

# Inverse in Tanglapui

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## 1. Introduction

Tanglapui is a non-Austronesian language spoken by approximately 3,000 people who live in the valleys of the eastern highlands of the island of Alor, in Nusa Tenggara Timur province, Indonesia. The language has been classified by Stokhof (1975), Wurm (1975) and Wurm and Hattori (1981) as an 'independent member' of the Timor-Alor-Pantar Stock, a group of non-Austronesian languages found on parts of Timor and the surrounding islands of Pantar, Alor and Kisar. Apart from the very limited materials presented by Stokhof, no work has been published on the language. This article seeks to present data on the unusual voice system that is found in the Lantoka dialect of Tanglapui, and, based on data from peripheral dialects of Tanglapui and nearby languages, to propose a path of possible evolution for this voice system.

## 2. Basic Pronominal Prefixing

Tanglapui is a head-marking language, with clauses sometimes consisting of just a single verb with pronominal prefixing indicating the information about the person and number of the participants. There are several different paradigms operating in verbal agreement in Tanglapui, depending on the valence of the verb, and the 'affectedness' of the undergoer of that verb. These separate paradigms will be exemplified in the sections below.

### 2.1. Intransitive non-affective verbs

Intransitive non-affective verbs are those in which the subject of the verb does not undergo a significant change of state as a result of the verb; it includes most of the verbs which have been referred to in the literature as 'active' or 'unergative' verbs (see Merlan 1985 or Mithun 1991 for a thorough discussion of the literature), but also extends further into the domain of non-agentive verbs as well. It is illustrated with four verbs, shown in (1).<sup>1</sup>

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<sup>1</sup> The phonological system of Tanglapui includes the following consonants and vowels: *p t k k<sup>w</sup> b d g g<sup>w</sup> m n ŋ ŋ<sup>w</sup> v r l y s i i u e o a*. Stress is non-contrastive, and initial.

(1)	<i>ve</i>	‘go’	<i>miti</i>	‘sit’	<i>yi</i>	‘go up’	<i>te</i>	‘sleep’
	1SG	<i>ŋve</i>	<i>ŋiti</i>		<i>ñdʒi</i>		<i>n̄te</i>	
	1PL	<i>ive</i>	<i>imiti</i>		<i>iyi</i>		<i>ite</i>	
	2/3	<i>yave</i>	<i>yamiti</i>		<i>yayi</i>		<i>yate</i>	

We can analyse the data given above into the following morphemes: *ŋ-*, 1SG; *i-*, 1PL; *ya-* 2/3 person (and *Ø-*, third person non-human), and a few assimilatory rules: the first person *ŋ* assimilates in place to a following non-nasal, and a following nasal assimilates in place to it (and through a rule of degemination is then lost); the glide in *ñy* then hardens to *ñdʒ*. Note that there is no distinction made for non-first person plural; number can be indicated by adding *-(a)ndua* to the verb,<sup>2</sup> or an independent nominal or pronoun, or both:

(2) *Ya-ndua-miti*

2/3-PL-sit

‘You (plural)/They sat.’

(3) a. *Ma-ga-ndua ya-ndua-miti*      b. *Ma-ga-ndua ya miti*  
 that-3-PLURAL 2/3-PL-sit      that-3-PLURAL 2/3-sit  
 ‘They sat.’

## 2.2. Transitive non-affective verbs

Transitive non-affective verbs are those in which the undergoer of the verb is not adversely affected by the performance of the verb, or in which the performance of the verb is not an activity that can be performed with a definite completion that will exclude its being repeated. The two verbs *di* ‘see’ and *magina* ‘hear’ are given as illustrative of this paradigm, in (4):

<sup>2</sup> The plural morpheme is positioned before the last morpheme in the word, so that aspect or negation marking on the verb (eg., *-tuna*, ‘perfective’) would cause the plural marker to appear after the verb root: *Ya-miti-ndua-tuna* ‘They are already seated.’ On a nominal, it appears following any adjectives, but before a demonstrative clitic: *suba-ndua* ‘houses’, *suba wansa-ndua* ‘big houses’, but *suba wansa-ndu-o* ‘those big houses’. Given the lack of evidence for a verb phrase that contains the object, we might interpret these restrictions as reflecting the same constraints on second-last position in the phrase, either verb-phrase or determiner phrase (with a *Ø* indefinite determiner).

