A grammar of Dhao: An endangered Austronesian language in Eastern Indonesia

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4

Morphosyntax: Inflection and Derivation

4.1. Introduction

This chapter is concerned with the forms that play a significant role in morphosyntactic processes in Dhao. These forms include affixes, clitics, reduplication, compounding, and vowel change. This chapter starts with actor indexing in a verb class that obligatorily requires corresponding affixes to co-index subjects. Dhao has only one derivational prefix, *pa-*, which is discussed in §4.3. This section focuses on the meanings carried by the prefix and on related issues, such as integration of the prefix *pa-* with inflected verbs, reduplication, andcompound forms. Furthermore, §4.3 also discusses the lexicalization of the prefix *pa-*. Reduplication, including its types and semantics, is discussed in §4.4. While the prefix *pa-* is productive for verb formation (see §3.3.1.1), reduplication is productive for noun formation (see §3.2.1.1). Another productive morphosyntactic process in Dhao is compounding, which is discussed in §4.5. This section will touch on compounds in nominal and verbal categories. Related meanings of compounds are also mentioned in brief. A discussion on vowel change is presented in §4.6. Although it is a less productive morphosyntactic process, it will be shown that Dhao, as a Hawu-like language, still maintains such a morphosyntactic feature.

4.2. Actor Indexing

In Dhao, nine verbs obligatorily require affixes that co-index with the subject (see §3.2.2.1). Eight verbs take prefixes, whereas the verb *la-* 'to go' takes a suffix. Of the eight verbs taking prefixes, two are irregular forms; their initial vowels require phonological adaptation. The paradigm of the irregular verbs is presented in Table 4.1 below.

Table 4.1: Irregular Verbal inflection

Pro.	**Pref.**	*-a'a* **'to eat'**	*-are* **'to take'**
1SG	*k-*	*k-u'a*	*k-ore*
2SG	*m-*	*m-u'a*	*m-ore*
3SG	*n-*	*n-a'a*	*n-are*
1PL-in	*t-*	*t-a'a*	*t-are*
1PL-ex	*ng-*	*ng-a'a*	*ng-are*
2PL	*m-*	*m-i'a*	*m-ere*
3PL	*r-*	*r-a'a*	*r-are*

The vowels of the first and second person prefixes assimilate with the initial vowels of the verb roots. In the verb *–a'a* 'eat' the initial vowel is replaced by /u/ and /i/ of both the 1SG and 2PL prefixes, yielding *ku'a* '1SG.eat' and *mi'a* '2PL.eat'. The second irregular verb root is *-are* 'take'. The vowel /u/ of the 1SG and 2SG prefixes and the vowel /a/ of the root merge into the vowel /o/, which results in *kore* '1SG.take' and *more* '2SG.take'. The vowel of the 2PL prefix /i/ and the vowel of the root /a/ are neutralized into /e/, which results in *mere* '2PL-take'. The other verbs simply merge their vowels.

The paradigm of regular inflected verb forms is presented in Table 4.2 below. The assimilation solely demotes the vowels of the prefixes and retains the initial vowel of the roots.

Table 4.2: Regular Verbal inflection with prefix

Pro.	**Pref.**	*-e'a* **'to know'**	*-èdhi* **'to see'**	*-èti* **'to bring'**	*-o'o* **'to want'**	*-inu* **'to drink'**	*-èd'u* **'to hold'**
1SG	*k-*	*k-e'a*	*k-èdhi*	*k-èti*	*k-o'o*	*k-inu*	*k-èd'u*
2SG	*m-*	*m-e'a*	*m-èdhi*	*m-èti*	*m-o'o*	*m-inu*	*m-èd'u*
3SG	*n-*	*n-e'a*	*n-èdhi*	*n-èti*	*n-o'o*	*n-inu*	*n-èd'u*
1PL-in	*t-*	*t-e'a*	*t-èdhi*	*t-èti*	*t-o'o*	*t-inu*	*t-èd'u*
1PL-ex	*ng-*	*n-ge'a*	*ng-èdhi*	*ng-èti*	*ng-o'o*	*ng-inu*	*ng-èd'u*
2PL	*m-*	*m-e'a*	*m-èdhi*	*m-èti*	*m-o'o*	*m-inu*	*m-èd'u*
3PL	*r-*	*r-e'a*	*r-èdhi*	*r-èti*	*r-o'o*	*r-inu*	*r-èd'u*

As stated previously, only the verb *la-* 'to go' takes suffixes for inflection. Other motion or direction verbs never are inflected. Although Grimes (2010) listed the verb *la-* 'to go' in Dhao as an innovation from Proto-Malayo-Polynesian **lakaw* 'to go, to walk', the innovation of the pronominal suffixes still is debatable from

such historical perspective. A different interpretation comes from Jonker (1903), who states that the suffixes are loans from Rotenese, which are historically grammaticalized from pronominals in turn. The following list is taken from Jonker's work (1903) and compared to the current usage of pronominal suffixes in Dhao.

Table 4.3: Verbal Inflection with suffix

Pro.	**Jonker's**		**Current Usage**	
	Suf.	***la*- 'to go'**	**Suf.**	***la*- 'to go'**
1SG	*-ku*	*la-ku*	*-ku*	*la-ku*
2SG	*-mu*	*la-mu*	*-mu*	*la-mu*
3SG	***-ni***	*la-ni*	***-'e***	*la-'e*
1PL-in	*-ti*	*la-ti*	*-ti*	*la-ti*
1PL-ex	***-ku***	*la-ku*	***-'a***	*la-'a*
2PL	*-mi*	*la-mi*	*-mi*	*la-mi*
3PL	***-ri***	*la-ri*	***-si***	*la-si*

As can be seen, three suffixes changed over time: *-ni* turned into *-'e* '3SG', *-ku* turned into *-'a* '1PL-ex', and finally *-ri* changed into *-si* '3PL'. Jonker's argument is worth being taken into account for the very reason that Dhao has had intense contact with Rotenese since a very long time (see §1.3).

The affixes must 'agree' in person and number with their antecedents (see §3.2.2.1). Inflected verbs alone already generate well-formed sentences without a full NP, pronouns, or pronominal clitics. There are four possible ways to analyze the affixes here: (1) as agreement markers, (2) as bound pronouns, (3) as both agreement markers and bound pronouns, and (4) as neither agreement markers nor bound pronouns (after Haspelmath, 2013). The only strategy is to analyze the affixes as neither agreement markers nor as pronouns.

The affixes are obligatorily attached to verbs that co-index NPs, as illustrated in (1)a and (3)a. (1)b shows an example in which the co-index is wrong, marked by an asterisk (*). The NPs, however, may be absent, in which case the affixes do not depend on a controller.

(1) a. [*ina* *=na*] ***n-e'a*** *le*
mother 3SG 3SG-know already
'His mother has known already' [FF_Bheni_ae_kabo.099]

b. [*ina* *=na*] ****k-e'a*** *le*
mother 3SG 1SG-know already

(2) ***n-****èti* *adhe* *ana* *èèna*
3SG.to.bring liver child DIST.SG
'He brought the liver of that child' [elicited from: SK_Polisi.440]

(3) a. *ca* *lod'o* *hari* *ka* [***Rika*** *la-'**e*** *dhasi*]
a day again PART Rika to.go-3SG sea
'One day Rika went to the beach' [BS_Rika_Jote.017]

b. *ca* *lod'o* *hari* *ka* [*la-'**e*** *dhasi*]
a day again PART to.go-3SG sea
'One day she went to the beach'

The affixes provide information about person and number of their antecedents. The affixes and the NPs share the same referent and role in the clause. For example, take the sentence in (1)a above, in which the prefix *n-* and the NP *ina na* 'his mother' refer to the same referent, that is: the individual who already knew. As they share the same referent, they also share the same syntactic role, that is: the subject.

From a typological perspective, inflectional affixes in Dhao can be considered as having a cross-reference system for two reasons: first of all, the verb and its affix already constitute a complete clause, and second of all, the dependent NP requires the affix on the verbal head, whereas the head and the marker can occur without the NP. This system is not unique to Dhao only, as some languages in neighboring areas also have a similar phenomenon, such as Kambera on Sumba (Klamer, 1998), Rotenese on Rote (Balukh, 2005), and Tetun on Timor (Van Klinken, 1999). Nevertheless, this perspective leaves the syntactic status of full NPs unclear still.

Inflectional affixes in Dhao are best treated as neither agreement nor as cross-reference in a narrow sense, but rather as a double expression. That is, the affixes confirm that the argument referent is available within the context. When the NP is present, the affix and the NP jointly constitute the subject argument. Thus, the argument is doubly expressed in this regard. Following Haspelmath (2013) , I call this the double expression of an actor index.

4.3. Prefix *pa-*

The prefix *pa-* is the only derivational morpheme in Dhao. It derives not only verbs from either verbal or non-verbal bases, but it also derives adverbs from adjectives. Only few derived nouns that have the prefix *pa-* have been identified. In terms of valency operation, the prefix *pa-* functions to both increase as well as decrease and to rearrange the valency of verbs. It increases valency in the sense that monovalent verbs will change into bivalent verbs, for example to express causativity. Furthermore, the prefix *pa-* also decreases verb valency in that bivalent verbs change

into monovalent verbs, for example, in order to denote reciprocal meaning. In my Dhao corpus no trivalent verbs decrease their valency to bivalency. The discussion in this section focuses on the meanings of the prefix *pa-*. Note that the corresponding form and meanings of this prefix are also obviously found in languages of the same subgroup: *pa-* in Kambera on Sumba (Klamer, 1998) and *pe-* in Hawu on Sawu (Walker, 1982).

Causative meaning is expressed by attaching the prefix *pa-* to the bases of verbs as well as adjectives, nouns, and numerals. The results of this derivation are bivalent or trivalent verbs. The discussion of causative meaning also involves manipulative meaning (§4.3.1.1). Intensity meanings can be derived from either monovalent or bivalent verbs (§4.3.1.2). Reciprocal meaning is derived from bivalent verbs and resultative meaning from monovalent verbs (§4.3.1.3). Resultative meaning does not change the valency of the verb (§4.3.1.4). Simultaneity meaning is presented in §4.3.1.5. Habitual, durative, and factitive meanings are derived from nominal bases, which result in either monovalent verbs or adverbs (§4.3.1.6; §4.3.1.7; §4.3.1.8). Other specific meanings encoded by prefixing *pa-* will also be taken into account in this section (§4.3.1.9). The Derived forms as bases of *pa-* are presented in §4.3.2, §4.3.3, and §4.3.4. Lexicalization of *pa-* is given in §4.3.5. A summary of the meanings resulting from the prefix *pa-* is presented in Table 4.4 below.

Table 4.4: Bases and Meanings of *pa-*

Meanings	**Base forms**	**Derived forms**
Causative	Monovalent verbs Bivalent verbs Ambivalent verbs Adjectives	Bivalent verbs
	Nouns	Bi/trivalent verbs
	Numerals	Bivalent
Manipulative	Bivalent verbs	Trivalent verbs
	Monovalent verbs	Bivalent verbs
Intensity	Monovalent verbs Bivalent verbs	Mono/bivalent verbs
Reciprocal	Bivalent verbs	Monovalent verbs
Resultative	Monovalent verbs	Monovalent verbs
Simultaneity	Monovalent verbs	Monovalent verbs
	Bivalent verbs	Bivalent verbs
Habitual	Nouns	Monovalent verbs
Durative	Nouns	Adverbs
Factitive	Nouns	Monovalent verbs
Other	Monovalent verbs Bivalent verbs	Mono/bivalent verbs
	Nouns	Nouns

4.3.1. Meanings of the prefix *pa-*

4.3.1.1. Causative

Causative meaning is commonly expressed by verbal constructions that profile an action that brings about a particular process leading to a change in the state of an entity (Shibatani & Pardeshi, 2001). This phenomenon refers to a situation that is cross-linguistically termed a 'causative situation', in which two interrelated events are involved: the causing event and the caused event (Shibatani, 1976; Kulikov, 2001).

This section is concerned with the causative meaning brought about by the prefix *pa-*. This section will also discuss causative constructions expressed by SVCs in connection with the attachment of the prefix *pa-* to particular bases. Causative meanings expressed by lexical words can be found in the discussion of verbs in §3.3.1.2 and of SVCs in §6.4.3.4. Before discussing the semantic constraints and syntactic construction of causatives, it is important to first present the bases that take the prefix *pa-*.

