Chapter 4
Word classes

4.1 The term ‘word’

The concept of the ‘word’ may be defined either phonologically or grammatically. If grammatically defined, the relevant criteria may be either paradigmatic or syntagmatic. Paradigmatically, a word may be replaced by other words, whether it is nominal or verbal, assuming that the result is grammatical from the point of view of the other levels of the grammar. Syntagmatically, it moves in the sentence as a unit, and may not be divided. These are the same criteria that were used to establish the existence of Noun Phrases, Case Phrases and Verb Phrases.

Problems specific to the question of the ‘word’ mainly centre around the difference between the grammatical and the phonological word, and the fact that processes of language change have led to some parts of the lexicon moving between word classes, leading to problems in an absolute interpretation of the data. At the same time a root may display properties that define it as belonging to one word class, but another set of criteria would place it in another. This is apparent in Tukang Besi when we look at contiguous serial verb constructions.

Paradigmatic replacement can be seen in the following sets:

(1)  
\textit{Ku-manga te osimpu.}  
\textbf{1SG-eat} \hspace{1em} \text{CORE} \hspace{1em} \text{young.coconut}  
‘I ate the coconut.’

(2)  
\textit{Ku-manga te kaujawa.}  
\textbf{1SG-eat} \hspace{1em} \text{CORE} \hspace{1em} \text{cassava}  
‘I ate the cassava.’

(3)  
\textit{Ku-hengolo te kaujawa.}  
\textbf{1SG-boil} \hspace{1em} \text{CORE} \hspace{1em} \text{cassava}  
‘I boiled the cassava.’

(4)  
\textit{Ku-hengolo-’e na kaujawa.}  
\textbf{1SG-boil-3OBJ} \hspace{1em} \text{NOM} \hspace{1em} \text{cassava}  
‘I have boiled the cassava.’

Syntagmatic coherence is exemplified by the fact that \textit{kaujawa} ‘cassava’, etymologically clearly a compound based on \textit{kau} ‘wood’ and \textit{jawa} ‘Java’ (that is, Javanese wood), cannot be split up and spread about the sentence, or even the noun phrase. As a whole word, however, it may appear in a noun phrase with either of the articles, and move within the clause:
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Furthermore, there are (as has been seen in chapters 2 and 3) differences in the phonetic rules that apply to two identical vowels not of the same morpheme, depending on whether they adjoin across a morpheme boundary within the same word, or across a word boundary. In (10) and (11) the existence of a phonetic glottal stop between *wila* and *ako* depends on whether or not the two morphemes occur in one word, or with a word boundary between them:

(10) *No-wila ako te ina-no.*

3R-go BEN CORE mother-3POSS

‘They went for their mother.’

\[ [nɔ'pi'ila'ako te ina-no] \sim [nɔ'pi'ilaako te ina-no] \sim [nɔ'pi'ila'ako te ina-no] \]

(11) *No-wila-ako te ina-no.*

3R-go-APPL CORE mother-3POSS

‘They sent their mother.’

\[ [nɔ'pi'ila'ako te ina-no] \sim [nɔ'pi'ilaako te ina-no] \]

The shift in accent is due not to the placement of the word break, but the fact that in (11) *te inano* is under the same VP node as *nowilaako*, whereas in (10) *te inano* is in the same node as *ako*, but not the same as *nowila*. See chapter 3 for a discussion of the implications of this for phrase structure.

In the case of identical vowels coming together across a word boundary the two vowels either merge or show no special phenomena. If the same morphemes come together within the word, a glottal stop is frequently inserted between the two vowels (see chapter 2 for more discussion).

4.1.1 Words versus affixes

Problems in the idea of the word being defined by paradigmatic replacement alone arise when we look at contiguous serial verb constructions. One of the main functions of serial
verb constructions cross-linguistically is to build complex verbal units (Foley and Van Valin 1984: 205) (see chapter 8 for more details on the restrictions applying to serial verb constructions in Tukang Besi). An example of this is seen in (12), where an activity and a resulting state are presented as a serial verb construction:

(12) *Ku-kamalo-menha te bangka.
    1SG-paint-red CORE ship
    ‘I painted the ship red.’

Here the free verb kamalo presents the activity, and meha describes the resulting state. However, kamalo is also in a paradigmatic relationship with the factitive prefix hoko-:

(13) *Ku-hoko-menha te bangka.
    1SG-FACT-red CORE ship
    ‘I made the ship red.’

We have then a paradigmatic relationship between a member of a non-bound, open word class, kamalo, and a bound affix, hoko-. There is no reason to assume that processes of language change might not lead to hoko- being reanalysed as an independent, unbound verb, meaning something like ‘make’;¹ this has not yet happened, as hoko- cannot stand independently of another verb, whereas other serial verbs can:

(14) *Ku-hoko te bangka.
    1SG-FACT CORE ship
    ‘I caused the ship.’

(15) Ku-kamalo te bangka.
    1SG-paint CORE ship
    ‘I painted the ship.’

This data is, however, good evidence for the argument that at a more abstract level of analysis the causative prefixes are best regarded as verbs, but ones that may only appear bound to another verb root. This is paralleled by the analysis of the bound pronominal affixes marking subject and object on verbs as being bound pronominal forms, and not just agreement markers (chapter 5).

Moving in the opposite direction, the verb ako ‘do for’ has a much wider range of meanings when used as a serial verb, being able to introduce benefactive, instrumental, theme, purpose or causal arguments (see chapter 10 for a more detailed discussion). With this degree of semantic bleaching, and the decline in its use as a main verb, we are probably witnessing a process in which ako is becoming reanalysed as a preposition or affix (see Baker (1988a) for a detailed discussion of the putative relationship between prepositions and applicative affixes, and that between verbs and causative affixes).

(16) *Ku-ako te kabali.
    1SG-do.for CORE machete
    ‘I used the machete.’
Given that Tukang Besi, as with all languages, is in a continuous process of reanalysis, with (in the case of Tukang Besi) open class lexemes being reanalysed as closed class, it is reasonable to expect that some lexemes in the open classes behave somewhat erratically in certain environments. Similarly, some of the members of some closed classes, namely the prepositions, show some properties more typical of the open classes.

4.2 Word classes and the problem of overlap

The lexical specification of many words in Tukang Besi does not explicitly mention word class membership; the same form may be used, with no derivational morphology, in both nominal and verbal frames. Rather, the word class of these lexical items is specified syntactically. Thus the same lexeme may appear functioning as a noun in some contexts, and as a verb in others. An example of this can be seen in the following two extracts from the same text (the Wa Iambo text included in the appendices), occurring in adjacent lines:

(18) ...ka-atu-mo no-nduu-mo na tawatawa i molengo.  
PRES-3R-make.noise-3R-hand.gong hand.gong  
‘...there it was there, a hand gong (that she’d heard) earlier on was making a noise.

(19) “E, te ndonga-ndonga o-tawatawa-mpaira,...  
Hey CORE RED-clang-GEN-hand.gong hand.gong  
‘... “Hey, what kind of hand gong thing is that clanger doing,...”

In (18) tawatawa functions as the head of a noun phrase, its nominal character in this clause clear from the article preceding it indicating that it is in a KP, and is the nominative subject of the intransitive verb nduu ‘make noise’; tawatawa is not affixed to indicate relative clause status, so we must assume it is the nominal head of the NP. In the next line, given here as (19), tawatawa is prefixed with verbal subject-marking morphology, and clearly serves as the intransitive verb in the clause whose subject is te ndongandonga ‘the clanger’ / ‘the clanging one’. Similar precategorial behaviour is found with words describing more permanent properties, such as leama ‘good’, which may function as a predicate (Noleama, ‘S/he’s good.’), or a referential expression in a KP (te leama, ‘the good (one)’, or the good(NESS)’; the KP may refer either to someone or something possessing this property, or to the property itself). With an adjective beginning with mo-, such as molengo ‘long (time)’, the use of the lexeme in a KP requires less morphology than the predicative use, since the fossilised mo- prefix is not retained in referential use: te lengo, ‘the long (one)’, or ‘the length’, compared withNomopera ‘S/he’s short.’, but * Nolengo. With adjectives with the fossilised ma-, the prefix is always retained when referential (te mamuda ‘the comfortable (one)’/‘the comfort’), and adjectives with me- show variable behaviour: te langka / te melangka ‘the long (one)’ / the length’, and Nomelangka.

There do not appear to be many lexemes that are always unambiguously either nouns
or verbs, but not both. Certainly (at least most) ‘nominals’ can occur in verbal positions, without derivational morphology. Some verbs require overt derivation, using the nominalising suffix -'a, to appear as nouns. This is the case with 'ita in (20) - (22):

(20) Ku-['ita] te honda-'u.
    1SG-see CORE motorbike-2SG.POSS
    'I can see your motor bike.'

