

# Information structure in Totoli – Reference management and its interrelation with voice selection

*Sonja Riesberg  
Universität zu Köln*

## 1. Introduction

Totoli is a Western Malayo-Polynesian language spoken in the northern part of Central Sulawesi. Like many languages in this group, Totoli is a symmetrical voice language, i.e. it displays more than one transitive constructions – an actor voice and two undergoer voices<sup>1</sup> – that behave morphologically and syntactically symmetrical. Examples (1)a. and (2)a. below illustrate two actor voice clauses with their respective undergoer voice constructions in (1)b. and (2)b.

- (1) a. *I Rinto manaip taipang.*  
i Rinto **moN**-taip taipang  
HON PN AV-peel mango  
‘Rinto is peeling a mango.’
- b. *Taipang taip i Rinto.*  
taipang taip i Rinto  
mango peel:UV1 HON PN  
‘Rinto is peeling a mango.’
- (2) a. *I Winarno mongusut kunji motorna.*  
i Winarno **moN**-kusut kunji motor=na  
HON PN AV-look.for key scooter=3s.GEN  
‘Winarno is looking for the keys for his scooter.’
- b. *Kunji itu kusuti i Winarno.*  
kunji itu kusut-**i** i Winarno  
key DIST look.for-UV2 HON PN  
‘Winarno is looking for the keys.’

The two morphologically distinct undergoer voices – here glosses as UV1 and UV2 respectively – are lexically determined and unlike in Philippine-type languages are not semantically distinct, i.e. in both cases a patient or a theme argument is linked to subject position. In addition to the alternation between actor voice and undergoer voice, there is an obligatory distinction between realis and non-realism mood, as shown in the two undergoer voice examples below. Note that the different mood values are reflected in the English translations by different tenses (past versus future or progressive forms). Table 1 summarises the Totoli voice paradigm, including non-realism and realis forms.

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<sup>1</sup> Totoli exhibits a third voice, the locative voice in which a location is linked to subject position. While fully productive, locative constructions have a somewhat special status, as they are syntactically far more restricted than actor voice and undergoer voice constructions. The locative voice is therefore not further considered in this paper. For a detailed description see Himmelmann/Riesberg 2013.

- (3) a. *Niug ana kodoong botak i Jui*  
 niug ana ko-doong botak i Jui  
 coconut MED POT-want split:UV HON PN

‘Jui is splitting a coconut.’

- b. *Niug ana tookamo nibotak i Jui*  
 niug ana tooka=mo **ni**-botak i Jui  
 coconut MED finish=CPL **RLS**-split:UV HON PN

‘Jui split a coconut.’

	NON-REALIS	REALIS
AV	<i>moN</i> <sup>-2</sup>	<i>noN</i> -
	<i>mog</i> -	<i>nog</i> -
	<i>mo</i> -	<i>no</i> -
UV1	∅	<i>ni</i> -
UV2	<i>-i</i>	<i>ni</i> - <i>-an</i>

**Table 1:** Totoli voice paradigm

The alternations in (1) and (2) two are symmetrical in that all voices are overtly marked<sup>3</sup> by voice morphology and in that – unlike in an active-passive alternation – the non-subject arguments show the same behavioural properties (e.g. with respect to relativisation, control, raising, word order restrictions etc.). While languages may differ in the degree to which their voice systems are symmetrical, with certain subtle behavioural differences (as recently established in Riesberg 2014), Totoli seems to be a particular prototypical instance of a symmetrical voice language: Totoli shows a nearly 100% symmetry in the behaviour of verbal arguments (one exception being the different realisation of pronouns in actor voice and undergoer voices, see below). In particular, Totoli does not display the same kind of definiteness restrictions known from many other western Austronesian languages, like for example Tagalog. In Tagalog definite undergoer arguments usually have to become the subject of the construction and actor voice constructions with definite non-subject undergoer arguments are clearly dispreferred. This is illustrated in the Tagalog example in (4)a. (both examples in (4) are taken from Latrouite 2012: 96), where the undergoer argument *bahay* has to receive an indefinite interpretation (i.e. ‘a house’). If the same state of affairs needs to be expressed with a definite undergoer argument, the speaker has to choose a patient voice construction as in (4)b. (though see Himmelmann 2005: 367 for an discussion of exceptions and counter examples to this rule of thumbs).

<sup>2</sup> The distribution of the three actor voice prefixes is determined mostly by phonological factors: vowel-initial bases, almost all of which are non-derived, take *mog*-, consonant-initial lexical bases take *moN*-, and derived stems mostly take the prefix *mo*-. There is a limited class of consonant-initial verbs which are lexically subcategorized for *mo*-.

<sup>3</sup> Note that in many Austronesian languages that display symmetrical voice, there is usually one slot in the verbal paradigm that remains morphologically unmarked (here the non-realis form of UV1). However, language inherent evidence as well as cross-linguistic comparison give reason to assume that the non-marked forms are a historical coincident rather than representing the “unmarked” voice (in the sense that the active represents the “unmarked” voice in the active-passive alternation). Thus, language-internally non-marked forms always stand in paradigmatic opposition to marked ones. Cross-linguistically, the non-marked slots do not occur in the same position in the paradigm. For a more detailed discussion on this issue see Riesberg 2014 (especially section 2.2.5).

