

# What is “natural” speech? Comparing free narratives and Frog stories in Indonesia

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While there is overall consensus that narratives obtained by means of visual stimuli contain less natural language than free narratives, it has been less clear how the naturalness of a narrative can be measured in a crosslinguistically meaningful way. Here this question is addressed by studying the differences between free narratives and narratives elicited using the Frog story in two languages of eastern Indonesia, Alorese (Austronesian) and Teiwa (Papuan). Both these languages are not commonly written, and belong to families that are typologically distinct. We compare eight speakers telling free narratives and Frog stories, investigating the lexical density (noun-pronoun ratio, noun-clause ratio, noun-verb ratio), narrative style (the use of direct speech reports and tail-head linkage), as well as speech rate. We find significant differences between free and prompted narratives along these three dimensions, and suggest that they can be used to measure the naturalness of speech in oral narratives more generally.

**1. Introduction**<sup>1</sup> This study investigates the linguistic effects of using a picture book as a stimulus to elicit a narrative by comparing free narratives with narratives elicited by means of the Frog story. Free narratives here refers to both traditional narratives and narratives concerning a free topic (e.g., personal experience, daily activities). By comparing a free narrative and the Frog story from the same speakers, we show that the characteristics of the situation in which these narratives are told (i.e., production circumstances, communicative purposes, topic), affect the use of six lexico-grammatical features and of speech rate. The Frog story here refers to the book entitled *Frog, where are you?* (Mayer 1969), a wordless picture book consisting of 32

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pages and 24 pictures. The pictures depict the story of a boy and a dog who search for a little frog that went missing. They first search for it in the boy’s house, then they go into the forest where they encounter many animals and have a number of adventures. Three pictures of the Frog story are presented in Figure 1 as an example.

**Figure 1.** Picture 1, 10, and 22 of the book *Frog, where are you?* (Mayer 1969)

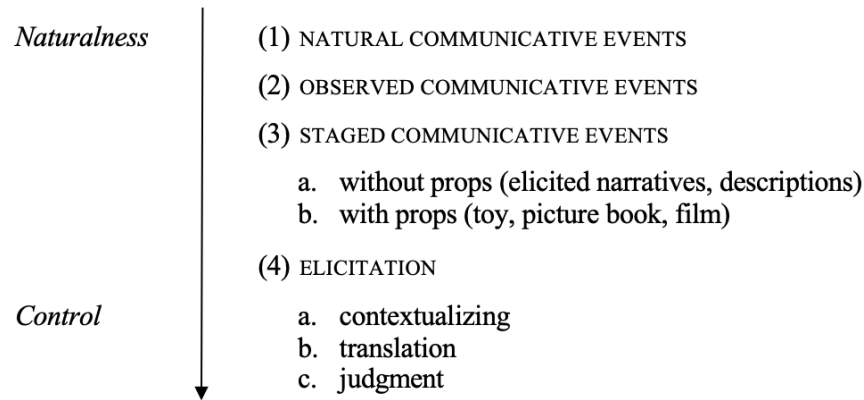


The Frog story was first used by a student of Dan Slobin, Michael Bamberg, to carry out research on the acquisition of narratives among German children (Bamberg 1987). Since the publication of Berman & Slobin’s (1994) crosslinguistic study, elicitation using the Frog Story has also been adopted in the field of documentary and descriptive linguistics, for three reasons. First, by using visual stimuli, it is possible to exclude possible linguistic interference (of e.g. a second language) when eliciting data. Second, a picture story book such as the Frog story potentially elicits a monologue in which clauses are connected. Third, using the same Frog story as stimulus enables crosslinguistic comparison of such stories across the fields of documentary and descriptive linguistics and typology. The Frog story began to be used for descriptive linguistic purposes in the late 1990s; one early mention of it being used for that function is Himmelmann (1998), while it also appears in later handbooks for fieldwork (Bowern 2008; Chelliah & de Reuse 2011; Sakel & Everett 2012). One major disadvantage is that narratives obtained using visual stimuli are considered low in their degree of “naturalness”.

In his seminal work, Himmelmann (1998:185–86) classified the whole range of linguistic behavior, which he calls *communicative events*, into four types distinguished by their degree of naturalness (see Figure 2). This classification brings to light the inverse correlation between the degree of naturalness and the degree of control that the researcher has over the data to be collected. Some data collection methods (type 1 and 2) elicit very natural language, but give the researcher little or no control over the vocabulary and the grammatical features that occur in the communicative event. Communicative events without “props” or stimuli that are staged for the linguist (type 3a) can vary in their degree of naturalness. Although narratives obtained in this way are usually considered natural, and figure in the appendix of many grammars, the fact that the linguist is also present as an addressee may cause some language consultants to use a kind of foreign talk (de Vries, *pers. comm.*). Other methods using visual props

(type 3b) or other elicitation material (type 4) are ranked lower in their naturalness, but they allow the researcher to influence or control the content and the linguistic structure of the utterances.

**Figure 2.** Typology of communicative events, adapted from François (2019:157)



Here it is important to stress that *naturalness* is not the same as *spontaneity* (Himmelmann 1998:176–178). Naturalness concerns the place of a communicative event in the culture under study, and therefore applies to those communicative events that are commonly practiced. Spontaneous communicative events are those that are not planned and prepared before being uttered, like exclamations and many types of conversations. With respect to these two parameters, traditional narratives are natural, but often not spontaneous, in the sense that they are often prepared to some extent and often take place in particular, planned situations such as traditional ceremonies or meetings. Free narratives, such as telling a personal experience or a daily activity, are natural and spontaneous, in that speakers can draw on routines of verbalization in their long-term memories but have little planning time. While the Frog story is not natural because the genre is not established in the oral tradition of the community, nevertheless its production is quite spontaneous when speakers narrate it on the spot without time to prepare. In this paper, we contrast traditional and free narratives (*natural*) to Frog story narratives (*not natural*), and as such we investigate linguistic features of natural speech, leaving an investigation of spontaneity for future research.

Although there is overall consensus that narratives obtained by means of visual stimuli are less natural than free narratives obtained without such stimuli, the question of *how* they are less natural has not been addressed by many researchers. Some studies have discussed the reasons *why* the Frog story or other wordless picture books may not be methodologically adequate in all cultures (Bower 2008; Berthele 2009; de León 2009; Sakel & Everett 2012). This has to do with the situation in which Frog stories are normally recorded. Following Biber & Conrad (2009:39–41), we describe a number of situational characteristics that determine the language variety that a speaker is going to use.

The first characteristic involves the production circumstances: speakers are asked to use a book as a source of storytelling. However, this is a cultural practice of mod-

ern Western literate societies. In many oral or “pre-literate” cultures printed images or books do not connect with the notion of “story” (de León 2009:188). This is confirmed in our field of study in eastern Indonesia, where local languages are mostly spoken, not written, and one rarely finds books in people’s houses. Where books are found, these are usually school books or religious books in Indonesian. Thus, for many speakers, using a book is associated with a classroom or church setting where Indonesian is used, not with story-telling in one’s own language. Furthermore, constructing a previously unknown story from a series of pictures is a hard task for speakers who have no previous experience in this (Bower 2008:83), and some speakers indeed struggle to do so. For instance, Jeanette Sakel (in Sakel & Everett 2012:134) reports on her fieldwork experience using a picture story:

In the Somali pilot study [...] I wanted to make use of picture stories in order to gain comparable texts in both Somali and English from a range of speakers. I liked the idea of using the frog stories, as they have been used for data collection in a wide range of languages and language contact situations. However, I was concerned that the cultural setting of the frog stories was not necessarily appropriate. I ran it past my two main teachers, who struggled to find words for many of the central items in the book, and who agreed that a more culturally sensitive story would be preferable. We set out to find good materials and settled for a range of pictures taken from a story for second language learners of Arabic. These pictures formed a story when put together. Yet, the pilot study with a total of 19 speakers showed that this story was also not ideal, as a few speakers struggled to find the links between the pictures.

The second characteristic involves the relation of the participants and the communicative purpose. The speaker and the listener are often complete strangers that sit face-to-face only for the purpose of the recording. According to Berthele (2009:168), the context of Frog story telling in linguistic fieldwork is artificial, because it involves an adult telling a children’s story to another adult (often the linguist) who is not part of the community, and who already knows the story better than the storyteller. This creates an atypical situation whereby the speaker has to “catch up” with pre-existing knowledge on the part of the hearer. Telling a story in such a context may feel like role playing for some speakers.

Finally, the third characteristic relates to the topic of the narrative. The Frog story may not be appropriate in all cultures due to the content of the pictures. The first pictures depict objects that are quite culturally specific (a bedroom, a bed with poles, a dog in a bedroom, special windows, shoes, a lamp). The need to invent or borrow vocabulary to describe unfamiliar objects and make sense of unfamiliar situations might distract from the storytelling itself (Bower 2008:226; Sakel & Everett 2012:134). This may result in an event description that does not represent naturally used language.

