

9

Hierarchies in Argument Structure Increasing Processes: Ranking Causative and Applicative

MARK DONOHUE

1 Introduction

This paper examines which of applicative and causative constructions can be said to be the least 'marked'. Diachronically we could investigate the grammaticalisation of the one morpheme or lexical item from one sense to another. While suggestive, this would not eliminate the chance of influence from other parts of the language, and could not present a synchronic perspective of the system. In order to gain an idea of how a language orders the constructions dynamically, we need to find examples of synchronic alternation or shift in progress: this is a subtler notion of grammaticalisation, as it does not entail the completion of a shift, but only the observation of alternatives. The material presented shows that the causative in *Tukang Besi* is less marked.

2 Hierarchies among Constructions

The notion of establishing hierarchical orders between different constructions in a language appears to be problematic. Diachronically we could investigate the drift in meaning (grammaticalisation) of a morpheme or lex-

Voice and Grammatical Relations in Austronesian Languages.

Simon Musgrave and Peter Austin

Copyright © 2007, CSLI Publications.

cal item from one sense to another, perhaps with the retention of the original sense, though not necessarily so (see, for instance, Harris and Campbell 1995).

While suggestive, this does not manage to remove from the picture the question of influence from other parts of the language that have also changed, and does not present a view of the system at one point of time: the assumption on which a hierarchy is based. In order to gain an idea of how a language orders the constructions dynamically, at one particular point in time, we need to find examples of synchronic alternation or shift in progress: this is a subtler notion of grammaticalisation, as it does not entail the completion of a shift, but only the observation of alternatives.

I shall present material showing that, between causative and applicative constructions in *Tukang Besi*, the causative has primacy, even when the morphology makes the applicative choice clear. This follows a discussion of the theoretical model of valency-increasing processes that I shall be adopting as an explanatory tool in this investigation (couched in terms of the argument structure architecture of Lexical Functional Grammar).

3 Argument Structure Increasing

Amongst the processes that can affect the argument structure of a language, we can distinguish three major groups:

- valency decreasing
- valency determining
- valency increasing

Valency decreasing processes include passive and anti-passive, and involve the dropping of one argument; while interesting, they are not discussed in this paper. Valency determining processes specify the valency of the resulting predicate (as either bivalent or monovalent); these processes often have other derivational functions.

This paper is concerned with the behaviour of valency-increasing processes; those that add an argument to a basic verb. These may be split into two types, depending on the type of argument that they add to the clause: either a subject may be added that is different from the subject of the base clause; or a new object may be added, which is different from the object of the base clause (if there is one).¹ These two valency increasing processes are commonly referred to as causative and applicative predicates, respectively. Examples of their use are:

¹ The fact that two types of causatives are found is of only peripheral interest to this paper, though important for claims about the universality of parameter settings within a particular language.

Causative: Turkish

- (1) a. *Hasan öl-dü*
 Hasan die-PST
 'Hasan died.'
- b. *Ali Hasan-i öl-dür-dü*
 Ali Hasan-ACC die-CAUS-PST
 'Ali caused Hasan to die / Ali killed Hasan.'

In these examples we can see that the argument that is coded as the subject in (1a) (lack of accusative case, sentence-initial position in this SOV language), *Hasan*, is coded as the object in the causative variant (1b) (between subject and verb, accusative case). A new agent is added. This is in contrast to the changes seen in applicative constructions, illustrated in the following pair.

Applicative: Swahili

- (2) a. *Ni-me-lim-a* *shamba*
 1SG-PERF-cultivate-FINV plantain
 'I have cultivated the plantain.'
- b. *Ni-me-m-lim-i-a* *Musa*
 1SG-PERF-3SG-cultivate-APPL-FINV Musa
shamba
 plantain
 'I have cultivated the plantain for Musa.'

Here we can see that there is no change in the identity of the subject; it is first person singular in the applicative sentence (2b) just as in the base sentence (2a), but that there is a new object; the identity of *Musa* as an object can be demonstrated by its immediate post-verbal position, the fact that it (and not *shamba*) can control the presence of an object agreement marker on the verb (*m-* in the example above), and is eligible for promotion to subject under passivisation (not illustrated). Crucially, the new object is treated as a primary object of the verb, but the grammatical status of the original subject is unchanged.