- (4) a. *Sumira siya ng bahay.*  
 -um-sira siya ng bahay  
 -AV-destroy 3s.NOM GEN house  
 ‘(s)he destroyed a/\*the house.’
- b. *Sinira niya ang bahay.*  
 -in-sira niya ang bahay  
 -PV-destroy 3s.GEN NOM house  
 ‘(s)he destroyed the house.’

But this is clearly not what we find in Totoli (at least in elicited data); compare the Tagalog data in (4)a. to the Totoli actor voice construction in (2)a., where the undergoer argument is realised as a possessive phrase *kunji motorna* ‘the keys for his scooter’ and thus can/has to be interpreted as definite.

This then brings us to the major research question of this paper: If the two major voice constructions in Totoli are indeed symmetrical and syntactically equal, how do speakers choose which voice to use? Even though we do not find the same strict definiteness restrictions as in other western Austronesian languages, the hypothesis would be that discourse pragmatic factors influence the choice of voice selection made by the speakers during discourse. This paper will therefore investigate reference management in three spoken Totoli narratives and look whether there is a interrelation between the information status of referential expressions and the voice construction. Before looking at the actual numbers and counts from these texts in section 4, I will give an introduction of the different ways to refer to discourse participants in Totoli in section 2. Section 3 will introduce and explain the annotation scheme used for the text analyses.

## 2. Referential expressions in Totoli

As in all languages, there is a wide range of possibilities to refer to discourse participants in Totoli, ranging from zero forms to complex nominal expressions. In this section I want to introduce these means of reference without going into detail as to in which information structural contexts they might occur.

### 2.1 Zero anaphora and bound- and free pronouns

Totoli has two series of personal pronouns; the nominative series consisting of free forms and the genitive series consisting of clitics (cf. Table 2):

	NOMINATIVE	GENITIVE
<b>1SG</b>	<i>aku</i>	= <i>ku</i> ; <i>ku-</i>
<b>2SG</b>	<i>kau</i>	= <i>mu</i> ; = <i>ta</i>
<b>3SG</b>	<i>isia</i>	= <i>na</i>
<b>1PL EXCL</b>	<i>kami</i>	<i>kami</i>
<b>1PL INCL</b>	<i>kita</i>	= <i>ta</i>
<b>2PL</b>	<i>kamu</i>	= <i>ta</i>
<b>3PL</b>	<i>sisia</i>	<i>sisia</i> ; (=na)

**Table 2:** Totoli pronouns

In actor voice constructions, nominative forms can function either as subjects or as objects (cf. (5)a.), in undergoer voice constructions nominative forms usually only occur in subject position, while the non-subject argument is realised by the genitive form, cliticised to the verb. If cliticised to nouns, genitive pronouns mark the possessor in a possessive construction. Note

that =*na* is mostly only used for third person singular, whereas the free form *sisia* is used for plural forms. In some instances, however, =*na* can also be found to refer to third person plural actors.

- (5) a. *Aku nongiu' kamu kalangena ia.*  
**aku** noN-iu' **kamu** kalangena ia  
**1s** AV-call **2** a:moment:ago PRX  
 'I called you this morning.' [political\_meeting.004]
- b. *kalambotimu aku nokulia*  
 ko-lambot-i=**mu** **aku** no-kulia  
 POT-remember-UV2=**2s.GEN** **1s** AV.RLS-study  
 'you remember me study.' [farming\_2.2037]

In spoken discourse, it is common to drop referential expressions if they have been introduced before. This is very common for undergoer voice subjects, as illustrated in the sequence in (6), taken from a narrative. After a first mention of the undergoer subject (*bungo sagin itu* 'the banana fruits'), the following four predicates occur without overt subject expressions. The actor argument, however, is still realised by the third singular pronominal clitic =*na* (see Himmelmann 1999 on the lack of zero anaphora in undergoer voice constructions in Tagalog). In actor voice constructions, both subject and object phrases are often omitted (cf. example (7) where no referring expression is used).

- (6) *Njan nalapitna bungo sagin itu*  
 njan no-lapit=*na* bungo sagin itu  
 like.that POT.RLS-reach=3s.GEN fruit banana DIST
- poopolut niganutna ai nikaanna*  
 RDP2-polut ni-ganut=*na* ai ni-kaan=*na*  
 RDP2-penetrate RLS-pull.off:UV1=3s.GEN and RLS-eat:UV1=3s.GEN
- nijjomoona.*  
 ni-RDP1-jomoo=*na*  
 RLS-RDP1-devour=3s.GEN
- 'As he reached the banana fruits, he opened (them), ripped off (their peel), and ate (them). He gorged (them)' [monkey\_turtle.245-249]