(21) Te [ita-ra]-no no-ja'o ala'a.
    CORE see-NL-3POSS 3R-bad just
    'It looks pretty bad.'

(22) * Te [ita]-no no-ja'o ala'a.
    CORE see-3POSS 3R-bad just

   (this morpheme has the special form -na when used with 'ita ‘see’ denoting ‘sight, appearance.’ Note, however, that the word 'ita-'a also exists, meaning ‘act of looking’, precluding the analysis that -na is a suppletive form of the morpheme -'a used with the stem 'ita.)

Other lexemes require this suffix to refer to the action, but have another (related) meaning when used nominally without the suffix; such is the case with topa in the following examples:

(23) Ku-[topa]-'e na ana-'u mosega.
    1SG-slap-3OBJ NOM child-2SG.POSS naughty
    'I slapped your naughty child.'

(24) Te [topa-'a]-no o-i-sala no-moboha.
    CORE slap-NL-3POSS 3R-OP-fault 3R-heavy
    'His slapping was rather severe.'

(25) Te [topa]-no o-i-sala no-moboha.
    CORE hand.drum-3POSS 3R-OP-rather 3R-heavy
    'His hand drum is rather heavy.'
    (A hand drum is played by slapping the ends with an open palm)

Some ‘more nominal’ concepts DO require the use of a verbalising prefix he- in order to be used verbally. Compare the use of two different body-part terms as verbs of striking, in (26) - (28) which require the verbal prefix, and (29) - (30) which, like most body-part terms in Tukang Besi, do not require this prefix to be used verbally:

(26) Te tu'u i wor(u) u pa'a.
    CORE knee OBL under GEN thigh
    '(Your) knee is under (your) thigh.'

(27) No-he-tu'u te bali-no.
    3R-DO-knee CORE opponent-3POSS
    'He kneed his opponent.'
Although no counts or extensive testing have been done, there are, impressionistically, fewer purely nominal lexemes than there are purely verbal lexemes; that is, a greater proportion of words that would be classed as ‘nouns’ from an English perspective display precategorial behaviour than do words which are more ‘verbal.’

The best analysis is probably that there are some concepts which are, due to their semantic content, explicitly verbal, and a (smaller) number of concepts that are more nominal. The majority of forms, however, may function in either position in a clause, as exemplified by tawatawa in (18) and (19). The cline between strictly verbal concepts and (the less common) strictly nominal concepts may be represented as follows:

This cline is justified by several morphosyntactic traits, presented in table 3:

<table>
<thead>
<tr>
<th>Verbal</th>
<th>Pre-categorial</th>
<th>Nominal</th>
</tr>
</thead>
<tbody>
<tr>
<td>'ita</td>
<td>topa</td>
<td>bose</td>
</tr>
<tr>
<td>‘see’</td>
<td>‘slap’</td>
<td>‘paddle’</td>
</tr>
<tr>
<td>wowine</td>
<td>komba</td>
<td></td>
</tr>
<tr>
<td>‘woman’</td>
<td>‘moon’</td>
<td></td>
</tr>
</tbody>
</table>

This cline is justified by several morphosyntactic traits, presented in table 3:

<table>
<thead>
<tr>
<th>Feature</th>
<th>'ita</th>
<th>topa</th>
<th>bose</th>
<th>wowine</th>
<th>komba</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head of NP without ‘a’?</td>
<td>←</td>
<td>←</td>
<td>←</td>
<td>←</td>
<td>←</td>
</tr>
<tr>
<td>Subject prefixes?</td>
<td>←</td>
<td>←</td>
<td>←</td>
<td>←</td>
<td>←</td>
</tr>
<tr>
<td>Object suffixes?</td>
<td>←</td>
<td>←</td>
<td>←</td>
<td>←</td>
<td>←</td>
</tr>
<tr>
<td>Subject may be [Dative]?</td>
<td>←</td>
<td>←</td>
<td>←</td>
<td>←</td>
<td>←</td>
</tr>
</tbody>
</table>

Examples of these parameters interacting with different words at different points on the continuum can be seen in examples (21) - (25), and the discussion underneath example (33). Example (65) in chapter 12 shows the inability of komba to occur with the nominalising suffix ‘a, and line 46 of the Wa Iambo text (the first text of those included in the appendices) presents a natural discourse use of subject prefixes on an intuitively very nominal concept, wowine ‘(be a) woman’. This ambiguous behaviour is partly explainable by the fact that the subclass of non-agentive verbs in Tukang Besi is made up of verbs whose meaning is ambiguous between ‘be STATE’ and ‘become STATE’. Thus mate
‘dead’, with third person subject prefixes, may mean either ‘S/he is dying’, ‘S/he died’, or ‘S/he is dead’:

(31) \[ Jari \ no\text{-}poso\text{-}mo \ na \ ia \ mo\text{'}ane \ iso, \ o-, \ no\text{-}mate\text{-}mo. \]
\[ \text{so} \quad 3R\text{-}dizzy\text{-}PF \quad \text{NOM} \quad 3SG \quad \text{male} \quad \text{yon} \quad 3R\text{-} \quad 3R\text{-}die\text{-}PF \]
\[ ‘That boy felt dizzy, he was (weakening and) dying.’ \]

(WaI:61)

(32) \[ Jari \ te \ La \ Kohokoho \ no\text{-}mate\text{-}mo. \]
\[ \text{so} \quad \text{CORE} \quad \text{La} \quad \text{Heron} \quad 3R\text{-}dead\text{-}PF \]
\[ ‘So Heron died.’ \]

(RA:39)

(33) \[ Jari \ o-, \ o\text{-}po\text{'}awa\text{-}mo. \ O\text{-}pogau \ na \ Ndokendoke \ kua \]
\[ \text{so} \quad 3R\text{-} \quad 3R\text{-}REC\text{-}get\text{-}PF \quad 3R\text{-}say \quad \text{NOM} \quad \text{Monkey} \quad : \]
\[ ‘E \ iaku, \ o\text{-}mate\text{-}mo, \ mbeaka \ no\text{'}ido \ na \ loka\text{-}su. \]
\[ \text{TOP} \quad 1SG \quad 3R\text{-}die\text{-}PF, \quad \text{not} \quad 3R\text{-}live \quad \text{NOM} \quad \text{banana}\text{-}1SG\text{.POSS} \]
\[ ‘Well, they met each other, Monkey said “As for me, they are dead, my bananas aren’t living.”’ \]

(AK:37)

With this breadth of meaning, one form being used to indicate both a state and a process, it is less surprising that otherwise nominal lexemes can be used verbally; the extension of a state of existence to a process of change follows from the semantic classes established by the non-agentive verbs. An example of the functional reality of this ambiguity can be illustrated anecdotally. Sitting in a canoe, with a Tukang Besi person in a similar canoe within arm reach, both equipped with paddles but in very shallow water, such that the canoes could be propelled without paddles if needed, I said to my companion *bose!* As a putatively verbal form, it would be interpreted, by its lack of any subject prefixes, as being an imperative used to a singular addressee, with the meaning ‘Paddle! (away)’. As a putative nominal form, the absence of an article or verb would mean that it could only be interpreted as the theme object of the verb give, thus meaning ‘(Give me your) paddle!’ My idea was that if the lexeme *bose* was underlingly verbal, the addressee should paddle away; if underlingly nominal, he should give me the paddle. His response was neither of these; he hesitated, and then asked ‘Do you want me to paddle away, or to give you the paddle?’, clearly unable to disambiguate the two interpretations of the (grammatical) utterance.

The concept of clear word classes is needed to describe the direction taken by many derivational affixes; the suffix -‘a ‘nominaliser’ always derives a word that is a noun; similarly, the prefixes *he- ‘verbaliser’, hoN- ‘purposeful verbaliser’, and hoko- ‘factitive’, amongst others, always unambiguously derive words that are verbs (see chapters 9 - 11 for more examples). Here, as in the lexicon, there are more unambiguously verbal concepts than nominal ones. Even though there are more precategorial entries in the lexicon than ones assigned to the classes ‘noun’ or ‘verb’, I will use the labels ‘noun’ and ‘verb’ to discuss their function in a particular syntactic frame, without necessarily claiming that the word is specified lexically as being either noun or verb.