The situational characteristics discussed above explain why Frog story narratives are typically less natural than observed free narratives, but how does this reflect into

the language of the narrative? In other words, what does it mean for the language of the Frog story to be less natural? To our knowledge, only two studies have systematically investigated the linguistic differences between Frog story narratives and traditional narratives. One is a qualitative study on Watam (Papuan) by Foley (2003), and the other is a quantitative study on Tzotzil (Mayan) by de León (2009); furthermore Berthele (2009) reports some anecdotal evidence on a Swiss German dialect.

Foley (2003) compares one Watam traditional narrative produced by a man in his late 30s to one Frog story narrative produced by a woman in her 50s. In Foley’s analysis, the two narratives diverge along two features: lexical density, i.e., the ratio of Nominal Phrases (NPs) and Prepositional Phrases (PPs) per clause, and serial verb constructions. The traditional narrative is low in lexical density (NPs with established referents are often elided, and NPs carrying new information occur only once per clause); it is highly implicit with much information that needs to be understood from the context, and it makes extensive use of verb serialization. The Frog story narrative, on the other hand, is high in lexical density, with many overt NPs and PPs per clause making the narrative very explicit, and lacking complex serial verb constructions. Foley (2003:94) concludes that, being lexically dense and explicit, the Frog story narrative is more resemblant to written texts than oral narratives. The quantitative study on Tzotzil (de León 2009) shows that speakers tend to suppress evidentials when they tell the Frog story. Evidential markers are a typical feature of Tzotzil and are prolifically used by speakers when telling spontaneous narratives without the use of pictures. Finally Berthele (2009:168–69) reports that the Frog stories of some Swiss German speakers use definite articles or demonstratives to introduce new referents (e.g., ‘this frog’ instead of the expected ‘a frog’), or that they describe each picture separately (e.g., ‘A boy [...] and there is a dog on top [...]. There is a dog again and he [...]').

The aim of the present study is to further investigate the language of the Frog story by using the following methodological criteria (see Biber & Conrad 2009:52): (i) we adopt a *comparative approach* comparing differences in structure, style, and speech rate between free narratives and narratives elicited by means of the Frog story; (ii) we carry out a qualitative and *quantitative analysis* of lexical density (noun-pronoun ratio, noun-clause ratio, noun-verb ratio), narrative style (the use of direct speech reports and ideophones, tail-head linkage), and speech rate; and (iii) we base our comparison and analysis on a *representative sample* of narratives from eight speakers. We study narratives in two languages of eastern Indonesia, Alorese and Teiwa. Both languages have only an oral tradition (i.e., are not commonly written), and they belong to different families (one Austronesian, the other Papuan), so that they are very different lexically as well as typologically. The linguistic features that are included in the analysis were selected based on our own initial qualitative observations.

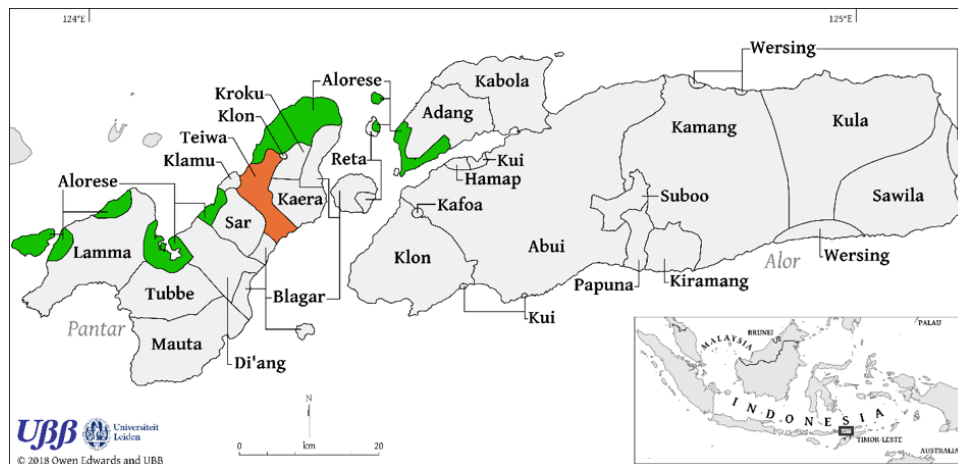
By providing empirical evidence showing the differences and similarities across free and prompted narratives in two unrelated languages, this study contributes to our understanding of what the notion “less natural language” means crosslinguistically. In other words, while the Frog story and other wordless picture books are a useful tool for comparative/typological and also descriptive research, we all know that their

use comes with a cost. The data provided in this article, together with previous studies (Foley 2003; Berthele 2009; de León 2009), concretely show what this cost is. In the appendix, we provide some of the data this study is based on, by including a Frog story and a free narrative from one Alorese and one Teiwa speaker in our sample.

This article is organized as follows. In §2, we give some background on the languages and provide the dataset used for the present study. §3, §4, and §5 are devoted to illustrating and discussing the diagnostic features of “natural” speech, namely lexical density, narrative style, and speech rate, respectively. In §6, we offer a general discussion of the findings and some concluding remarks.

**2. Background on the languages and the dataset** Alorese and Teiwa are two languages spoken in the Alor-Pantar archipelago in eastern Indonesia (see Figure 3). Both Alorese and Teiwa are languages with a mainly oral tradition. For writing, speakers typically use Indonesian, the national language and language of education.

**Figure 3.** The Alor-Pantar archipelago with Alorese marked in green and Teiwa marked in orange.



Alorese (locally referred to as *Bahasa Alor*) is an Austronesian language. It has approximately 25,000 speakers living along the northern coast of the island of Pantar, on the south coast of the Alor peninsula, and on the islets in the vicinity (Grimes et al. 1997; Eberhard et al. 2019). Klamer (2011) is a grammar sketch of the language. The Alorese speakers investigated here all live on Pantar. Teiwa is a member of the Timor-Alor-Pantar (TAP) family<sup>2</sup> and is spoken by approximately 4,000 speakers, also on Pantar island (Klamer 2010).

<sup>2</sup>The Timor-Alor-Pantar (TAP) family is an outlier Papuan group located around 1,000 kilometers west of the New Guinea mainland. The term “Papuan” is used here as a cover term for the hundreds of languages spoken in New Guinea and its vicinity that are not Austronesian (Ross 2005:15) and is considered synonymous with “non-Austronesian”. The label Papuan says nothing about the genealogical ties between the languages. For an introduction with references to work on individual Timor-Alor-Pantar languages, see Klamer (2017); Holton & Klamer (2017).

As Alorese and Teiwa are unaffiliated, they are very different lexically as well as structurally. Here we present a brief typological overview of the languages, focussing on the major differences.<sup>3</sup> Alorese is an isolating language. The language lacks nominal morphology as well as verbal morphology marking tense, aspect, or modality. Almost all verbs have free subject pronouns. A small set of vowel-initial verbs has a subject marking prefix. Objects and subjects are expressed with the same pronouns, and objects are never affixed on the verb. Alorese nouns do not inflect for number, gender, or case. No dedicated morphology to derive nominals exists. NPs are head-initial: nominal heads precede demonstrative, numeral, quantifying, nominal, or verbal modifiers. Alorese does not have a class of adjectives: property concepts behave like (stative) verbs. In nominal possessive constructions, free possessor pronouns precede the possessee. Alorese clauses have SV and AVP constituent order.<sup>4</sup> However, contrasting with this head-initial order are post-predicate negation and clause-final conjunctions. Alorese has accusative alignment, so that S and A are treated alike, as opposed to P. Alorese clauses are linked to each other by linking words such as conjunctions, or by complementation. Complementation is by juxtaposition; complement clauses are not formally marked as embedded: they have no special word order, no special morphology or lack thereof. Serial verb constructions, especially directional ones, are often used.

The morphological profile of Teiwa is less isolating than Alorese. One important morphological difference between Alorese and Teiwa is that Teiwa has prefixes that index animate *objects* on verbs while in Alorese most verbs lack any person marking, and the few that do have *subject* agreement prefixes. Another difference is that Teiwa has possessor prefixes on nouns while Alorese nouns do not take possessor morphology. Teiwa also has a suffix marking realis status on verbs, and an applicative prefix on verbs; morphology that Alorese lacks. However, like in Alorese, Teiwa nouns do not inflect for number, gender, or case; there is no morphology to derive nominals; and verbs do not inflect for tense, aspect, or modality. Like Alorese, Teiwa has accusative alignment: S and A are treated alike, as opposed to P. Unlike Alorese, however, subject and object pronouns in Teiwa are from different paradigms while in Alorese they are the same forms. Also unlike Alorese, Teiwa word order is more generally head-final: besides having clause final conjunctions and negations, Teiwa has APV order and clause-final verbs. In the nominal domain, Teiwa and Alorese show the same orders: in nominal possessive constructions, possessors always precede their possessee, and non-possessed NPs have the head noun as their initial element. Teiwa clauses are combined by coordinating conjunctions or juxtaposition; complement clauses are not formally marked as embedded. Serial verb constructions are frequently used.