Monovalent base verbs are exemplified in (4) below. A typical intransitive construction with the monovalent verb *madhe* 'to die' is given in (4)a. The verb semantically denotes the state of an entity, in this case *kahibi èèna* 'that goat'. When the verb *madhe* 'to die' is prefixed with *pa-* in (4)b, the morphologically complex verb denotes an action that causes a change of state, that is, from being alive to being not alive, or rather, dead. This construction implies that the actor *rèngu* '3PL' acts in a particular manner which in turn causes the undergoer *kahibi èèna* 'that goat' to be dead. The prefix *pa-* expresses the causation, whereas the base verb *madhe* 'to die' expresses the resulting state. A list of state verbs taking the prefix *pa-* is given in (5).

(4) a. *kahibi* *èèna* ***madhe*** *le*
goat DIST.SG to.die PERF
'That goat has been dead' [elicited]

b. *rèngu* ***pa-madhe*** *kahibi* *èèna*
3PL CAUS-to.die goat DIST.SG
'They kill the goat' [Elicited]

(5) State monovalent verb bases for *pa-*

adhu	'hard'	*pa-adhu*	'cause X hard'
bai	'swollen'	*pa-bai*	'cause X swollen'
bani	'brave'	*pa-bani*	'cause X brave'
bèdhu	'blind'	*pa-bèdhu*	'cause X blind'
bhaka	'blunt'	*pa-bhaka*	'cause X blunt'

èra	'strong'	*pa-èra*	'cause X strong'
j'èra	'suffer'	*pa-j'èra*	'cause X suffer'
kèpu	'be burnt'	*pa-kèpu*	'cause X burnt'
madhe	'to die'	*pa-madhe*	'cause X to die'
mèu	'be clean'	*pa-mèu*	'cause X clean'

Like state verbs, monovalent action verbs also take the prefix *pa-* to encode causative meanings. While the meaning of action verb bases always designate physical actions, the derived counterpart may also refer to non-physical phenomena. For example, the verb base *manahu* 'to fall' in (6) denotes a physical action in which the individual *bhèni èèna* 'that woman' drops from a high position. When attaching *pa-*, the verb becomes *pamanahu* 'cause to fall'. The verbal construction may denote either a corresponding physical action, as in (6)a or a non-physical phenomenon (a sentiment), as in (7), which contextually means 'make s.o. suffer'. More action monovalent verbs taking *pa-* are listed in (8) below.

(6) a. *bhèni* *èèna* ***manahu***
woman DIST.SG to.fall
'That woman falls down' [SB_Lolo.311]

b. *ra* ***pa-manahu*** *bhèni* *èèna*
3PL CAUS-to.fall woman DIST.SG
'They cause the woman to fall'

(7) *ra* ***pa-manahu*** *èdhi* *asa* *j'ara* *susa*
3PL CAUS-to.fall 1PL.in to way to.suffer(IND)
'They make us suffer' [TF_E'yu_Maraho.171]

(8) Action monovalent verb bases for *pa-*

bhodho	'to exit'	*pa-bodho*	'cause X to exit'
cèna	'to sink'	*pa-cèna*	'cause X to sink'
cèri	'be separated'	*pa-cèri*	'cause X to separate'
manahu	'to fall'	*pa-manahu*	'cause X to fall'
cudu	'to bow down'	*pa-cudu*	'make bow down'
dha'u	'to go down'	*pa-dha'u*	'make go down'
guri	'to collapse'	*pa-guri*	'make X collapse'
hae	'to flow'	*pa-hae*	'make X flow'
kalua	'to exit'	*pa-kalua*	'make X to exit' (take X out)
bèbhe	'to fall'	*pa-babhe*	'to fell X'
kabhui	'to fall'	*pa-kabhui*	'to fell (fruit)'

kako	'to walk'	*pa-kako*	'to run X'
kèdi	'to get.up'	*pa-kèdi*	'to wake up X'

The combination of an adjective and the causative prefix *pa-* is illustrated in (9) below. The adjective *madhera* 'long' in (9)a describes an additional feature of the entity *aj'u èèna* 'that log'. When attaching the prefix *pa-*, the adjective is verbalized as in (9)b, meaning 'to make something become'. The derived verb designates that the referent of *nèngu* '3SG' takes a particular action which causes the log to be long. Like with monovalent base verbs, the integration of the prefix *pa-* profiles a process that leads to a change of the state of an entity. However, this construction also requires the action verb *tao* 'to make'. All this results in a SVC (which will be explained further down below). A list of adjectives taking the prefix *pa-* is presented in (10) below.

(9) a. *aj'u* *èèna* ***madhera***
wood DIST.SG long
'The log is long' [GD_Kei_Ei.084]

b. *nèngu* *tao* ***pa-madhera*** *aj'u* *èèna*
3SG to.make CAUS-long wood DIST.SG
'He makes the log long'

(10) Adjective bases for *pa-*

(*ana*) *iiki*	'small'	*pa-ana iiki*	'to make X small'
aapa	'bad'	*pa-aapa*	'to make X bad'
bab'a	'short, shallow'	*pa-bab'a*	'to shorten'
be'a	'good'	*pa-be'a*	'to make X better'
bhèla	'wide'	*pa-bhèla*	'to widen'
dèbho	'big (wood)'	*pa-dèbho*	'to make X big'
kapai	'big, large'	*pa-kapai*	'to make X big'
kobo	'narrow'	*pa-kobo*	'to make X narrow'
ma'aa	'thick'	*pa-ma'aa*	'to thicken'
madhera	'long, tall'	*pa-madhera*	'to lengthen'
manii	'thin'	*pa-manii*	'to make X thin'
marèma	'deep'	*pa-marèma*	'to deepen'

The adjectives presented in (10) above are classified as "recategorized" adjectives, except for *iiki* 'small', which is a prototypical or "true" adjective (see §3.4; Balukh, 2015). Unlike other adjectives, the causative prefix *pa-* is attached to the compound form *ana iiki* 'small child'. This phenomenon may be explained as follows. Prototypical or "true" adjectives in Dhao can only function as direct noun modifiers

and they obligatorily require a head noun. As the result, compound forms appear like a NP construction. As demonstrated in (11)a below, the prefix *pa-* is attached to the compound form *ana iiki* 'small child'. When *ana* 'child' is absent, like in (11)b, the construction is ungrammatical. This phenomenon may suggest that the adjective *iiki* 'small' loses its morphosyntactic characteristics and requires the lexical form *ana* 'child' as its semantic counterpart (Balukh, 2015).

(11) a. *èdhi* ***sai*** ***pa-ana.iiki*** *nèngu*
1PL.in to.chop CAUS-child.small 3SG
'We cut it into small' [elicited]

b. **èdhi* ***pa-iiki*** *nèngu*
1PL.in CAUS-small 3SG

The prefix *pa-* also derives causative verbs from nominal bases, which can be either concrete or abstract nouns. For instance, in (12) the noun *ngara* 'name' is a possessed noun. Prefixed with *pa-*, the derived verb *pangara* denotes the meaning 'to name' or 'to cause something to have a name'. The construction in (13) was taken from a story about the ancestors of Dhao who first came to the island. It is said that there was a debate amongst three people; a man named Pesa Kèli asked the other two, Rika and Jote, what name they had given to the island in order to prove that they had been the first ones to come to the island. A list of more nouns that can be the bases for the prefix *pa-* is given in (14).

(12) *dhèu* *èci* ***ngara*** *na* *baki* *Hètu.Helo*
person one name 3SG.CL grandfather *Hètu.Helo*
'There was a person named Mr. Hètu Helo' [JL_Musu_Bajo.256]
(Lit: one person, his name (is) Mr. Hètu Helo)

(13) *miu* ***pa-ngara*** *kabarai* *ne'e* *ne* *na* *ngaa*?
2PL CAUS-name island PROX.SG PROX.SG COMP what
'What name did you give to this place?' [BS_Rika_Jote.077]
(Lit: you name this island what?)

(14) Noun roots for *pa-*

èi	'water'	*pa-èi*	'to solder, melt'
hèu	'odor'	*pa-hèu*	'to make smell'
horo	'foam'	*pa-horo*	'to make foam'
kabheca	'mud'	*pa-kabheca*	'to become muddy'
kabua	'bridewealth; price'	*pa-kabua*	'to honor'

katanga	'cover'	*pa-katanga*	'to make layers' 'to bundle' 'to double'
lii	'voice, sound'	*pa-lii*	'to ring'
maruru	'garbage'	*pa-maruru*	'to pollute, to contaminate'
masi	'salt'	*pa-masi*	'to make it become salt'
mènyi	'oil, fat'	*pa-mènyi*	'to oil'
na'i	'tobacco'	*pa-na'i*	'to treat (medical)'
ngara	'name'	*pa-ngara*	'to name'
ro'a	'hole'	*pa-ro'a*	'to make hole'
saraa	'light'	*pa-saraa*	'to make light'

The prefix *pa-* is confined to the cardinal number *èci* 'one' and the fraction *ca malore* 'a half'. The derived verbs denote the meaning 'cause to become one' and 'cause to become half'. The attachment of *pa-* to the cardinal number *eci* 'one' may also mean 'to unite, to unify, to mix, to gather' depending on the context. An example is given in (15), in which someone would like to unite with other people in the community. In this case, the derived verb *paèci* bears the meaning 'to unite'.

(15) *la-ku* ***pa-èci*** *dènge* *dhèu* *ae-ae* *sèi*
to.go-1SG CAUS-one with person DUP-many DIST.SG
'I went to unite with many people over there' [Elicited]

From the description above it is clear that derived verbs with the prefix *pa-* changed from monovalent verbs into bivalent verbs. The same holds true for non-verbal categories (adjective, noun, and numeral) that behave the same as monovalent verbs constructionally (see §5.4 for details on valency and transitivity). Some examples are presented for clarification below. In (16)a, the verb *hera* 'be dirty' is monovalent. It profiles an event that has only a single semantic participant, which is referred to as *èmu èèna* 'that house' in this construction. With the prefix *pa-* in (16)b, the derived verb *pahera* 'to make dirty' profiles an event that requires two semantic participants, which makes the verb bivalent. One participant serves as the actor and the other as the undergoer. *Nèngu* '3SG' refers to the actor and *èmu èèna* 'that house' to the undergoer. Another example is shown in (18), where the base is a noun, *èi* 'water'. As seen in (17) the entity *èi* 'water' appears in an argument position, the object. The derived form with the prefix *pa-* in (18) *paèi* 'to solder, to melt' is a bivalent verb, which profiles an event that requires two participants: the actor of the soldering event and the undergoer that is to be soldered.

(16) a. *èmu* *èèna* ***hera*** *ae*
house DIST.SG dirty many
'That house is too dirty'

b. *nèngu* ***pa-hera*** *èmu* *èèna*
3SG CAUS-be.dirty house DIST.SG
'He makes that house dirty'

(17) *rèngu* *pai* ***èi***
3PL to.boil water
'They boil water' [Verb_Elicited.00332]

(18) *ja'a* ***pa-èi*** *nèngu* *ne'e*
1SG CAUS-water 3SG PROX.SG
'I soldered it' [AL_Tuku_Doi_Pudhi.049]

However, causativization and valence increasing operations do not always match in Dhao. The attachment of the prefix *pa-* to bivalent verbs maintains the verbal valence, and rather, they become more volitional. This is exemplified in (19) with the cognition verb *sanède* 'to remember' (see §3.3.1.2.3). The verb is bivalent, since it requires two participants: an experiencer, profiled by *èdhi* '1PL.in' and a stimulus, profiled by *hela ne'e* 'this blossom'. When the verb is prefixed with *pa-*, as in (20), the meaning changes into 'to remind'. The same also holds true for the bivalent verb *ciu* 'to tear apart' as illustrated in (21), which is prefixed in (22). Unlike *sanède* 'to remember', the verb *ci'u* 'to tear apart' is an action verb that is inherently causative. The difference with the derived form *paci'u* is that the latter is more volitional: the actor executes the verbal action with a specific purpose. A list of more bivalent verbs that may take the causative prefix *pa-* is presented in (23) below.

(19) *èdhi* ***sanède*** *hela* *ne'e*
1PL.in to.remember blossom PROX.SG
'We remember this blossom' [YK_HelaBunga.048]

(20) *lii* *holonori* *Lamatua* ***pa-sanède*** *ji'i*
voice advice Lord CAUS-to.remember 1PL.ex
'The Word of God reminds us' [CY_Pray.009]

(21) *èu* *baku* ***ciu*** *eele* *sa-suri* *èèna*
2SG do.not to.tear.apart PART DUP-write DIST.SG
'(you) don't tear the paper apart' [Verb_Elicited.00246]

(22) *ja'a* ***pa-ciu*** *hèngu*
2SG CAUS-to.tear.apart thread
'I divide the threads' [YL_Hengu.060]

(23) Bivalent verbs with *pa-*

hèle	'to spread'	*pa-hèle*	'to spread (mat)'
hiki	'to move'	*pa-hiki*	'to make X move'
hutu	'to wrap'	*pa-hutu*	'to make X wrapped'
jingi	'to tidy up'	*pa-jingi*	'to make X tidy'
j'oka	'to lift'	*pa-j'oka*	'to make X lifted'
kadhoe	'to hang'	*pa-kadhoe*	'to hang'
kosa	'to rub'	*pa-kosa*	'to rub'
sanède	'to remember'	*pa-sanède*	'to remind'

It has been explicated previously that causative verbs bring about a particular process resulting in a change of the state of an entity. However, in Dhao, this does not automatically imply that derived verbs equal underived verbs in terms of syntactic slots. Causative constructions with *pa-* are syntactically distinguishable as two main types: single verbal predication, and SVCs. This will be discussed by means of a scale between prototypical verbs and prototypical adjectives, as is presented in Table 4.5 below.