With the closed word classes a greater proportion of the lexemes are more clear; ‘ulu, for instance, is a classifier, and cannot be used as a head of a noun phrase, or verbally. Some of these clear cases are listed below:
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<table>
<thead>
<tr>
<th>CLASSIFIER</th>
<th>'ulu</th>
<th>bala</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>'classifier for animals'</td>
<td>'classifier for soap'</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PREPOSITION</th>
<th>mina</th>
<th>kua</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>'ablative preposition'</td>
<td>'allative preposition'</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONJUNCTION</th>
<th>maka</th>
<th>toka</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>'and then…’</td>
<td>‘but’</td>
</tr>
</tbody>
</table>

Many of the forms that may appear in a syntactic position that calls for a member of a closed class can also, however, function as a member of an open class. Examples include:

<table>
<thead>
<tr>
<th>CLASSIFIER-NOUN</th>
<th>ba'e</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>'counter for small round things’</td>
<td>'fruit; heart’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONJUNCTION-NOUN</th>
<th>kene</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>‘and, whilst’</td>
<td>‘friend’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONJUNCTION-VERB</th>
<th>jari</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>‘and so, thus…’</td>
<td>‘become’</td>
</tr>
</tbody>
</table>

A discussion of word classes in Tukang Besi must bear in mind that the distinction between classes is, generally, a syntactically determined one, and not lexically specified. With this in mind, the open word classes, consisting of nouns and verb (including adjectives) will be discussed, followed by commentary on the closed word classes.

4.3 Open word classes

There are two main classes of words in Tukang Besi that have open membership, nouns and verbs. There is not a limit to the number of items in these classes, and loan words are regularly assimilated to one of these open classes. Additionally, there is a sub-class of verbs that has several distinct morphosyntactic properties, in some ways more similar to nouns than to verbs, consisting wholly of intransitive non-agentive verbs (see 4.5); these are called adjectives. They act identically to verbs when used predicatively, but when modifying the head of an NP they display some distinctive behaviour. The adjectives also appear to be an open (sub-)class, with approximately 9% of the lexicon of the language being adjectives (Based on a count of approximately 1500 items in a dictionary file), and loanwords able to be borrowed into this class.

4.4 Nouns

A noun can be identified on syntactic grounds by the fact that it always appears in an NP, preceded by either an article (see 4.6.7) or a preposition (4.6.4). In citation, nouns are most commonly preceded by the non-nominative core article te. A nominal can head an NP without requiring any morphology to specify that it is serving in that role, such as the derivational -'a required on some ‘verbs’. Due to the extensive indexing of role information on the verb in Tukang Besi, nominals in core function occur rather
infrequently: a text of 130 verbal clauses (Wa Iambo, in the appendices) included approximately 30 nominals each in [S] and [O] role, and 10 in [A] role. The infrequency of nominals appearing in discourse, and the lack of any outstanding pre-syntactic criteria that they have, leads to there being few criteria for their classification. The system of numeral classifiers covertly divides the nominals into groups, but these are not absolute divisions, as one nominal may appear with more than one classifier, such as loka ‘banana’ (see 4.6.6).

4.5 Verbs and adjectives

The label ‘verb’ is used to indicate the class of words that can be prefixed to indicate its subject when used as the head of a main clause. Verbs, and the subclass of adjectives, are related and divided into subclasses by a number of morphological features, which are summarised in table 4, and illustrated with examples following the table:

<table>
<thead>
<tr>
<th>to'o'ge</th>
<th>ja'o</th>
<th>like</th>
<th>mente</th>
<th>buti</th>
<th>wila</th>
<th>bose</th>
<th>topa</th>
<th>hu'u</th>
<th>hoto-</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘big’</td>
<td>‘bad’</td>
<td>‘awake’</td>
<td>‘surprise’</td>
<td>‘fall’</td>
<td>‘go’</td>
<td>‘paddle’</td>
<td>‘slap’</td>
<td>‘give’</td>
<td>‘have’</td>
</tr>
</tbody>
</table>

hoko- factitive

<table>
<thead>
<tr>
<th>pa- causative</th>
<th>pa-</th>
</tr>
</thead>
<tbody>
<tr>
<td>pa- + -[um]- = [m]a-</td>
<td>[m]a-</td>
</tr>
</tbody>
</table>

may take object suffixes may take object suffixes

Compulsory -[um]- when modifying

Objects must be nominative +NOM

hepe- requestive

<table>
<thead>
<tr>
<th>—Adjective—</th>
<th>non-Adjective</th>
</tr>
</thead>
<tbody>
<tr>
<td>—non-Experiencer—</td>
<td>Exp.-er</td>
</tr>
<tr>
<td>—non-Dynamic—</td>
<td>non-Experiencer—</td>
</tr>
<tr>
<td>—non-agentive—</td>
<td>Dynamic</td>
</tr>
<tr>
<td>—intransitive—</td>
<td>agentive</td>
</tr>
<tr>
<td>—transitive—</td>
<td>—agent.</td>
</tr>
</tbody>
</table>

In addition to the facts in table 4, it should be noted that hoto- is the only example of a non-agentive transitive verb, and that there appear to be only two ditransitive verbs, hu'u ‘give’ and kahu ‘send’.

The morphological tests involved are:

° choice of causative prefixes: hoko- factitive, pa- causative, or hepe- requestive;
° use of the subject infix -[um]- when modifying in an NP;
° allomorphy of -[um]- when the verb is prefixed with pa- in a main clause;
° ability to take object suffixes to index an object;
° ability for an object (if present) to be non-nominative.
Diagrammatically, the different classes of verbs can be represented as in (34):

![Diagram of Verbal Categories]

The terms transitive and intransitive need no introduction, other than to mention that transitive verbs in Tukang Besi may generally omit their object; they do not, however, act as intransitives in this case, as several syntactic tests show (see eg. chapter 9.1). Agentive and non-agentive are used to describe the difference between verbs that subcategorise for an [Agent] argument and those that do not; an agent is in control of the predicate, and not affected by it directly. The term ‘non-agentive’ is used in preference to ‘stative’, since these verbs may refer to either an ongoing state or the inception of that state, as illustrated in (31) - (33). A dynamic verb describes an activity that necessarily changes over time; a non-dynamic verb may refer to an activity that leads to a change, but may equally refer to an unchanging state. Within the non-Dynamic class, experiencer verbs are those in which the affected argument does not undergo a change in physical state, but only an emotional or experienced one, such as mo’aro ‘be hungry’ as opposed to mobela ‘be wounded’. Finally, the distinction between Adjective and non-Adjective is purely a morphosyntactic one, and does not have any semantic correlates (other than the interpretation of one modifying constructions). For instance, the set of colour terms is split between the Adjective and non-Adjective class; biru ‘black’ is an adjective, but ‘ijo ‘green’ is a verb.

Examples of the morphological criteria establishing these divisions can be seen in (35) - (62):

Transitive verbs divided on the basis of the ability or inability to take non-nominative objects:

(35) No-siasa-’e na ‘obu iso.
3R-beat-3OBJ NOM dog yon
‘They beat that dog.’

(36) No-siasa te ‘obu iso.
3R-beat CORE dog yon
‘They beat that dog.’

(37) No-hoto-’e na ‘obu iso.
3R-have-3OBJ NOM dog yon
‘They own that dog.’
(38) * No-hoto te 'obu iso.
3R-have- CORE dog yon
‘They own that dog.’

Transitive / intransitive established by the choice of article when causativised with pa- in Lia-Mandati dialect:

(39) No-pa-manga di mia iso.
3R-CAUS-eat OBL person yon
‘They had that person there eat.’

(40) * No-pa-manga te mia iso.
3R-CAUS-eat CORE person yon

(41) No-pa-wila te mia iso.
3R-CAUS-go CORE person yon
‘They sent that person there.’

(42) * No-pa-wila di mia iso.
3R-CAUS-go OBL person yon

Agentive / non-agentive established by the ability or inability to occur with hepe-

(43) Ku-pa-buti te osimpu.
1SG-CAUS-fall CORE young.coconut
‘I dropped the coconut.’

(44) * Ku-hepe-buti te osimpu.
1SG-REQ-fall CORE young.coconut

(45) No-pa-wila-aku te ina-su.
3R-CAUS-go-1SG.OBJ CORE mother-1SG.POSS
‘My mother made me go.’

(46) No-hepe-wila-aku te ina-su.
3R-REQ-go-1SG.OBJ CORE mother-1SG.POSS
‘My mother asked me to go.’

non-agentive / agentive established by the allomorphy of pa- and -[um]-:

(47) Ko-[m]a-buti te osimpu-?
2SG.I-CAUS.SI-fall CORE young.coconut
‘Are you going to drop the coconuts?’