This paper is specifically interested in addressing the question of whether there are morphosyntactic grounds for supposing that there is a 'basic', or less-marked, form of valency-increasing predicate: is the causative less marked than the applicative, or vice versa? We can attempt to an-

swer this question typologically, examining (for instance) a number of languages that have some form of applicative, and those that have some sort of causative, perhaps trying to determine whether or not there is a relationship between them ('the existence of a causative implies the existence of an applicative construction in the language', for instance, would be an example of a (false) implication).

Rather than adopting this approach I shall seek language-internal evidence, in the *Tukang Besi* language, for the primacy of applicative or causatives as a valency-increasing process. Based on the evidence to be presented in sections 4 and 5, I shall propose a hierarchy of preferred linking types. Before presenting the data, however, we shall discuss the treatment of predicate composition in syntactic models employing argument structure.

3.1 Argument Structure and the Thematic Hierarchy

As an account of the applicative and causative constructions, I shall adopt the formalisms of Lexical-Functional Grammar's argument structure (a-structure). In this the arguments of a predicate are listed in an order established by the semantic roles that the different arguments bear, and their position on the thematic hierarchy. While various versions of this hierarchy are listed, they all agree on the positions of the most common roles.

For the work presented here the actual hierarchy is not particularly important (other than being used as an organisational tool for subcategorisation frames); discussion of the need to both distinguish and rank semantic roles in *Tukang Besi* can be found in Donohue (1999). The identities of the particular semantic roles are, however, relevant, in that some of the complex predicate combinations make reference to the semantic role identity of one or more of the arguments of the predicate. Also relevant is the way in which complex predicates, involving causative and applicative constructions, are built, and modelled in argument-structure.

3.2 Causatives

Causatives are predicates that take an existing predicate, and derive a complex predicate with a new subject. Alsina (1993) provides arguments that the best model of causatives is not one that simply apposes the new subject to the base predicate, as has been assumed in earlier work,² but that a better model treats the causative as a predicate that takes three arguments: the causer, the causative patient, and the base predicate. The causative patient is

² This would involve a model of the causative similar to that given in (i):

- (i) Causative: New subject + base predicate
 |
 'PRED < __, (__)>'

coindexed with one argument from the base predicate, typically the subject. This is the case with the *Tukang Besi* general causative formed with *pa-*, and is modelled as follows:

- Proto-typical causative linking
 (3) 'CAUS < ____[1], ____[2] PRED < ____[2], (____[3]) >>'
 |_____|

In some languages the causative patient is rather linked to the lowest argument of the base predicate.³ This linking strategy is found for French, Japanese, and other languages. Alsina (1992) models it as follows:

- (4) 'CAUS < ___, ___ PRED < ag, (___) >>'
 |_____|

It appears more likely that this second strategy is really just an alternative kind of case marking, and does not represent a true re-ordering of grammatical functions—see Alsina (1996) for arguments supporting the proposal that the dative, and not the accusative, argument is the object of the verb in Romance languages. The issue is not of immediate import here, however, since this morphosyntactic pattern is not found in the variety of *Tukang Besi* discussed.

Despite these differences in the linking of the causative predicate to the base predicate, there are few languages which have restrictions on the semantic roles involved: typically, the causative links to either the subject or the object of the base predicate, without restriction.⁴

3.3 Applicatives

Applicative processes derive complex predicates with one more argument than specified in their base predicate; typically this extra argument is one

³ This option is referred to as 'preposition insertion' in much generative literature (see, for instance, Baker (1988:xx)).