(4) *di* 'see'<sup>3</sup>

		OBJ		
		1	2	3
SUBJ	1		<i>ɲyadi</i>	<i>ɲadia</i>
	2	<i>yendia</i>		<i>yadia</i>
	3	<i>ndia</i>	<i>dia</i>	<i>dia</i>

*magina* 'hear'

		OBJ		
		1	2	3
SUBJ	1		<i>ɲyamagina</i>	<i>ɲamagina</i>
	2	<i>yeɲagina</i>		<i>yamagina</i>
	3	<i>ɲagina</i>	<i>magina</i>	<i>magina</i>

In this set we can see the same prefixes that have already been encountered in the intransitive verb paradigm, but there is now a distinction between the second and third persons, and no longer a distinction in number in the first person. The prefixes found in the transitive non-affective paradigm are as follows: *ɲ(a)-*, first person (actor or undergoer); *ya-*, second person (actor or undergoer) (allomorph: *ye-* if the undergoer is first person); *Ø-*, third person (actor or undergoer). Again, the *ɲ-* displays a wide range of allomorphs. It is worth noting that the order of the two prefixes is fixed: the prefix denoting the actor precedes that denoting the undergoer, and never the other way around. Plural is formed by adding *-(a)ndua* to an undergoer prefix, or using an independent pronoun or demonstrative for a plural transitive subject; *-(a)ndua* cannot be added to a subject prefix. Thus we can see the use of the plural morpheme on the undergoer agreement in the verb in example (5):

(5) *Ya-Ø-ndua-di-tuna*  
 2-3-PL-see-PERF  
 'You saw them'

Sentence (5) cannot be interpreted as 'You (plural) saw her/him/it.' (*Ya-ndua-Ø-di-tuna*), since that interpretation would require the plural *-ndua* to be attached to the transitive subject, which is not allowed: it only attaches to an absolutive argument. In (6) we can see how a plural subject does not affect the verbal agreement, but simply requires the use of a plural independent pronoun:

(6) *ɲa-ndua ɲ-ya-dia*  
 I-PLURAL 1-2-see  
 'We can see you.'

<sup>3</sup> In the absence of an overt aspect marker, the transitive verbs appear with a paragogic *-a*.

Sentences such as (7), with the plural morpheme attached to a transitive subject prefix, are ungrammatical (compare with the grammatical use of the plural morpheme on an intransitive subject prefix in (2), in section 2.1):

- (7) \* *Ye-ndua-n-dia*  
 2-PL-1-see  
 'You (plural) can see me.'

To summarise the data so far, we have the following morphemes found prefixed to verbs in Tanglapui, used to indicate pronominal agreement on the verb:

	Intransitive	Transitive	
	subject	undergoer	subject
1SG	<i>ŋa-</i>	<i>ŋa-</i>	<i>ŋa-</i>
1PL	<i>i-</i>	<i>ŋa-</i>	<i>ŋa-</i>
2SG	<i>ya-</i>	<i>ya-</i>	<i>ya-</i>
2PL	<i>ya-</i>	<i>ya-</i>	<i>ya-</i>
3SG	<i>ya-</i>	$\emptyset$	$\emptyset$
3PL	<i>ya-</i>	$\emptyset$	$\emptyset$

**Table 1: person marking on the verb**

In the case of the transitive verbs, there is a clear ranking of positions within the verb: subject precedes undergoer. (see (6) for an illustration of this point). We cannot, however, assume a nominative/accusative or ergative/absolutive alignment for the language, since there is no basis for choosing which of the transitive agreement positions matches the intransitive one. Additionally, plural can be indicated on the verb in the following cases, with the morpheme shown:

	Intransitive	Transitive	
	subject	undergoer	subject
1PL	<i>i-</i>	<i>ndua-</i>	—
2PL	<i>ndua-</i>	<i>ndua-</i>	—
3PL	<i>ndua-</i>	<i>ndua-</i>	—

**Table 2: indexing number on the verb**

We can clearly see that plural marking on the verb works on an absolutive basis: the subject of an intransitive verb, or the undergoer of a transitive verb, may index their plurality on the verb, but the subject of a transitive verb may not. The presence of the first person plural agreement marker *i-* in the intransitive paradigm is unusual; surrounding languages tend to have a *ni-* or *pi-* morpheme in the first person plural.