(48) * Ko-[um]a-buti te osimpu?
2SG.I-CAUS.SI-fall CORE young.coconut

(49) * Ko-[m]a-wil(a) i koranga la?
2SG.I-CAUS.SI-go OBL garden ILL.FORCE

(50) Ko-[um]a-wil(a) i koranga la?
2SG.I-CAUS.SI-go OBL garden ILL.FORCE
‘Are you going to go to the garden?’
non-Dynamic / Dynamic established by the ability or inability to occur with the factitive prefix hoko-:

(51) **No-hoko-like-aku te iai-su.**  
3R-FACT-wake.up-1SG.OBJ CORE younger.sibling-1SG.POSS  
‘My younger brother really woke me right up.’

(52) **No-pa-like-aku te iai-su.**  
3R-CAUS-wake.up-1SG.OBJ CORE younger.sibling-1SG.POSS  
‘My younger brother woke me up somewhat (but I managed to get back to sleep).’

(53) * **Ku-hoko-buti te osimpu.**  
1SG-FACT-fall CORE young.coconut  

(54) **Ku-pa-buti te osimpu.**  
1SG-CAUS-fall CORE young.coconut  
‘I dropped the coconut.’

Experiencer / non-Experiencer established by the use of passive relative clauses (separates non-dynamic non-experiencer) in Lia-Mandati dialect:

(55) * **Te iaku t[um]o-pa-mente.**  
CORE 1SG PASS.SI-CAUS-surprise  
‘I, who was surprised….’

(56) **Te iaku t[um]o-pa-like.**  
CORE 1SG PASS.SI-CAUS-wake.up  
‘I, who was woken up, ….’

Adjectives separated from non-Adjective non-Dynamic verbs based on the ability to modify without the -[um]- infix:

(57) **No-wila na kalambe kabongo.**  
3R-go NOM girl deaf  
‘The deaf girl went.’

(Note that, as mentioned in chapter 2.5.1, the -[um]- infix shows no overtly distinct allomorph on adjectives beginning with m-, but is semantically distinct; thus meha ‘red’ but [m]eha ‘reddest’. Context disambiguates these two meanings.)

(58) **No-wila na kalambe l[um]ule.**  
3R-go NOM girl naked  
‘The naked girl went.’

(59) **No-wila na kalambe k[um]abongo.**  
3R-go NOM girl deaf  
‘The girl who’s really deaf went.’

(Adjectives can appear with the infix -[um]-, but are then assigned a superlative meaning)

(60) * **No-wila na kalambe lule.**  
3R-go NOM girl naked  
‘The naked girl went.’
Adjectives divided into plain adjectives and ambitransitive verb/adjectives:

(61) * To-leama-'e na wunua-no.
  1PL.R-good-3OBJ NOM  house-3POSS
  ‘We improved their house.’

(62) To-ja'o-ke na wunua-no.
  1PL.R-bad-3OBJ NOM  house-3POSS
  ‘We ruined their house.’

The subcategorisation frames of the verbs in the different classes share certain gross features, with the transitive verbs having the greatest variation. The classes of transitive, intransitive (non-agentive, experiencer, agentive), ditransitive and ambitransitive verbs will be dealt with separately to explain the peculiarities of the subcategorisation frames of verbs in their class.

4.5.1 Transitive verbs

Verbs in Tukang Besi can be usefully grouped according to the semantic roles of the arguments that they take. This is determined through the interactability of different verbs with different constructions that call for particular semantic roles (see Donohue 1996 for an illustration of this procedure with intransitive verbs); the relevant constructions are causativisation (chapter 9), applicativisation (chapter 10), and the ability of a by-phrase in a passive construction to appear (chapters 11 and especially 20). All transitive verbs have one of the following as their basic subcategorisation frame:

1. \( \text{topa} \langle [\text{Ag}], ([\text{Thm}/\text{Pt}]) \rangle \) ‘slap with first joint of fingers;
   \( \text{slap a hand drum} \)
2. \( \text{’awa} \langle [\text{Dat}], ([\text{Thm}/\text{Pt}]) \rangle \) ‘get, obtain’
3. \( \text{raho} \langle [\text{Instr}], [\text{Pt}]_{\text{NOM}} \rangle \) ‘affect’
4. \( \text{pake} \langle [\text{Ag}], ([\text{Instr}]) \rangle \) ‘use’
5. \( \text{hoti} \langle [\text{Ag}], ([\text{Dat}]) \rangle \) ‘donate (food or clothing) charitably’

It is worth noting from the outset that in most cases the object of the transitive verb is optional: as a general principle, a transitive verb may be used without an overt object (either nominal or affixal) with no special morphosyntax required to ‘detransitivise’ it. In the case of verbs with morphology that specifically adds on more than the base number of objects, there is a requirement that at least one object must be present, but there is no specification as to which of the possible objects this must be, in the case of (for example) a base transitive verb with applicative or causative morphology added (though there is evidence that the objectless verb is still regarded as transitive - see the discussion on dialect B forms of causatives in chapter 9.3). This also means that some derived transitive verbs (for example, \( \text{pa-ja’o} \) ‘ruin’, morphologically \( \text{CAUS}-\text{bad} \)) have an obligatory object.

The first of these case-frames is the most common, with most transitive verbs fitting this frame. Dative subjects occur only with ‘awa ‘get’ and \( \text{tarima} \) ‘receive’, and as an alternative for some perception verbs (eg. the verb \( \text{rodongo} \) with the frame \( \langle [\text{Dat}], ([\text{Thm}/\text{Pt}]) \rangle \) has the meaning ‘hear (by chance)’, and with the frame \( \langle [\text{Ag}], ([\text{Thm}/\text{Pt}]) \rangle \)
‘listen to (deliberately).’

The differences between an agent subject and a dative subject are testable morphologically; when the verb is affixed with the applicative affix -ngkene, a suffix that may only appear on verbs with an [Ag] argument, the verb cannot serialise with sala to mean ‘by chance’:

(63) No-sala-rodongo te tolua-'a nu rambi.
3R-accident-hear CORE vomit-NL GEN orchestra
‘They happened to hear the orchestra.’

(64) * No-sala-rodongo-ngkene te kene-no.
3R-accident-hear-COM CORE friend-3POSS
‘They happened to listen to (it) with him.’

The third frame is the most unusual, REQUIRING a nominative patient, and applies only to expressions of natural force, such as roho ‘affect’ (in ‘the rain affected me’), mepa ‘wet’, motiti ‘dry’. An example is shown in (65), and the ungrammaticality of a non-nominative object is shown in (66):

(65) No-motiti-aku te 'oloo s[um]io.
3R-dry-1SG.OBJ CORE sun afternoon.SI
‘The afternoon sun dried me.’

(66) * No-motiti te anabou la'a-mo n[um]angu
3R-dry CORE child just-PF swim.SI
na 'oloo s[um]io.
NOM sun afternoon.SI
‘The afternoon sun dried the boy who had just been swimming.’

Instrumental objects, as shown in the fourth subcategorisation frame, are seen with the verb pake ‘use’, verbs of throwing such as eda ‘throw underarm’, kabi ‘throw away at’, and many derived verbs, such as heka-batu ‘throw (a stone)’, he-kabali ‘use a machete’, which may also take non-typical objects (such as, in the examples given, hekabatu te po'o ‘throw a mango (as if it were a stone)’, hekabali te hansu ‘use a sword (as if it were a machete)’).

(67) No-heka-batu te po'o.
3R-VERB-stone CORE mango
‘They threw mangoes (as if throwing stones).’

Simple transitive verbs with dative objects are rare; indeed, only hoti ‘donate (food or clothing)’, and speech act verbs such as balo ‘answer’, and ‘ema ‘ask’ have been identified in this frame so far. Unlike hu'u ‘give’, which takes a dative and a theme object, hoti has an assumed object, food or clothing, that may not be overtly expressed nominally. Compare (68) and (69) with the ungrammatical (70):

(68) No-hu'u te ana mo'aro (te mandara).
3R-give CORE child hungry CORE sweet.potato
‘They gave (sweet potato) to the hungry child.’
This behaviour can probably be attributed to the fact that hoti, used nominally, has the meaning ‘meal’. However, even when referring to clothing donated charitably, the object may not be mentioned:

(71) * No-hoti te ana mo’aro te baju.
3R-donate.food CORE child hungry CORE shirt
‘They donated a shirt to the hungry child.’

Note that [Agent] is the most versatile top semantic role in transitive verbs frames, able to appear with all the other semantic roles, and that [Theme/Patient] is the most versatile bottom semantic role, able to appear with any of the other semantic roles above it. This provides support for the notion that the proto-typical subject of a transitive clause is an [Agent], and that the prototypical object is a [Theme/Patient].