As is shown, the lexemes in group A can only function as predicates, which is the prototypical function of verbs. Contrastively, the lexemes in group D can only become noun modifiers and never fill predicate slots in their bare forms, which implies that they are prototypical adjectives (see §3.4.1). Groups B and C show that there is a group of intermediate lexemes that can behave both like verbs as well as like adjectives. All of them express states. The lexemes in group A and B are classified as verbs, whereas the lexemes in group C and D are classified as adjectives (see §3.3.1 and §3.4). The more verb-like a lexeme is, the more the prefix *pa-* is integrated with the base to express causation. The more adjective-like a lexeme is, the more causation is expressed separately by a specific action verb.

Table 4.5: The scale between prototypical verb and adjective

Predicate only	A	*kako*	'to walk'	Verb
		tangi	'to cry'	
		muri	'to grow'	
		mèu	'be clean'	
		hera	'be dirty'	
Predicate & modifier	B	*pèda*	'be sick'	
		madhe	'be dead, die'	
	C	*manii*	'thin'	
		mèdi	'black'	
N-modifier only	D	(*ana*) *iiki*	'small'	
		(*mone*) *aae*	'great, big'	Adjective

The example in (24) demonstrates that the base verb *kako* 'to walk' is a monovalent action verb. The prefix *pa-* is fused with the root. It does not need any extra verbs to express causation. Verbs like *kako* 'to walk' are actor-oriented verbs that require an actor participant. The example in (25)a is copied from the example in (16)b, with the state verb base *hera* 'to be dirty'. The prefix *pa-* and the base verb are integrated to express causative meaning. When the generic verb *tao* 'to make' is added, the construction becomes ungrammatical. This implies that, although *hera* 'to be dirty' itself semantically denotes a state, it syntactically is a verb just like *kako* 'to walk'.

(24) *ji'i* ***pa-kako*** […] *ètu* *dara* *gereja* *ji'i*
1PL.ex CAUS-to.walk LOC inside church(IND) 1PL.ex
'We run [offerings] in our church' [CY_Pray.069]

(25) a. *nèngu* ***pa-hera*** *èmu* *èèna*
3SG CAUS-be.dirty house DIST.SG
'He makes that house dirty'

b. *nèngu* (****tao***) ***pa-hera*** *èmu* *èèna*
3SG (to.make) CAUS-be.dirty house DIST.SG
'He makes the house dirty'

Unlike the verb *hera* 'to be dirty', the monovalent state verb *madhe* 'to die' may combine with the prefix *pa-* as demonstrated in (4) above, or may take a lexical verb to express the causation as a separate component in the predicate slot, resulting in an SVC, as is illustrated in (26). If speakers would like to specify causation, the generic

verb *tao* ‘to make’ may be replaced with other action verbs, such as *pare* ‘to slaughter’ or *game* ‘to hit’.

(26) *rèngu* (***tao***) ***pa-madhe*** *kahibi* *èèna*
3PL to.make CAUS-to.die goat DIST.SG
‘They cause the goat die’

Adjective bases always require causation to be expressed separately by the use of a specific verb. The integration of the prefix and the base itself does not qualify syntactically. Therefore, the SVC with the generic verb *tao* ‘to make’ and the *pa*-derived verb *pamanii* ‘to make thin’ is grammatical in (27)a, but the example in (27)b is not. A construction as such implies that the events profiled in a causativized construction are arranged into separate components that each are expressed with a specific verb. The lexical verb expresses the causation and the *pa*-verb the affected event. The two verbs form a cohesive unit; no NP may intervene between them. This is confirmed by means of negation: a negator is acceptable after the *pa*-verb, as is shown in (27)c. This designates that the resulting state of being thin is not achieved. However, it always is possible to negate only the causation, as in (27)d, meaning that there is no action to change the state of the entity *aj’u sèra* ‘those logs’ at all. The cohesiveness of the two verbs in the predicate position is strongly demonstrated by the fact that the SVC cannot be broken up, as shown in (27)e.

(27) a. *nèngu* ***tao*** ***pa-manii*** *aj’u* *sèra*
3SG to.make CAUS-thin wood DIST.PL
‘He makes the logs thin’

b. *nèngu* ****pa-manii*** *aj’u* *sèra*
3SG CAUS-thin wood DIST.PL

c. *nèngu* ***tao*** ***pa-manii*** ***boe*** *aj’u* *sèra*
3SG to.make CAUS-thin not wood DIST.PL
‘He does not make the logs thin’

d. *nèngu* ***tao*** ***boe*** ***pa-manii*** *aj’u* *sèra*
3SG to.make not CAUS-thin wood DIST.PL
‘He does not make the logs thin’

e. **nèngu* ***tao*** *aj’u* *sèra* ***pa-manii***
3SG to.make wood DIST.PL CAUS-thin

Beside SVCs, as explicated above and in (28)a below, the construction in which the prefix *pa-* is applied can also be expressed periphrastically, as in (28)b. The *pa-*derived verb appears in a subordinate clause, designating the resulting state of the causee while the causation proper is expressed by a lexical verb in the main clause. These two clauses are tightly integrated, in which the causing event in the main clause requires the result state to be expressed explicitly. As seen in (28)c, the negation is allowed to appear after the lexical verb *sai* 'to chop'. When the construction is negated in the same manners as the SVCs explicated in (28)d, it is judged less grammatical. It would not be totally wrong, but it is rarely used. The negator *boe* 'not' in (28)e is ungrammatical in such a position, which suggests that the two verbs are a single cohesive unit.

(28) a. *èdhi* ***sai*** ***pa-ana.iiki*** *nèngu*
1PL.in to.chop CAUS-child.small 3SG
'We minimize it'

b. *èdhi* ***sai*** *nèngu* ***pa-ana.iiki***
1PL.in to.chop 3SG CAUS-child.small
'We cut it small'

c. *èdhi* ***sai*** ***boe*** *nèngu* ***pa-ana.iiki***
1PL.in to.chop not 3SG CAUS-child.small
'We do not cut it small'

d. ?*èdhi* ***sai*** ***pa-ana.iiki*** ***boe*** *nèngu*
1PL.in to.chop CAUS-child.small not 3SG
'We do not cut it small'

e. **èdhi* ***sai*** ***boe*** ***pa-ana.iiki*** *nèngu*
1PL.in to.chop not CAUS-child.small 3SG

SVCs and periphrastic constructions suggest that Dhao causatives allow the causing event and the resulting state to be expressed by separate components. The causing event is profiled by an overt lexical verb and the integration of the prefix *pa-*, and the base denotes a process leading to a change of the state of an entity. This implies that the causative meaning is provided by the construction but is not realized by a lexical item (Foley, 2010: 85). Similarly, the periphrastic construction shows that the *pa*-derived verb occurs after the undergoer, resulting in a biclausal construction. Nonetheless, the two clauses cannot be broken up into two independent clauses. This suggests that the position of the *pa*-derived verb after the undergoer NP is an

implicature of the event structure in the construction, as it expresses the process of achange of state.

4.3.1.2. Intensity

Some bivalent verbs signal intensity when prefixed with *pa-*. For instance, the verb *kanici* 'to sort' prefixed with *pa-* means 'to sort in detail'. *Tenge* 'to look for' is a bivalent verb, as shown in (30). When prefixed with *pa-*, it denotes the meaning 'to look for something intentionally and intensively'. Verbs of this type all are action verbs, as illustrated in (31) below.

(29) *ja'a* ***tenge*** *doi*
1SG to.look.for money
'I earn money' [YF_Tenge_Mamuri.042]

(30) *èdhi* ***pa-tenge*** *ku dhèu la*
1PL.in INTS-to.look.for tag person PART
'We have to look for a person' [FF_Koli_Bubhu.761]

(31) Bivalent verbs with *pa-* denoting intensity

kanici	'to sort'	*pa-kanici*	'to sort in detail'
karèko	'to shake'	*pa-karèko*	'to shake continuously'
ngètu	'to nod'	*pa-ngètu*	'to nod continuously'
pèlo	'to fill'	*pa-pèlo*	'to fill continuously'
pici	'to splash'	*pa-pici*	'to spatter'
pode	'to turn'	*pa-pode*	'to turn continuously'
poro	'to cut'	*pa-poro*	'to cut continuously'
reo	'to go around'	*pa-reo*	'to go around continuously'
rodha	'to scream'	*pa-rodha*	'to scream loudly'
tenge	'look for'	*pa-tenge*	'look for X intensively'
			'look for X each other's Y'

4.3.1.3. Reciprocal

When the prefix *pa-* is attached to bivalent action verbs it conveys a reciprocal meaning. The derived verbs are monovalent: they require a single plural participant. For instance, in (32) the verb *liku* 'to hug' has two participants: the actor *ja'a* '1SG' realized as subject, and the undergoer *kadera* 'chair' as object. In (33), the derived verb *paliku* 'to hug each other' is a monovalent verb with a plural subject and has a reciprocal reading.

(32) *ja'a* ***liku*** *kadera*
1SG to.hug chair
'I hug the chair' [Verb_Elicited.00314]

(33) *dua* *rèngu* ***pa-liku***
two 3PL RECP-to.hug
'They hug each other' [Recip_Elicited.002]

Verbs taking the reciprocal prefix *pa-* are presented in (34) below.

(34) Bivalent verbs with reciprocal *pa-*

bae	'to pay'	*pa-bae*	'to pay each other'
bara	'to help'	*pa-bara*	'to help each other'
ère	'to pull'	*pa-ère*	'to pull each other'
galaa	'to complaint'	*pa-galaa*	'to complaint each other'
gale	'to urge'	*pa-gale*	'to urge each other'
kacuu	'to carry (s.o)'	*pa-kacuu*	'to carry each other'
kadhèi	'to hold'	*pa-kadhèi*	'to hold each other'
kadhi	'to bite'	*pa-kadhi*	'to bite each other'
karèi	'to ask'	*pa-karèi*	'to ask each other'
ku'u	'to pinch'	*pa-ku'u*	'to pinch each other'
leru	'to care for'	*pa-leru*	'to care for each other'

Reciprocal *pa-* also is attested on one noun: *angalai* 'friend'. In (35), the noun *angalai* 'friend' occupies the subject position preceding the verbal predicate *mai* 'come'. In (36), the noun *angalai* 'friend' is prefixed with *pa-*, resulting in a reciprocal verb.

(35) *ngaa* *tao* *ka* ***angalai*** *mai*?
what to.make PART friend to.come
'Why do you come (here), friend?' [SB_Lolo.255]
(Lit: what makes (you) come, friend?)

(36) *èdhi* *dua* *ti* ***pa- angalai***
1PL.in two 1PL.in.CL RECP-friend
'We are friends' [TF_Enyu_Maraho.074]

4.3.1.4. Resultative

The prefix *pa-* can also add a resultative meaning to monovalent verbs denoting positions and states. This is exemplified in (37) by the position verb *titu* 'to stand'.

When prefixed with *pa-*, like in (38), the derived verb denotes a resulting state of an inanimate subject. This is exemplified once more in (41) by the derived verb *pa-kajape* 'hung'. The example in (40) displays its counterpart without the prefix *pa-*. The derived resultative *pa-* requires an extra marker: the relative marker *dhu* 'REL'. Without *dhu*, native speakers intuitively interpret a causative meaning, as in (39), even if the subject is an inanimate object, which actually would not be able to to control such an action. A list of action verbs with resultative *pa-* is given in (42) below.

