   be-PAS
         'Who on Earth felled (the tree)?' (lit. by whom was it felled)   {narr}

Furthermore, as shown in (44a-b), both elements of an auxiliary construction, the non-inflecting verb root and the auxiliary, need not be contiguous (although they often are, like in (43a-b)).

(44)a. *Pia   Ese'eja=ha **haha-hia**   poja'a **kua-nahe** biñani,   palo santo.*
         other Ese'eja=GEN fell-DEPR   maybe   be-PAS   tree_sp   tree_sp(Sp)
         'The *palo santo* was felled by other Ese'eja maybe.'   {narr}

   b. *E'é   **buscando**   bobi   **a-ka-ani**.*
         DISC look_for(Sp)   food   do-3A-PRS
         'Indeed they are searching for food.'   {narr}

Functionally, the auxiliary does not specify the meaning of the predicate as the second element of the VCs does.

5.2. Grammaticalized verbs

Numerous verb roots have undergone grammaticalization in Ese'eja, often yielding aspectual values.[28] Many non-obligatory verbal slots are thus filled by elements of verbal origin, like the imperfective marker *-neki* 'stand/IPFV' (Slot +9): in (45a), *neki-* (Slot 0) is one of the four posture verbs and means 'stand', while in (45b), *-neki* 'stand/IPFV'(Slot+9) does not only refer to the position of the figure, but also adds an imperfective value to the main verb *koho-* 'collect'.

(45)   Posture verb > ASPECT
   a. Main verb (lexical source)
         *…dokuei-'ai=ha sheana=ho oya   **neki**-nahe.*
          stag-big=GEN   horn=LOC   3ABS stand-PAS
         '... he was standing on the big   stag's horns.'   {FWA}

   b. (Grammaticalized into an) imperfective marker
         *Ekuaaya   e-sho'i   yawa=ho   koho-mee-**neki**-nahe.*
         1EXCL.ERG NPF-child long_ago=LOC collect-CAUS-stand/IPFV-PAS
         'We used to make the children go collect (the bananas).'   {narr}

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[28] In Aikhenvald's (1999) typology, similar phenomena correspond to the 'asymmetrical compounds' or to 'asymmetrical serial constructions'.

However, these grammaticalized verbs do not enter the root/stem slots as VCs do: in (45b), the grammaticalized (posture) verb *-neki* 'IPFV' follows the causative marker *-mee* 'CAUS' (Slot+3). In (46) also, the associated motion morpheme *-jeki* 'COME(P)' (Slot+6, from the lexical verb *jeki-* 'go get') follows the person indexation *-ka* '3A' (Slot+5). Note that *-ka* is suffixed to a VC.

(46)　*Ijiakaji=kuana=pi'ai　[kuia-pohi]-ka-**jeki**-ani.*
　　　animal=PL=ALSO　　hit-bald-3A-COME(P)-PRS
　　　'She singes the animal (<u>brought home/to her by her husband</u>).'　{narr}

See also the imperfective suffix *-ani* 'sit/IPFV' (Slot+9) in (20b). These former verb roots undergo semantic modifications (bleaching or extension, in the case of the imperfective markers which not only preserve their posture semantics but get an additional imperfective meaning), as is the case of *-pahia* 'STOP' (Slot+2, from *pahia-* 'forget') in (47).

(47)　*Ojahia-**pahia**-ka-nahe.*
　　　spit-STOP-3A-PAS
　　　'He stopped spitting (blood).'　{narr}

Grammaticalized morphemes of verbal origin are thus discarded from VCs on a semantic and a structural basis.

6. Multi-verb constructions in the Amazon

Constructions involving several verbs (and former verbs) are well represented in the Western part of the Amazon, as reported by the numerous examples from Amazonian languages in Aikhenvald (2006), the abundance of individual papers (see for example Gomez-Imbert 1988, 2007 and Stenzel 2007 for Tukanoan languages, Martins 2007 for Makú languages, Valenzuela 2010 for Panoan languages, or van Gijn 2010 and Haude 2010 for Bolivian isolates), and dissertation chapters (e.g. Ospina Bozzi 2002: Part IV on Yuhup, Valenzuela 2003: 268ff on Shipibo-Konibo, Epps 2008: Chap. 9 on Hup).

Verb compounding as defined in this paper is less widespread. It is however productive in Tukanoan and Makú languages (although not always mentioned as such by the authors cited above), and also apparently in Nambikwara languages (Telles de Araujo Pereira Lima 2002, Eberhard 2009). In the Takanan family, Araona (Emkow 2006: 525ff; 664) displays

resultative verb-verb compoundings similar to the ones described here. In Cavineña, the only verb compounds attested belong to the Path semantic domain (Guillaume 2008: 320). In Tacana (Guillaume 2013a), verb compounding is restricted to path and posture verbs in V2 position. Path verbs combine with a greater variety of verbs in Tacana than in Ese'eja, and posture verbs in Ese'eja only appear in the first position of verb compounds, while they productively appear in first and second position in Tacana. Ese'eja appears to be the only language of the family to display verb-adjective compounds.

7. Conclusions

Ese'eja shows a high degree of verbal polysynthesis. Verb predicates often consist of several morphemes that may look very lexical but are in fact grammaticalized. The phenomenon of verb compounding investigated in this paper is clearly distinguished from more grammaticalized phenomena such as the imperfective markers grammaticalized from posture verbs. Verb compounds further subdivide on a lexical category basis into Verb-Verb vs. Verb-Adjectives, on a semantic basis into Result vs. Path compounds, or on a syntactic basis into intransitive vs. transitive. However, all subtypes still share many properties, which makes them analyzable as a unique phenomenon. Table 5 summarizes the distinct VCs found in Ese'eja.

Table 5: (productive) Compound types in Ese'eja

V1	X2	Semantics	Example	Translation
Any V	Adjective	Cause – Result	*poki-kewa-* go-opaque	'disappear'
			hia-pewee- throw-askew	'overturn'
Action V	Action V	Cause – Result	*haha-poho-* cut-divide	'cut into pieces'
(caused) Post. V	(caused) Path V	(caused) Post. – Path V	*neki-'oke-* stand-go down	'get down standing'
			nekia-'okia- standTR-put_down	'put down standing'
(caused) Motion V	(caused) Path V	(caused) Motion-Path V	*poki-sowa-* go-go_up	'go upriver'
			hia-sowa- move_away-put_up	'pick up'

The domain of verb compounding appears very promising for further research, including a finer description of the possible semantic combinations, as well as systematic crosslinguistic comparison.

Abbreviations

1	1st person	NPF	noun prefix
2	2nd person	OS	Object to Subject co-reference
3	3rd person	P	Patient like argument of a prototypical transitive verb
A	Agent like argument of a prototypical transitive verb		
ABS	absolutive	PAS	past
ALL	allative	PERL	perlative
APF	adjective prefix	PL	plural
CTRS	contrastive	PRIV	privative
DEM	demonstrative	PRS	present
DEPR	depreciative	PURP	purpose
DES	desiderative	Q	question word
DISC	discourse marker	RED	reduplication
DS	different subject	REP	reportative
ERG	ergative	RES	resultative
EXCL	exclusive	RPAS	remote past
FUT	future	SG	singular
GEN	genitive	SS	same subject
IMP	imperative	(Sp)	Spanish loan
INCL	inclusive	TEL	telic marker
INSTR	instrumental	TMP	temporal subordinate clause
IPFV	imperfective	TR	transitive
LOC	locative	U	unique argument of an intransitive verb
MID	middle	V	verb
NMZ	nominalizer	VC	verb compound
		X	2nd element of a verb compound

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