In §3.2 and §4 of this paper, we refer to the number of clauses in the narratives. To count these, we applied the following formal criteria to recognize clauses and clause boundaries in Teiwa and Alorese: (i) A clause minimally consists of a predicate (which

<sup>3</sup>For more extensive overviews of the grammar of Alorese and Teiwa see Klamer (2010; 2011). For a comparison of the lexicon of Alorese and Teiwa we refer to the online database *LexiRumah* (Kaiping et al. 2019) which contains extensive word lists of both languages.

<sup>4</sup>A refers to the more agent-like argument of a transitive verb, P to the more patient-like argument of a transitive verb, and S to the single argument of an intransitive verb.

can be verbal or nominal) and an argument. If there is a sequence of predicates which share one overtly expressed argument, then these form a single clause (containing a serial verb construction or a verb sequence). (ii) Clauses are separated by conjunctions and/or intonational breaks (a falling intonation, and/or a pause). (iii) A topicalized phrase (separated from the clause with a topic marker or an intonational break) which does not contain a predicate is not counted as a clause.

The dataset of the present study includes narratives by three Alorese speakers and five Teiwa speakers. The three Alorese speakers are two women, Marifat (age 57) and Magdalena (age 53), and one man, Jakobus (age 35). Marifat was recorded in the village of Pandai, while Magdalena and Jakobus were recorded in the village of Munaseli. Both villages are located on the northern coast of Pantar island (see Figure 3). The speakers were recorded by Francesca Moro during a fieldwork trip on Alor and Pantar from April to August 2016. The recordings are archived as part of a larger Alorese corpus compiled by Moro (n.d.). The speakers were asked to tell the Frog story and a traditional narrative, or in case they did not know or recall any traditional story, to tell a personal experience. The dataset includes a free narrative and a Frog story from each of these three Alorese speakers (see Table 1 below).

The five Teiwa speakers are two women, Martheda (age 36) and Bertha (age 50), and three men, Lorens (age 22), Aser (age 44), and Seprianus (age 34). Martheda and Bertha were recorded in May 2016 in the village of Madar by Francesca Moro. Lorens was recorded in June 2003 in Kalabahi by Marian Klamer. Aser and Seprianus were both recorded in July 2003 in the village of Madar by Marian Klamer. They volunteered to tell a free narrative of their own choice and were recorded immediately. The recordings are archived in the Teiwa corpus (Klamer n.d.). The Teiwa dataset used here includes a free narrative and a Frog story from Martheda and Bertha, only the Frog story from Lorens, and only a free narrative from Aser and Seprianus (see Table 1).

**Table 1.** The Alorese and Teiwa dataset

Language	Speaker	Gender	Age	Free narrative Length (mm:ss)	N. of clauses	Frog story Length (mm:ss)	N. of clauses
Alorese	Marifat	F	57	1:13	25	9:04	112
	Magdalena	F	53	3:58	98	9:54	178
	Jakobus	M	35	4:58	94	13:45	220
Teiwa	Martheda	F	36	3:56	83	7:56	131
	Bertha	F	50	0:48	15	8:36	144
	Lorens	M	22	–	–	7:37	144
	Aser	M	44	6:17	136	–	–
	Seprianus	M	34	9:07	250	–	–



The elicitation setup for Marifat, Magdalena, Jakobus, Martheda, and Bertha was the following. Before beginning the video recording, the researcher showed the Frog story to the speaker, by giving an example in Indonesian of how to tell the story. After this, the participant was recorded re-narrating the story while leafing through the book. Once the Frog story was recorded, the speaker was asked to tell a free narrative (a traditional story or a personal experience). For Lorens, the set up was different. He was introduced to the Frog story picture book by the researcher giving an example in Indonesian on how to describe the first few pictures, and he brought the booklet home to study it before the recording was made on the next occasion he met the researcher. In all cases, the speaker told the stories to the researcher. In all elicitation settings except the one by Lorens, there were many onlookers standing in the vicinity. We believe that the fact that the participants were explicitly asked to narrate the story as if they were narrating it to a friend or a family member, and in most cases the presence of other speakers of the language, have prevented speakers from using foreign talk.

The narratives of Marifat, Magdalena, Martheda, and Bertha were purposively selected for the present study because, at a first inspection by the researchers, their Frog stories contained less natural speech. In order to balance the sample, we also included male speakers. Jakobus was selected as he is the only Alorese male consultant from whom both a free narrative and the Frog story were collected. The narratives of Aser, Seprianus, and Lorens are three narratives available from Teiwa male consultants.

**3. Lexical density** The first feature that differentiates free narratives from Frog stories is the degree of lexical density. This parameter has been used to investigate complexity in oral and written language (Wells 1960; Halliday 1989).<sup>5</sup> There are different ways to measure lexical density. One measure is to calculate the ratio of lexical items per clause (Halliday 1989). Another possibility is to calculate the ratio of the sum of nominal items to the sum of the verbal items (Wells 1960).<sup>6</sup> Yet other studies have also included the calculation of the noun-pronoun ratio (Norrby & Håkansson 2007). All of these calculations have the same rationale, namely that nouns are information-dense, because they carry both lexical and grammatical indexing information.

As for pronouns, they only carry grammatical information (person, number, grammatical relation) and no lexical semantic content. When speakers need to refer to an entity, they can choose to use a noun like *the frog* or a pronoun like *it*. However,

<sup>5</sup>The notion of *lexical density* is different from the notion of *referential density* proposed in Bickel (2003). The former is based on the ratio of lexical items to clauses, while the latter is based on the ratio of nouns or pronouns to the available argument slots in the clause. Here we do not calculate referential density, since knowing which argument slots are available (but not filled) in the clause requires analyses of the lexical argument structure of verbs and of zero-anaphora, in both Teiwa and Alorese. These are topics about which several separate studies can be written, and as such are beyond the scope of this paper.

<sup>6</sup>Wells (1960) considers nominal parts to include nouns, participles, and prepositions, and verbal parts to include verbs, pronouns, and adverbs. This is clearly a language-specific categorization as the nominal vs. verbal status of participles, prepositions, and adverbs may differ across languages. For instance, in Alorese adpositions are more nominal-like and historically derive from nouns, while adpositions in TAP languages like Teiwa historically derive from verbs (Klamer 2018).

the use of the noun *the frog* conveys the meaning more explicitly than the pronoun *it*. Norrby & Håkansson (2007:49) point out that “a text with a high proportion of pronouns signals that its style is implicit and context-dependent whereas a text characterised by many nouns is likely to be linked to an explicit and context-independent style”. Usually these two styles are considered to be prototypical for oral and written language.

As for verbs, their use is not related to the density of information because, in general, verbs are not replaced with other referential devices.<sup>7</sup> Thus, the use of many verbs does not make a text lexically dense. To summarize, a higher ratio of nouns indicates higher lexical density and makes the language of a narrative more explicit. On the other hand, a lower ratio of nouns is indicative of a lower lexical density and makes the language of a narrative less explicit.

Here we adopt three measurements of lexical density: we calculate (i) noun-pronoun ratio, (ii) noun-clause ratio, and (iii) noun-verb ratio. To this aim, we counted the total number of lexical and pronominal NPs, verbs, and clauses. Pronouns in Alorese are always free pronouns (see §2). The subject prefixes that occur on a very small number of vowel-initial verbs are not analysed as pronominals but as agreement morphology, because they can co-occur with a pronominal or lexical subject. Subject prefixes in Alorese are therefore not included in the count. Counted pronouns in Teiwa include free pronouns (subject and object), but also pronominal object prefixes on verbs that refer to animate objects (see §2).<sup>8</sup> Possessor prefixes on nouns were excluded from the count as they function to express nominal possessors, not verbal arguments. We first present the noun-pronoun ratio in §3.1, then the noun-clause ratio in §3.2, and finally the noun-verb ratio in §3.3. In all the sections Alorese is discussed first, followed by Teiwa.

**3.1 Ratio of nouns to pronouns** In Alorese, free narratives have a lower noun-pronoun ratio than Frog stories, and this holds true for all the three speakers (see Table 2). In Jakobus and Marifat’s free narratives the noun-pronoun ratio is between 1.8–2.1 (for every two nouns there is one pronoun), while in Magdalena it is 1.1 (for every noun there is one pronoun). In Jakobus and Marifat’s Frog stories the noun-pronoun ratio is much higher, between 3.9–4.2 (for every four nouns there is one pronoun), and in Magdalena’s Frog story it reaches 5.1 (for every five nouns there is one pronoun). The ratios were statistically analyzed for significance by using the Fisher’s Exact test (95% confidence interval).<sup>9</sup> The results show a statistically significant difference for all of the three speakers (Jakobus:  $p < 0.05$ , odds ratio = 1.882; Marifat:  $p < 0.05$ , odds ratio = 2.255; Magdalena:  $p < 0.001$ , odds ratio = 4.706).

<sup>7</sup>Some languages, like the Awyu-Dumut languages, may use generic verbs (e.g., *to do so*) to replace other verbs, where the content of these generic verbs depends on the preceding verb.