- (7) *Ngadaan nousa ana nangkaalamai.*  
 nga daan no-usa ana noN-ko-ala=*mo=ai*  
 NEG EXIST ST-long and AV.RLS-ADA-get=CPL=VEN
- 'It didn't take long and (they) got (it).'
- [monkey\_turtle.110-111]

## 2.2 Demonstratives and demonstrative phrases

Totoli exhibits three demonstrative formatives, roughly marking three levels of distance from the speaker: *ia* signals closeness to the speaker (glossed here as *proximative* = PRX), *ana* signals an intermediate distance from the speaker (glossed as *medial* = MED), and *itu* (glossed as *distal* = DIST) which marks a distance further away from the speaker. These demonstratives can

function as free demonstrative pronouns, as in (8), as well as determiners in demonstrative phrases, e.g. with nouns ((9)a.), pronouns ((9)b.), or prepositional phrases ((9)c.).

- (8) a. *Ia nollipa nolobaanku Nanong.*  
**ia** no-RDP1-lipa no-loba-an=ku Nanong  
**PRX** ST-RDP1-forget ST-inform-APPL1=1s.GEN PN  
 ‘This one has been forgotten, I told Nanong.’ [conversation\_4.711]
- b. *Tongaita ana*  
 tonga-i=ta **ana**  
 ask-UV2=1pi.GEN **MED**  
 ‘We ask that.’ [expl\_celeb.197]
- (9) a. *Bali aku kode mmake leang sagin ana*  
 bali aku kode moN-pake **leang** **sagin** **ana**  
 so 1s only AV-use **leaf** **banana** **MED**  
 ‘So I just use these banana leaves.’ [red\_sugar.393]
- b. *geimo kodoonganta aku ia.*  
 geimo ko-doong-an=ta **aku** **ia**  
 not ST-like-APPL2=1pi.GEN **1s** **PRX**  
 ‘You don’t like me.’ [podok\_langgat.186]
- c. *Dei bale itu paapake daster.*  
**dei** **bale** **itu** RDP2-pake daster  
**LOC** **house** **DIST** RDP2-wear house.dress  
 ‘In the house, (she) is wearing a house dress.’ [conversation\_4.663]

### 2.3 Nouns and complex noun phrases

As might have become clear from the given examples so far, Totoli doesn’t have either definite or indefinite articles. A bare noun can either receive a definite or an indefinite interpretation, depending on the context. To stress the fact that a specific entity is meant, speakers can use one of the demonstratives discussed in section 2.2 above, but this use is not obligatory for a definite reading. Compare the two instances of the noun *ondan* ‘ladder’ in example (10): The first instance is the first mention of the ladder in this conversation, and is thus interpreted as indefinite. In the second instance, however, the ladder is already known and thus receives a definite reading.

- (10) *pertama monodokan ondan (...)*  
 pertama moN-todok-an **ondan**  
 first AV-stand-APPL1 **ladder**
- koopatmo danna limpatan ondan*  
 ko-opat=mo daanna limpat-an **ondan**  
 ADA-four=CPL then move-APPL1 **ladder**
- ‘First, you have to put up a ladder (...) There are four (sides to pick).  
 Then, you have to move the ladder’ [cloves.17&84]

Another strategy for generating a definite reading is by adding the third person genitive pronoun =*na* to the respective noun, which could either mark possession (and therefore single out the entity as specific and definite), or, in some cases mark definiteness without possession. This seems to be a common phenomenon in many Austronesian languages, e.g. also in Indonesian and Balinese, though only little work has been done on this topic (but see e.g. Haiduck 2014 for Balinese). See, for example, where the NP *bangunanna* does not mean ‘his building(s)’ or ‘their buildings’ but rather denotes ‘the buildings’ in former times in the village of Bjugan.

- (11) *Tempo ia sampe sekarang Bayugan*  
 tempo ia sampe sekarang Bajugan  
 time PRX until now PN
- geiga dennia bangunanna*  
 geiga dennia bangunan=**na**  
 NEG like.this building=**3s.GEN**

‘In these times until now (in) Bajugan,  
 they weren’t like this, the buildings.’

[bajugan.44-46]

Noun phrases can furthermore become more complex by being modified by other nouns (cf. e.g. *leang sagin* ‘banana leaf’ in example (9)a.), by stative verbs (e.g. *tampat melea* ‘a large place’), or by relative clauses, as in (12)a. Headless relative clauses can also function as either subjects or objects, as in (12)b.

- (12) a. *tau moane anu kodoong kabing*  
 tau moane anu ko-doong kabing  
 person man REL POT-want marry
- b. *Nokotiing pokotinga i olong.*  
 noko-tiing poko-tinga i olong  
 POT.AV.RLS-hear POT-say HON monkey

‘the man who wants to get married’

[wedding\_expl\_TTL.026]

‘(he) heard what the monkey had said.’

[monkey\_turtle.277]

## 2.4 Prepositional phrases

Prepositional phrases in Totoli are usually used to denote peripheral participants, most notably locations and instruments. The preposition *dei* is by far the most frequent one, marking locations, but also goals and recipients (cf. the three examples in (13)). Other prepositions are *uli* ‘from’, *takin* ‘with’ (instrumental), and *lengan* ‘with’ (comitative).