Further examples of transitive verbs, divided according to their subcategorisation frames, include:

\[
\begin{align*}
&\langle [\text{Ag}], ([\text{Thm/Pt}]) \rangle: & \text{ala} & \text{fetch} \\
& & \text{manga} & \text{eat} \\
&\langle [\text{Dat}], ([\text{Thm/Pt}]) \rangle: & \text{ita} & \text{see, catch sight of} \\
& & \text{tarima} & \text{receive} \\
&\langle [\text{Instr}], [\text{Pt}]_{\text{NOM}} \rangle: & \text{mepa} & \text{wet} \\
& & \text{raho} & \text{affect} \\
&\langle [\text{Ag}], ([\text{Instr}]) \rangle: & \text{pake} & \text{use} \\
& & \text{hebaju} & \text{wear (a shirt)} \\
&\langle [\text{Ag}], ([\text{Dat}]) \rangle: & \text{hoti} & \text{donate (food/clothes)} \\
& & \text{‘ema} & \text{ask (someone)}
\end{align*}
\]

Notice that in all cases, except for verbs with instrumental subjects, the object of the transitive verb may be omitted; a drop in transitivity does not require morphological derivation in order to be grammatical, but may occur at any time. This has been indicated in the subcategorisation frame by the bracketing around the object in each of these frames. In the case of an unspecified object, the culturally or contextually unmarked object is assumed (e.g., manga ‘eat’ takes manga ‘cassava’ as its assumed object; pake ‘use’, in the context of a discussion on blacksmithing, takes palu ‘hammer’, as its assumed object).

Two subclasses of the \langle [\text{Ag}], ([\text{Thm/Pt}]) \rangle class of verbs exists, verbs which subcategorise for an optional core argument in instrumental role, as well as a patient, thus representing a kind of ‘ditransitive’ construction. The first of these subcategorises for an extra argument:


*simbi* 〈[Ag], ([Instr]), ([Pt])〉 ‘slash’

Other verbs with a subcategorisation frame allowing a core instrumental argument include the following:

*bongko*  tie
*gotii*  chop
*hugu*  slice
*kohii*  chop
*tu’o*  fell

The second subclass also involves an instrument in addition to a theme/patient argument, but has the restriction that the instrument may not be nominative:

*tompa* 〈[Ag], ([Instr],-NOM), ([Pt])〉 ‘throw (something) at’

Compare the grammaticality of (72) and (73), with nominative instruments:

(72)  *No-simbi-’e te pada na kabali.*
3R-slash-3OBJ CORE kunai.grass NOM machete
‘He slashed the kunai grass with the machete.’

(73)  *No-tompa-’e te ’obu na tomba.*
3R-throw-3OBJ CORE dog NOM mud
‘He threw the mud at the dogs.’

This second subclass includes verbs in which the instrument cannot so readily be thought of as an intermediate agent (following Marantz 1984: 247); the instrumental knife involved in the verb ‘cut’ is much more easily thought of as an intermediary agent than is the instrumental stone in a verb like ‘throw’ (note, however, that unlike English a sentence like ‘The machete slashed the kunai grass.’ is NOT grammatical in Tukang Besi, as some agent must be expressed or implied; only a small number of weather verbs allow for an instrument to act as the subject in their clause). Other verbs in this subclass include:

*tompa*  throw
*hambere*  throw something long
*eda*  throw underarm

These two subclasses of verbs that subcategorise for an instrumental argument as well as another non-subject core argument differ from the verbs that take a sole instrumental object in that the head of an object relative clause may not be the instrumental object in the case of these verbs, whereas it may be for verbs with instrumental main objects. Compare (74) and (75):

(74)  *Te kabali i-simbi-su.*
CORE machete OP-slash-1SG.POSS
‘The machete that I slashed with.’
(an Instrument relative clause may be used for either of these two constructions to express the instrument in a relative clause that is distinct from either the subject relative clause or the object relative clause. Both of the following sentences are grammatical: *Te kabali simbisu, Te kabali pakesu. See chapter 15*)

(75)  
\begin{align*}  
Te & \text{kabali} \ i-pake-su. \\
\text{CORE} & \text{machete} \ \text{OP-slash-1SG.POSS} \\
\text{‘The machete that I used.’} 
\end{align*}

Not all verbs that involve an instrument as part of their action may include a core instrumental role; with the verbs that can, it appears that there is a default choice of instrument, such as *kabali* ‘machete’ as the default instrument used with *simbi*, or *poda* ‘knife’ the default instrument used with *robo* ‘stab’. A verb that does not have a default instrument is *helo’a* ‘cook’. Compare the grammatical (76) with the ungrammatical (77):

(76)  
\begin{align*}  
\text{No-simbi} & \text{ te pada te kabali.} \\
\text{3R-slash CORE kunai.grass CORE machete} \\
\text{‘He slashed the kunai grass with the machete.’} 
\end{align*}

(77) *  
\begin{align*}  
\text{No-helo’a} & \text{ te kaitela te panse.} \\
\text{3R-cook CORE corn CORE pot} \\
\text{‘She cooked the corn in a pot.’} 
\end{align*}

This sentence is acceptable with a preposition marking *panse*. *No-helo’a te kaitela di panse*.

These verbs also differ from ditransitive verbs such as *hu’u* ‘give’ in that only the theme/patient argument may be subject in a passive sentence, whereas both the recipient and theme arguments of *hu’u* may be subject in a passive sentence (as exemplified in chapter 11).

4.5.2 Intransitive verbs

Intransitive verbs can be split into those that take agentive arguments as their sole arguments, and those that take non-agentive arguments. The non-agentive verbs may be either experiencer or theme/patient verbs. Into the latter category fall the subclass of adjectives, and the overlapping class of ambitransitive verbs, dealt with later.

The adjectives that may not appear with object-suffixes, exemplified by *to’oge* in table 4, and thus are not ambitransitive verbs, have a simple subcategorisation frame that allows only a patient:

\[
\text{to’oge} \ \langle [Pt] \rangle \ ‘\text{big’} 
\]

Other adjectives with this subcategorisation frame include the following:
and all the adjectives formed with ma-, me- or mo-, such as mandawulu ‘beautiful’, mendaro ‘deep’, mombaka ‘delicious’.

The subclass of verbs must have a experiencer as subject. Some of these verbs may optionally take an oblique argument, marked by either the article i or te:

(78) No-motindo’u te uwe nu osimpu.
    3R-thirsty CORE water GEN young.coconut
    ‘She’s thirsting for some coconut juice.’

(79) No-monimpala i porai-no.
    3R-miss OBL fiancee-3POSS
    ‘She misses her fiancee.’

The verbs that do not take oblique arguments are ambitransitive:

(80) No-mente na kalaminsala-su.
    3R-surprised NOM elder.sister-1SG.POSS
    ‘My older sister is surprised.’

(81) No-mente-’e na kalaminsala-su.
    3R-surprised-3OBJ NOM elder.sister-1SG.POSS
    ‘They surprised my older sister.’

These verbs have the following subcategorisation frames:

\[
\text{motindo’u} \ 〈[\text{Dat}], ([\text{Cause}])\rangle \quad \text{‘thirsty’}
\]

\[
\text{monimpala} \ 〈([\text{Dir}]), ([\text{Source}])\rangle \quad \text{‘feel homesick, miss’}
\]

\[
\text{mente} \ 〈([\text{Ag}]), ([\text{Dat}])\rangle \quad \text{‘surprised’}
\]

There are very few verbs with this type of subcategorisation frame.

Agentive intransitive verbs subcategorise for one argument:

\[
\text{wila} \ 〈[\text{Ag}]\rangle \quad \text{‘go’}
\]

Other agentive verbs with this subcategorisation frame include the following:
Some non-agentive verbs have alternate subcategorisation frames in which the single argument is an [Agent], not [Patient]. This is found with verbs denoting a voluntarily induced state, such as moturu ‘sleep.’ The [Agent] interpretation is a rather marked one, and usually not the first interpretation that speakers will assume. The subcategorisation frames for moturu are as follows:

\[
\begin{align*}
\text{moturu} & \quad \langle [\text{Pt}] \rangle \quad \text{‘sleep’} \\
\text{moturu} & \quad \langle [\text{Ag}] \rangle \quad \text{‘go in order to sleep’}
\end{align*}
\]

Note this contrast in the sentences (82) and (83):

[Theme]:

\[(82) \quad \text{No-moturu kene wowine ane ke hotu mopera.} \quad 3R\text{-sleep and woman exist and hair short}
\]

‘He slept with the woman with the short hair.’

(ie., they were asleep near each other.)