⁴ Some languages impose further restrictions on these complex predicates; a well-known example is the inability to form causative predicates based on bivalent verbs, or even all monovalent verbs; typically only unaccusative verbs (those with an experiencer, theme or patient S) are eligible. This is the case with the *Tukang Besi* factitive (or 'final causative') construction with the prefix *hoko-*:

- Tukang-Besi causative linking 2: factitive
 (ii) 'CAUS < ____[1], ____[2] PRED < thm/pat_[2] >>'
 |_____|

Although again interesting, these restricted causatives do not bear on the discussion that follows, and so are not dealt with in any more detail; the interested reader is referred to Donohue (1999:205-211).

that would have been expressed as an oblique with the base predicate.⁵ Unlike causatives, the new argument is coded as an object in the applicative construction.

Again following Alsina, and Austin (1997), I shall adopt a model of applicative predicate composition that assumes the applicative to be a separate predicate with three arguments: the agent, the applicative object, and the base predicate. The agent in the applicative predicate is coindexed with the agent from the base predicate

- Proto-typical applicative linking
 (5) 'APPL < ____[1], ____[2] PRED < ag_[1], (____[3]) >>'
 |_____|

Unlike causatives, which in general do not place restrictions on the semantic roles of the arguments in the base predicate, it does appear that there is a universal restriction such that applicatives require thematically highly ranked (agent or experiencer) subjects in the base predicate (pace Ruge-malira; see Donohue 1996 for a discussion of why Ruge-malira's (1994) so-called unaccusative applicatives are in fact better thought of as involving agentive predicates). Since it is, in fact, this same agent of the base predicate that is the agent of the combined predicate, this restriction is not so surprising.

3.4 Generalising

Based on the discussion above concerning the implications of causatives and applicatives for argument structure models, we can generalise the types of argument structure linking conventions that are found. This is not a predictive model; it simply states that, for a monovalent base predicate, a complex predicate that builds on it must link either the first or the second argument of the outer predicate with the single argument of the base predicate. This is shown in (6):

- a-structure linking
 (6) 'ARG < ___, ___ PRED < ag/thm >>'
 |_ or _|_____|

With a bivalent base predicate, we can make a prediction: if the linked argument in the outer predicate is the most agentive one, it must be linked with the highest ranked argument of the base predicate. If, on the other

⁵ Though there are languages where the extra argument cannot be expressed as an oblique with the base predicate.

hand, the least agentive argument of the outer predicate is the one shared, then we cannot predict the linking convention. This can be summarised as:

- Applicative: link the highest ranked argument of the inner predicate with the most agentive argument of the outer predicate
- Causative: link the highest ranked argument of the inner predicate with the least agentive argument of the outer predicate
or
link the lowest ranked argument of the inner predicate with the least agentive argument of the outer predicate.

3.5 The Hunt

In order to determine any ordering of the causative and applicative constructions with respect to each other, in terms of some notion of 'more-marked' and 'less-marked', we must demonstrate that there is a tendency for one predicate type to dominate the other. This cannot be done cross-linguistically, since that merely gives us statistical frequencies of the two constructions, and does not help in determining which of the two is more likely to occur.

In *Tukang Besi* we have a language with both applicative and causative constructions, and evidence that one of these constructions, the causative, is expanding into the (morphologically-defined) range of the applicative. Causative interpretations are being attached to morphologically applicative verb forms, in some environments at least. This is exemplified in the following section.

4 *Tukang Besi*

Tukang Besi is an Austronesian language spoken on the islands of the *Tukang Besi* archipelago of central-east Indonesia, and in numerous trading communities between Singapore and New Guinea (Donohue 1999). Basic word order is verb-object-subject with obligatory agreement for the subject of the clause (by verbal prefix), and optional agreement for object (by verbal enclitic). Case is encoded by prepositions: *na* 'nominative' marks the grammatical subject, *te* object, *di* oblique and *nu* genitive. Additionally, there are various more specific prepositions such as *kene* for instrumental. In a clause without an object-agreement enclitic on the verb, the object(s) of the verb are marked with *te*; no more than one object may trigger verb agreement. *Tukang Besi* is an asymmetrical language, in that it does not offer equal treatment to both objects of a trivalent verb. A detailed discus-

sion of asymmetry as it is relevant to applicative constructions can be found in Donohue (1997).