### 3. Complications

The paradigms presented so far are descriptive of the sets of transitive non-affective and intransitive non-affective verbs, but fail to account for a large number of other verbs in which there is a stronger sense of affectedness on the undergoer. This section presents data on these paradigms, and demonstrates that Tanglapui has an inverse alignment system operating in which the position of the two arguments on the animacy hierarchy determines morphological marking in the verb apart from strict pronominal indexing. Additionally, this morphology can be used in wider contexts, where there is no sense of ranking.

#### 3.1. Transitive affective verbs

Verbs in which the affected argument undergoes a change of state, or is adversely affected by the completion of the action, are called transitive affective verbs. The paradigm of prefixing on these verbs is substantially different to that found in the non-affective verbs, though many of the morphemes can be recognised from earlier paradigms.

(8) *baba* 'hit'

		OBJ		
		1	2	3
SUBJ	1		<i>ŋebaba</i>	<i>ŋababa</i>
	2	<i>yeŋanababa</i>		<i>yababa</i>
	3	<i>ŋanababa</i>	<i>yanababa</i>	<i>yababa</i> <i>yanababa</i>

*silale* 'search for'

		OBJ		
		1	2	3
SUBJ	1		<i>ŋesilale</i>	<i>ŋasilale</i>
	2	<i>yeŋanasilale</i>		<i>yasilale</i>
	3	<i>ŋanasilale</i>	<i>yanasilale</i>	<i>yasilale</i> <i>yanasilale</i>

The morphemes present are not dissimilar to those that have already been encountered in the previous verbal paradigms: *ŋa-*, first person subject or undergoer (allomorph: *ŋe-* if the undergoer is second person); *ya-*, second or third person subject or undergoer (allomorph: *ye-* if the undergoer is first person and actor is second person). Only one *ya-* can occur in sequence (\**yaya*). The *ŋe* and *ye* allomorphs of the first and second person markers can be stated in terms of involvement of speech act participants: if a speech act participant acts on another speech act participant, then the vowel of the index on the verb must be *e*. This would, however, predict a form such as \**ŋenababa* for 'You hit me.',

and since this is not the case an additional stipulation must be made to the effect that the *e*-vowel allomorph must occur with a full pronominal index that refers to the actor<sup>4</sup> in the clause. Interestingly, this is the only part of the transitive affective verb paradigm in which both the actor and the undergoer are indexed on the verb as separate prefixes, and so must be said to be reflecting a situation in which both the arguments are indexed onto the verb; we have seen that for transitive non-affective verbs more pronominal information is present on the verb, and in section 4 data from a related dialect will be presented that indicates that full pronominal indexing was once the case in Lantoka Tanglapui as well. Contemporary Lantoka Tanglapui, however, has a pronominal indexing system that (generally) indexes only the most 'salient' argument of the verb (see figure 1 below). Abstracting the prefixes on the verbs roots in (8), we arrive at table 3:

		OBJ		
		1	2	3
SUBJ	1		<i>ŋe -</i>	<i>ŋa-</i>
	2			<i>ya-</i>
	3	<i>ŋa-na-</i>	<i>ya-na-</i>	<i>ya-</i>
				<i>ya-na-</i>

**Table 3: prefixes on the affective transitive verb**

From Table 3 we can see that, unlike the case for the transitive non-affective verbs, the verbs do not always display a complete set of prefixes to indicate the person of the actor and undergoer; in (9), for instance, the person of the actor but not the undergoer is shown on the verb:

- (9) *ŋa-baba*  
 1-hit  
 'I hit her/him/it.'  
 \* 'I hit myself.'

In (10), however, we find the person of the undergoer, but not the actor, indexed:

- (10) *ŋa-na-baba*  
 1-na-hit  
 'He/She hit me.'

<sup>4</sup> I shall follow Foley and Van Valin's 1984 terminology and refer to the actor and undergoer in the clause, rather than potentially confusing terms like subject and object (reserving 'subject' to refer to single argument of an intransitive verb, or for the grammatical subject), or terms that collapse too many categories, such as agent and patient. In transitive clauses these may be taken to be functionally equivalent to Dixon's A and O, respectively.