( # they had sex together)

[Agent]:

\[(83) \quad \text{No-moturu-ngkene te wowine ane ke hotu mopera.} \quad 3R\text{-sleep-COM CORE woman exist and hair short}
\]

‘He slept with the woman with the short hair.’

( ie., they had sex together)

( * they simply slept near each other without activity)

Sentence (82) uses the conjunction kene (on an ‘empty’ NP; see chapter 18) to show an additional sleeping participant of the activity; the [Patient] interpretation is the only one possible. In (83), however, the [A] of the verb must be an [Agent], because of the addition of the -ngkene applicative suffix that requires an [Agent] in the subcategorisation frame of the verb, and so the non-agentive interpretation is not allowed. The analysis that this agenteive meaning of moturu is lexicalised, rather than an alternative case frame, can be countered by the fact that in Tukang Besi the verb moturu ‘sleep’ also has a range extending over ‘lie down, rest’ (as in Indonesian tidur ‘sleep’); in pa-moturu CAUS-sleep ‘put to sleep’, the meaning is not of knocking someone out, but of laying a person down in order that they can sleep. I argue then that in addition to ‘sleep, lie down, rest’, ‘have sex’ is also part of the range of the lexeme.

With a verb denoting a state that is NOT voluntarily induced, this agentive interpretation
is not allowed, as seen by the ungrammaticality of suffixing -ngkene to the verb (which would require an agent argument):

[Patient]:

(84) No-turu kene wowine ane ke hotu mopera.
3R-unconscious and woman exist and hair short
‘He was unconscious with the woman with the short hair.’
(ie., they happened to be knocked out near each other.)

[Agent]:

(85) * No-turu-ngkene te wowine ane ke hotu mopera.
3R-unconscious-COM CORE woman exist and hair short

4.5.3 Ditransitive verbs

There are only three verbs that display ditransitive (in the usual sense of the term, involving a recipient and a theme; see also the simbi subclass of transitive verbs described in 4.5.1) behaviour, hu'u ‘give’, sumbanga ‘donate (money)’, and kahu ‘send’. All three differ in some ways with regard to their subcategorisation frames; most radically, sumbanga is a loan word, and speakers vary in their treatment of its arguments. Since there is no consensus about its grammatical treatment, and no prescriptive norm, sumbanga has not been considered here. Of the other two ditransitive verbs, hu'u has only one subcategorisation frame, which is also found for some occurrences of kahu:

hu'u 〈[Ag], ([Dat]), ([Thm])〉 ‘give’

In this frame both the dative and the theme arguments are specified as optional; one of them is, however, required. Thus (86) and (87) are both grammatical, but (88) is not:

(86) No-hu'u-aku.
3R-give-1SG.OBJ
‘They gave me (something).’

(87) No-hu'u te doe.
3R-give CORE money
‘They gave (someone) some money.’

(88) * No-hu'u.
3R-give
‘They gave (someone) (something).’

With kahu ‘send’, the same frame as for hu'u may be used, specifying three core arguments, or alternatively the following may be used with only two core arguments, and one oblique one:

kahu 〈[Ag], ([Thm])〉 〈[Dat]〉 ‘send’

Similar to the restrictions found with hu'u, the frame specifies two optional arguments, in
this case the theme and the locative; one, however, is required, making * nokahu ‘They sent’ an ungrammatical sentence on its own. Compare the following sentences, the first using the $\langle [\text{Ag}], [\text{Dat}], [\text{Thm}] \rangle$ subcategorisation frame with three core arguments, the second using the $\langle [\text{Ag}], ([\text{Thm}]) \rangle \langle [\text{Dat}] \rangle$ frame. With the first frame, both the Dative and the Theme objects are marked as core arguments, but only the Dative object may be indexed on the verb. In the second sentence, the Theme is the object that determines the object suffixes on the verb, and the recipient is present as an oblique argument; it may not be marked by the core article te:

\[ (89) \text{No-kahu-aku te doe te kene-su.} \]
\[ 3R \text{-send-1SG.OBJ CORE money CORE friend-1SG.POSS} \]

‘My friend sent me some money.’

\[ (90) \text{No-kahu-‘e na doe te kene-su i iaku.} \]
\[ 3R \text{-send-3OBJ NOM money CORE friend-1SG.POSS OBL 1SG} \]

‘My friend sent some money to me.’

These two subcategorisation frames have further consequences when grammatical processes such as passivisation and relative clause formation are applied; with the first frame, the recipient may be passivised, whereas with the second, the theme may be passivised:

\[ (91) \text{No-to-kahu-mo te doe na kene-su.} \]
\[ 3R \text{-PASS-send-PF CORE money CORE friend-1SG.POSS} \]

‘My friend was sent some money.’

\[ (92) \text{No-to-kahu-mo na doe i kene-su.} \]
\[ 3R \text{-PASS-send-PF NOM money OBL friend-1SG.POSS} \]

‘My friend sent some money to me.’

\[ (93) * \text{No-to-kahu-mo na doe te kene-su.} \]
\[ 3R \text{-PASS-send-PF NOM money CORE friend-1SG.POSS} \]

‘My friend sent some money to me.’

4.5.4 Ambitransitive verbs

The set of Ambitransitive verbs consists of non-agentive verbs, whether they are adjectives or not, dynamic or not, that have the following subcategorisation frame:

\[ ja'o \rangle \langle ([\text{Ag}], [\text{Thm/\text{Pt}}_{\text{NOM}}] \rangle \text{ ‘bad; ruin’} \]

This shows a verb with a patient, and an optional agent. Whether the agent is present or not, the patient must be the nominative argument in its clause. In an intransitive clause, this is not a problem; all underived subjects of intransitive clauses are automatically nominative:
This notation indicates that only one of the following two sentences is grammatical:

(94) No-ja'o na ambere iwo.
3R-bad NOM bucket that:lower
‘That bucket down there is wrecked.’
# ‘That bucket down there has been ruined.’

In order for an argument other than the highest in the thematic hierarchy (see chapter 3) to be the nominative one in a sentence, object suffixes must be used. In the case of the ambitransitive verbs, this means that if the verb is used transitively, then the restriction that the [Patient] argument must be nominative requires the verb to use object suffixes.

Other ambitransitive verbs with this subcategorisation frame include the following:

- bongko tie, be tied
- buke open, be open
- buti fall, drop
- hesowui wash
- like wake up
- lule strip, be naked
- mota’a cook, be cooked
- pono fill, full
- pusì confuse, be dizzy
- saba’e divide, be separate

Finally, one verb, waliako ‘return’, appears to have the following subcategorisation frame:

waliako 〈[Ag], ([Thm/Pt])〉  ‘return’

This is different from the ambitransitive verbs that all require a nominative patient/theme, and allow for an optional agent; waliako has an agentive argument, and allows that argument to act on itself, intransitively, or on another object, transitively. This contrasts with the closely related verb mbule ‘return’, which is a simple agentive intransitive verb, and does not allow for a transitive interpretation:

mbule 〈[Ag]〉 ‘return’
4.6  Closed word classes

The closed word classes show less internal division, less derivational morphology, and much smaller membership than the open classes of noun, verb (and adjective). Some of these, the independent forms of the pronouns, and the referential and actual demonstratives, for instance, are better thought of as belonging to a greater nominal class, but they are described here separately, due to their smaller membership and restricted derivational possibilities.

4.6.1  Personal pronouns

Personal pronouns are available for first, second and third persons, and further differentiate number three ways for first person (singular, paucal and plural), and two ways for second person (singular and plural). The paucal category is being eroded to become a plural exclusive one, through contact with other languages, foremost Malay, that use this distinction. The pronoun class can be thought of as having one set of free forms, two prefixed sets, and three suffixed sets (one of which is becoming obsolete). There are, however, very few features distinguishing the free forms of the pronouns from any other noun, and might be better thought of as being specialised nouns, leaving only the bound forms as true pronouns. Further details on the forms of the various pronominal sets are given in Chapter 5.