(37) *èu la-mu **titu** dedha papa èèna*
2SG to.go-2SG to.stand above board DIST.SG
'You go to stand on the board' [BS_Tuka_Suki.498]

(38) *boto èci dhu **pa-titu** ètu dedha hadhu*
bottle one REL RES-to.stand LOC above stone
'a bottle is standing on the stone' [Prep_Elicited.018]

(39) *na **pa-titu** sapeda*
3SG.CL.SUBJ RES-to.stand bicycle(Mal)
'He puts the bicycle upright' [YY_PearStory.034]

(40) *bola èci **kajape** ètu kolo aj'u*
ball(IND) one stuck.up LOC top wood
'a ball stuck up on the tree' [Prep_Elicited.009]

(41) *...dhari dhu **pa-kajape** ètu*
…string REL RES- stuck.up LOC

kalai aj'u èèna
branch wood DIST.SG
'…the rope that is hung on the branch of the tree' [Loc_Elicited.023]

(42) Resultative meaning with action verbs

huni	'be hidden'	*pa-huni*	'to hide'
pènu	'be full'	*pa-pènu*	'be full of'
titu	'to stand'	*pa-titu*	'to cause X to stand'
			'be upright'
ngee	'to think'	*pa-ngee*	'to think of'
nangi	'to swim'	*pa-nangi*	'to throw into (sea)'
j'unu	'to lie down'	*pa-j'unu*	'lie down'

4.3.1.5. Simultaneity

Derived verbs with *pa-* indicating simultaneous action are illustrated below. The bivalent verb *uri* 'to disentangle' is prefixed with the prefix *pa-* to designate the meaning 'to manage together'. The same also holds true for the bivalent verb *sanunu* 'to plan X' and the monovalent verb *mari* 'to laugh'[1].

(43) Bivalent verbs with *pa-* denoting simultaneity

kasere	'to consider'	*pa-kasere*	'to consider together'
mari	'to laugh'	*pa-mari*	'to laugh together'
sanunu	'to plan X, to intercept X'	*pa-sanunu*	'to plan together'
soa	'to jump'	*pa-soa*	'to jump together' 'to jump intensively'
uri	'to disentangle'	*pa-uri*	'to manage together'

4.3.1.6. Habitual

The prefix *pa-* adds a habitual notion to the verb *ku'a* 'to eat' and the generic nouns indicating gender *mone* 'male' and *bhèni* 'female' (see §4.3.2). In (44), the prefix *pa-* is added to the fully inflected verb *ku'a* 'to eat', signaling the habitual characteristics of the subject. This construction can be negated by the marker *boe* 'not'.

(44)

ja'a	*ne'e*	*dhèu*	*dhu*	***pa-ku'a***	*boe*	*dhèu*
1SG	PROX.SG	person	REL	HAB-1SG.to.eat	not	person

'I am a person who is not eating people' [SK_AnaBheni_Dhe'uPidhu.070-071]

When attached to the nouns *mone* 'male' and *bhèni* 'female', the prefix *pa-* signals that the actors have an egoistic attitude. The bare noun *mone* 'male' is given in (45) and the derived form is given in (46) below.

(45)

mone	*ne'e*	*madhe*	*ka*	*tèke*	*ina*
male	PROX.SG	to.die	PART	to.leave.behind	female

'Her husband died and left his wife behind' [FF_Bheni_ae_kabo.023]

(46)

èu	***pa-mone***	*ae*
2SG	HAB-male	many

'You are so egoistic' [Elicited]

[1] *pa-mari* actually emphasizes the act of laughing itself more.

4.3.1.7. Durative

When the prefix *pa-* is attached to time nouns, such as *nihia* 'afternoon' and *mèda* 'night', it denotes the duration of time. The derived form is adverbial rather than verbal. A typical underived construction with the time noun *nihia* 'afternoon' is shown in (47), in which it refers to a specific point in time. When prefixed with *pa-* in (48), it informs the duration of time spent on a certain activity that ends in the afternoon.

(47) *lod'o* ***nihia*** *ne'e* *ji'i* *mai*
time afternoon PROX.SG 1PL.ex to.come
'We come this afternoon' [Pinangan_20140430.049]

(48) *ji'i* *tuku* *medha* *ne'e* ***pa-nihia***
1PL.ex to.smith thing PROX.SG DUR-afternoon
'We are smithing this thing until afternoon' [Elicited]

4.3.1.8. Factitive

The prefix *pa-* also indicates factitive meaning when attached to a noun. It showcases that the subject referent is characterized by the expression of the noun (see also Klamer, 1998: 183). An example with the noun *dhudhu* 'thorn' is given in (49).

(49) a. *ana* *aju* *èèna* *dènge* ***dhudhu***
child wood DIST.SG with thorn
'The tree has thorn' [Elicited]

b. *ana* *aj'u* *èèna* ***pa-dhudhu***
child wood DIST.SG FAC-thorn
'The tree is full of thorn' [Elicited]

4.3.1.9. Other Meanings

The following list shows that the meanings of *pa-* vary from verb to verb. The prefix *pa-* changes the semantics of a verb although the meaning of the base still is transparent. For instance, the verb *j'uj'u* 'to point' profiles an action where someone points at something with his or her finger. Prefixed with *pa-* the verb profiles a metaphorical rather than a physical action: *paj'uj'ju* 'to indicate'. As such, the meaning of *pa-* is unpredictable in this particular case. An illustration with the derived verb *paj'uj'u* 'to indicate' is given in (50). The subject *Lamatua* 'Lord' shows something to the object *ja'a* '1SG'.

(50) *Lamatua* ***pa-j'uj'u*** *hia* *ja'a*
Lord PA-point to.give 1SG
'The Lord shows to me' [Pinangan_20140430.077]

(51) Other meanings with *pa-*

katèju	'to clap'	*pa-katèju*	'to.kick'
j'uj'u	'to point to'	*pa-'j'uj'u*	'to.indicate'
madenge	'repugnant'	*pa-madenge*	'be repugnant'
madhutu	'to follow'	*pa-madhutu*	'eager to follow'
malaa	'to wonder'	*pa-malaa*	'surprising'
neo	'to want'	*pa-neo*	'have feeling'
tabhèli	'to slip'	*pa-tabhèli*	'slippery'
tari	'to begin to plait'	*pa-tari*	'to begin to plait'
nasu	'boil, cook'	*pa-nasu*	'to cook X'

In (52), the bivalent verb *eso* 'move' profiles an action done by the actor *mone èèna* 'that man' towards the object *tas* 'bag (IND)', which results in a change of position. When prefixed with *pa-* in (53), the object *era* 'place' profiles the goal of the movement.

(52) *mone* *èèna* ***eso*** *tas* *nèngu*
man DIST.SG to.move bag(IND) 3SG
'That man moves his bag…' [Loc_Elicited.070]

(53) *bhèni* *deo* *èèna* [***pa-'eso*** *era*]
woman recent DIST.SG PA-to.move place
'The woman just now moves to another place'

The prefix *pa-* can also be attached to the quantifier *ae* 'many', which results in an adverb. The prefixed quantifier indicates the quality of the action denoted by the verbal predicate. As demonstrated in (54), the quantifier *ae* 'many' occurs as modifier of the noun *dhua* 'lontar palm'. When prefixed with *pa-* in (55), it functions as the modifier of the verb *cudu* 'to bow'. The opposite counterpart quantifier *ciki* 'a little, few' has not been attested with the prefix *pa-*.

(54) *karena* *ji'i* *èta* *dhua* ***ae***
because(IND) 1PL.ex to.tap.lontar lontar.palm many
'Because we tap many lontar-palms' [Ada_20140427.014]

(55) *èu* *baku* *cudu* ***pa-ae***
2SG PROH.NEG to.bow PA-many
'(you) don't bow down very much' [Verb_Elicited.00249]

4.3.2. Prefix *pa-* and inflected verbs

As explicated in §4.2 above, eight verbs obligatorily require co-index prefixes, without which the verbs cannot occur independently. Four verbs in the corpus occur as bases for the prefix *pa-*. In this regard, the meaning of *pa-* is unpredictable (see §4.3.1.6). In (56), the verb *re'a* 'to know' has a 3PL co-index prefix *r-* and plural subject '3PL'. Observe that the prefix *pa-* is attached to the prefix *r-* and adds a reciprocal meaning, as is illustrated in (57).

(56) *rèngu* ***r-e'a*** *sa-sue* *Lamatua*
3PL 3PL-to.know DUP-love Lord
'They know the love of God' [CY_Pray.059]

(57) *rèngu* *mai* *asa* *kabarai* *Dhao* ***pa-re'a*** *boe*
3PL come to public Dhao RECP-3PL.to.know not
'They came to Ndao Island, they did not know each other'
[PD_Rika_Jote.007-008]

However, in (58) the prefix *pa-* bears a different meaning when attached to *k-* '1SG'. In this case it denotes the meaning 'to care' or 'to be interested in'. This combination has been attested only with a negation.

(58) *ja'a* ***pa-ke'a*** *boe*
1SG PA-1SG.to.know not
'I do not care' [PM_sobhu 210]

The examples in (59) and (60) below show that the causative prefix *pa-* has a specific allomorph *pang-* with *-inu* 'drink' and *-a'e* 'to eat'. In (61), the prefix *pa-* has a competitive reading. Again, a plural subject evokes a reciprocal reading, like in (62). Possible combinations are given in Table 4.6 below.

(59) *ja'a* ***pang-inu*** *ana* *èèna* *dhua*
1SG CAUS-to.drink child DIST.SG palm.juice
'I cater the child to drink palm juice' [elicited]

(60) *ja'a* ***pang-a'e*** *ana* *èèna* *kau*
1SG CAUS-to.eat child DIST.SG rice
'I feed the child rice' [elicited]

(61) *ja'a* ***pa-k-inu*** *èi* *dènge* *ana* *mone* *nèi*
1SG PA-1SG-to.drink water with child male REM.SG
'I compete drinking with the boy' [elicited]

(62) *era* *dhu* *dhèu* ***pa-r-a'a*** *dhèu*
place REL person RECP-3PL-to.eat person
'A place where humans eat humans' [SK_Polisi.153]

Table 4.6: Prefix *pa-* and inflected verbs

k-e'a 1SG-to.know	*pa-k-e'a boe* PA-1SG-to.know not	'I do not care'	semantic specific
r-e'a 1SG-to.know	*pa-r-e'a* PA-1SG-to.know	'they know each other'	reciprocal
t-inu 1PL.in-to.drink	*pa-t-inu* PA-1PL.in-to.drink	'we compete in drinking (water)'	competitive
t-a'a 1PL.in-to.eat	*pa-t-a'a* PA-1PL.in-to.eat	'we compete in eating'	
r-a'a 3PL-to.eat	*pa-r-a'a* PA-3PL-to.eat	'to have a habit of eating s.t.'	competitive habitual

The phenomenon explicated above showcases the problematic status of the prefix *pa-* with respect to the base. If the base is regarded as having co-index prefixes, then *pa-* should be analyzed as a clitic. If *pa-* is a prefix, then the base should be analyzed as a lexicalized item. The first analysis goes back to Greenberg's Universal 28 (1963:93) that states that derivational affixes attach to roots rather than to inflections. However, in some cases, inflectional forms may feed the derivational ones (Booij, 2012: 117). This is shown in the case of Dhao, where the co-index prefixes are part of the base.

4.3.3. Prefix pa- and Reduplication

The prefix *pa-* can also be attached to nouns derived with (C)*a-* reduplication. The roots are mostly non-active monovalent verbs. However, some active verbs also are acceptable in this regard. Semantically, the prefix *pa-* denotes causativity. This is exemplified by the stative verb *bia* 'to be heavy' below. In (63), *bia* 'to be heavy' occurs in its bare form as a monovalent verb. In (64), *bia* 'to be heavy' is partially reduplicated into a noun meaning 'weight' and is a euphemism for 'pregnancy' in

the context of (65). When prefixed with *pa-*, as is illustrated in (66), *pababia* euphemistically refers to the action of causing a pregnancy.

(63) *aj'u* *èèna* ***bia***
wood DIST.SG heavy
'The log is heavy' [Verb_Elicited.00404]

(64) *ca* *kaloos* ***ba-bia*** *nèngu* *tèlu* *kilo* *dua* *ons*
a bale DUP-heavy 3SG three kilogram two ounce
'a bale, its weight is three kilograms and two ounce'
[SB_Tao_Hengu.002-003]

(65) *nèngu* *dènge* ***ba-bia***
3SG with DUP-heavy
'She is pregnant' [BS_Tuka_Suki.011]

(66) *nèngu* ***pa-ba-bia*** *ana* *bhèni* *èèna*
3SG CAUS-DUP-heavy child woman DIST.SG
'He made the girl pregnant' [elicited]

(67) Prefix *pa-* and reduplication

bhèla	'wide'	*ba-bhèla*	'width'	*pa-ba-bhèla* *pa-bhèla*?	'make X wide'
bia	'heavy'	*ba-bia*	'burden'	*pa-ba-bia* *pa-bia*?	'impregnates'
gai	'to dab'	*ga-gai*	'to dab repetitively'	*pa-ga-gai*	'dab each other'
lodhe	?	*la-lodhe*	'to hang'	*pa-la-lodhe*	'hang X'
muri	'to live'	*ma-muri*	'life'	*pa-ma-muri* *pa-muri*	'make X live'
		ka-bhèla	?	*pa-ka-bhèla*	'make X wider'

The prefix *pa-* on /p/-initial words is homonymous with the reduplication allomorph /pa/ (see §4.4.1.1 below). Consequently /p/-initial verb stems with a preceding /pa/-formative can be interpreted as either reduplicated or prefixed with *pa-*. /P/-initial verbs that bear both the reduplication allomorph and the prefix *pa-* are illustrated in Table 4.7 below.