- (13) a. *I Lolio nemea dei tangipa boto*  
 i Lolio no-mea dei tangipa boto  
 HON PN ST.RLS-live LOC other.side small.lake

‘Lolio lived on the other side of the small lake’

[monkey\_butterfly.061-062]

- b. *Mallako dei daami.*  
 mo-RDP1-lako dei daami  
 AV-RDP1-walk LOC abandoned.garden

‘Walk to the recently abandoned garden.’

[map\_task\_2b.407-409]

c.	<i>kodoong</i>	<i>mangambuling</i>	<i>dei</i>	<i>togu</i>	<i>bitu</i>	<i>ana</i>
	ko-doong	mon-kambuling	dei	togu	bitu	ana
	POT-want	AV-return	LOC	possession	bracelet	MED

‘(it) wants to give the bracelet back to its owner.’

[chicken\_eagle.170]

To conclude this section, Table 3 lists all Totoli referential expressions that have been discussed in the previous sub-sections:

PRON	zero	∅ (6)
	free	e.g. <i>aku, kamu</i> (5)a.
	bound	e.g. <i>=ku, =mu, =ta</i> , etc. (5)b.
DEM	PRX	<i>ia</i> (8)a.
	MED	<i>ana</i> (8)b.
	DIST	<i>itu</i>
DP	DPPr	e.g.
	DPM	e.g. <i>leang sagin ana</i> ‘these banana leafs’ (6)
	DPD	e.g. <i>bale itu</i> ‘that house’ (9)c.
N		e.g. <i>ondan</i> ‘a/the ladder’ (10)
N <sub>poss</sub>	N= <i>ku</i>	e.g. <i>anak=ku</i> ‘my child’
	N= <i>mu</i>	e.g. <i>tangayopan=mu</i> ‘your plants’ (21)
	N= <i>na</i>	e.g. <i>amang=na</i> ‘his father’
	N <i>kami</i>	e.g. <i>bakele kami</i> ‘our grandmother’
	N= <i>ta</i>	e.g. <i>usat=ta</i> ‘our sibling’
	N <i>sisia</i>	e.g. <i>tinga sisia</i> ‘their language’
NP		e.g. <i>mangana dedek</i> ‘small child’
PP		e.g. <i>dei daami</i> ‘to the garden’ (13)b.
REL		e.g. <i>tau moane anu kodoong kabing</i> ‘the man who wants to get married’ (12)a.

**Table 3:** Referential expression in Totoli

### 3. Information status and the RefLex annotation scheme

In this section, I want to introduce the annotation scheme used in this study. There are numerous accounts on discourse analysis and on reference management in discourse. By now, it seems to be established that at least three different activation statuses – given, activated, and new – should be distinguished (cf. Chafe 1976, Prince 1981). Other authors have proposed more fine-grained distinctions, such as in the well-known givenness hierarchy established by Gundel, Hedburg and Zacharski 1993. This hierarchy consists of the six statuses given in (14) below. Each of these status is assumed to be “a necessary and sufficient condition for the appropriate use of a different form or forms” (Gundel et al. 1993: 275). As Gundel et al. show in their comparative study on English, Chinese, Japanese, Russian, and Spanish, not all statuses are relevant in all languages. However, for all languages the hierarchy predicts that a given form is inappropriate if the respective status is not met.

(14) in focus > activated > familiar > uniquely identifiable > referential > type identifiable

While this is a very interesting and certainly insightful approach, I found it rather difficult to apply to my own data. When faced with the Totoli texts, I often struggled trying to determine the correct status to a given form. I therefore decided to use the less complex annotation scheme developed by Stefan Baumann and Arndt Riester (cf. Baumann/Riester 2012; 2013). Baumann's and Riester's two-dimensional annotation scheme (called RefLex) has been developed to investigate the relationship between information status and prosody. In particular, it claims to enable even non-expert annotators to create consistent annotations and is therefore easier applicable than the six-status approach by Gundel et al. (even though it does not consist of less categories).

The RefLex annotation scheme is two-dimensional in that it annotates the information status of a given referential expression on two levels, i.e. on the referential as well as on the lexical level. Compare the three examples below to see the difference between these two levels (all taken from Baumann/Riester 2013):

- (15) a. *After the holidays, John arrived in a new car, and also Harry had bought a new car.*
- b. *A car was waiting in front of the hotel. I could see a women in the car.*
- c. *Yesterday, a friend of mine prepared a lasagne for me. I found it hard to enjoy the tasteless stuff.*