<sup>8</sup>Teiwa objects with an animate referent are always expressed with a verbal prefix; a lexical object NP may be added but is syntactically optional. Inanimate objects are always expressed as free constituents (Klamer 2010:49,171–86).

<sup>9</sup>The Fisher’s Exact test is a test of significance used in 2 by 2 tables with small counts (Baayen 2008:122).

**Table 2.** Total number of nouns and pronouns, and noun-pronoun ratio in the free narratives and the Frog stories of three Alorese speakers

	Free narrative			Frog story		
	Nouns	Pronouns	Ratio	Nouns	Pronouns	Ratio
Jakobus	69	33	2.1	264	67	3.9
Marifat	24	13	1.8	188	45	4.2
Magdalena	85	78	1.1	242	47	5.1

The results show that all three Alorese speakers use more nouns than pronouns in the Frog stories. To give an example, we contrast the opening sentences of the Frog story (1) and of a traditional free narrative (2), both provided by Jakobus.<sup>10</sup> In the first sentences of the Frog story the speaker introduces all the participants (a boy, a dog, and a frog), and the setting (a room) (see Figure 1). In the following sentences, despite having introduced the participants, the speaker continues referring to them with full nouns instead of using pronouns. As a result of being so explicit, the opening sentences contain 11 nouns, and no pronoun. The high noun-pronoun ratio reveals that these sentences have very high lexical density.

(1) Opening sentences of the Alorese Frog story by Jakobus.

*Mərreng tou ke kamar tou onong bai klake tou,*  
 night one LOC.PROX<sup>11</sup> room(MLY) one inside child male one  
 ‘One night inside a room there is a boy,

*bai klake anang tou, aho tou nang tamba nang taling mətto.*  
 child male small one dog one with add(MLY) with add frog  
 a little boy, a dog and a frog.

*Bai klake anang ke nang na aho tobo...*  
 child male small DEM.PROX with POSS dog sit  
 The little boy with his dog sit...

*tobo seru mətto ke toples onong,*  
 sit look frog LOC.PROX jar(MLY) inside  
 sit looking at the frog inside the jar.

*Tobo seru-seru mu matang toki.*  
 sit RDP~look SEQ eye sleepy  
 They look and look and their eyes become sleepy.’

<sup>10</sup>The reader can find the full texts in the Appendix.

<sup>11</sup>The abbreviations that are used in this paper and are not in the Leipzig Glossing Rules are: FORTHC = forthcoming topic; HIGH = higher than deictic center; INTJ = interjection; LEVEL = same level as deictic center; LOW = lower than deictic center; MLY = Malay loan; RDP = reduplication; REAL = realis; SEQ = sequential; SIM = simultaneous.

The opening sentences of the traditional free narrative in (2) reflect a more typical way of conveying information in Alorese. In the first sentence, the speaker explains who the three main participants are. The pronoun *we* ‘they’ is used cataphorically, probably because he assumes that they are already known to the hearer. Being a traditional narrative, the characters of the story are part of the community-shared information, and they were also known to the researcher who elicited this narrative. Unlike the Frog story, after having introduced the participants, the speaker refers to them by using the pronoun *we* ‘they’. As a result of this strategy, the opening sentences contain nine nouns and four pronouns. The ratio of nouns to pronouns here is very low, therefore these sentences have low lexical density.

(2) Opening sentences of the Alorese free narrative by Jakobus.

*Lara tou we mäsia tällo, tou te na kotong blaha,*  
 day one 3PL person three one DEM.DIST POSS head long  
 ‘One day they three people, one had a long head,

*tou te na ubong dake,*  
 one DEM.DIST POSS butt sharp  
 one had a sharp butt,

*tou te na aleng kele.*  
 one DEM.DIST POSS waist slender  
 one had a slender waist.

*Lara tou na mama gahing we r-ahi gena kajo,*  
 day one POSS father order 3PL 3PL-go search wood  
 One day their father ordered them to go fetch some wood,

*we r-ahi gena kajo ke bo*  
 3PL 3PL-go search wood DEM.PROX and  
 they went fetch the wood and

*we pana pana pana r-ahi.*  
 3PL walk walk walk 3PL-go  
 they walked and walked.’

Regarding the noun-pronoun ratio in the Teiwa narratives, the results are similar to what we observed for Alorese. Again, the noun-pronoun ratio is lower in the free narratives than in the Frog stories, and this holds true for all of the five speakers (see Table 3). In Martheda’s free narrative the noun-pronoun ratio is 1.1 (for every noun there is one pronoun), while in the Frog story it is 2.7 (for every three nouns there is one pronoun). For Bertha, the noun-pronoun ratio is also lower in the free narrative (1.8) than in the Frog story (3.0). In Aser and Seprianus’s free narratives the noun-pronoun ratio is 1.4, which is lower compared to the ratio in Lorens’s Frog story, which is 2.3. Using the Fisher’s Exact test, the results show a statistically significant difference in all speakers, except for Bertha (Martheda:  $p < 0.001$ , odds ratio = 2.490;

Aser and Lorens:  $p < 0.05$ , odds ratio = 1.603; Seprianus and Lorens:  $p < 0.05$ , odds ratio = 1.649).

**Table 3.** Total number of nouns and pronouns, and noun-pronoun ratio in the free narratives and the Frog stories of five Teiwa speakers

	Free narrative			Frog story		
	Nouns	Pronouns	Ratio	Nouns	Pronouns	Ratio
Martheda	67	61	1.1	118	43	2.7
Bertha	16	9	1.8	178	59	3
Aser	124	86	1.4	–	–	–
Seprianus	129	92	1.4	–	–	–
Lorens	–	–	–	125	54	2.3

To illustrate the high lexical density in Teiwa, we present the opening sentences of the Frog story and the free narrative as told by Bertha in (3) and (4). The Frog story starts with a description of the first picture (see Figure 1 above), introducing the participants (boy, dog, frog), as well as the setting (moon, glass jar). The sentence contains five nouns and no pronouns or pronominal object prefixes. This high ratio of nouns to pronouns gives the sentence a high lexical density.

(3) Opening sentence of the Teiwa Frog story by Bertha.

*Wur a liar bifgoqai nuk a-tan raq yip ma autugi*  
 moon PROX shine child one 3SG.POSS-hand two also come support.chin  
 ‘The moon is shining, a child supporting his chin with his two hands is watching  
*botol g-om ga’an i,*  
 glass.jar(MLY) 3SG.POSS.inside DEM PROX  
 inside that bottle here,  
*mauqubar nuk in mis-an ma pal-an.*  
 frog one CONT sit-REAL come inspect-REAL  
 (where) a frog is sitting.’

The opening sentences of the Teiwa free narrative told by Bertha are given in (4). They introduce three participants (women, garden, water). The women are introduced with a noun in the first clause, and subsequently referred to by the plural pronoun *inam* ‘3.PL’, the dual pronoun *iraxau* 3.DU ‘they two’, and the distributive object prefix *ta-*. The garden is referred to with the 3rd singular pronoun that is used to refer to locations, *i*. The water is twice referred to with the 3rd singular object prefix *ga-* on the verb *gi* ‘go’. In addition, we see the noun *gi-om* ‘their insides’ used twice in the idiomatic expression for ‘to be thirsty’. There are thus seven nouns and seven pronouns / object prefixes; in these opening sentences the ratio of nouns to pronouns is thus lower than in the Frog story.

(4) Opening sentences of the Teiwa free narrative by Bertha.

*Biar eqar inam raq tewar i ar deqai gi-om siis.*  
 PL woman 3PL two walk 3SG.place garden clean 3PL.POSS-inside dry  
 ‘Women, they two walk to the garden to work (and) are thirsty (lit. their insides (are) dry)

*Inam gi-om siis ba nuk gi yir ga-gi.*  
 3PL 3PL.POSS-inside dry SEQ one go water 3SG-go  
 They (are) thirsty so one goes to fetch water.

*Iraxau i ta-li-in gi yir hisan ga-gi yir hufa’.*  
 3.DU FORTHC 1PL.DISTR-invite-REAL go water put 3SG-go water drink  
 The two of them tell each other to get water (and) drink water.’

To summarize, the comparison of the noun-pronoun ratios in free narratives and Frog stories of Alorese and Teiwa show that in both languages, Frog stories tend to have a higher ratio of nouns to pronouns, and therefore a higher lexical density.

**3.2 Ratio of nouns to clauses** In Alorese, free narratives have a lower noun-clause ratio than Frog stories, and this holds true for all the three speakers (see Table 4). In the free narratives there is less than one noun per clause (the noun-clause ratios are 0.7 and 1.0), while in the Frog stories there is more than one noun per clause (the noun-clause ratios are 1.2, 1.3, and 1.7). Using the Fisher’s Exact test, the results show a statistically significant difference for Jakobus and Magdalena, and an almost significant difference for Marifat (Jakobus:  $p < 0.05$ , odds ratio = 0.612; Magdalena:  $p < 0.05$ , odds ratio = 0.638; Marifat:  $p = 0.083$ , odds ratio = 0.573).