Table 4.7: Reduplication, prefix *pa-* and /p/-initial roots

Roots	**Derived form**	**Reduplication meaning**	***pa-* meaning**
pake 'to use'	*pa-pake*	'the way of wearing, clothing style'	'cause to wear'
para 'to cut'	*pa-para*	'the way of cutting'	'to fight with sharps'
peka 'to say'	*pa-peka*	'the way of inviting people'	'to tell each other'
puru 'go down'	*pa-puru*	'the way of going down'	'to lower s.t'
pici 'to splash'	*pa-pici*	'the way of splashing (water)'	'to splash (water) to each other'
pèci 'throw'	*pa-pèci*	'way of throwing'	'to hit (throw) each other'

4.3.4. Prefix *pa-* and Compound forms

Compound verbs and adjectives can be bases for the prefix *pa-* as well, in which cases it takes a causative meaning. A list of compound words taking the prefix *pa-* is presented below.

(68) *rèngu* *dua* *ra* ***pa-leo-èmu***
3PL two 3PL.CL PA-married
'Two of them got married' [SB_Lolo.002]

(69) *na* *ngaa* *tao* *ka* *èdhi* *bisa*
PART what to.make PART 1PL.in can(IND)

heka ***pa-ana*** ***iiki***
no.more CAUS-child small
'Why can we not decrease it' [PL_Aj'aDhao.169]

(70) Prefix *pa-* and compound forms

ana iiki	'small'	>	*pa-ana iiki*	'to make X small'
child small				
budu tèke	'to postpone'	>	*pa-budu tèke*	'make X to postpone'
postpone keep				
leo èmu	'be married'	>	*pa-leo èmu*	'cause to marry'
shelter house				

4.3.5. Lexicalization of *pa-*

Sometimes the prefixation of *pa-* yields forms whose meanings no longer seem to be related clearly to the meanings of their root words. This is exemplified in example (71) where *pa-* is attached to the verb *kèdi* 'to get up', yielding the causative verb *pa-kèdi* 'to wake someone'. In (72), the verb has been lexicalized as *pakèdi* 'to leave', which no longer has a direct relation to its root word *kèdi* 'to get up', as is illustrated in (73).

(71) *lod'o* *rea* *Ama* *Lamatua* ***pa-kèdi*** *ji'i*
sun to.appear father Lord CAUS-to.get.up 1PL.in
'When the sun rises, Lord, You awake us' [UA_Sambut_Jenasah.027]

(72) *bèli* *jam* *aru* *miu* ***pakèdi***
tomorrow hour(IND) eight 2PL to.leave

asa *era* *musu*
to place war
'You go to war at eight o'clock' [SK_Polisi.017]

The following list shows /pa/-initial words that still have a semantic relation to their root words.

(73) Lexicalization of *pa-*

paloa 'to liken, compare'	(*loa* 'sheet, cord')
pahia 'to sell'	(*hia* 'to give')
padhai 'to talk, speak'	(*dhai* 'fishing net')
patèka 'to bet'	(*tèka* 'to keep, put')
pag'ag'a 'to fight'	(*g'ag'e* 'to touch')
pacuhi 'cold'	(*cuhi* 'cool')
paiia 'to pacify'	(*iia* 'ordinary, common, good')
paiie 'be careful'	(*iie* 'precisely')
paj'uj'u 'to point'	(*j'uj'u* 'refer to')

Example (74) below shows that the verb *paloa* 'to liken' is a bivalent verb, which profiles the comparison between two entities *miu* '2PL' and *ja'a* '1SG'. The verb *pacuhi* 'cold' is a state verb that is used attributively in (75). This verb is an example of a lexicalized *pa-* form, as its root *cuhi* is hardly used independently. In the following list in (76), the words that are expected to be roots have no actual lexical meaning.

(74) *miu* *baku* ***paloa*** *miu* *dènge* *ja'a* *ne*
2PL PROH.NEG to.liken 2PL with 1SG PROX.SG
'You should not compare you and me' [FF_Bheni_ae_kabo.1797]

(75) a. *bisa* *boe* *minu* *èi* ***pacuhi***
can(IND) not 2SG-to.drink water cold
'(you) may not drink unboiled water' [BS_Tuka_Suki.327]

b. *èi* *ne* ***pacuhi*** *le*
water PROX.SG cold already
'The water is already cold' [ADJV_Elicit.042]

(76) No corresponding root for *pa-*

patèku 'to fight'	(*tèku* '?')
pakihu 'to mix'	(*kihu* '?')
pa'oo 'to call loudly'	(*'oo* '?')
pahadhe 'to hamper'	(*hadhe* '?')
pacuhi 'cold'	(*cuhi* '?')
paloa 'to liken'	(*loa* '?')

As seen in (77) below, the word *pakihu* ' to mix' cannot be separated into *pa-* plus a clear morpheme *kihu*. Due to the verb bearing a causative meaning it is analyzed as a lexicalized *pa-*verb in this example.

(77) *ji'i* ***pakihu*** *rai* *pudhi* *dènge* *j'u'u*
1PL.ex to.mix land white with grass
'We mix the white soil with grass' [GD_Kei_Ei.067-068

4.4. Reduplication

Reduplication in Dhao involves hosts from different word categories: nouns, verbs, adjectives, quantifiers, and question words. Dhao distinguishes four types of reduplication; (1) (C)*a~* reduplication as described in §4.4.1.1, (2) full reduplication as described in §4.4.1.2, (3) lexical reduplication as described in §4.4.1.3, and (4) rhyming reduplication as described in §4.4.1.4. Semantically, reduplication in Dhao indicates instruments (§4.4.2.1), nominalization (§4.4.2.2), intensity (§4.4.2.3), manner (§4.4.2.5), and location or place (§4.4.2.3). Other meanings, such as attenuation or limitation and intensification, will be discussed separately in §4.4.2.6.

4.4.1. Types of Reduplication

4.4.1.1. (C)a~ Reduplication

(C)*a*~ reduplication is discussed in this section first, as it is the most productive type of reduplication in Dhao. (C)*a*~ reduplication is confined to bisyllabic verbs and adjectives, and mostly creates nouns (see §3.2.1.1). This subsection focuses on the phonological form of the reduplication, whereas its meanings will be discussed in detail in §4.4.2. A few reduplications do not change word category, but do evoke a new meaning, for example by adding a notion of intensity (see §4.4.2.3). The list in (78) provides examples of (C)*a*~ reduplication. The template is exemplified in (79) below.

(78) (C)*a*~ reduplication

bhèla	'wide'	***ba*~*bhèla***	'width'
bia	'heavy'	***ba*~*bia***	'heavy, burden'
dui	'to carry (with yoke)'	***da*~*dui***	'k.o.yoke'
goe	'to lock'	***ga*~*goe***	'key'
g'ute	'to cut (with scissors)'	***g'a*~*g'ute***	'scissors'
j'èra	'difficult'	***j'a*~*j'era***	'difficulty, affliction, in labor'
laho	'be destroyed'	***la*~*laho***	'powder'
maho	'be cold'	***ma*~*maho***	'shade'
mea	'red'	***ma*~*mea***	'red part (on weaving)'
pèda	'be sick'	***pa*~*pèda***	'sickness'

(79)

Input					Output					
C	V	C	V		C	*a*~	C	V	C	V
|	|	|	|		|	|		|	|	|
p	ə	d	a	⇒	p	a~	p	ə	d	a

For long vowel-initial words, the reduplicant simply is *a*, because there is no onset to be copied, which would realize as a short vowel [a] next to a long vowel. Only very few examples of long vowel reduplication were attested in the corpus. In (80), the template of reduplication with glottal-initial words shows that the glottal of the root is maintained. Example (81) shows that only *a* is reduplicated in long vowel roots.

(80) Input Output

C	V	C	V		C	*a~*		C	V	C	V
|	|	|	|		|	|		|	|	|	|
ʔ	a	b͡β	u	⇒	ʔ	a~		ʔ	a	b͡β	u

(81) Input Output

V	V	C	V		*a~*		V	V	C	V
|	|	|	|		|		|	|	|	|
a	:	p	a	⇒	a~		a	:	p	a

(82) (C)*a-* reduplication with glottal initial words

/ʔab͡βu/	'to get'	/**ʔa**~ʔab͡βu/	'thought, idea'
/ʔaʃa/	'to learn, teach'	/**ʔa**~ʔaʃa/	'lesson'
/ʔəra/	'be strong'	/**ʔa**~ʔəra/	'strength'
/ʔɛɔ/	'to herd'	/**ʔa**~ʔɛɔ/	'way of shepherd'
/a:pa/	'bad'	/**a**~a:pa/	'bad side'

4.4.1.2. Full Reduplication

Full reduplication is the copying of the entire base (Velupillai, 2012:101). Full reduplication involves not only content words, such as verbs (*eo~eo* 'turning around') and adjectives (*ae~ae* 'too many)', but also interrogative words (*cee~cee* 'whoever') and number (*èci~èci* 'one by one'). It is confined to single morphemes. As demonstrated in the list (83) below, the three complex interrogative words cannot be fully reduplicated. Full reduplication indicates intensification, like *pa'oo~pa'oo* 'call repetitively', or distributive plurality with interrogative words, like *pèri~pèri* 'how many per group', or numbers. The template of full reduplication in (84) illustrates that all the segments in the root are copied as the reduplicant. The full reduplication of numbers is shown in (85).

(83) Full reduplication

(*baka*) *pèri*	'how many'	*pèri~pèri*	'how many per group'
(ka) mia, (ètu) mia	'where'	*(ètu) mia~mia*	'wherever'
ae	'many'	*ae~ae*	'too many'
cee	'who'	*cee~cee*	'whoever'

eo	'to turn, to herd'	*eo~eo*	'turning around'
loli	'to roll'	*loli~loli*	'rolled up'
miri	'be slant'	*miri~miri*	'aslant'
ngaa	'what'	*ngaa~ngaa*	'whatever'
pa'oo	'to scream'	*pa'oo~ pa'oo*	'scream repetitively'
paroa	'to call'	*paroa~paroa*	'call repetitively'

(84) Input Output

C	V	C	V		C	V	C	V~	C	V	C	V
|	|	|	|		|	|	|	|	|	|	|	|
l	o	l	i	⇒	l	o	l	i~	l	o	l	i

(85) Full reduplication of numbers

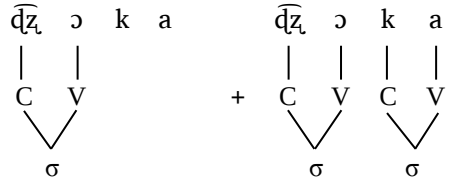
èci	'one'	*èci~èci*	'one by one, one each'
dua	'two'	*dua~dua*	'two by two, two each'
tèlu	'three'	*tèlu~tèlu*	'three by three, three each'
èpa	'four'	*èpa~èpa*	'four by four, four each'
lèmi	'five'	*lèmi~lèmi*	'five by five, five each'

In (86), the word *dhoka* 'only' undergoes syllabic reduplication as *dho-dhoka* 'only' in casual speech. In careful speech, however, it features the full reduplication form *dhoka-dhoka* without a change of meaning. Another instance of syllabic reduplication would be the interrogative word *ngaa* 'what', which can also be fully reduplicated into *ngaa-ngaa,* meaning 'anything'. In casual speech, the final long vowel is shortened to *nga-*. The reduplicant morpheme can no longer be distinguished from (C)*a~* reduplication in this case. However, the full reduplicated form suggests that the initial CV syllable becomes the reduplicant. Following Marantz (1982), the template of syllabic reduplication in Dhao is given in (87) below.

(86) Syllabic reduplication

dhoka	'only'	***dho****~dhoka* *dhoka~dhoka*	'only'	**dha-dhoka*
ngaa	'what'	***nga****~ngaa* *ngaa~ngaa*	'anything'	* *nga-ngaa*

(87)



In this case syllabic reduplication is a lexical variant of full reduplication and should be distinguished from (C)*a*- reduplication. In other words, (C)*a*-reduplication is not a syllabic-based, but is segmental with the vowel *a*, as is shown above (see 4.4.1.1) .

4.4.1.3. Lexical Reduplication

Lexical reduplication refers to forms which have no corresponding simplex forms (Sneddon et al., 2010). For example, the non-reduplicated root form of *ate-ate* 'earrings' **ate* has no meaning of its own[2]. Examples are given in (88).