In both (15)a. and (15)b. there are two instances of the same referring expression (*the new car* and *the car* respectively). In (15)a., the first instance of *the new car* is referentially new, as it is an indefinite expression introducing a new referent. It is also lexically new, as the lexical items have not been used before. The second instance is also referentially new, as it refers to another car than the first mention. However, it is lexically given, as the same lexical material has been used immediately before. In (15)b., again the second instance of *the car* is lexically given, but this time it is also referentially given, as both instances refer to the same referent. Finally, in (15)c. we find the reverse situation in which *the tasteless stuff*, though referentially given as it refers to the same lasagne, is lexically new. The distinction between referential givenness and lexical givenness is important for Baumann and Riester, as it offers, for example, an explanation for the fact that (15)a. and (15)b. receive the same prosodic marking, i.e. deaccentuation of the second mention of *the (new) car*, even though in a. it is referentially new and in b. it is given. For the main research question of this paper – the question whether there is a relationship between voice on the one hand, and information statuses of referential expression on the other hand – I believe that the distinction of these two levels is not necessary. I will therefore only apply the categories of the referential level proposed in Bauman/Riester (2012; 2013). However, it should be noted that the study presented in this paper is very preliminary. If it turns out that information status on the lexical level *does* play a role for voice selection, it can be easily added in further studies.

For the study presented in this paper, I used a simplified version of RefLex, as proposed in Baumann/Riester (2013). This version contains five labels on the referential level, summarized and briefly explained in Table 4 (for the full, more complex scheme see Baumann/Riester 2012). As mentioned in section 2, definiteness in Totoli is not necessarily overtly marked. Nevertheless, depending in the information status of the respective discourse referent, linguistic expressions receive definite or indefinite interpretations. It therefore seems justified to keep the three-way distinction of definite, definite/indefinite, and indefinite as proposed by



Baumann/Riester 2013. In the following sub-sections, I will exemplify the annotation labels, mainly using Totoli data from those texts that have been annotated for the present study.

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<b>Definite</b>	
r-given	anaphor corefers with antecedent in previous discourse
r-bridging	anaphor can be resolved to non-coreferring antecedent or within a described scenario
r-unused	discourse-new, non-anaphoric definite expression referring to an item which is generally known or identifiable from its own linguistic description
<b>Definite or Indefinite</b>	
r-generic	abstract or generic item
<b>Indefinite</b>	
r-new	specific or existential indefinite introducing a new referent

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**Table 4:** Labels for the annotation of discourse referents in the RefLex scheme (Baumann/Riester 2013)

### 3.1 Given versus new

The given versus new distinction has already been briefly illustrated with the English example in (15)a. The Totoli example below consists of the three first intonation units of a story about a monkey and a turtle, a folk story that is well known not only in the Tolitoli area, but also in other parts of Sulawesi and the Philippines. The three bare nouns in the first line, *bolong* ‘a monkey’, *pomponu* ‘a turtle’, and *guan* ‘a garden’, introduce the most important participants of the story. In lines two and three two of them, the monkey and the turtle, are taken up again, this time expressed by a zero form.

(16)	<i>sirita</i>	<i>bolong</i>	<i>ai</i>	<i>pomponu</i>	<i>nogutu</i>	<i>gauan</i>
	sirita	bolong	ai	pomponu	no-gutu	gauan
	story	monkey	and	turtle	AV.RLS-make	garden
		<b><u>new</u></b>		<b><u>new</u></b>		<b><u>new</u></b>
	<i>pomoona</i>	<i>molipidoan</i>	Ø			
	pomoo=na	moli--an pido	Ø			
	first=3s.GEN	RCP good	Ø			
			<b><u>given</u></b>			
	<i>njan</i>	<i>pombulina</i>	<i>nolidaisan</i>	Ø		
	injan	pombuli=na	noli--an dais	Ø		
	then	later=3s.GEN	RCP.RLS bad	Ø		
				<b><u>given</u></b>		

‘(This is) the story about a monkey and a turtle. First, they were friends, and then they hated each other’ [monkey\_turtle.001-003]

A similar example has already been given in (10), where both, given and new information is expressed by a bare noun (i.e. *ondan* ‘a/the ladder’). Note, however, that distance between the newly introduced referent and its second mention in the two examples discussed differ strongly:

While in (16) we are dealing with consecutive intonation units, there are 64 units between the first and the second mention of the ladder in (10). As I believe that the distance between the occurrences of referents may play a role in voice selection (but also on the respective referring expression), I decided to use one more label that is missing from Table 4, but which part of the more complex scheme in Baumann/Riester 2012, namely the category given-displaced. This label is used for exactly those cases as in (10), i.e. where there is a coreferring antecedent that has not been mentioned at some point in the preceding discourse, but not in the immediately preceding utterances (the fixed unit in Baumann/Riester 2012: 138 is five intonation units or clauses, not counting smaller units, such as brief back channelling etc.).

### 3.2 Accessible

In addition to the three possibilities discussed in the previous section (i.e. given, given-displaced, and new), it is sometimes the case that a referent is neither given, as defined above, nor new, but still activated, or accessible. This is for example the case when an expression denotes a part of an entity that has been mentioned before, as in the example below, again taken from the story of the monkey and the turtle. Here, the stem, being a part of the banana tree (which has been mentioned), is accessible, even though it has not been mentioned before.