**Table 4.** Total number of nouns and clauses, and the noun-clause ratio in the free narratives and the Frog stories of three Alorese speakers

	Free narrative			Frog story		
	Nouns	Clauses	Ratio	Nouns	Clauses	Ratio
Jakobus	69	94	0.7	264	220	1.2
Marifat	24	25	1	188	112	1.7
Magdalena	85	98	0.9	242	178	1.4

In Teiwa the differences between free narratives and Frog stories are not so pronounced. The free narratives have a slightly lower noun-clause ratio than the Frog stories (see Table 5). For instance, in Seprianus’s free narrative the noun-clause ratio is 0.5 (one noun every two clauses), while in Lorens’s Frog story the ratio is 0.9 (almost one noun per clause). Using the Fisher’s Exact test, the results show a statistically significant difference only for Seprianus and Lorens (Seprianus and Lorens:  $p < 0.05$ , odds ratio = 0.595).

**Table 5.** Total number of nouns and clauses, and the noun-clause ratio in the free narratives and the Frog stories of five Teiwa speakers

	Free narrative			Frog story		
	Nouns	Clauses	Ratio	Nouns	Clauses	Ratio
Martheda	67	83	0.8	118	131	0.9
Bertha	16	15	1.1	178	144	1.2
Aser	124	136	0.9	–	–	–
Seprianus	129	250	0.5	–	–	–
Lorens	–	–	–	125	144	0.9

To summarize, both in Alorese and Teiwa, the noun-clause ratio is generally lower in free narratives than in Frog stories. The results are statistically significant in all Alorese comparisons, but only in one Teiwa comparison.

**3.3 Ratio of nouns to verbs** In Alorese, free narratives have a lower noun-verb ratio than Frog stories, and this holds true for all of the three speakers (see Table 6). In the free narratives the noun-verb ratio is between 0.5 and 0.7 (for every noun there are two verbs), while in the Frog stories it is between 0.9 and 1.3 (for every noun there is one verb). Using the Fisher’s Exact test, the results show a statistically significant difference for all of the three speakers (Jakobus:  $p < 0.05$ , odds ratio = 1.539; Marifat:  $p < 0.05$ , odds ratio = 2.293; Magdalena:  $p < 0.05$ , odds ratio = 1.423).

**Table 6.** Total number of nouns and verbs, and the noun-verb ratio in the free narratives and the Frog stories of three Alorese speakers

	Free narrative			Frog story		
	Nouns	Verbs	Ratio	Nouns	Verbs	Ratio
Jakobus	69	124	0.6	264	308	0.9
Marifat	24	44	0.5	188	150	1.3
Magdalena	85	127	0.7	242	254	1

The results show that in the Alorese Frog stories there is approximately one noun for every verb. Roughly speaking, this may be an indication that in the Frog story verbs tend to have overt nominal arguments. To give an example, we contrast a few sentences of the middle section of the Frog story (5) and of a traditional free narrative (6), both provided by Jakobus. In the sentences of the Frog story in (5) there are nine verbs, but only two of them, which form a verb sequence in the last clause *gokal lodong* ‘fall down’, do not have an overt nominal argument. All the other verbs have overt nominal subjects and objects.

- (5) Sentences of the middle section of the Frog story by Jakobus.

*Aho ke di natong kotong seru.*  
 dog DEM.PROX also stretch head look  
 ‘The dog stretches its head to look.’

*Le takke kənnə kotong lodo buno ekang.*  
 long.time NEG then head descend kill place  
 After a while its head falls down and hits the ground.

*Toples ba.*  
 jar(MLY) heavy  
 The jar is heavy.

*Toples mate kotong bo kotong ba, gokal lodong.*  
 jar(MLY) tight head and head heavy fall descend  
 Its head is caught in the jar and its head is heavy, it falls down.’

In the Alorese free narrative, verbal arguments are more frequently left unexpressed or expressed by a free pronoun, as shown in example (6). In (6) there are 13 verbs. For two verbs, namely *mərre* ‘say’ and *hela* ‘climb’, the subject argument is expressed by a pronoun. For all of the other verbs, the subject argument is left unexpressed.

- (6) Sentences of the middle section of the free narrative by Jakobus.

*Geki nəmuang Kotong Blaha Kotong Dake ke ro mərre:*  
 laugh just head long head sharp DEM.PROX 3SG say  
 ‘They laughed and Pointed Head he said:

*Kaing bo go bo hela.*  
 already and 1SG FOC climb  
 ‘That’s it, I climb.’

*Hela gereng, gereng sampe ktti mau*  
 climb go.up go.up arrive(MLY) LOC.HIGH want(MLY)  
 He climbed up, went up to the top to

*natong limang gere paha tapo klappang.*  
 stretch hand go.up hold coconut leaf.midrib  
 stretch his hands up to grab the midrib of the coconut leaf.

*Tərre wəkking gereng kətte.*  
 pull body go.up LOC.DIST  
 He pulled his body up.’

In Teiwa, there does not seem to be a difference in the noun-verb ratio when comparing free narratives and Frog stories (see Table 7). Teiwa narratives in general have a low noun-verb ratio. The only significant difference emerges when comparing the



free narrative of Seprianus to the Frog story of Lorens, in the free narrative the noun-verb ratio is lower than in the Frog story (Seprianus and Lorens:  $p < 0.001$ , odds ratio = 1.637).

**Table 7.** Total number of nouns and verbs, and the noun-verb ratio in the free narratives and the Frog stories of five Teiwa speakers

	Free narrative			Frog story		
	Nouns	Verbs	Ratio	Nouns	Verbs	Ratio
Martheda	67	148	0.5	118	213	0.6
Bertha	16	22	0.7	178	243	0.7
Aser	124	250	0.5	–	–	–
Seprianus	129	458	0.3	–	–	–
Lorens	–	–	–	125	271	0.5

To summarize, the Alorese Frog stories are lexically more dense because there is approximately a one-to-one ratio of nouns and verbs, while in the Alorese free narratives there are more verbs than nouns. One possible explanation for this pattern is that nominal subject arguments with established referents are more easily elided in free narratives than in the Frog stories. The fact that in Teiwa the ratio of nouns to verbs only differs significantly in one comparison of free narrative and Frog story indicates that noun-verb ratio is probably not only measuring lexical density but is also influenced by language-specific factors, which will be discussed in the next section.

**3.4 Summary** Comparing the noun-pronoun ratios in both languages shows that across the board, Frog stories have a significantly higher ratio of nouns to pronouns, and therefore a higher lexical density. The other two measures show a more variable picture. Both in Alorese and Teiwa, the noun-clause ratio is generally lower in free narratives than in Frog stories, but while the results are statistically significant in all Alorese comparisons, they are significant in only one Teiwa comparison. The noun-verb ratio shows a significant difference in all Alorese comparisons, and in only one Teiwa comparison. This may be a language-specific factor, namely that Teiwa uses more verbs per clause in general. We calculated the average verb-clause ratio for Teiwa and Alorese, and this shows that Teiwa has an average of 1.7 verbs per clause, while in Alorese the average is 1.4. The fact that Teiwa makes extensive use of serial verb constructions (Klamer 2010:303), more so than Alorese, may account for the high number of verbs in each clause.

Finally, this may suggest that lexical density can only properly be measured across languages using the noun-pronoun rate. The noun-verb rate appears to not only depend on variable referential properties (like the noun-pronoun rate) but is also influenced by a language’s typological properties (such as being heavily serializing or not), which influences the average rate of verbs per clause.

**4. Narrative style** Apart from structural differences, traditional free narratives and Frog stories also show different narrative styles. We investigated our data set along two stylistic dimensions: the level of vividness, and the level of cohesion between clauses, assuming that free narratives are more lively and more cohesive than Frog stories. The level of vividness was measured by investigating the use of direct speech and ideophones (§4.1), while the level of cohesion was measured by investigating the use of tail-head linkage constructions (§4.2).

**4.1 Direct speech and ideophones** Strategies that are crosslinguistically often employed to bring events to life and thus add vividness to the discourse include direct speech (Larson 1977; de Vries 2010) and ideophones (Voeltz & Kilian-Hatz 2001; Dingemanse 2012). The use of these stylistic devices differs across languages, individual speakers, as well as genres. For example, some languages make more use of ideophones than others; some speakers sprinkle their stories with more direct speech than others; and personal narratives are typically told in a more lively style than recipes or process descriptions.

We counted the number of clauses representing direct speech in the Alorese and Teiwa texts. We also counted the number of ideophones, but this was done only for Teiwa because in Alorese ideophones did not occur in any of the narratives.

In Alorese free narratives, direct speech is more frequent than in the Frog stories, and this holds true for all three speakers (see Table 8). For instance, in the free narrative of Jakobus 20.2% of the clauses are quotes, while in his Frog story only 3.6% of the clauses are quotes. Using the Fisher’s Exact test, the results show a statistically significant difference for all of the three speakers (Jakobus:  $p < 0.001$ , odds ratio = 6.665; Marifat:  $p < 0.001$ , odds ratio = 26.715; Magdalena:  $p < 0.05$ , odds ratio = 4.749).