Clearly the pattern that underlies this alternation is that the person of the argument most highly ranked in terms of an animacy hierarchy is always indexed on the verb. This animacy hierarchy corresponds to the general one of the sort first proposed by Silverstein (1976),<sup>5</sup> in which first person is the most highly ranked member, and third person is the lowest ranked member:

1<sup>st</sup> person > 2<sup>nd</sup> person > 3<sup>rd</sup> person

**Figure 1: The animacy hierarchy in Tanglapui**

Additionally, as mentioned earlier, if the clause involves two speech act participants, the vowel of the prefix indexing the actor must be *e*, and this must be explicitly present on the verb, thus requiring a actor prefix, which may be different to that indicating the highest ranked argument.

Looking at table 3, we also notice that the marker *na-* appears when third person acts on first or second person, and when second person acts on first person. It cannot appear when first person acts on second or third person, or when second person acts on third person. Whenever an action is performed contrary to the expected direction on this hierarchy, the marker *na-* must be used; in this respect the use of *na-* corresponds to the use of inverse markers in an inverse alignment type of language (eg., Cree: see Wolfart 1973, or more recently Dahlstrom 1986, 1991), and so shall be referred to here as the 'inverse' marker (INV). The use of the first person *ŋa-* is surprisingly transparent: it must be present if there is a first person argument in the clause, regardless of the grammatical function of that argument. As with the verbs in section 2, plural may be marked by adding *-(a)ndua* to an undergoer prefix, or using an independent pronoun or demonstrative for a plural transitive actor.

A further point of interest in the use of the inverse marker, and a necessary refinement to the animacy hierarchy, is the use of it in reflexive constructions. These are formed using *akanj* 'self', as an independent undergoer (it may be possessed, but does not have to be in this kind of sentence). Crucially, the verb used in the construction does not appear with any specific reflexive morphology, but must appear with the inverse marker, despite the coreference of the actor and undergoer. This is illustrated in (11) and the ungrammatical (12):

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<sup>5</sup> Though a very similar hierarchy was proposed to account for number oppositions by Smith-Stark in 1974.

- (11) *Ijanu akaj ŋa-na-pisi* / *ŋw-akaj ŋa-na-pisi*  
 I self 1-INV-cut 1-self 1-INV-cut  
 'I cut myself.'
- (12) \**Ijanu akaj ŋa-pisi*  
 I self 1-cut  
 'I cut myself.'

We might want to conclude that this demonstrated that the inverse marker must be used when the undergoer is equal to or greater than the actor on the animacy hierarchy; this, however, would not predict the variation found in the third person: we would expect all third person acting on third person clauses to be obligatorily inverse, which is not the case. Rather, we must conclude that the reflexive 'self' is ranked higher on the animacy hierarchy than the actor self. The revised hierarchy is then one that includes a shift upwards for 'self':

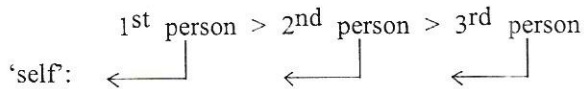


Figure 2: The revised animacy hierarchy

### 3.2. Functions of the inverse marker

The use or omission of the inverse marker has many ramifications in the syntax of Tanglapui, demonstrating that it is clearly a voice system and not just an affectedness marker that has been restricted to only (and obligatorily) appearing with certain positions on the animacy hierarchy. The syntactic use of the voice system can be seen in the word order possibilities available in a clause, and in the scope of certain clitics that are used. With respect to word order, the language has a strict restriction that the order of nominal constituents in clauses must be SOV. This is illustrated with the non-affective verb *di* 'see':

- (13) *Lena Gerson Ø-di-tuna*  
 Lena Gerson 3-see-PERF  
 'Lena saw Gerson.'
- (14) *Gerson Lena Ø-di-tuna*  
 Gerson Lena 3-see-PERF  
 'Gerson saw Lena.'  
 \* 'Lena saw Gerson.'

With the use of an inverse marker a undergoer-actor-Verb word order is found: the first nominal is the affected argument, and the second nominal is the actor. This is seen in (15) and (16), where (15) shows a direct version of the sentence, and (16) shows the inverse equivalent of it, with the order of the nominals reversed but the same meaning.



We may take this as evidence that the category 'grammatical subject' is in this language equal to the most agentive argument in a direct clause, and to the most patientive argument in an inverse clause.

- (15) *Toby Kris ya-baba*  
 Toby Kris 3-hit  
 'Toby hit Kris.'
- (16) *Kris Toby ya-na-baba*  
 Kris Toby 3-INV-hit  
 'Toby hit Kris.'