(17)	<i>sabab</i>	<i>ana</i>	<i>sagin</i>	<i>mapangkat</i>	<i>batangna</i>
	sabab	ana	sagin	mo-pangkat	batang=na
	because	if	banana	ST-high	stem=3s.GEN
			<b><u>given</u></b>		<b><u>bridging</u></b>
	‘because as for the banana (tree), its stem is high’				[monkey_turtle.81-82]

Baumann and Riester use the term *bridging* rather than *accessible* (Chafe 1976) or *inferable* (Prince 1981), because it subsumes not only meronyms (as just illustrated in (17)), but also other context-dependent expressions which do not possess a coreferential antecedent (Baumann/Riester 2013: 22), as, for example, in (18). This example is taken from a story about a chicken and an eagle. The chicken borrows a bracelet from the eagle and then loses it. This, so the story goes, is the reason why chickens always keep scraping, even if they have enough food, and why eagles prey on chicks. The hearer, having heard the whole story, can therefore access the expression *utang* ‘the debt’, though it has not been introduced in the preceding discourse.

(18)	<i>pogitanapo</i>		<i>turuus</i>	<i>ana</i>	
	pog-ita=na=po		turuus	ana	
	GER-search=3s.GEN=INCPL		always	MED	
	<b><u>given</u></b>			<b><u>given</u></b>	
	∅	<i>tuju</i>	<i>kueang</i>	<i>menagi</i>	<i>utang</i>
	∅	tuju	kueang	menagi	utang
	∅	bewitch	eagle	AV:demand	debt
	<b><u>given</u></b>		<b><u>given</u></b>		<b><u>bridging</u></b>
	‘It (the chicken) is still searching for it (the bracelet). It is bewitched by the eagle, who demands his debt’				[chicken_eagle.211-214]

### 3.3 Discourse-new versus hearer-new

Finally, one more distinction needs to be discussed in more detail, namely the difference between *new* and *unused* (see Table 4). This distinction pertains to the fact that certain referents are known to the hearer, even though they have not been introduced into the discourse before, i.e. even though they are discourse-new. Well known and often cited examples are *the president of the United States*, or *the moon*, which are uniquely identifiable and therefore in English are used with the definite article, even if they have not been mentioned before. A similar case is illustrated by the Totoli example in (19). Both proper nouns, *Palu* and *KPUD*, have not been mentioned in the discourse before. However, they are known to the hearer: Palu is the capital of the province Sulawesi Tengah (Central Sulawesi), the KPUD (= *Komisi Pemilihan Umum Daerah*) is the local commission for the general elections.

(19)	<i>tau</i>	<i>tukka</i>	<i>dei</i>	<i>Palu</i>	<i>tempona</i>	<i>ana</i>
	tau	tukka	dei	Palu	tempo=na	ana
	person	older.sibling	LOC	PN	time=3s.GEN	MED
	<b><u>given</u></b>			<b><u>unused</u></b>		
	<i>nobali</i>	<i>anggota</i>	<i>KPUD</i>			
	no-bali	anggota	KPUD			
	AV.RLS-become	member	PN			
		<b><u>new</u></b>	<b><u>unused</u></b>			

‘The oldest brother, who is in Palu now, became a member of the KPUD’

[Nahre’s\_life.093-096]

## 4. Preliminary results

For this very preliminary study discussed in this paper, I annotated 3 spoken Totoli narratives (together 25:50 minutes of spoken speech). The texts were coded for four variables: First, the grammatical relation of the respective referring expression (i.e. whether it occurred in subject, object, or oblique function); second, the voice of the constructions, as introduced in section 1 (i.e. whether we are dealing with an actor voice, and undergoer voice, or a stative construction); third, the form of the referring expression, as discussed in section 2 and summarized in Table 3; fourth, the information status of the referent denoted by the referring expression, as discussed in section 3 and summarized in Table 4. Altogether, 642 referring expressions were coded. This paper will focus on the following three research questions, which will be discussed consecutively in the next three sub-sections:

1. Which forms can be/are used for which information status?
2. How is the distribution of form and grammatical relation in the different voices?
3. How are new referents introduced into the discourse and how does the information status influence voice selection?

### 4.1 Form and information status

Looking at how different referring expressions are used in Totoli narratives, most of the distribution is not particularly surprising. As one might expect, all three kinds of pronouns (zero, free, and bound forms) as well as demonstrative pronouns are only used when the referent is given, or given-displaced. One exception is the occurrence of a first person singular inclusive bound pronoun that the speaker uses to refer to himself and the listener. Not having been used in the discourse before but referring to the speech act participants, it has been classified as *unused*. Likewise expectable is the distribution of bare nouns. As already mentioned in section 2.3 (cf. e.g. the discussion of example (10)), bare nouns in Totoli can receive both a definite

and an indefinite interpretation. This is also reflected in the use of bare nouns in the narratives investigated: While roughly two thirds of the occurrences denote referents that are given or given-displaced, almost one third is used for newly introduced referents. In fact, bare nouns make almost half of the forms used for introducing new participants (21 of 51). A fairly large amount of bridging instances is also realized by bare nouns, as well as by possessive constructions (together 12 of 17). Especially the latter is, again, not surprising, as most of the instances where bridging occurs consists of part-whole-relations, such as illustrated in example (17). What might be a little less expected is the fact that demonstrative phrases, in addition to their frequent use for denoting given (and given-displaced) referents, are also fairly often used for introducing new participants. One of the most striking examples for this is maybe the following, which is the very first utterance in the story about the chicken and the eagle. It is the first time the chicken is mentioned, yet it is expressed by the demonstrative phrase *manuk ana* ‘that chicken’.