4.6.2  Epistememes (interrogatives)

Whilst there is clearly a group of words that may be called interrogatives, in that they are invariably used when asking content questions and for specifying the semantic range of a group of entities, the actual words themselves fall into different classes, and some are indeed precategorial. Only a small few of the words can be classed as being epistememes (see Durie and Mushin 1992, Mushin 1995 for a discussion about the use and justification of this term), and do not belong in any other word class. The epistememes found in Tukang Besi are:

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>paira</td>
<td>what</td>
<td>noun</td>
</tr>
<tr>
<td>sapairap</td>
<td>how much (price)</td>
<td>epistememe</td>
</tr>
<tr>
<td>-mpairap</td>
<td>what kind of</td>
<td>precategorial</td>
</tr>
<tr>
<td>popiap</td>
<td>how many (n.)</td>
<td>numeral + classifier</td>
</tr>
<tr>
<td>pia-</td>
<td>how many</td>
<td>numeral</td>
</tr>
<tr>
<td>ie'ei, emai, ie'emai</td>
<td>who</td>
<td>noun</td>
</tr>
<tr>
<td>'umpapa</td>
<td>how, where</td>
<td>epistememe</td>
</tr>
<tr>
<td>ha'a</td>
<td>how, do what</td>
<td>verb</td>
</tr>
<tr>
<td>kehia</td>
<td>when (future)</td>
<td>epistememe</td>
</tr>
<tr>
<td>(d)ehia</td>
<td>when (past)</td>
<td>epistememe</td>
</tr>
<tr>
<td>anu</td>
<td>thingy, whatsit</td>
<td>precategorial</td>
</tr>
</tbody>
</table>

These words, and their use, are discussed in more detail in chapter 19.
4.6.3 Demonstratives

There are two sets of demonstratives in Tukang Besi, further divided into those used to refer to entities still visible, and those used to refer anaphorically to no longer current or visible entities. The first set indicates spatial or referential distance from the speaker, divided three ways into that which is close to the speaker, but far from the hearer (*ana*), that which is close to the hearer but far from the speaker (*atu*), and that which is far from both (*iso*). The second set is used to add a topographic component to the information, specifying either ‘up’ (*ito*) or ‘down’ (*iwo*); in addition to literal up and down, these topographic demonstratives are also used to refer to east and west, north and south, landwards and seawards, and towards versus out from the cultural centre. There seems to be a hierarchy of relevance of these categories for the purposes of choosing which demonstrative to use, such that a trip downhill may still be described as going in the upward direction, if the journey still proceeds in a west-east direction. Further details, and village-specific information on this topographic deixis, is given in chapter 6.

4.6.4 Prepositions

The class of prepositions in Tukang Besi contains several words that have additional functions in other word classes, foremost verbs. It seems clear that there is a cline of properties that separate ‘pure’ prepositions from pure verbs. The following set of features seems to define the differences and similarities clearly, going from main-clause verbs on the left, through the serial verb use of *ako*, to the conjunction *kene*, and then the three prepositions:

<table>
<thead>
<tr>
<th>Core article phonologically incorporated?</th>
<th>Verb</th>
<th>ako</th>
<th>kene</th>
<th>mina</th>
<th>kua</th>
<th>apa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Governs KP, not NP?</td>
<td>←→</td>
<td>←</td>
<td>←→</td>
<td>←→</td>
<td>←→</td>
<td></td>
</tr>
<tr>
<td>Allows object suffixes?</td>
<td>←</td>
<td>←</td>
<td>←→</td>
<td>←→</td>
<td>←→</td>
<td></td>
</tr>
<tr>
<td>Uses subject prefixes when predicative?</td>
<td>←</td>
<td>←</td>
<td>←→</td>
<td>←→</td>
<td>←→</td>
<td></td>
</tr>
<tr>
<td>Fronts when nominal fronts?</td>
<td>←→</td>
<td>←</td>
<td>←→</td>
<td>←→</td>
<td>←→</td>
<td></td>
</tr>
</tbody>
</table>

The behaviour of these words, as both ‘prepositions’ and in other roles, is dealt with in chapter 13.

4.6.5 Conjunctions

Two clauses in Tukang Besi can be conjoined without the need for an overt conjunction. However, some conjunctions exist to join two clauses, neither of which is subordinate to the other. Some of these conjunctions include:
The first of these, *kene*, shows many verb-like properties, but with interesting and important restrictions that are not applied to main-clause verbs; it may be that *kene* is displaying an interesting usage here as a serial verb serving to link syntactic units. Details of this are discussed in chapter 17.

4.6.6 Numerals and classifiers

Numerals form an almost closed word class in Tukang Besi, with native forms for the numbers from one to ten and hundred, and a decimal counting system. The numbers for thousand, *riwu*, and million, *juta*, are loans (from Malay), but fit into the base-ten system easily. In addition to the numbers, certain quantifiers and questions words, such as *koruo* ‘many’, and *pia-* ‘how many’, also fit into the numeral category, in that they occur in the same position in a numeral + classifier phrase. The numerals from 1 - 9 have three different forms, and these are given in table 5:

<table>
<thead>
<tr>
<th></th>
<th>free</th>
<th>prefix</th>
<th>‘reduplicated’</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>sa’asa</td>
<td>sa-</td>
<td>sa’asa</td>
</tr>
<tr>
<td>2</td>
<td>dua</td>
<td>dua-</td>
<td>dodua</td>
</tr>
<tr>
<td>3</td>
<td>tolu</td>
<td>tolu-</td>
<td>totolu</td>
</tr>
<tr>
<td>4</td>
<td>gana</td>
<td>hato-</td>
<td>gana</td>
</tr>
<tr>
<td>5</td>
<td>lima</td>
<td>lima-</td>
<td>lolima</td>
</tr>
<tr>
<td>6</td>
<td>no’o</td>
<td>nomo-</td>
<td>nono’o</td>
</tr>
<tr>
<td>7</td>
<td>pitu</td>
<td>hitu-</td>
<td>popitu</td>
</tr>
<tr>
<td>8</td>
<td>alu</td>
<td>alu-</td>
<td>oalu</td>
</tr>
<tr>
<td>9</td>
<td>sia</td>
<td>sia-</td>
<td>sosia</td>
</tr>
</tbody>
</table>

Many of the numbers have the same form across several columns but this is not true for the class of numerals as a whole; for example, ‘four’ is *gana* in both the free and the reduplicated sets, but has a separate prefixed form, *hato-*. For ‘nine’, on the other hand, the free and prefixed forms are identical, *sia*, but the reduplicated form is different, *sosia*. In Southern Tukang Besi, of Tomea and Binongko, the historically irregular *gana* (< Malay ‘complete’?) does not occur, and the historically more conservative *pa’a* is used with the meaning ‘four.’
The plain forms are used to form the last number in a complex number, such as ‘one’ in thirty one, *toluhulu sa‘asa*, and (with modification) to show the number of participants in an intradirective action (see chapter 5). The major use of the reduplicated forms is as numeral verbs. In this function they are treated as ambitransitive (adjectival) verbs: they may be transitive, but only when used with object suffixes. Some examples of their use are given in (97) and (98):

(97)  *Te ikomiu i-popia-mo wa?*

   \[
   \begin{array}{lll}
   \text{CORE} & \text{2PL} & \text{2PL.R-how.many-PF} \\
   \text{ILL.FORCE} & \text{ILL.FORCE} \\
   \end{array}
   \]

   ‘How many of you are there now?’

(98)  *Labi to-dodua-‘e?*

   \[
   \begin{array}{lll}
   \text{better} & \text{1PL.R-be.two-3OBJ} \\
   \end{array}
   \]

   ‘We should (put a) second one (in).’

   (Referring to putting petrol in a motorbike; lit., ‘Better we should make it two.’)

The reduplicated forms are also used for counting (‘How many chickens do I have? One, two, three…’) by some speakers, though others (the older generation) use the plain forms, and yet others always use classifiers with the prefixed set of numerals. The most common pattern amongst younger speakers seems to be to use the unreduplicated forms, except for the number one, which is often given as *sa‘asa* when counting. A final use of these numerals is to show an ‘ordinal’ number, by being used as adjectival modifiers. In this use the sense is that the item numbered is the one that makes the set equal to the ‘ordinal’ number that is expressed. For example, in

(99)  *Te kie totolu-no atu ai, …*

   \[
   \begin{array}{lll}
   \text{TOP} & \text{mat be.three-3POSS} & \text{that ANA} \\
   \end{array}
   \]

   ‘Now, her third mat there …’

   (Literally glossed, ‘That mat of hers that makes (the number of mats) three…’)

The prefixed forms are used with classifiers, and with the higher numbers (10, 100,…) to form complex numbers, as seen in table 6:
Table 6. Numbers above 9 (selection only)