Secondly, the inverse system is used to determine the scope of the second-position clitic =*to* 'additional'. This clitic attaches to the first element in a clause, and conveys the meaning 'verb is relevant to grammatical subject (in addition to others)'. The subject is taken to be the most agentive argument in a direct clause, or the most patientive argument in an inverse clause. This can be seen in (17) - (20), in which (17) and (18) show that in direct clause the actor is the referent of the additional morpheme, indicating that the action was performed by the actor in addition to its being performed by other parties. Note especially that in (18) the referent of =*to* is still the actor, despite the clitic host being the undergoer nominal. In (19) and (20) the undergoer is the referent, since the clause is now an inverse one, and so the subject is the most patientive argument. Again, note that in (20) the clitic host is the actor, but the reference of =*to* is still the undergoer.

- (17) *Kris=to Paulus ya-baba*  
 Kris=ADDITIONAL Paulus 3-hit  
 '(In addition to the others) Kris hit Paulus.'
- (18) *Paulus=to ya-baba*  
 Paulus=ADDITIONAL 3-hit  
 '(Someone else also) hit Paulus.'
- (19) *Paulus=to ya-na-baba*  
 Paulus=ADDITIONAL 3-INV-hit  
 '(Someone) hit Paulus (as well as some others).'
- (20) *Paulus=to Na-na-baba*  
 Paulus=ADDITIONAL 1-INV-hit  
 'Paulus hit me (as well as some others).'

One final piece of evidence that the inverse system is actually a voice system comes from an examination of the coreference constraints that apply to conjunction reduction, as monitored by the (limited) switch reference system. When the subject of one clause has the same identity as the subject of a second, following, clause, the sequential action prefix

may be used instead of the normal subject marking on the second clause verb, as seen in (21) and (22):

- (21) *Toby Kris ya-baba, ta-lula*  
 Toby Kris 3-hit SEQUENTIAL-return.home  
 ‘Toby<sub>i</sub> hit Kris, and then Ø<sub>i</sub> went home.’
- (22) *Toby Kris ya-baba, ya-lula*  
 Toby Kris 3-hit 3-return.home  
 ‘Toby<sub>i</sub> hit Kris, and then he<sub>j</sub> went home.’

When the inverse is used on the transitive clause, the argument that is monitored as being coreferential or not with the following clause is the undergoer, not the actor:<sup>6</sup>

- (23) *Kris Toby ya-na-baba, ta-lula*  
 Kris Toby 3-INV-hit SEQUENTIAL-return.home  
 ‘Toby<sub>j</sub> hit Kris<sub>j</sub>, and then Ø<sub>j</sub> went home.’
- (24) *Kris Toby ya-na-baba, gi-ta-lula*  
 Kris Toby 3-INV-hit DIFFERENT.ACTOR-SEQUENTIAL-return.home  
 ‘Toby<sub>j</sub> hit Kris<sub>j</sub>, and then Ø<sub>i</sub> went home.’

The Tanglapui data examined so far displays an almost ‘classic’ inverse system after the fashion of the Algonquian languages of northern America, in that it has both an inverse alignment and an inverse voice system (using Gildea’s 1994 terminology). The first of these points is shown by the fact that the animacy hierarchy operates to dictate conditions when use of the inverse marker *na-* is compulsory, whenever the undergoer outranks the actor in terms of animacy. Furthermore, we find an alternation in the third person→third person paradigm, which shows us that in addition to the hierarchical alignment there is also a voice system operating, since we cannot predict the use of the inverse marker wholly in the basis of the relative positions of the arguments on the animacy hierarchy. Complications arise when we consider some additional data from intransitive verbs, in the following section.

### 3.3. *Intransitives revisited: intransitive affective verbs*

The class of intransitive affective verbs in Tanglapui is those verbs in which the subject is the non-controlling undergoer of an undesirable state, over which he or she has no or little control. Furthermore, the subject is changed (not necessarily permanently) as a result of the verb’s taking place. The paradigms for three verbs are given as

<sup>6</sup> The equivalent of (22) with an inverse voice verb (*Toby Kris yanababa, yalula*) is, interestingly enough, ambiguous in the reference of the actor of the second clause.

representative of this class, presented to match as closely as possible the paradigms seen in section 2.1.