(20)	<i>manuk</i>	<i>ana</i>	<i>masahabatan</i>	<i>ai</i>	<i>kueang</i>	
	manuk	ana	mo--an	sahabat	ai	kueang
	chicken	MED	RCP	friend	with	eagle
	‘the chicken was friends with the/an eagle’					[chicken_eagle.028-32]

Compare this also with the example in (21), where the demonstrative is combined with a possessive phrase. This seems to be a very common strategy in Totoli, and is probably best translated into English as ‘how are these plats of yours’. Table 5 summarises the distribution of form and their respective information statuses in the three narratives investigated<sup>4</sup>.

(21)	<i>ai</i>	<i>engan</i>	<i>deinamoko</i>	<i>tangayopanmu</i>	<i>ana</i>	
	ai	engan	deinamoko	tangayop-an=mu	ana	
	hey	buddy	how	plant-NR=2s.GEN	MED	
	‘hey buddy, how are your plants?’					[monkey_turtle.128-129]

	PRON			dem	DP	N	Nposs	NP	PP	REL	<i>sum</i>
	zero	free	bound								
given	154	88	81	10	22	42	7	3	14	-	421
given-dis	12	6	2	-	23	25	3	4	18	1	94
bridging	-	-	-	-	1	6	6	-	3	-	16
unused	-	-	1	-	4	-	1	-	-	1	7
new	-	-	-	-	7	21	8	5	10	-	51
<b><i>sum</i></b>	<b>166</b>	<b>94</b>	<b>84</b>	<b>10</b>	<b>57</b>	<b>94</b>	<b>25</b>	<b>12</b>	<b>45</b>	<b>2</b>	

**Table 5:** Forms and their statuses

#### 4.2 Form, grammatical relation, and voice

This section will look at potential asymmetries between actor voice constructions and undergoer voice constructions with respect to the linguistic form of different grammatical relations (primarily of subjects and objects). One of these asymmetries have been mentioned before,

<sup>4</sup> Note that this table does not contain all of the 642 instances of referring expressions mentioned above. In order to keep things simple and more manageable, those cases that were classified as generic or abstract, as well as items that refer to text-external context, are excluded from the summary in Table 5.

namely the fact that non-subject pronouns in undergoer voice constructions but not in actor voice constructions are cliticized to the verb. However, this kind of asymmetry originates in morpho-syntactic system of the language. A more interesting question is thus, whether there are other asymmetries in the form of actor voice and undergoer voice subjects and objects that are due to information structural factors rather than morpho-syntactic ones. This seems to be indeed the case (cf. Figures 1-4).

Note, first of all, that some of the different forms that have been introduced in section 2 and that have been kept apart in Table 5, were combined for the current purpose: In the following, I will compare the use of zero forms, pronouns and more complex nominal material in subject and object position in the two voice types. The category *pronoun* thus includes both, free forms and bound forms. The term ‘more complex nominal material’ should be understood as an umbrella category opposed to zero forms and pronouns. It includes bare nouns, determiner phrases, and modified nouns as described in section 2.3. Furthermore, the label *actor voice* subsumes both actor voice constructions with dynamic verbs, as well as stative actor voice constructions. Likewise, *undergoer voice*, as used in this section, includes the ‘ordinary’ dynamic undergoer voice constructions and stative constructions.

Looking at subjects first, the difference between actor voice and undergoer voice pertains mainly to the pronominal forms: In actor voice constructions, 34% of the subjects are realised as pronouns, 16% zero forms where used. In undergoer voice constructions, on the other hand, we find the reverse pattern, with 19% pronouns and 35 % zero forms. The higher number of zero forms in the undergoer voice can probably be explained by the high number of so called “rapid action sequences” (Himmelman 1999: 244) typical for Totoli (and Austronesian in general) narratives. Typically, these sequences occur in the undergoer voice where the subject, after being initially mentioned in the first unit, is dropped for the rest of the sequence. An example of a rapid action sequence of this kind was given in example (6).

As for the use of the more complex nominal material, actor voice and undergoer voice construction behave roughly alike (50% in actor voice, 46% in undergoer voice).