(88) Lexical reduplication

**ate*	*ate~ate*	'earrings'
**bhète*	*bhète~bhète*	'too muddy'
**boti*	*boti~boti*	'lifted up'
**cèba*	*cèba cèba*	'twinkle'
**dau*	*dau~dau*	'voice from the far'
**j'aj'e*	*j'aj'e~j'aj'e*	'to step on'
**rèji*	*rèji~rèji*	'dripping'
**saseti*	*saseti~saseti*	'to push'

Another type of lexical reduplication is onomatopoetic words or ideophones. In this thesis, this type of lexical reduplication is called adverbial lexical reduplication. Examples are given in (89). These reduplicated words can only function as verbal or adjectival modifiers (see §3.3.2.3).

(89) Adverbial lexical reduplication

aa'i ***mèu~mèu***	'**absolutely** complete'
bua ***gari~gari***	'**too** overflowing'
hae koro~koro	'flowing loose'
hèu ***oone~oone***	'**too** smell'
kako ***eepo~eepo***	'**panting** walk'
kako ***eko~eko***	'**staggered** walk'

[2] There is a homonymous form *ate* 'to blink', but it has no semantic relation to *ate-ate* 'earrings'.

ma'aa ***haki~haki***	'**too** thick'
madera ***lola~lola***	'**too** long'
manii ***bedo~bedo***	'**too** thin'
mari ***eere~eere***	'laugh **restrainedly**'
mari ***uuku~uuku***	'burst out'
madèdhi ***mau~mau*** (***gua~gua***)	'sit **silently'**
pènu ***idhu~idhu***	'**very** full'
rai pode ***eo~eo***	'run **randomly**'
rai ***pode~pode***	
sagèba ***mopo~mopo***	'fall face-down'
tarenga ***hara~hara***	'supine'
titu ***dhii~dhii***	'stand **uprightly**'
udhu ***sobhu~sobhu***	'abundant result'

4.4.1.4. Rhyming Reduplication

Dhao has a small rest group of rhyming reduplication, which sometimes also is called imitative reduplication or 'echo construction'. This type of reduplication involves changes of phonological material (Rubino, 2013). As shown in the list in (90) below, rhyming reduplication does not follow any general rules.

(90) Rhyming reduplication

cebe~lebe	'scattered around'
ciki~diki	'in a moment'
koa~kio	'to praise'
koko~oko	'cackle'
oe~eo	'nearly'
tare'a~re'a	'absolutely right'

4.4.2. Semantics of (C)*a*- Reduplication

4.4.2.1. Instruments

Instruments can be derived from related verbs by applying (C)*a*~ reduplication. The reduplicated verbs should semantically denote actions whose events require instruments. This is exemplified by the action verb *goe* 'to lock'. The locking event not only requires an actor and an undergoer, but also implies the use of an instrument in order to execute the action, which typically is a key. As demonstrated in (91)a, the base *goe* 'to lock' is a verb occurring in the predicate profiling the locking event. In (91)b, the reduplicated form *ga-goe* 'key' is the instrument that functions as the object of the verb *pake* 'to use' (see §6.4.3.8). More reduplicated forms expressing instruments are listed in (92) below.

(91) a. *ja'a* ***goe*** *èmu* *ji'i*
1SG to.lock house 1PL.ex
'I locked our house' [Verb_Elicited.00268]

b. *ja'a* *goe* *èmu* *ji'i* *pake* ***ga~goe*** *kapai*
1SG to.lock house 1PL.ex use DUP~to.lock big
'I locked our house using a big key'

(92) Expressing instruments

abo	'to pound'	*a~'abo*	'pounder'
bèdho	'to close'	*ba~bèdho*	'cover'
bhoke	'to open'	*ba~bhoke*	'opener'
cèbi	'to plait'	*ca~cèbi*	'tool for plaiting'
dhui	'to bail (water)'	*da~dhui*	'bailer'
g'ute	'to cut (with scissors)'	*ga~g'ute*	'scissors'
goe	'to lock'	*ga~goe*	'key'
ngapi	'to clamp'	*nga~ngapi*	'tools for clamping'
roso	'to grate'	*ra~roso*	'grater'

4.4.2.2. Abstract Nominalizing reduplication

Nominalization of this type of reduplication involves any semantic category of verbs. The reduplicating verbs can either be action verbs, state verbs, or process verbs. Reduplicating these verbs yields nouns that mostly express abstract concepts, such as 'ideas' or 'strength'. This is exemplified by the verb *ngee* 'to think' in (93). Its reduplicated counterpart is *nga-ngee* 'idea, opinion', as is illustrated in (97). More examples of nominalizing reduplication are presented in the list (95) below.

(93) *ja'a* ***ngee*** *ma~muri* *èdhi* *ne'e* *na* *j'èra* *ae*
1SG to.think DUP~to.live 1PL PROX.SG PART to.suffer many
'I think about our life that it is very difficult' [SN_Manenu.001]

(94) *nèngu* *abhu* ***nga~ngee*** *dhu* *be'a*
3SG get DUP~to.think REL good
'He got a good idea' [FF_Koli_Bubhu.147]

(95) List of nominalizing reduplications

abhu	'to get'	*a~'abhu*	'thought, idea'
aj'a	'to learn, teach'	*a~'aj'a*	'subject, teaching'
bhodho	'to appear'	*ba~bhodho*	'appearance'
dèi	'to like, wish'	*da~dèi*	'will'
èra	'be strong'	*a~'èra*	'strength'

game	'to hit'	*ga~game*	'hitting'
heo	'to aglow'	*ha~heo*	'light'
kako	'to walk'	*ka~kako*	'journey'
lape	'to fold'	*la~lape*	'folded sign'
madhe	'be dead'	*ma~madhe*	'dead person'
mai	'to come'	*ma~mai*	'coming'
mèke	'be able to'	*ma~mèke*	'ability'
muri	'to live'	*ma~muri*	'life'
neo	'to want'	*na~neo*	'desire'
ngee	'to think'	*nga~ngee*	'idea, opinion'
rapi	'to wrap'	*ra~rapi*	'packing'
saba	'to work'	*sa~saba*	'work'
sala	'be wrong'	*sa~sala*	'fault, sin'
seba	'to rent'	*sa~seba*	'value of rent'
soda	'to sing'	*sa~soda*	'song'
suri	'to write'	*sa~suri*	'letter'

4.4.2.3. Locational reduplication

Reduplication can also signify a location or a place where the profiled action takes place. Examples are shown in (96) below.

(96) Locational reduplication

edhe	'to soak'	*a~'edhe*	'place of soaking'
kiju	'to tuck'	*ka~kiju*	'place to tuck s.t.'
mera	'be flat'	*ma~mera*	'flat place'
roe	'be weak'	*ra~roe*	'part of body that is painful'
tèka	'to keep'	*ta~tèka*	'place to keep s.t.'

4.4.2.4. Intensive reduplication

Reduplication can add an intensive reading to action verbs, as listed in (97) below.

(97) Intensive reduplication

bari	'to ask'	*ba~bari*	'to ask many times'
bèdi	'to take apart'	*ba~bèdi*	'be scattered'
bhubhu	'to bake'	*bha~bhubhu*	'to bake intensively'
ciu	'be broken'	*ca~ciu*	'to torn'
core	'to throw'	*ca~core*	'to throw around'
dede	'to lift'	*da~dede*	'to lift intensively'
dhèko	'to take out'	*dha~dhèko*	'to take out continuously'

dhobho	'to dilute'	*dha~dhobho*	'to stir water'
edo	'to grup up'	*a~'edo*	'to grup up intensively'
hag'e	'to separate'	*ha~hag'e*	'to separate intensively'
kèi	'to dig'	*ka~kèi*	'to dig intensively'

4.4.2.5. Manner Reduplication

Manner reduplication yields nouns from action verbs and expresses the manner in which something is done. A list of examples is given in (98).

(98) Manner reduplication

bhèj'i	'to sleep'	*ba~bhèj'i*	'way of sleeping, closing eyes
eo	'to herd'	*a~'eo*	'way of herding'
lere	'to accompany'	*la~lere*	'way of accompanying'
libu	'to melt'	*la~libu*	'way of melting, smithing'
nèu	'to wear'	*na~nèu*	'way of wearing, style'
roge	'to dance'	*ra~roge*	'way of dancing'
sabhi	'to wean'	*sa~sabhi*	'way of weaning'

4.4.2.6. Other types of reduplication

Sometimes reduplication of verbs yields meanings that are not discussed in the previous sections. As they are unpredictable, their description is confined to the list in (99) below.

(99) Other meanings of reduplication

dhaa	'to answer'	*dha~dhaa*	'to react'
dugu	'to tease'	*da~dugu*	'to persuade'
g'ag'e	'to touch'	*g`a~g'ag'e*	'not to touch'
kutu	'to close'	*ka~kutu*	'to do the closing'
lèke	'be right'	*la~lèke*	'absolutely right'
leko	'to disturb'	*la~leko*	'to interfere'
maho	'be cold'	*ma~maho*	'shadow, to shade'

4.4.3. (C)*a~* reduplication and inflected verbs

Eight of nine inflected verbs (see §4.2) can be partially reduplicated (see §4.4.1.1). The verb *o'o* 'to want' cannot be reduplicated, as indicated in (104) below. Like other verbs described in §4.4.1.1 above, the reduplication of inflected verbs also

yields nouns. However, these nouns should be used as possessed nouns. For instance, in example (100), the reduplication of the verb *ku'a* 'to eat' is the possessed noun of the possessor *ja'a* '1SG' in the subject slot. The meanings of reduplications vary depending on the verbs, as shown in (103) below. The verbs *ku'a* 'to eat' and *nginu* 'to drink' have multiple meanings: habitual meaning, as shown in (100), and concrete nominalizing reduplication, as shown in (101). The latter meaning indicates that reduplicated verbs lose the reference of their co-index prefixes and simply encode a generic meaning. In (101) for example, *nganga'a* 'food' appears as the object and does not refer to any specific actor. For other verbs, the co-index in the reduplicated forms still refers to the actor of activities profiled by the verbs. A list of inflected verbs reduplication with prefixes is given in (104), and the verb *la-* 'to go' with suffixes is given in (105) below.

(100) ***ka~ku'a*** *ja'a* *sèmi* *èèna* *ka*
DUP~1SG.eat 1SG be.like DIST.SG PART
'That is my habit of eating' [Elicited]

(101) *nèngu* *bisa* *boe* *tenge* ***nga~nga'a***
3SG can not look.for DUP~1PL.ex.eat
'He could not seek food' [BS_Rika_Jote.010]

(102) ***ka~ke'a*** *ja'a* *dhoka* *dai* *sangae* *èèna* *di*
DUP-1SG.know 1SG only reach that.big DIST.SG just
'What I know is only about that' [EL_Dhari.143]

(103) Meanings of inflected verbs reduplication

ku'a	'1SG.to.eat'	*ma~mu'e*	'my habit of eating'
nga'a	'1PL.ex.to.eat'	*nga~nga'a*	1) 'our habit of eating' 2) 'food'
nginu	'1PL.ex.to.drink'	*nga~nginu*	1) 'our habit of drinking' 2) 'drinks'[3]
kore	'1SG.to.take'	*ka~kore*	'my habit of taking'
ke'a	'1SG.to.know'	*ka~ke'a*	'my knowledge, what I know'
kèdhi	'1SG.to.see.	*ka~kèdhi*	'what I see'
kèti	'1SG.to.bring'	*ka~kèti*	'what I bring, belongings'
kèdu	'1SG.to.hold'	*ka~kèdu*	'what I hold, belongings' 'my habit of holding'
laku	'to.go.1SG'	*la~laku*	'my going/journey'

[3] This word should be compounded with *nganga'a* 'food'

(104) (C)*a*~ reduplication and inflected verbs with prefixes

Pro.	*-a'a* **'to eat'**	*-inu* **'to drink'**	*-are* **'to take'**	*-e'a* **'to know'**	*-èdhi* **'to see'**	*-èti* **'to bring'**	*-èd'u* **'to hold'**	*-o'o* **'to want'**
1SG	*ka-ku'a*	*ka-kinu*	*ka-kore*	*ka-ke'a*	*ka-kèdhi*	*ka-kèti*	*ka-kèd'u*	
2SG	*ma-mu'a*	*ma-minu*	*ma-more*	*ma-me'a*	*ma-mèdhi*	*ma-mèti*	*ma-mèd'u*	
3SG	*na-na'a*	*na-ninu*	*na-nare*	*na-ne'a*	*na-nèdhi*	*na-nèti*	*na-nèd'u*	
1PL-in	*ta-ta'a*	*ta-tinu*	*ta-tare*	*ta-te'a*	*ta-tèdhi*	*ta-tèti*	*ta-tèd'u*	
1PL-ex	*nga-nga'a*	*nga-nginu*	*nga-ngare*	*nga-nge'a*	*nga-ngèdhi*	*nga-ngèti*	*nga-ngèd'u*	
2PL	*ma-mi'a*	*ma-minu*	*ma-mere*	*ma-me'a*	*ma-mèdhi*	*ma-mèti*	*ma-mèd'u*	
3PL	*ra-ra'a*	*ra-rinu*	*ra-rare*	*ra-re'a*	*ra-rèdhi*	*ra-rèti*	*ra-rèd'u*	

(105) (C)*a*~ reduplication and inflected verb with suffixes

Pro	**Suf.**	***la*- 'to go'**
1SG	*-ku*	*la~laku*
2SG	*-mu*	*la~lamu*
3SG	*-'e*	*la~la'e*
1PL-in	*-ti*	*la~lati*
1PL-ex	*-'a*	*la~la'a*
2PL	*-mi*	*la~lami*
3PL	*-si*	*la~lasi*

4.5. Compounding

Compounding is a productive strategy that is used to form new lexemes in Dhao. However, the distinction between compounds and phrases is not always straightforward through the analysis of phonological or morphosyntactic criteria. First of all, stress assignment does not distinguish compounds from phrasal expressions; stress always is on the penultimate position of the syllable (see §2.3.3). Secondly, Dhao does not have overt marking on adjectival elements to distinguish a compound from an NP containing a modifying element. For example, take the combination *dhèu kapai*, where *dhèu* means 'person' and *kapai* means 'big'. This combination may be construed as an NP meaning 'big person' where the second element *kapai* functions as the attribute of *dhèu*. The same combination may also metaphorically denote 'an official'. In this regard, the combination behaves like a compound. Thus, compounds and phrasal expression are only distinguishable by a semantic interpretation. Or rather, a compound is a lexicalized form.