**Table 8.** The number of direct speech and non-direct speech clauses in the free narratives and the Frog stories of three Alorese speakers

	Free narrative			Frog story		
	Direct speech clauses	Non-direct speech clauses	Total clauses	Direct speech clauses	Non-direct speech clauses	Total clauses
Jakobus	19 (20.2%)	75	94	8 (3.6%)	212	220
Marifat	5 (20%)	20	25	1 (0.9%)	111	112
Magdalena	14 (14.3%)	84	98	6 (3.4%)	172	178

An example of an Alorese direct speech from the free narrative of Jakobus is given in (7). Alorese direct speech constructions are typically introduced by the speech verb *mərre* ‘say’.

(7) Alorese direct speech in the free narrative by Jakobus.

*Kotong Dake mərre “Kaing tite plae doli”.*  
 head sharp say already 1PL.INCL run can.not  
 ‘Pointed Head said “That’s it, we can’t run”.’

In Teiwa, we also see a tendency to use more direct speech in free narratives than in the Frog stories (see Table 9). For instance, in the free narrative of Martheda, 20.5% of the clauses are part of direct speech quotes, while in her Frog story, only 3.8% of the clauses are part of quotes. Similarly, in the free narratives by Aser and Seprianus, 14.7% and 13.2% of the clauses are quotes, while in the Frog story by Lorens, only 4.2% of the clauses are part of quotes. Using the Fisher’s Exact test, the results show a statistically significant difference in all speakers, except for Bertha (Martheda:  $p < 0.001$ , odds ratio = 6.432; Aser and Lorens:  $p < 0.05$ , odds ratio = 3.947; Seprianus and Lorens:  $p < 0.05$ , odds ratio = 3.488)

**Table 9.** The number of direct speech and non-direct speech clauses in the free narratives and the Frog stories of five Teiwa speakers

	Free narrative			Frog story		
	Direct speech clauses	Non-direct speech clauses	Total clauses	Direct speech clauses	Non-direct speech clauses	Total clauses
Martheda	17 (20.5%)	66	83	5 (3.8%)	126	131
Bertha	0 (0%)	15	15	2 (1.4%)	142	144
Aser	20 (14.7%)	116	136	-	-	-
Seprianus	33 (13.2%)	217	250	-	-	-
Lorens	-	-	-	6 (4.2%)	138	144

Teiwa direct speech is typically introduced by a clause containing a speech verb such as *wa* ‘say’. A quote marked by *wa* ‘say’ can report both thoughts as inner speech and utterances. In (8), the first use of *wa* has the protagonist “he” as its subject, and introduces the entire utterance (8) as a single thought. The second *wa* marks the first quote of what the fish said (“she will also pray like (that)”), and the third *wa* marks the second quote of the fish (“Let that rain fall”).

(8) Teiwa direct speech in the free narrative by Martheda.

*A wa “O insi ana gi si,*  
 3SG say INTJ maybe long,time go SIM  
 ‘He thought, “Oh, maybe later,

*a'an yip ana sambayang mo xaf wa ge'eg*  
 3SG also long.time pray(MLY) like fish say just.now  
 “she will also pray like (that)” fish said just now

*a bali un sambayang a wa...*  
 3SG see CONT pray(MLY) 3SG say  
 (the fish that) he saw praying saying...

*Kari Uaad ga-soi xaf, “Xal eran yaa-n u.”*  
 old.man big 3SG-order fish rain that descend-REAL DIST  
 ...(that) fish requesting Big Lord “Let that rain fall”.”

Direct speech constructions may contain ideophones. This is illustrated in (9), from the free narrative by Seprianus, where direct speech (between quote marks) and ideophones (in bold) both add vividness to the discourse.

- (9) Direct speech construction containing two ideophones in the free narrative by Seprianus.

*...si uy kri a wa xa'a:*  
 SIM person old.man 3SG say this  
 ‘...and that man said:

*“O! Ga-hafan ga'an la war ma paq ha*  
 INTJ 3SG.POSS-village this FOC stone come sound.of.crushing.corn then  
 “Oh! That is the village where stones crush corn,

*xoi ma duxu'*  
 rice.pestle come sound.of.s.th.heavy.falling  
 rice pestles thump,

*bai a qau-an afo'o..."*  
 pig 3SG scream.of.pig-REAL over.there  
 and pigs scream”.’

However, not all speakers use ideophones frequently; in our data they occur in the free narrative by Seprianus (five times), and in the Frog story by Martheda (one time).

The direct speech quote in Martheda’s Frog story in (10) contains the onomatopoeic word *xuri*, which describes quietness in sound (whispering or not speaking) or a quiet movement such as creeping or walking on tip toe. However, speakers can also express a sound without using the separate word class of onomatopoeic forms. For example, the verb *sigā* ‘be quiet’, in the sense of ‘not to utter a sound’, is used by Lorens in (11). The examples in (10)–(11) come from Teiwa Frog stories and describe Figure 4.

Figure 4. Picture 20 of the book *Frog, where are you?* (Mayer 1969)



- (10) Direct speech construction with an ideophone in the Teiwa Frog story by Martheda.

*Ba a'an ga'an ta a-yivar ga'-wulul a wa*  
 SEQ 3SG DEM TOP 3SG.POSS-dog 3SG-talk 3SG say  
 'So that one talks to his dog saying,

*"Xuri-xuri, tai nuk un ada' be'."*  
 RDP-quiet tree one CONT be(MLY) indeed  
 "Quiet, there's a tree trunk".'

- (11) Direct speech construction with a verb in the Teiwa Frog story by Lorens.

*Yivar manak a wa, a-yivar ga-walas a wa*  
 dog master 3SG say 3SG.POSS-dog 3SG-tell 3SG say  
 'The dog's master said, told his dog saying

*"Ha siga ga'an..."*  
 2SG be.quiet DEM  
 "You be quiet there" ...'

In sum, direct speech constructions, which may be accompanied by ideophones, are used more in free narratives than in Frog stories in both Alorese and Teiwa.

**4.2 Tail-head linkage** The level of cohesion of free narratives versus Frog stories was investigated by considering the use of tail-head linkage. Tail-head linkage links three clauses: the first clause of the construction (the ‘tail’) is the final clause in a unit of discourse, usually a paragraph. The second clause (the ‘head’) recapitulates the tail clause. It typically immediately follows the tail clause but it acts as the initial element of the third clause in a new discourse unit or paragraph (Guérin & Aiton 2019). Tail-head constructions differ in what the head recapitulates from the tail (de Vries 2005); in our data, the recapitulation ranges from a full clause to just a single verb or noun.

The primary discourse function of a tail-head construction is to add cohesion to the discourse. By recapitulating the tail clause, the head puts (an element of) the proposition of this clause into the “background”, and “foregrounds” the clause that follows the head (Guérin & Aiton 2019:2–3). In addition, tail-head linkages function to structure the discourse, for example by formally outlining paragraph boundaries, the end of a paragraph is signaled by a tail clause, while a head clause opens a new paragraph (Guérin & Aiton 2019:25–29).

Tail-head constructions appear to be used far more frequently in spoken language than in written language, which may be because the repetition of tail-head linkage helps in both the online planning of the narrative and the processing of it (de Vries 2005). Tail-head linkage does not appear equally often in all oral genres: it seems to be favoured in narrative and procedural texts. Because tail-head constructions are a stylistic device, the rate of their use may vary across languages as well as across individuals (de Vries 2005:375; Guérin & Aiton 2019:25).

In the Alorese narratives, the Frog stories have little or no tail-head linkage, while in free narratives, 19.1–32% of all clauses connect in a tail head construction (see Table 10). Using the Fisher’s Exact test, the results show a statistically significant difference for Marifat and Magdalena, but not for Jakobus (Marifat:  $p < 0.001$ , odds ratio = inf; Magdalena:  $p < 0.001$ , odds ratio = inf).

**Table 10.** The number of tail-head and non-tail-head clauses in the free narratives and the Frog stories of three Alorese speakers

	Free narrative			Frog story		
	Tail-head clauses	Non-tail-head clauses	Total clauses	Tail-head clauses	Non-tail-head clauses	Total clauses
Jakobus	18 (19.1%)	76	94	28 (12.7%)	192	220
Marifat	8 (32%)	17	25	0 (0%)	112	112
Magdalena	20 (20.4%)	78	98	0 (0%)	178	178

An example of the difference in the degree of cohesion in free narratives and Frog story is presented in examples (12)–(13). The function of tail-head linkage to create cohesion can be seen by comparing two “falling” events described by the same speaker Marifat in the free narrative and in the Frog story. In the free narrative she uses tail-head linkage to create coherence three times, as in (12) below. The tail head linkage also functions to organize the series of events by building a logical hierarchy of events that leads to the falling event. The fall event is the last event that is presented, when the narrative reaches its climax.