<table>
<thead>
<tr>
<th></th>
<th>Word</th>
<th></th>
<th>Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>ompulu</td>
<td>30</td>
<td>toluhulu</td>
</tr>
<tr>
<td>11</td>
<td>ompulu sa’asa</td>
<td>40</td>
<td>hatohulu</td>
</tr>
<tr>
<td>12</td>
<td>ompulu dua</td>
<td>50</td>
<td>limahulu</td>
</tr>
<tr>
<td>13</td>
<td>ompulu tolu</td>
<td>60</td>
<td>nomohulu</td>
</tr>
<tr>
<td>14</td>
<td>ompulu gana</td>
<td>70</td>
<td>hituhulu</td>
</tr>
<tr>
<td>15</td>
<td>ompulu lima</td>
<td>80</td>
<td>aluhulu</td>
</tr>
<tr>
<td>16</td>
<td>ompulu no’o</td>
<td>90</td>
<td>siahu</td>
</tr>
<tr>
<td>17</td>
<td>ompulu pitu</td>
<td>100</td>
<td>sahatu</td>
</tr>
<tr>
<td>18</td>
<td>ompulu alu</td>
<td>200</td>
<td>duahatu</td>
</tr>
<tr>
<td>19</td>
<td>ompulu sia</td>
<td>300</td>
<td>toluhatu</td>
</tr>
<tr>
<td>20</td>
<td>duahulu</td>
<td>400</td>
<td>hatohatu</td>
</tr>
<tr>
<td>21</td>
<td>duahulu ‘asa</td>
<td>500</td>
<td>limahatu</td>
</tr>
<tr>
<td>22</td>
<td>duahulu dua</td>
<td>600</td>
<td>nomohatu</td>
</tr>
<tr>
<td>23</td>
<td>duahulu tolu</td>
<td>700</td>
<td>hituhatu</td>
</tr>
<tr>
<td>24</td>
<td>duahulu gana</td>
<td>1,000</td>
<td>sarivu</td>
</tr>
<tr>
<td>25</td>
<td>duahulu lima</td>
<td>1,000,000</td>
<td>sajuta</td>
</tr>
</tbody>
</table>

Note that the numeral ‘one’ uses a special form when it attaches to -hulu ‘ten’; rather than the expected sa-, as seen in sa-hatu ‘100’, sa-riwu ‘1,000’, and all the numeral + classifier combinations, it and the following -hulu appears as a suppletive form, ompulu. As can be seen, intermediate numbers are simply combinations of different base-ten units. A more complicated example:

1966: sa-riwu sia-hatu nomo-hulu no’o
1-thousand 9-hundred 6-ten 6

Classifiers occur only after a numeral, and are not entirely fixed for each lexical item; for instance, loka ‘banana’ may take ba’e, the ‘fruit and small objects’ classifier, as its classifier when the speaker wishes to refer to the fruit, or ‘asa, the general classifier, when referring to pieces of fried banana. The following classifiers have been found; it is very likely that a thorough search would reveal more, but their use is declining amongst younger speakers, who tend to use ‘asa to cover the whole range of meaning.

<table>
<thead>
<tr>
<th>Classifier</th>
<th>Things covered</th>
<th>example:</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘asa</td>
<td>general counter</td>
<td>sombre potoloti</td>
</tr>
<tr>
<td>‘ulu</td>
<td>animals</td>
<td>woleke ika</td>
</tr>
<tr>
<td>ba’e</td>
<td>small objects;</td>
<td>beleke malobu</td>
</tr>
<tr>
<td></td>
<td>fruit</td>
<td>loka po’o</td>
</tr>
<tr>
<td>bala</td>
<td>soap</td>
<td>sabo rinso</td>
</tr>
</tbody>
</table>
A numeral + classifier phrase may occur in an NP (see chapter 12), or it may float to a position elsewhere in the sentence (see chapter 20); an example of each of these options can be seen in (100), which has a numeral + classifier in the NP that contains the counted noun, and (101), which shows a numeral + classifier floated out of the NP:

(100)  Sa-anu-no ane ke [mia pande] [sa-mia]\textsubscript{N-C} \textsubscript{NP}

\textit{when-thingy-3POSS exist and shaman 1-CLASS}
\textit{no-tari-ako-‘e na kau iso.}
\textit{3R-ESP-APPL-3OBJ NOM tree yon}

‘When that happened, there was a shaman, and he spied on that tree mentally.’

(101)  Ane [sia-rope]\textsubscript{N-C} na [kapala mawi]\textsubscript{NP} i o‘a.

\textit{exist 9-CLASS NOM boat sea OBL mooring,place}

‘There are nine motor ships in the harbour area.’

In both of these cases, the only modification that can occur is with \texttt{labi} ‘better, more’ following the numeral + classifier, as in (102):

(102)  Ane [sa-komba labi]\textsubscript{N-C} na [wakutuu]\textsubscript{NP}

\textit{exist 1-month more NOM time}

‘They had more than a month.’
Numerals 2: The *kampalei*

In addition to the regular set of base-ten numerals, there is a counting system that involves the use of the fingers and palm of the right hand, originally (and still primarily) used for determining fortune at sea, it is used by many people as a means of normal counting as well. The arrangement of the hand for this mode of counting is as seen in figure 1:

![Figure 1: The kampalei](image)

After arriving back at the palm, the thumb, on a second circuit, becomes 8, and so on, so that the palm is then 13, 19, 25, etc. These numbers may be referred to using the normal number set, or using the names of the fingers, so that on the first circuit the following names are encountered, as alternatives to the numerals 1 - 7:

<table>
<thead>
<tr>
<th></th>
<th>Name</th>
<th>‘Meaning’</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><em>randa nu lima</em></td>
<td>‘chest’</td>
</tr>
<tr>
<td>2</td>
<td><em>wunga to’oge</em></td>
<td>‘big’</td>
</tr>
<tr>
<td>3</td>
<td><em>wungansaha</em></td>
<td>‘indicate’</td>
</tr>
<tr>
<td>4</td>
<td><em>wungantonga</em></td>
<td>‘middle’</td>
</tr>
<tr>
<td>5</td>
<td><em>wunganja’o</em></td>
<td>‘bad’</td>
</tr>
<tr>
<td>6</td>
<td><em>wungancili</em></td>
<td>‘small’</td>
</tr>
<tr>
<td>7</td>
<td><em>randa nu lima</em></td>
<td>‘chest’</td>
</tr>
</tbody>
</table>

Thus *tonga* may be used with the meaning ‘four’, instead of *gana*. Alternative names exist for the *wunga ja’o*, ‘bad finger’, such as *wunga homali* ‘cursing finger’.

4.6.7 Articles

There are four articles in Tukang Besi (see chapter 3 for the differences between the articles and prepositions), two of which (*te* and *na*) are obligatorily used with all core NPs, one of which (*ildi*) is usually, but optionally, used with oblique NPs, and one of which (*nu*) is used only with genitive expressions inside another NP. This is the smallest, and most closed word class in the language. Although the two core articles mark the nominative (*na*) and non-nominative (*te*) core arguments in a clause, they do not directly mark those cases, with the non-nominative article also used for all fronted or topicalised core arguments,
which can be shown by various syntactic tests (see chapter 20) to still retain their original grammatical function, nominative or non-nominative. The oblique article is more constant.

4.7 A note on ‘derivational’ and ‘inflectional’ categories

As with the distinction between different word classes, so too is the distinction between derivational and inflectional morphology somewhat tenuous for Tukang Besi. This can be illustrated with the set of object suffixes. As would be expected of an inflectional class, they are fully productive; any transitive verb may (optionally) take object suffixes, and some verbs require them. The existence of such pairs as ja’o ‘bad’ and ja’oke ‘ruin’ (morphologically decomposable into the adjective ‘bad’ + the affix ‘third person object suffix’), exemplified in 4.5, example (62), might be taken as proof that the set of object suffixes can function as a means of deriving transitive verbs from intransitive ones. This view would assume that the presence or absence of object-indexing morphology on the verb dictated the article choice on the KP; in fact, as the choice of articles on the KPs is really a case-marking system that makes overt a pragmatic prominence due to the role that the argument in question plays in the discourse situation, it is better to think of the abstract Case ‘nominative’ being assigned to the KP on the base of discourse criteria (given, prominent information, ongoing salience in the narration or conversation). Should that argument not be the highest on the hierarchy of semantic roles that the main verb of its clause subcategorises for, then the verb must be marked by object suffixes. Since some verbs, such as ja’o ‘bad; ruin’ have a stipulation in their lexical entries that the nominative argument must be the [Patient], these verbs must use object suffixes when they are presented with a nominal argument serving as an [O].
1 Indeed, this has occurred in Onin (Austronesian, Bomberai peninsula, Irian Jaya), in which *foka* (cognate with *hoko*-) is an independent verb (data from my own fieldnotes):

\[ \text{i} \text{ai} \text{ roa ea mane sina foka ia a-sofa.} \]

1SG see child that they make 3SG PRED-wash

'I saw the child that they made wash.'

2 More correctly, a group of closely spaced villages with a central authority.