4.1 Regular Causatives

The basic (in the sense of most productive and least semantically restrictive) causative in *Tukang Besi* is formed with the prefix *pa-*; examples of the use of this affix in both monovalent and bivalent clauses are given in the following sentence pairs:

Monovalent unergative

- (7) a. *No-lagu na mia*
3RL.SUBJ-sing NOM person
'The people are singing.'
- b. *No-pa-lagu='e na mia*
3RL.SUBJ-CAUS-sing=3.P NOM person
'They made the people sing.'

Monovalent unaccusative

- (8) a. *No-ja'o na bangka='u*
3RL.SUBJ-bad NOM boat=2SG.GEN
'Your boat is wrecked.'
- b. *No-pa-ja'o=ke na bangka='u*
3RL.SUBJ-CAUS-bad=3.P NOM boat=2SG.GEN
kene baliu
INSTR axe
'They wrecked your boat with axes.'

Bivalent

- (9) a. *Ku-manga te ika*
1SG.SUBJ-eat OBJ fish
'I ate some fish.'
- b. *No-pa-manga=aku te ika*
3RL.SUBJ-CAUS-eat=1SG.P OBJ fish
'She had me eat fish.'

As can be seen in these examples, the subject of a causative is treated as the object of the complex predicate clause. The linking between the two predicates is that seen in section 3.2.

4.2 Regular Applicatives

Applicatives in *Tukang Besi* can create objects with a variety of semantic roles; a typical example is the following pair, showing that the same event can be coded with an oblique instrument, or with an applicative object instrument:

- (10) a. *No-tu'o* *te* *kau* *kene* *baliu*
 3RL.SUBJ-fell OBJ tree INSTR axe
 'He chopped the tree with an axe.'
- b. *No-tu'o=ako* *te* *kau* *te* *baliu*
 3RL.SUBJ-fell=APPL OBJ tree OBJ axe
 'He used the axe to chop the tree.'

As discussed earlier with respect to applicatives in section 3.3, these constructions involve a complex predicate with the subject being coindexed with the subject of the base predicate, and with a new object in the clause. In *Tukang Besi*, which has extensive oblique marking strategies, there is a dynamic alternation available between the applicative object coding option and the oblique coding option; this is not relevant here. It is important to note that the coindexed subject must be an agent in the base predicate. Attempts to construct applicatives based on predicates with non-agentive subjects are not grammatical. This is illustrated with the bivalent verb '*awa* 'get, happen to come into possession of' and the monovalent '*ontoo* 'recover from sickness', neither of which has an agentive subject, and so neither of which may be the base predicate in an applicative construction.

Bivalent non-agentive construction

- (11) a. *No-'awa* *te* *doe* *na* *kalambe*
 3RL.SUBJ-get OBJ money NOM young.girl
 'The girl got the money.'
- b. **No-'awa=ako* *te* *tuha=no* *te*
 3RL.SUBJ-get=APPL OBJ family=3.GEN OBJ
doe na kalambe
 axe NOM young.girl
 'The girl got the money for her family.'

Note that the verb '*awa* cannot be interpreted with the reading 'fetch'; for this meaning a different verb, *ala*, is used.

Monovalent non-agentive construction

- (12) a. *No-'ontoo* *na* *kalambe*
 3RL.SUBJ-get.well NOM young.girl
 'The girl got better.'
- b. **No-'ontoo=ako* *te* *tuha=no*
 3RL.SUBJ-get.better-APPL OBJ family=3.GEN
na kalambe
 NOM young.girl
 'The girl got better for her family.'

These examples have shown that applicatives link with base predicates in the manner expected from a cross-linguistic examination of the construction. Important to the exposition that follows is the fact that, whether the base verb is bivalent or monovalent, an applicative construction must link the first argument of the applicative predicate with an agentive first argument of the base predicate.

5 Unergatives

An interesting upset arises in the neat categorisation of argument-structure affecting derivations when we consider unergative predicates. Up to this point we can state that the morphological form of the derivational affix determines (or is correlated with) the type of argument structure affecting process: *pa-* (and *hoko-* and *hepe-*) produce causatives, and *=ako* (as well as *-ngkene* and *-Vci*) produce applicatives. Examining unergative predicates shows that the morphological shape of the derivational affix alone is not sufficient to determine the nature of the derivation.