(12) Tail-head linkage in the Alorese free narrative by Marifat.

*Akhirnya mene-mene Kotong Dake nawang ehm Ubong Dake nawang,*  
 finally RDP~come head sharp win butt sharp win  
 ‘Finally, Sharp Head won, eh Pointed back won,  
*Ubong Dake nawang ro nolo hela jadi ro hela gere*  
 butt sharp win 3SG 3SG-precede climb so(MLY) 3SG climb go.up  
 Pointed Back won he climbed first so he climbed up,  
*ro hela gere mu ro paha tapo klappang*  
 3SG climb go.up SEQ 3SG hold coconut midrib  
 he climbed up and he grabbed the midrib of the coconut leaf,  
*paha tapo klappang ro gokal lodo.*  
 hold coconut midrib 3SG fall descend  
 (having) grabbed the midrib of the coconut leaf, he fell down.’

In contrast, in Marifat’s Frog story there is no tail-head linkage, which makes the description less cohesive, as in (13). She uses an Indonesian conjunction *karena* ‘because’ which does not reflect the Alorese way of linking events. Here, she says that the boy falls and subsequently explains why, whereas a more natural way of expressing causality in Alorese would let the cause precede the result, as in the final two clauses of (12).

(13) No tail-head in the Alorese Frog story by Marifat.

*Ro sementara ke ro seru mato*  
 3SG while PROX 3SG see frog  
 ‘He is doing this, he looks at the frog,  
*bai anang ke, bai anang gokal ke karena ke*  
 child small DEM.PROX child small fall LOC.PROX because DEM.PROX  
 the small child, the small child falls because this,  
*karena kolong mnia ke*  
 because bird owl DEM.PROX  
 because an owl

*ada ke kajo bea ke na lolong.*  
 be(MLY) LOC.PROX tree big DEM.PROX POSS top  
 is on the tree.’

Unlike Alorese, the Teiwa narratives do not show a similar tendency against using tail-head constructions in Frog stories (see Table 11). In Martheda’s free narrative and Frog story, the percentage of clauses linked by tail-head constructions is almost the same: 12% of the clauses in her free narrative are connected in a tail-head construction, while 10.7% of the clauses in her Frog story are so connected. In Bertha’s narratives, tail-head constructions are only present in the free narrative, while they are absent in the Frog story. Using the Fisher’s Exact test, the results show a statistically significant difference only for Bertha ( $p < 0.05$ , odds ratio = inf). Interestingly, among the men, we observe the opposite pattern, namely the Frog story by Lorens contains more clauses linked by tail head (23.6%) than the free narratives by Aser (11.8%) and Seprianus (14.4%) (Fisher’s Exact test for Aser and Lorens  $p < 0.05$ , odds ratio = 0.433; for Seprianus and Lorens  $p < 0.05$ , odds ratio = 0.454). The tail head pattern in Lorens’s Frog story may be due to the fact that, unlike Martheda and Bertha, Lorens had the time to familiarize himself with the story before the recording was made (see §2).

**Table 11.** The number of tail-head and non-tail-head clauses in the free narratives and the Frog stories of five Teiwa speakers

	Free narrative			Frog story		
	Tail-head clauses	Non-tail-head clauses	Total clauses	Tail-head clauses	Non-tail-head clauses	Total clauses
Martheda	10 (12%)	73	83	14 (10.7%)	117	131
Bertha	2 (13.3%)	13	15	0 (0%)	144	144
Aser	16 -11.8	120	136	-	-	-
Seprianus	36 (14.4%)	214	250	-	-	-
Lorens	-	-	-	34 (23.6%)	110	144

In sum, overall, in both languages, the style of free narratives is more lively than Frog stories, using relatively more direct speech quotes, sometimes accompanied by ideophones. The level of cohesion as measured by the use of tail-head linkage constructions used in Alorese is higher in free narratives than in Frog stories. In Teiwa, however, both types of narratives do not really differ in their use of tail-head linkage, so that the use of this style feature by Teiwa speakers seems to be more individually based.



**5. Speech rate** The last feature that may differentiate free narratives from Frog stories is the speakers’ speech rate. Speech rate is the measure of how many words a speaker utters per minute. Based on our own observations while transcribing the recordings, we expected speech rates to be faster in free narratives than in Frog stories. That would be expected for the following reasons: (i) the Frog story may be problematic in terms of lexical access and planning; (ii) the Frog story is not entrenched in the speaker’s repertoire; and (iii) the Frog story is told while holding a booklet or loose pages. We briefly explain these reasons here.

Studies in second language acquisition and heritage languages have demonstrated that speech rate is an indicator of fluency, which is the ability of quickly accessing lexical items, packaging information into grammatical forms, and planning the utterance (Polinsky 2008; Segalowitz 2010; Irizarri van Suchtelen 2016). When speakers have problems with lexical access and general construction of clauses, they are less fluent and therefore have a slower speech rate. Interestingly, speech rate can also be affected by the presence of nouns. A recent study by Seifart et al. (2018) shows that nouns slow down speech across structurally and culturally different languages. They explain this tendency as “nouns thus appear to require more planning, probably due to the new information they usually represent” (5720). These two factors can act in a cumulative way, as the Frog story requires more planning than a free narrative both in terms of packaging information and in terms of the type and number of nouns that are used to describe the pictures. We may therefore expect a slower speech rate in the Frog story because speakers have to access many lexical items, some of which they rarely use, and they have to plan an unknown narrative.

The second reason, related to the first one, why the speech rate in Frog stories is expected to be slower is that the Frog story is not “entrenched” in the repertoire of speakers as traditional free narratives are. Entrenchment is understood here as “the degree to which the formation and activation of a cognitive unit is routinized and automated” (Schmid 2012:119). The production of traditional free narratives is routinized and automated because speakers have repeatedly heard and told these stories. In other words, speakers have no problem accessing lexical items and packaging information into grammatical forms when they tell a free narrative, because this is not composed on the spot, but recovered from memory.

Third, we expect speakers to talk slower because they hold a booklet or loose pages depicting the Frog story in their hands while telling the story. In the video recordings, it is visible that speakers physically look at the pictures and turn the pages while describing them. This inevitably should have an effect on their speech rate, when compared to the free narrative where speakers talk freely, looking around without having any prop in their hands or studying images.<sup>12</sup>

<sup>12</sup>One may wonder whether this difference alone might account for the variation in speech rate between genres. To partially answer this question, one could either measure the speech rate in smaller windows between the turning of pages, or remove all of the pauses associated with page turning. However, the only way to filter out the effect of holding a picture and looking at it while speaking would be to ask the speaker to tell the Frog story without looking at the book (see for instance de León 2009:177). Unfortunately this is not the way the data used in the present study were elicited (see §2).

To measure speech rate, we divided a speaker’s total number of words by the total duration of his or her speech in minutes, taking out any stretches of silence at the beginning and end of the recordings. As we did not filter out pauses, repetitions, or self-corrections that took place within the narrative, speech rate here is a broad measure of fluency.

The speech rate measures of Alorese and Teiwa speakers are reported in Table 12. For all the speakers, the speech rate is higher in the free narrative. However, there is some variation among speakers, for instance on average Jakobus only utters approximately 8 words more per minute, while Marifat utters 60 words more every minute. Furthermore, all Teiwa speakers are faster than the Alorese speakers; this may be due to a language-specific factor.

**Table 12.** Speech rate as words per minute (wpm) in Alorese and Teiwa speakers

Alorese <sup>13</sup>	Free narrative (wpm)	Frog story (wpm)
Marifat	135.2	74.9
Magdalena	117.2	88.2
Jakobus	90.1	82.4
Teiwa <sup>14</sup>	Free narrative (wpm)	Frog story (wpm)
Martheda	146.6	107.3
Bertha	242.3 <sup>15</sup>	110.5
Aser	144.7	–
Seprianus	165.4	–
Lorens	–	120.7

To test the speech rate in the two conditions (free narrative and Frog story), we used a Wilcoxon signed rank-test on Alorese and Teiwa speakers together.<sup>16</sup> The results showed that there was a significant difference ( $z = -2.154$ ,  $p < 0.05$ ) between the speech rate in the free narrative and in the Frog story. The median rate for the free narrative was 139.5 wpm compared to 97.75 wpm for the Frog story. Therefore, when telling the Frog story, speakers usually talk at a slower speech rate. This likely happens because they have to retrieve lexical items that they do not commonly use, such as ‘owl’ or ‘ravine’, and they have to think of terms that may not exist in their language, such as ‘jar’, ‘bed’, or ‘boots’. The need to invent or borrow vocabulary may distract speakers from the storytelling itself. Further evidence for this comes from the speech rate of Lorens, who is faster than the other Teiwa speakers when

<sup>13</sup>The speech rates in the Frog story of Alorese speakers is similar to the average speech rate in other five Austronesian languages that we tested for the same stimulus ( $M=82.1$  wpm). For instance, in Javanese the speech rate in the Frog story was 79.2 wpm.