Compounds typically consist of two or more lexemes that generate one stem. In Dhao, compounds combine three lexemes at most. Following Bauer (2009), Dhao has four types of compounds. Firstly, endocentric compounds, of which the heads are one of the elements in the compound. For example, the compound *rai-haha* denoting 'earth' combines *rai* 'land' with *haha* 'below'. In this compound, *rai* 'land' is the head. The compound *èi-mènyi-rai* 'kerosene' has three lexemes: *èi* 'water', *mènyi* 'fat' and *rai* 'land'. Kerosene is a liquid substance; it is not a fat nor is it a land, which confirms that the head is *èi* 'water'. Secondly, Dhao has exocentric compounds, whose meanings are not hyponyms of either element. For example, the compound *lii-dai* 'to invite' does not take the meaning of either element of the compound. Compounds in Dhao can also involve lexemes that have no lexical meaning. For instance, the overall combination *hua-hètu* denotes 'star'; the form *hua* means 'fruit', but *hètu* has no lexical meaning. Thirdly, coordinative compounds in which the elements can be interpreted as being joined by "and". For example, the compound *ina-ama* 'parents' combines *ina* 'mother' and *ama* 'father'.

This section focuses on the the formation of compounding. The meanings and the types of compounds are only mentioned in passing. In this section the presentation of compounds is based on the lexical elements that are combined into compounds, and is not based on the formal types of compounds mentioned previously. This section begins with compound nouns in §4.5.1 and is followed by compound verbs in §4.5.2.

4.5.1. Compound Nouns

Compound nouns in Dhao are divided into three types; (1) compounds whose overall meaning is associated with either both or one of the meanings of the separate elements, such as *ina-ama* 'parents', (2) compounds whose heads employ semantically specific nouns, such as *èi-kabhète* water-thick) 'porridge', and (3) compounds of which one of the elements has no lexical meaning, like *èj'i-lai* (rain-?) 'rainy season'.

As was already mentioned above, there is no formal distinction between noun compounds and noun phrases in Dhao. Semantic interpretation is the only determining factor. Lexemes combined in compounds are syntactically inseparable and semantically generate a new meaning. The meaning changes once the elements are separated. For example, the compound *ana-èpu* 'descendant' cannot be separated by the conjunction *dènge* into *ana dènge èpu*, otherwise it would be interpreted as 'the child and the grandchild'. Nominal compounds and their meanings are listed in (106). As is shown, they are expressed by two stems that have transparent meanings. The stems may have the same categories: N+N, such as *rai* 'land' + *dedha* 'above', or V+V, such as *mae* 'be broken' + *manyèla* 'to separate'; or they may have different categories: N+V, such as *rena* 'main' + *paru* 'hit', or or N+Adj, such as

dhèu 'person'+ *aae* 'great, big'. The head of noun compounds in Dhao is the first or the leftmost stem. In turn, the head determines the category and the meaning of the entire compound. The meanings of the separate stems combine and result in a new generic meaning.

(106) Compound nouns with associated meanings

ana-èpu	child+grandchild	'descendant'
ina-ama	mother + father	'parents'[4]
bhèni-aae	woman + big	'queen'
bhèni-bhalu	woman + loss	'widow'
mone-bhalu	man + loss	'widower'
dhèu-aae	person + great	'king'
dhèu-èmu	person + house	'spouse'
dhèu-sala	person + wrong	'poor person'
dhua-nasu	palm.juice + cook	'palm.juice'
doi-dhari	money + rope	'finance'
la-leo-lèu	DUP-shelter + sea	'umbrella'
mae-manyèla	broken + separate	'separation'
rena-paru	main + to.strike	'k.o.hammer'

Compounds whose heads are specific nouns also are productive in Dhao. For example, something that is analogous to "content" employs the noun *isi* 'content' as the head. For something that has a string or sheet-like shape, the word *loa* 'sheet' is used as head. To refer to an area, the word *rai* 'land' is used as the head. In the same way the noun *sabha* 'palm container' is used as the head in compounds that refer to containers. In turn, the second element refers to the entity that is stored within the container. The head noun can also be modified by verbs like *uusu* 'to bail'. Examples are given in (110).

(107) Compound nouns with specific nouns

isi-kapoke	content + spear	'arrow'
isi-kasiro	content + gun	'bullet'
isi-èmu	content + house	'insider'
isi-rai	content + land	'inhabitants'
loa-hèngu	sheet + cotton	'yarn'
loa-nyama	sheet + raffia	'raffia'
loa-katuka	sheet + rice.cake	'string for rice.cake'
loa-sebhe	sheet + edge	'sarong's edge'

[4] *ana-èpu* 'descendant' and *ina-ama* 'parents' are similar to lexical parallelism, wherein the lexemes involved in a compound are equal.

rai-dedha	land + above	'land'
rai-haha	land + below	'earth; world'
rai-liru	land + sky	'cloud (white)'
sabha-èi	palm.container + water	'water container'
sabha-nginu	palm.container + to.drink	'palm.container for drinking'
sabha-uusu	palm.container + bail	'palm.container for bailing water'

Meanings designating liquids use the lexeme *ei* 'water' as the head noun. Its modifiers can be other nouns or stative verbs.

(108) Nominal compounds with *èi* 'water'

èi-ani	water +bait	'k.o solder'
èi-hèu mèngi	water + smell + fragrant	'perfume'
èi-kabhèsu	water + sweat	'sweat'
èi-kabhète	water + thick	'porridge'
èi-kadosa	water + remain in vinegar	'vinegar'
èi-lèngi	water + oil	'coconut oil'
èi-mènyi-rai	water + fat + land	'kerosene'
èi-na'i	water + tobacco	'medicine'
èi-pa-mènyi	water + PREF+fat (v)	'naptol'
èi-pa-pèda	water + PREF+sick	'disease'
èi-paringi	water + dulcify with water	'dew'

Some nominal compounds employ the noun *ana* 'child' as the head. The noun *ana* 'child' does not always refer to a person or a child, like in *ana lalu* 'fatherless child', but can also refer to physical objects, such as in *ana kapepe* 'tobacco container'. Examples of nominal compounds with *ana* are given in the list (109) below. The noun *ana* expresses a diminutive aspect in Dhao compounds. For instance, *ana-paru* 'wooden mallet' designates a smaller type of *rena-paru* 'wooden mallet'. The compound *ana-bhèni* denotes a generic meaning for 'girl', and does not explicitly mean 'small girl'. In this case, *ana* 'child' points at a younger age rather than size. Similarly, in the compounds *ana-kèni* and *ana-todha* which both refer to two different kinds of canoe, *ana* indicates that the referents are smaller than the default size of *koha* 'boat, ship'. A list of compounds with *ana* is given in (109) below.

(109) Nominal compounds with *ana* ‘child’

ana-lalu	child + to take care	‘fatherless child’
ana-aj’u	child + wood	‘plants, tree’
ana-bhèni	child + female	‘girl’
ana-hèni	child + sister	‘sister’
ana-kapepe	child + round-like	‘tobacco container’
ana-kèni	child + keel of acanoe	‘canoe’
ana-langi	child + k.o.fish	‘k.o.motif’
ana-madha	child + front	‘eye’
ana-mone	child + male	‘boy’
ana-paru	child + to strike	‘wooden mallet’
ana-pèci	child + to throw	‘wooden mallet’
ana-tai	child + to depend	‘slave’
ana-todha	child + k.o.canoe	‘dinghy’

Some compound nouns in Dhao use the noun *rèu* ‘leaf’ as the head and other nouns as modifiers. A list is given in (110) below. The head designates something that is analogous to ‘leaf’. Although the meaning of the compound still is associated with the meaning of the stem, it is not always straightforward. Take the compound *rèu-kèli*, which combines *rèu* ‘leaf’ and *kèli* ‘lontar’. The meaning of the compound refers to leafs of the lontar tree that have dried naturally. Compounds such as *rèu* ‘leaf’ + *kètu* ‘head’ meaning ‘hair’ demonstrate that the noun *rèu* ‘leaf’ denotes entities with similar properties to leafs. The same also holds true for *rèu-èngu* ‘seaweed’. In addition, the compound *rèu sabha* refers to a specific kind of palm leaf which is used to make containers.

(110) Nominal compounds with *rèu* ‘leaf’

rèu-kèli	leaf + lontar	‘dry palm.leaf’
rèu-kolo	leaf + top	‘sprout of lontar leaf’
rèu-èngu	leaf + k.o. seaweed’	‘seaweed’
rèu-dhilu	leaf + ear	‘ear’
rèu-sabha	leaf + palm.container	‘palm leaf to make container’
rèu-kètu	leaf + head	‘hair’

The compound nouns in (111) below indicate multi-word expressions whereof the second stem in the compound has no lexical meaning, indicated by the question mark (?) in the gloss. Those meaningless lexemes may be loans from neighboring languages such as Hawu or Rotenese, and are no longer identified as such by native Dhao speakers. For example, *manu* ‘chicken’ is the head of the compound *manu-*

bhui , whereas the word *bhui* resembles the Rotenese word for 'bird': *mbuik* or *puik*. A similar compound also is found in some Rotenese dialects, which use *manupuik* for 'bird' (Manafe, 1889: 641). Similarly, in the compound *kalaga-ledo* 'platform', the stem *kalaga* already denotes 'wooden platform' on its own. The word *ledo* is identical to Rotenese word *ledo* meaning 'sun'. A similar Rotenese compound is *loa-ledo*, which refers to a wooden platform outside the house to dry coconut kernels on. These compounds need further investigation still.

(111) Compounds with one element has no lexical meaning

ai-j'èla	foot/hand - ?	'sole'
baki-hoe[5]	grandfather - ?	'crocodile'
dara-lobho	inside - ?	'shallow'
èi-lobho	water - ?	'dirty water'
èj'i-lai	rain - ?	'rainy season'
hua-hètu[6]	fruit - ?	'star'
hui-kehi	astern - ?	'nape of neck'
kalaga-ledo	wooden platform - ?	'platform'
leko-monya	disturb - ?	'lie'
manu-bhui	chicken - ?	'bird'

4.5.2. Compound Verbs

Compound verbs in Dhao are V+V, V+Adj, V+N, and V+PART combinations. Like compound nouns, some stems have transparent meanings while others are dependent on the heads of their compound. Furthermore, some stems are grammatically independent, such as predicates or arguments while some are not. For instance, the compound *puu-gètu* 'to harvest' is a V+V combination whose stems have transparent meaning and are grammatically independent – they can be placed in predicate positions. The compound *padhai-lii* 'to discuss' is a V+N combination and both stems have transparent meaning: *padhai* 'to talk' and *lii* 'voice', but the stem, *padhai* 'to talk' cannot be used independently as predicate. It should always be compounded with a relevant stem. Notice that compound verbs and serial verbs (§6.4) are similar in terms of verb combination (V+V). However, they are distinct both syntactically as well as semantically-speaking. The combination of compound verbs is syntactically inseparable whereas the combination of serial verbs is separable. For example, the verb combination *lalau-lalo'o* 'to serve' cannot be separated into *rèngu lalau* 'they arrange' and *rèngu lalo'o* 'they manage'. However, the verb combination *rai mai* can be separated into *rèngu rai* 'they run' and *rèngu*

[5] The lexeme *hoe* might be an innovation of PAN **buqaya*.