(25)	<i>mata</i> 'sick'	<i>ima</i> 'fever'	<i>loki</i> 'be wet'	<i>tansi</i> 'fall'
	1SG <i>ŋanamata</i>	<i>ŋanaima</i>	<i>ŋanaloki</i>	<i>ŋanatansi</i>
	1PL <i>ŋa(ndua)namata</i>	<i>ŋa(ndua)naima</i>	<i>ŋa(ndua)naloki</i>	<i>ŋa(ndua)natansi</i>
	2/3 <i>yanamata</i>	<i>yanaima</i>	<i>yanaloki</i>	<i>yanatansi</i>

First, note that the person marking is different to that found in the intransitive verbs of section 2.1: there is no longer a contrast between singular and plural in the first person (other than use of *-ndua*); in fact, the paradigm presented here for intransitive affective verbs resembles the system found for person marking in transitive affective verbs, if we consider the subject of the intransitive verb to equate with the undergoer of the transitive verb paradigm. Foley (1986: 122-128). In addition to the person markers *ŋa-* and *ya-* the inverse marker *na-* obligatorily appears. Note also that plurality of subject can be indicated with *-(a)ndua* attached to the subject clitic: it does not have to appear on an independent pronoun, as is the case for the actor of a transitive or active intransitive verb; intransitive subject and transitive undergoer form a natural class here.

## 4. Possible Historical Development

### 4.1. Comparative evidence

An insight into the evolution of the person marking and inverse voice system found in Lantoka Tanglapui verbs can be gained through a comparison with the Naumang dialect of Tanglapui, found in the centre of that name (only 3 1/2 hours' walk away to the east) and surrounding villages. In this dialect we find almost the same paradigm for non-affective transitive verbs, all intransitive verbs patterning according to the patterns observed in 2.1 and 3.3 for intransitive verbs in Lantoka dialect, and a more transparent paradigm for the affective verbs. An example of a non-affective transitive verb is given in (26).

(26) *di* 'see'

		OBJ		
		1	2	3
SUBJ	1		<i>ŋayadia</i>	<i>ŋagada</i>
	2	<i>yandia</i>		<i>yagadi</i>
	3	<i>gandia</i>	<i>gayadia</i>	<i>gadia</i>

The paradigm for *di* in Naumang is clearly related to the Lantoka forms given in 2.2, but the Naumang data shows no allomorphy of the prefixes at all, all the actor/undergoer possibilities showing a simple combination of a actor and undergoer prefix, except for



third person acting on third person, in which case two identical prefixes are barred from appearing, just as two homophonous *ya*'s were barred. Examining the paradigm for affective transitive verbs in (27), we notice that the same lack of allomorphy is a feature of the paradigm, although the marker *na-* is found in the same places that it is found in the Lantoka Tanglapui paradigm, following the positions of the arguments on the animacy hierarchy, and as an option for third person acting on third person.

(27) *baba* 'hit'

		OBJ		
		1	2	3
SUBJ	1		<i>ɲayababa</i>	<i>ɲagababa</i>
	2	<i>yaɲanababa</i>		<i>yagababa</i>
	3	<i>gaɲanababa</i>	<i>gayanababa</i>	<i>gababa</i> <i>ganababa</i>

1<sup>st</sup> person    *ɲa-* Inverse:    *na-* on affective verbs only  
 2<sup>nd</sup> person    *ya-*  
 3<sup>rd</sup> person    *ga-* Only one *ga-* in a row allowed.

Clearly the affective/non-affective marking is as much a part of the paradigm in Naumang Tanglapui as it is in Lantoka, but its marking seems to be in addition to the pronominal indexing on the verb, and not replacing it. The Lantoka paradigms seen in 3.1 frequently contain only one pronominal prefix is carried by the verb, and so many cases of otherwise ambiguity are resolved by the presence or absence of the inverse marker (eg., *ɲanababa* vs *ɲababa*, 'He hit me.' vs 'I hit him.'). In Naumang, however, since both the prefix indexing the actor as well as the undergoer are at all times present, with the relative positions of the prefixes clearly identifying the syntactic roles (the equivalent verb forms are *ɲagababa* and *gaɲanababa*, with full indexing of the third person and first person participants), the presence or absence of the *na* is not crucial to the understanding of the verb, and so is an extra feature. For third person acting on third person, however, the same alternation is present: *gababa* and *ganababa*. We must conclude in this case the construal of affectedness has pragmatic overtones, and is not strictly governed by the animacy hierarchy (it is not known whether there are syntactic effects associated with the presence or absence of the *na* morpheme, as was demonstrated for Lantoka Tanglapui in 3.2). We conclude, therefore, that the *na* in Lantoka is a morpheme that has been (almost completely) regrammaticalised from an affectedness marker to an inverse marker. The question remains as to how affectedness managed to be marked on the verb in the first place. In order to propose an answer to this question, we need to examine some of the other, more distantly related languages on Alor.