5.1 Ambiguities in unergative derivations

Consider the following sentences, involving unergative predicates with the causative *pa-* or the applicative *=ako* attached. While the derivation with *pa-* is unexceptional, we can see that there are two possible interpretations available of the verb derived with *=ako*, one with the expected applicative interpretation, and one with, exceptionally, a causative interpretation.

Basic underived sentence

- (13) *No-wila* *kua* *kente*
 3RL.SUBJ-go ALL tidal.flats
 'She went to the tidal flats.'

Derivation with pa-

- (14) *To-pa-wila='e* *kua* *kente*
 1PL.RL.SUBJ-CAUS-go=3.P ALL tidal.flats
 'We made her go to the tidal flats.'

Derivation with =ako

- (15) *To-wila=ako='e* *na* *ina=no*
 1PL.RL.SUBJ-go-APPL=3.P NOM mother=3.GEN
kua *kente*
 ALL tidal.flats
 'We went to the tidal flats for their mother.' OR
 'We made mother go to the tidal flats.'

The two competing linking models for these interpretations are given below; note that there is no change in the overt morphosyntax present in the sentence at all, only in the interpretation of it.

- Applicative interpretation
 (16) '=ako < __, __ wila < __ >>'
└──────────┘

- Causative interpretation
 (17) '=ako < __, __ wila < __ >>'
└──────────┘

While the causative formed with *pa-* is unambiguous, the verb in (15) is ambiguous in interpretation between applicative and causative, as modelled in the argument structure linkings; this complication is the crucial one in the argument presented here, and is one that we shall return to later in section 5.3.

Not all 'unergative' predicates behave in this way; compare the two interpretations available to *wila=ako* with the sole interpretation available for *kolo=ako*:

Basic underived sentence

- (18) *No-kolo* *na* *mia* *r[um]ato*
 3RL.SUBJ-smoke.tobacco NOM person arrive.SI
 'The visitor smoked.'

Causative derivation with pa-

- (19) *No-pa-kolo='e* *na* *mia*
 3RL.SUBJ-CAUS-smoke.tobacco=3.P NOM person
r[um]ato
 arrive.SI
 'They had the visitor smoke.'

Applicative derivation with ako

- (20) *No-kolo=ako='e* *na* *raja* *te*
 3RL.SUBJ-smoke.tobacco=APPL=3.P NOM king OBJ
mia *r[um]ato*
 person arrive.SI
 'The visitor smoked for the king ('s benefit). BUT NOT
 **'The visitor made the king smoke.'

- (21) '=ako < __, __ PRED < __ >>'
└──────────┘

- (22) *'=ako < __, __ PRED < __ >>'
└──────────┘

5.2 Structure of the Non-Alternating Monovalent Predicate

The argument structure of the class of ambiguous unergatives is revealing. A volitional verb like *kolo* has the following subcategorisation frame:

- (23) \lceil_V 'kolo < agent >'

Non-volitional verbs like *ambanga* 'embarrassed' can be modelled with the following frame:

- (24) \lceil_V 'ambanga < theme >'

Less difficult verbs, such as *kolo*, 'smoke tobacco', and *ambanga*, 'embarrassed', lack ambiguous semantics, and so do not present problems: *ambanga*, 'embarrassed', can appear with a causative, but not with an applicative predicate, since it lacks an agent. In the following examples, we can see that a causative predicate can build on *ambanga*, 'embarrassed', without problems, since there is not a requirement for a particular semantic role identity.

Basic underived sentence

- (25) *No-ambanga* *na* *kalambe*
 3RL.SUBJ-embarrassed NOM young.girl
 'The girl was embarrassed.'

Causative derivation with *pa-*

- (26) *No-pa-ambanga*=*'e* *na* *kalambe*
 3RL.SUBJ-CAUS-embarrassed=3.P NOM young.girl
 'They embarrassed the girl.'