[6] The lexeme *hètu* might be an innovation of the PAN **bituqen* 'star'.

mai 'they come' without changing the meaning brought on by its combination. Thus, *lalau-lalo'o* is a compound, whereas *rai mai* is a serial verb. Semantically, compounded verbs result in a new meaning and are definitely fused, whereas serial verbs feature two or more simultaneous sub-events (§6.4) and their meanings are independent. A list of compound verbs is given in (112) below.

(112) Compound verbs

adu-ue	ask for trouble-result in problem	'to create problems'
budu-tèke	postpone-keep	'to leave s.t/s.o'
cebe-lebhe	spread-scatter around	'to fall apart'
koko-(*ka*)*mango*	larynx-dry	'be thirsty'
ladhe-leru	see-check	'to look after'
lala-o'oo	overflow-heavy rain	'to overflow of s.t'
lalau-lalo'o	arrange-manage	'to serve'
leko-monya	dishonest-trick	'to deceive'
lii-dai	voice-arrive	'to invite'
malaa-maloha	amazed-very confused	'be senile, confused'
padhai-lii	talk-voice	'to discuss'
padhue-padhai[7]	discuss-talk	'to discuss'
puu-gètu	pick fruit-pick leaves	'to harvest'
rai-reo	run-surround	'to run around'
solo-mako	hat-soft	'to persuade, '
tangi-dolo-aae	cry-scream-big	'to cry too much'

A construction with a verbal compound is illustrated in (113) below, in which the meaning of 'take care' is expressed through two lexical items, *ladhe* 'to see' and *leru* 'to check'. Both verbs are combined to create a new meaning that syntactically occupies the predicate position.

(113) *ana* *ja'a* *se'e* *cee* ***ladhe*** ***leru***?
child 1SG PROX.PL who to.see to.check
'For my kids, who take care (of them)?' [FF_Bheni_ae_kabo.445]

4.6. Vowel changes: final /a/ and /e/

A few words in Dhao exhibit vowel change. In most instances the back vowel /a/ alternates with the front vowel /e/. Only in the word *lolo* 'to tell' the final /o/ alternates with /e/. This vowel change in Dhao has two types; (1) semantic-induced vowel change (§4.6.1) and (2) valence increase vowel change (§4.6.2).

[7] It looks like reduplication (rhyming reduplication).

4.6.1. Semantic-Induced Vowel Change

Verbs with vowel change have constraints on the semantics of their arguments. That is, the semantics of the arguments determines the allomorph of the verb. Furthermore, vowel change is used to specify actions. In the first case, plurality of undergoer participants plays a significant role. Plural undergoers require verbs with final /a/, whereas singular undergoers require verbs with final /e/. This is well exemplified by the verb *mata* > *mate* 'to wait'. As demonstrated in (114)a-b, the allomorph with final /a/ is used when the undergoer is plural, otherwise the construction would be ungrammatical, as is shown in (114)c. Similarly, the examples (115)a-b show that the allomorph with final /e/ is employed when the undergoer is singular. A plural undergoer would be ungrammatical, as is shown in (115)c.

(114) a. *ja'a mata rèngu*
1SG to.wait 3PL
'I wait for them'

b. *rèngu mata èdhi*
3PL to.wait 1PL.in
'They wait for us'

c. **rèngu mata ja'a*
3PL to.wait 1SG

(115) a. *èdhi mate nèngu*
1PL.in to.wait 3SG
'We wait for him/her'

b. *nèngu mate ja'a*
3SG to.wait 1SG
'He/She waits for me'

c. **ja'a mate rèngu*
1SG to.wait 3PL

(116) Vowel change and participants

With Plural Undergoer		**With Singular Undergoer**	
basa	'to wash'	*base*	'to wash'
bèbha	'to fall'	*bèbhe*	'to fall'
cèna	'to sink' (sun)	*cène*	'to sink'
hua	'to load'	*hue*	'to lift'
lèpa	'to fold'	*lèpe*	'to fold'
mata	'to wait	*mate*	'to wait
panga'a	'to feed'	*panga'e*	'to feed'
para	'to cut'	*pare*	'to cut'
masèka	'be broken' (many pieces)	*masèke*	'be broken' (one piece)
gama	'to hit' (PL actor & undergoer)	*game*	'to hit' (SG actor & undergoer)
hia	'to give' (proximal recipient)	*hie*	'to give' (remote recipient)

(116) provides a list with verbs that display vowel change. The verbs *gama* >< *game* 'to hit' and *hia* > *hie* 'to give' differ from other vowel changing verbs. The allomorph *gama* 'to hit' requires a plural actor and undergoer while *game* requires singular actor and undergoer. The allomorph *hia* 'to give' has a recipient whose referent is near the referent of the actor, whereas its counterpart *hie* 'to give' requires a recipient whose referent is far from the actor's referent. In this particular case, the recipient is the endpoint.

This vowel change agreement complies with a similar phenomenon attested in Hawu, where it marks object agreement (Walker, 1982: 23). In Dhao, most verbal forms with final /a/ require a plural undergoer. Only *gama* 'to hit' has a singular undergoer. On the other hand, the verb *hia* 'to give' indicates the relative distance of the recipient's referent[8].

For some verbs no particular rule has been found that can account for their vowel alternation. For example, the allomorph *iga* 'to count' with the final /a/

[8] These two forms perhaps already are losing this specific morphosyntactic feature compared to other verbs. In the current usage of Dhao, native speakers no longer are aware of the difference between both allomorphs and only employ the forms with final /a/ most of the time. This might explain why this type of verbs was not found by Walker, (1982) nor Grimes, (2010).

designates that the moment of utterance takes place directly before or after the counting event, whereas the allomorph *ige* 'to count' with the final /e/ signals that the moment of speech has taken place long after the counting event. An example of *iga* 'to count' is given in (117). The construction was recorded during a Pear Story video stimulus session. The native speaker used final /a/ because he produced the utterance right after the video had shown a man counting fruits while putting them into a basket. The example in (118) showcasing an allomorph with final /e/ was taken from a procedural text about the process of weaving ikat textiles. The native speaker was telling the story without doing any demonstration. As such, the timespan between the storytelling event and the counting event was unknown.

(117) *na* ***iga*** *cue-cue* *asa* *dara* *karanjang*
3SG.CL to.count DUP-one to inside basket(Mal)
'He counts one by one (and) put into the basket' [YY_PearStory.011]

(118) *ja'a* ***ige*** *dhari*
1SG to.count rope
'I count the strings' [SB_Tao_Rabhi.020]

Another example is the verb *saba* > *sabe* 'to work'. In (119), the verb with the final /a/ was part of a story about the creativity of Dhaonese people in silversmithing. It was told that Dhaonese men never are trained in smithing. They are able to do it right away after having seen someone else doing it. The allomorph *saba* signals that the working event has not occurred yet. In contrast, an allomorph with the final /e/ signals that the working event has occurred already, as is illustrated in (120). The story tells of the speakers' work of composing a Dhao song titled *Hela Bunga*, which took them two weeks. To summarize, in this case the vowel change denotes an evidential difference between events. The /a/ allomorph profiles a possible event, whereas the /e/ allomorph profiles the actual event. While the semantics/pragmatics specific of the verbs listed in (121) are found, those in (122) are not identified as of yet.

(119) *rèngu* *bisa* ***saba*** *mèdha* *ne'e*
3PL can to.work thing PROX.SG
'They can do this things' [FAK_Rog'a.056]

(120) *ja'a* ***sabe*** *nèngu* *dua* *minggu*
1SG to.work 3SG two week(IND)
'I did it in two weeks' [YK_HelaBunga.006]

(121) Semantic/pragmatic-specific verbs with vowel change

aj'a	'to teach'	(verbally)
aj'e	'to teach'	(through exercises)
bèka	'to half-cut'	(for circumcision)
bèke	'to half-cut'	(for coconut)
ku'a	'I eat'	(common, polite)
ku'e	'I eat'	(vulgar)
lala	'to overflow'	(sea water)
lale	'to overflow'	(water in general)
sag'èba	'facedown'	(for animate)
sag'èbe	'facedown'	(for inanimate)
sola	'cut into pieces'	(for animals)
sole	'cut into pieces'	(for human, vulgar)
tangara	'to face'	(speaker asks the addressee)
tangare	'to face'	(speaker asks others)

(122) Other verbs with vowel change

bèbha	>	*bèbhe*	'to fall'
beta	>	*bete*	'to withdraw'
cèla	>	*cèle*	'to dive'
iga	>	*ige*	'to count'
jola	>	*jole*	'to hand over'
lalaa	>	*lalae*	'to rinse'
pahia	>	*pahie*	'to sell'

4.6.2. Valence Increase

Vowel change also changes monovalent verbs to bivalent verbs, or nominalizes verbs. This valence-changing morphological process is not as productive as the use of the prefix *pa-* (see §4.3 above). Four verbs are attested that feature valence increase by means of the vowel change /a/ to /e/. Only the verb *lolo* > *lole* 'to tell' has /o/ to /e/. As illustrated in (123)a below, the verb *palèbha* 'to lie athwart' with final /a/ is a monovalent verb. It has only one semantic participant that is profiled by

the subject argument *boto cue* 'a bottle' in this construction. The prepositional phrase introduced by the locative preposition *ètu* 'LOC' is an adjunct. The same verb with a final /e/ is illustrated in (123)b; it is a bivalent verb with *nèngu* '3SG' as its subject and *boto èèna* 'that bottle' as its object argument. The same also applies for the example in (124). The allomorph *lolo* 'to tell' has no object argument, whereas the allomorph *lole* 'to tell' has. A list of attested verb is given in (126) below.

(123) a. *boto cue dhu* ***palèbha*** *ètu dedha hadhu*
bottle one REL to.lie.athwart LOC above stone
'A bottle is lying arthwart on the stone' [Prep_Elicited.021]

b. *nèngu* ***palèbhe*** *boto èèna*
3SG to.lie.athwart bottle DIST.SG
'He placed the bottle arthwart'

(124) *ja'a neo* ***lolo/*lola***
1SG want to.tell
'I want to tell' [tao_dhepi.002]

(125) *ja'a* ***lole*** *dhu tao hèngu nyama ne'e*
1SG to.tell REL to.make thread raffia PROX.SG
'I will tell about (the way) of dyeing sarongs' [tao_dhepi.142]

(126) Valence increase with vowel change

tapa	'to be adhered'	*tape*	'to adhere'
palèbha	'to lie athwart'	*palèbhe*	'to put athwart'
katata	'to be cornered'	*katate*	'to corner'
sag'èba	'to facedown'	*sag'èbe*	'to turn over'
lolo[9]	'to tell'	*lole*	'to (re)tell s.t'

Nominal deverbalization by means of vowel change is attested in few words only. Nominal allomorphs feature a final /a/ whereas verbal allomorphs feature a final /e/. As illustrated in (127), the noun *tadha* 'sign' occupies the object position of the predicate *abhu* 'get'. In (128), *tadhe* 'to know' occupies the predicate position with the personal pronoun *èu* '2SG' as the subject and the singular demonstrative *ne'e* 'PROX.SG' as the object. The occurrence of these two words in different syntactic slots confirms that they are in different word categories.

[9] This is an exception because the word **lola* does not exist.

(127) *ja'a* *abhu* ***tadha/*tadhe*** *na* *ana….*
1SG to.get sign PART child
'I got a sign, that the child… [SK_AnaBheni_Dhe'uPidhu.215]

(128) *èu* ***tadhe/*tadha*** *ne'e* *do* *aad'o*?
2SG to.know PROX.SG or be.absent
'Do you know this one or not? [SK_Dhe'u_E'ta _Dua.132]

A list is given in (129) below. As is, three reduplicated nouns with final /a/ occur non-reduplicated as verbs.

(129) Deverbal nouns with vowel change

èèga	'span'	*èège*	'to span'
katanga	'cover'	*katange*	'to cover'
oka	'garden'	*oke*	'to fence'
pèga	'step'	*pège*	'to step'
tadha	'sign'	*tadhe*	'to recognize'
tangara	'to face'	*tangare*	'to look around'
raraja	'dowel'	*raje*	'to set dowel'
**raja*		**rareje*	
sasula	'filter'	*sule*	'to filter'
**sula*		**sasule*	
sasanga	'rift'	*sange*	'to put on slit of
**sanga*		**sasange*	branch'