Other languages in Alor have full paradigms for person and number of the verb. Compare the paradigms presented for the two dialects of Tanglapui with, for example,



'Woisika',<sup>7</sup> a language complex located 1 day's walk to the west of Lantoka. Only the singular paradigm is given in (28); data are from Stokhof 1975. The pronominal forms are clearly comparable to the Tanglapui forms, but the absence of any marker for affectedness is striking. From this data we can see that full verbal paradigms exist without affectedness being marked. Still, the question remains as to why the *na* should appear on the verb.

(28) *wel* 'wash'

		OBJ		
		1	2	3
SUBJ	1		<i>naawel</i>	<i>nagawel</i>
	2	<i>yanawel</i>		<i>agawel</i>
	3	<i>ganawel</i>	<i>gaawel</i>	<i>gayawel</i>

Undergoer: 1<sup>st</sup> person *na-* 2<sup>nd</sup> person *a-* 3<sup>rd</sup> person *ga-, ya-*  
 Actor: 1<sup>st</sup> person *na-* 2<sup>nd</sup> person *ya-, a* 3<sup>rd</sup> person *ga*<sup>8</sup>

In the Kui / Kiramang language, spoken mainly in the west of Alor but also in the Kiramang enclave on the coast immediately south of Woisika, south-west of the Tanglapui area, affectedness is not marked, as in 'Woisika'. The paradigm for a verb is as shown in (29); again, only the singular forms are given (data from my own fieldnotes):

(29) *teki* 'see'

		OBJ		
		1	2	3
SUBJ	1		<i>na ?ateki</i>	<i>nagateki</i>
	2	<i>?a nateki</i>		<i>agateki</i>
	3	<i>ga nateki</i>	<i>ga ?ateki</i>	<i>gagateki</i>

Undergoer: 1<sup>st</sup> person *na-* 2<sup>nd</sup> person *?a-* 3<sup>rd</sup> person *ga-*  
 Actor: 1<sup>st</sup> person *na* 2<sup>nd</sup> person *?a* 3<sup>rd</sup> person *ga*<sup>9</sup>

<sup>7</sup> The name Woisika is not recognised by people from Alor, nor is the linguistic unity of the 'language' called Woisika by Stokhof.

<sup>8</sup> This pattern of having only the object of the transitive verb prefixed on the verb is repeated in other languages in Alor, such as Kolana (eastern Alor, which has an ergative/absolutive paradigm but with only the absolutive arguments prefixed onto the verb) and Lamma (western Pantar).

In Kui the undergoer of a transitive verb is prefixed, but the actor is not; it is an independent pronoun. We now have attested forms of pronominal indexing on the verb: the Lantoka Tanglapui case, in which only the most animate argument is indexed, with certain exceptions; the Naumang Tanglapui and ‘Woisika’ case, in which all arguments of the verb are pronominally indexed; and the Kui case, in which only the undergoer is indexed on the verb. We are now in a position to propose a mechanism by which the current, rather aberrant looking, Lantoka Tanglapui system has evolved.

#### 4.2. *A grammaticalisation path*

From the comparison of Woisika, Naumang Tanglapui and Kui, as well as the transparent relationship between the independent pronouns and the prefixes in Kui, we can hypothesise that the pronominal indexing on the verb in Tanglapui and Woisika represents earlier free pronouns that have become cliticised, and later prefixed, onto the verb, a process that is only halfway completed in Kui. We may reconstruct an earlier stage of Tanglapui in which a transitive sentence would be complete simply as shown in (30), with no indexing on the verb:

##### **Pre-Tanglapui: Stage I, no verbal indexing, no nominal marking**

- (30) *Ija ga dia*  
 1SG 3SG see  
 ‘I saw her.’