- (27) 'CAUS < __ , __ PRED < __ >>'
 └──────────┘

In contrast to the productive causative derivation, applicative derivations are not possible with *ambanga*, 'embarrassed': =*ako* attaching to this verb would productively specify an agent A, which is not compatible with the theme that is subcategorised for by *ambanga*, 'embarrassed'. The causative interpretation of =*ako* is not possible, for reasons that will be discussed later.

Derivation with =*ako*

- (28) **No-ambanga*=*ako*=*'e* *te* *kalambe*
 3RL.SUBJ-embarrassed=APPL=3.P OBJ young.girl
 'The girl was embarrassed for them.'

- (29) *'APPL < ag , __ PRED < theme >>'
 └──────────┘

- (30) *'APPL < __ , __ PRED < theme >>'
 └──────────┘
 *'The girl embarrassed them.'

With *kolo*, 'smoke tobacco', either derivation is possible, since the *pa-*causative derivation is compatible with agents as well as themes: these sentences have appeared in (19) and (20); the argument structures are shown below:

- (31) 'CAUS < __ , __ PRED < agent >>'
 └──────────┘

- (32) 'APPL < __ , __ PRED < agent >>'
 └──────────┘

The structure of *wila*, 'go', is more problematic: its subject is at the one time an agent, as the volitional performer of the action, and also the theme, as the entity which moves as a result of the action.

- (33) |_v '*wila* < agent_[1] = theme_[1] >'

Although two semantic roles are listed, they are coindexed with the same numeral: they refer to the same real-world argument, and the dual identity reflects the complex semantics of the predicate.

Consider this ambiguous subcategorisation frame in the light of the restrictions that are placed on the predicates with which causative and applicative predicates may combine: an applicative is restricted to appearing with an agent in the base predicate coindexed with the agent of the applicative predicate:

- (34) 'APPL < __ , __ PRED < ag , (__) >>'
 └──────────┘

With *wila*, 'go', the prerequisites for this linking are met, in that there is an agent argument in the base predicate, and it is linked to the agent in the outside predicate:

- (35) 'APPL < __ , __ PRED < agent = theme >>'
 └──────────┘

This linking, is however, not unproblematic: given that the inner argument effectively combines two semantic roles, depending on the value of the semantic role that is regarded as most salient for the matching process, the applicative linking may be disallowed (recall that applicative linking requires that the first argument of each predicate be linked, and that the first argument of the base predicate be agentive). The ungrammatical linking of a theme in the base predicate with the agentive A of the applicative predicate is shown in the model below.

(36) * 'APPL < __ , __ PRED < agent = theme > '
 |_____|

The implications of this (occasional) failure to link as an applicative construction are examined in more detail in the following section, and discussed in section 6.

5.3 Resolving the Semantic Role Conflict

The dilemma presented to us by the variation found in the interaction of =ako with intradirective verbs is that the semantic role of the sole argument of the base predicate is ambiguous. Since there is only one argument in the base predicate, any complex predicate linking must involve that argument; therefore the semantic role of this argument is crucial for determining grammaticality, when there are restrictions on the semantic role of the arguments in a construction.

The applicative interpretation is not available for monovalent predicates with a non-agent semantic role, such as *ambanga* 'embarrassed' (illustrated above); thus, if a monovalent predicate takes a non-agentive argument, the applicative predicate cannot be combined with it. The screening for this is assumed to occur early in the selection process. Some predicates with non-agentive semantic roles slip through this process, however: the intradirective verbs have an agent semantic role, and so are allowed to combine with an applicative =ako. From the morphosyntactic behaviour witnessed, however, it seems that there are problems with the selection of the semantic role for combination purposes: since the semantic role of the argument is ambiguous, either may be the one selected by the combination process. The process of combination with the applicative predicate for non-agentive, agentive, and intradirective verbs are shown in Table 1.

Table 1: Combining with an Applicative: Selection and Linking

verb:	<i>ambanga</i> 'embarrassed'	<i>kolo</i> 'smoke (tobacco)'	<i>wila</i> 'go'	
semantic roles	theme	agent	agent = theme	
compatibility with =ako APPL < __ , __ PRED < ag >>	NO	YES	YES	
linking A with agent	n/a	YES	YES	NO
applicative formation	n/a	YES	YES	NO

The question then remains, what happens to the applicative formation that has selected the applicative morphology, has passed the 'attach only to predicates with agent semantic roles' phase, but which then, through what-

ever process, attempts to link the applicative A with the theme aspect of the semantic role information?