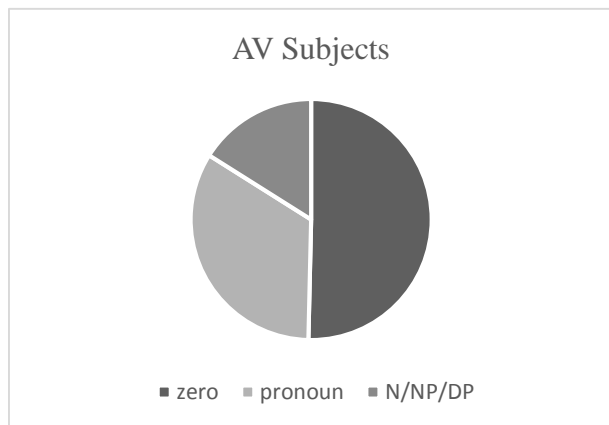


Figure 1: Forms of AV subjects

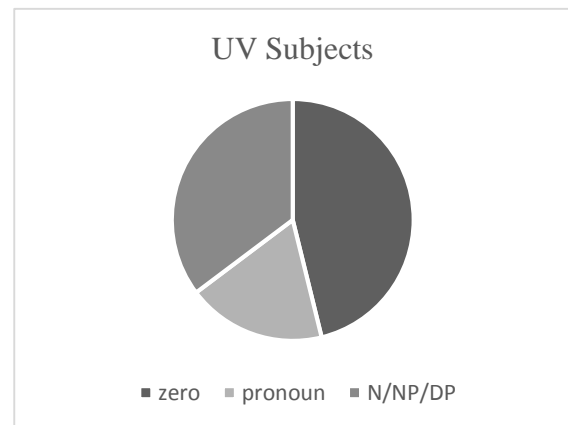
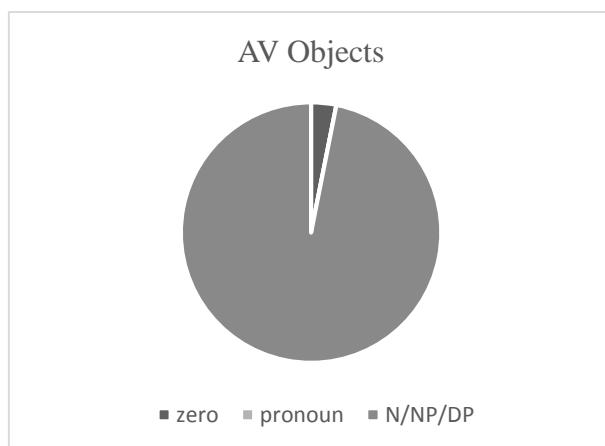


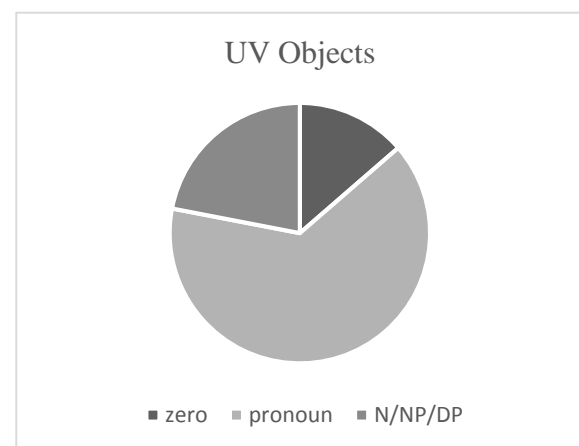
Figure 2: Forms of UV subjects

Now, looking at the forms of the object phrases, the difference between actor voice and undergoer voice is even more striking. Again, the most noticeable difference pertains to the use of pronouns: In undergoer voice constructions, 64% of all objects are realised as (bound) pronouns, whereas the corpus does not contain a single instance of a pronominal object in an

actor voice construction<sup>5</sup>. On the other hand, actor voice objects are almost always realised (97%) as bare nouns, complex nouns, or determiner phrases. In undergoer voice constructions, this is only to 22% the case. One explanation for the high number of pronominal objects in undergoer voice constructions are possibly again the rapid action sequences, in which the actor keeps being realized as a bound pronoun (cf. also the above mentioned observation by Himmelmann 1999 that western Austronesian language have a tendency not to drop actor arguments in undergoer voice constructions). Yet, as Figure 4 shows, zero forms are possible in Totoli undergoer voice constructions (14% in the investigated corpus). Whether these are in fact zero anaphora or whether these actorless constructions can be accounted for by other factors (as Himmelmann 1999: 255 does for Tagalog), is left for further research.



**Figure 3:** Forms of AV objects



**Figure 4:** Forms of UV objects

## 5. Summary

This paper is a first attempt of a corpus study of spoken Totoli narratives. The major aim was to investigate referential expression, as well as the question whether and how information structural factors influence the voice selection in discourse. While the investigated data set is still very small, some generalisations could be made as to which referential expression are the preferred choice for a given information status. Furthermore, it was shown that there are asymmetries in the realisation of subjects and objects when comparing actor voice constructions with undergoer voice constructions. These are particularly pronounced in the use of pronouns, both for subjects and for objects.

NB: Numbers are still preliminary and will probably be subject to revision for the final version of this paper as further texts will be added. Yet to come: Section 3.4 *Status, grammatical relation, and voice*

<sup>5</sup> Note, however, that the corpus is still very small. More data is certainly necessary to make more reliable claims, especially with regard to objects in actor voice constructions.

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