At this point in the development of the language the affectedness marker is introduced, in the form of an option case that appears on an affected nominal that the speaker wishes to mark as being especially affected by an action:

##### **Pre-Tanglapui: Stage II, nominals marked for affectedness**

- (31) *Ija ga-na baba*  
 1SG 3SG-AFFECTED hit  
 ‘I hit her.’
- (32) *Ga ŋa-na baba*  
 3SG 1SG-AFFECTED hit  
 ‘She hit me.’

Notice that at this stage the affectedness marker is assumed to appear on any nominal that is perceived as being suitably affected; there is not yet any restriction regarding relative positions on the animacy hierarchy. ‘The next development is a

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<sup>9</sup> This pattern of having only the object of the transitive verb prefixed on the verb is repeated in other non-Austronesian languages in the Alor-Pantar area, such as Kolana (eastern Alor, which has an ergative/absolutive paradigm but with only the absolutive arguments prefixed onto the verb) and Lamma (western Pantar).

grammaticalisation of a discourse tendency that was probably already in place in the language. Since a greater prominence is assigned to speech act participants, or a pragmatically highlighted participant in a discourse, adversely affecting actions are more likely to be marked on this participant than on others. Over time, the affectedness marker becomes available ONLY for undergoers which are more highly animate than their affecting actors. Some of the uses of the marker which were possible at Stage II of the language are now ungrammatical because of this requirement that the marker is only used when more prominent arguments are affected, with prominence defined firstly in terms of the animacy hierarchy, secondly in broader pragmatic/discourse terms. The suffix *-na* now marks both affectedness and the higher animacy of the undergoer:

**Pre-Tanglapui: Stage III, affectedness marker restricted by animacy conventions**

- (33) \* *Ija ga-na baba*  
 1SG 3SG-AFFECTED/HIGHER.ANIMACY hit  
 'I hit her.'
- (34) *Ga ŋa-na baba*  
 3SG 1SG-AFFECTED/HIGHER.ANIMACY hit  
 'She hit me.'

At a later stage this case-marking becomes obligatory when an affected argument outranks the actor on this same animacy hierarchy:

**Pre-Tanglapui: Stage IV, affectedness marker required by animacy conventions**

- (35) \* *Ga ŋa baba*  
 3SG 1SG hit  
 'She hit me.'

Next, the pronouns (with affectedness marker, if present) are cliticised onto the verb: this is the stage represented by the Naumang dialect data:

**Current Naumang Tanglapui, pronouns cliticise onto verb**

- (36) *Ga-ŋa-na-baba*  
 3SG-1SG-AFFECTED/HIGHER.ANIMACY-hit  
 'She hit me.'

The final steps required to derive the system current in Lantoka Tanglapui are (apart from the merger of *ga* and *ya* as pronominal prefixes on the verb),<sup>10</sup> the reduction of the

<sup>10</sup> Though they are distinguished in the free pronominal forms: second person *yanu*, third person (*ma-*)*ganu*.

number of verbal prefixes in accordance with the animacy hierarchy, such that only the most animate of the pronominal referents appears:

**Current Lantoka Tanglapui, morphological blocking of excess prefixes**

- (37) *ŋa-na-baba*  
 1SG-INV-hit  
 ‘She hit me.’

At the same time as this last change, the special requirements regarding the appearance of a vowel change in the verbal affix when both actor and undergoer are speech act participants are brought in; notice that these vowel changes must have occurred after the cliticisation/prefixation of the pronouns onto the verb, since the independent pronouns do not display any vowel alternations (the current first and second person independent pronouns are *ŋanu* and *yanu* for first and second person). Also note that prefix blocking is the only incomplete change; in (8) we saw that the form for 2→1 is not the predicted \**ŋenababa*, but rather *yeŋanababa*, with both pronominal prefixes present.

The missing piece of information in this proposed path of grammaticalisation is knowing the point at which the affectedness morpheme becomes a voice marker with syntactic ramifications (as presented in section 3.2) in addition to marking the relative affectedness of the undergoer; we cannot tell at which point the inverse voice system became integrated into the function of the affectedness marker.

## 5. Conclusions

The path proposed in section 4 helps us to see exactly how the inverse system might have become entrenched in the language: from a marker of affectedness on nominals, to a feature that has become bound up in animacy hierarchy restrictions, to the sole means of discriminating the roles borne by participants in the clause. The presence of this voice system in a Papuan language is, then, whilst unusual, not totally inexplicable.

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