It appears that, having attached the derivational predicate to the base one (through satisfying the requirement that there be an agentive argument there to link the applicative A with), there is no turning back: some linking must be made. We have already seen that, if for whatever reason the theme aspect of the semantic role specification for the intradirective subject is the salient one, and selected by the agent-seeking part of the linking process, an applicative linking is impossible. This was modelled in (35) and (36), repeated here.

(35) 'APPL < __ , __ PRED < agent = theme >>'
 |_____|

(36) * 'APPL < __ , __ PRED < agent = theme > '
 |_____|

There is, however, a two place predicate waiting for linking with the argument in the base predicate. Given that that argument is being interpreted as non-agentive, and so ineligible for applicative linking, the only choice is to change the linking so that the theme of the base predicate links with the object of the outer predicate:

(37) '=ako < __ , __ PRED < agent = theme >>'
 |_____|

This is now an acceptable linking, but is no longer applicative: the fact that the base subject is linked with the object of the outer predicate makes the combined predicate causative in nature.

5.4 Other Aspects of *Tukang Besi* that Show Variation

A similar phenomenon is found in another area of the language's morphosyntax. In addition to valency increasing and valency decreasing morphemes, *Tukang Besi* has a number of valency-announcing morphemes; they do not always specify an increase or decrease in valency, but rather specify what the valency of the final predicate must be. One of these morphemes is *hoN-*, which specifies that the combined predicate is bivalent and which attaches to both bivalent and monovalent roots. When attached to a monovalent verb root, the combined predicate is bivalent, and the relationship to the base predicate is either causative or applicative, depending on the semantic role of the subject of the base predicate. This is illustrated in

the following pairs of sentences, showing underived verbs and the result of adding the *hoN-* prefix to them.

[S] of underived verb is [patient]:

(38) *No-tunu na kau*
3RL.SUBJ-burn NOM wood
'The wood is burning.'

(39) *No-ho-nunu='e na kau*
3RL.SUBJ-VR-burn=3P NOM wood
'S/he is burning the wood.'

(40) '*hoN-* < __, __ *tunu* < __ >>'

[S] of underived verb is [agent]:

(41) *No-rau na ana*
3RL.SUBJ-yell NOM child
'The child is yelling.'

(42) *No-ho-rau='e na kene=no*
3RL.SUBJ-VR-yell=3.P NOM friend=3.GEN
'They are yelling at their friend.'

(43) '*hoN-* < __, __ *rau* < __ >>'

It seems that the best argument structure model of the *hoN-* predicate is one that makes explicit reference to semantic roles: the only requirement is that like semantic roles must link to other like semantic roles (see Lefebvre 1991 for a similar analysis of Fongbe serial verbs, and Austin 1997 for similar suggestions on similar predicates in Australian languages).

(44) '*hoN-* < ag, thm PRED < (ag), (thm) >>'

This requirement means that when there is a base predicate without, say, a theme argument, then the new argument added in the *hoN-* predicate is a

theme, since the agent in that outer predicate is already linked; the addition of a theme means that an object is added, and so a causative formed. This has been illustrated in the derivation of *honunu* from *tunu*. Similar arguments explain the applicative interpretation of *horau* in the examples above. Importantly, this type of linking with *hoN-* illustrates that there is a precedent in *Tukang Besi* for derivational predicates that do not have a constant linking pattern with the base predicate.

6 Implications for Hierarchies and 'Preferences' for A-Structure Changing

We have seen that the strategies that 'repair' incompatible matchings of base predicates and derivational predicates select causatives as the 'bail out' option, even when that is not the option selected by the morphology present on the verb. It is clear that, in terms of function served and morphology used to indicate that function, the causative is spreading; the range of that spread is shown in Table 2.

Table 2: The Spread of Causative Function into the Domain of Applicative Morphology

Base:	Bivalent		Monovalent	
type	(agentive)	agentive	intradirective	non-agentive
<i>pa-</i>	CAUS	CAUS	CAUS	CAUS
<i>=ako</i>	APPL	APPL	APPL	CAUS
				n/a

Thus it appears that the causative linking pattern is used as a rescue option when an applicative is called for by the morphology, but disallowed by the semantic roles involved and the restrictions on linking between predicates. From this we can conclude two points of note concerning the hierarchies found in the morphosyntax of valency increasing.

- i. The shape of the morphology (and the construction it dictates) may be overwritten by the architecture peculiar to the predicate combination;
- ii. The causative, which is less restricted in terms of types of predicates that may be combined, is capable of extending into the morphological

territory that belongs to the applicative, whereas the reverse is not true.⁶

From these observations we must conclude that the causative must be the least marked of the valency-increasing devices.

7 References

- Alsina, Alex. 1992. On the argument structure of causatives. *Linguistic Inquiry* 23:517–555.
- Alsina, Alex. 1993. Predicate composition: a theory of syntactic function alternations. Ph.D thesis, Stanford University.
- Alsina, Alex. 1996. *The role of argument structure in grammar: evidence from Romance*. Stanford: CSLI.
- Austin, Peter. 1997. Causatives and applicatives in Australian Aboriginal Languages. In *Dative and related phenomena* ed. Kazuto Matsumura & Tooru Hayashi. 165–225. Tokyo: Hitsuji Shobo.
- Baker, Mark C. 1988. *Incorporation: A theory of grammatical function changing*. Chicago: University of Chicago Press.
- Donohue, Mark. 1996. Relative clauses in *Tukang Besi*: grammatical functions and thematic roles. *Linguistic Analysis* 26.3–4:159–173.
- Donohue, Mark. 1997. The applicative construction in *Tukang Besi*. In *Proceedings of the Seventh International Conference on Austronesian Linguistics* ed. Cecilia Odé & Wim Stokhof. 415–432. Amsterdam: Editions Rodopi B.V.
- Donohue, Mark. 1999. *A Grammar of Tukang Besi*. Grammar Library series No. 20. Berlin: Mouton de Gruyter.
- Harris, Alice & Lyle Campbell. 1995. *Historical syntax in cross-linguistic perspective*. Cambridge, UK: Cambridge University Press.
- Lefebvre, Claire. 1991. *Serial verbs: grammatical, comparative, and cognitive approaches*. Amsterdam: John Benjamins.
- Rugemalira, Joseph M. 1994. The case against the Thematic Hierarchy. *Linguistic Analysis* 24:62–81.

⁶ That is, there are no cases of causative morphology being associated with applicative functions, something like:

(iii)	<i>No-pa-[verb]=e</i>	<i>na</i>	<i>iai=su</i>
	3RL.SUBJ-CAUS-[verb]=3.P	NOM	younger.sibling=1SG.GEN
	‘They [verb]ed for my younger sister.’		

The only reading possible for a sentence of the type seen in (iii) would be ‘They made my sister [verb].’

10

Lexical Categories and Voice in Tagalog

NIKOLAUS P. HIMMELMANN

1 Abstract

The meaning and lexical category of so-called verbal roots is one aspect of the voice systems in Tagalog and other Philippine-type languages which has received little attention in the controversy surrounding the analysis of these systems. It is common to assume that these roots cannot occur without any affixation and that, therefore, they should be considered precategoryal. Here it is shown that this view is ill-conceived. To begin with, it is possible to distinguish different classes of roots based on morphological features. Therefore, roots are not precategoryal. Furthermore, a large majority of the putative verbal roots allows for unaffixed uses. However, ‘verbal roots’ have ‘non-verbal’ meanings when used without voice marking. Inasmuch as it can be shown that voice-marked forms have clearly ‘verbal’ meanings, it follows that voice marking is derivational (among many other things).

Voice and Grammatical Relations in Austronesian Languages.

Simon Musgrave and Peter Austin

Copyright © 2007, CSLI Publications.