<sup>14</sup>The speech rates in the Frog story of Teiwa speakers is faster than the average speech rate in seven other Alor-Pantar languages that we tested for the same stimulus ( $M=74.5$  wpm). For instance, in Kaera the speech rate in the Frog story was 97.5 wpm, and in Sar it was 74.4 wpm. This finding suggests that variation in speech rate may be an interesting topic for further investigation in these languages.

<sup>15</sup>This measure needs to be taken with caution as the free narrative of this speaker only lasted 0.48 seconds (see §2).

<sup>16</sup>In the test, we included the rates of Aser (for the free narrative) and Lorens (for the Frog story), but we excluded Seprianus.

telling the Frog story. This is probably due to the fact that he was the only one who had time to prepare the story (see §2). It might indicate that familiarizing with the pictures before telling the story improves lexical retrieval of uncommon nouns, and has a positive effect on the speech rate of speakers. Furthermore, the story becomes more entrenched in the speaker’s mind, and therefore is told more fluently.<sup>17</sup>

Another factor that we cannot exclude in accounting for a slower rate in the Frog stories is that holding a print out of the story book in one’s hands, looking at the pictures, and physically turning pages may also affect speech rate. Unfortunately, it was not possible to tease apart this factor from the others; a rigorous testing would require separate experiments to be set up specifically for this purpose.<sup>18</sup>

**6. Discussion and conclusions** In this study we have shown that using the picture book *Frog, where are you?* as a stimulus to elicit narratives has measurable linguistic effects on the naturalness of the language that speakers use. This may be taken as a warning against basing grammatical descriptions or linguistic comparisons only on prompted narratives. A similar concern is expressed by McDonnell (2018:197), who noticed that “[n]owadays, it is my impression that the Frog story is collected as a way to elicit a story with relative ease”. In the previous sections we have shown that this ease comes at the cost of naturalness. Needless to say, this does not mean that our predictions apply to all speakers in all languages. Some speakers may perform very naturally even when they tell the Frog story, while others may not. Here we have focused on the linguistic effects in those speakers who perform less naturally.

The linguistic differences of free narratives and Frog stories are related to the different situations in which these narratives are told. The first difference, which stems from the production circumstances, is in the degree of lexical density, especially when this is operationalized as noun-pronoun ratio. Generally, the presence of many nouns is related to explicit style which is typical of context-independent written language, while the use of pronouns is more typical of spoken language that is contextually embedded. As pointed out by Norrby & Håkansson (2007:49), “[a] high frequency of pronouns indicates that the text is contextually and/or situationally dependent, whereas a high frequency of nouns points to a relatively context-independent text as many nouns have a specified meaning, irrespective of the context”. Frog stories are delivered orally, but they lack a context because they are new to the speaker, and are not part of his or her cultural practice. Therefore, instead of tracking referents by using pronouns, speakers prefer to be explicit by using full NPs. Interestingly, this was observed in two structurally and genetically different languages, Alorese and Teiwa. This suggests a strategy of tracking referents that is cross-linguistically applied: when speakers tell the Frog story, they prefer fully lexical referents over pronominal ones.

<sup>17</sup>To test the effect of entrenchment on speech rate, one would need to record two groups of speakers: one group telling the Frog story immediately after being given the pictures, and another group telling it after one week in which they have time to familiarize and prepare the narrative.

<sup>18</sup>To tease apart the effect of holding pictures while telling the narrative, one would need to record two groups of speakers: one group holding the book in their hands, and the other without any prompt, and test their speech rates.

The choice for explicitness has been observed also in the narratives of bilingual heritage speakers (see the Explicitness Hypothesis in Aalberse, Backus & Muysken 2019:251). Bilingual speakers who are not fluent in the heritage language tend to use overt or more explicit forms (see Polinsky 2006:244). What we can conclude from this is that, in general, when speakers feel less at ease with what they are saying (either because they are not fluent or because they are not familiar with telling a story using a picture book), they tend to be more explicit to increase the likelihood that their message is understood.

Another result that emerged from our analysis is that in some languages, such as in Alorese and in Teiwa, lexical density is better measured by the noun-pronoun ratio than by the noun-clause and the noun-verb ratios. This is because nouns and pronouns are both referential devices, but the former carry lexical information, while the latter only carry grammatical information. Thus, computing the ratio of nouns to pronouns gives a good indication of how much lexical and grammatical information a text contains. Verbs and clauses, on the other hand, are of a different nature because verbs also carry lexical information like nouns, while clauses are grammatical units that minimally include a predicate with a verbal or nominal head. So, computing the ratio of nouns to verbs and clauses might not be so informative of lexical density after all. As we have seen in §3.3, the frequency of verbs used in clauses is a language-specific typological feature which may affect the results of the calculation. In many Papuan language spoken in central New Guinea, the verb plays a key role as referential device in narratives because of the switch reference system, almost completely fulfilling the roles that pronouns have in languages without switch reference. As a result (free) pronouns are rare in narrative genres (de Vries, *pers. comm.*). In such languages, the noun-verb ratio may be a key indicator of lexical density.

The second difference between free narratives and Frog stories relates to the narrative style that speakers adopt to make a narrative more vivid, entertaining, and coherent. The narrative style varies according to the the communicative purposes and the production circumstances. The communicative purpose of the Frog story is more descriptive, while narratives are usually told to entertain. Therefore, the language of the Frog stories in Teiwa makes less use of stylistic devices such as direct speech (with ideophones). The low frequency of direct speech in Frog stories suggest that the involvement of the speakers with the story is less strong than in the free narratives: when speakers tell the Frog story they do not easily imagine the characters speaking. The production circumstances in which the Frog story is told are such that the speaker usually does not have time to plan what s/he will say. The low frequency of tail-head constructions in the Alorese Frog stories shows that speakers lack a global view of what is happening in the story, or how the story unfolds. Alorese speakers use tail-head to structure their narratives and create a chronological chain of events, but in order to plan the narrative in this way, they need to know the narrative (cf. de Vries 2006). It is easier to structure a narrative when it can be prepared, as the data from Lorens show, and harder to structure an unknown narrative. That the Alorese speakers lack a global overview of the events in the Frog story also manifests itself in the description style used by some speakers where each picture is described sepa-

rately, unconnected to the others (cf. Berthele 2009). Interestingly, in Teiwa the use of tail-head constructions does not seem to be dependent on the type of narrative, but rather seems a stylistic choice that varies per individual.

Finally, the differences in speech rate between free narratives and Frog stories are related to the topic and the content of the narrative. We hypothesize that there are three factors affecting the speech rate of Frog stories: lexical access, memory, and physically looking at the pictures. Speakers talk slower because they need to retrieve many lexical items that are not easily or routinely accessed in their repertoire. In other words, speakers need more time to plan their utterances because the words and the grammatical structures of the Frog stories are not entrenched in their repertoire. In contrast, free narratives are made of entrenched units that are rapidly retrieved from memory. Furthermore, holding a book or loose pages in their hands and constantly looking at them while telling the Frog story is also likely to interfere with the speed with which speakers plan and produce their utterances. To tease apart the influence of each of these factors requires additional testing (as suggested in footnotes 15 and 16).

In sum, this paper has presented qualitative and quantitative evidence that orally delivered free narratives and prompted Frog story narratives differ significantly in their degree of naturalness. The linguistic variables that can be used to measure degree of naturalness of oral narratives include lexical density defined as noun-pronoun ratio, the frequency of direct speech reports, and tail-head linkage, as well as speech rate. These measures apply in languages of different genetic affiliation and with different typological profiles. It has long been known that using visual prompts to elicit narratives has benefits, but also comes with the cost of losing naturalness, and here we have indicated ways to measure this cost.

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## Appendix A. Free narratives

Complete utterances are numbered separately. Most orthographic lines represent a separate intonational phrase. Intonational phrases are separated from the following phrase by level or rising intonation which signals that there is more to come, and/or a pause; all of these are indicated by commas. Hesitation pauses are indicated by <...>.

Alorese free narrative by Jakobus, title *Aleng Keleng* ‘Slender Waist’.

- (1) a. *Lara tou we mäsia tällo, tou te na kotong blaha,*  
 day one 3PL person three one DEM.DIST POSS head long  
 One day they three people, one had a long head,
- b. *tou te na ubong dake,*  
 one DEM.DIST POSS butt sharp  
 one had a sharp butt,
- c. *tou te na aleng kele.*  
 one DIST POSS waist slender  
 one had a slender waist.
- (2) *Lara tou na mama gahing we r-ahi gena kajo.*  
 day one POSS father order 3PL 3PL-go search wood  
 One day their father ordered them to go fetch some wood,
- (3) a. *We r-ahi gena kajo ke bo*  
 3PL 3PL-go search wood DEM.PROX and  
 they went fetch the wood and
- b. *we pana pana pana r-ahi.*  
 3PL walk walk walk 3PL-go  
 they walked and walked.
- (4) *We onong marak.*  
 3PL inside dry  
 They were thirsty.
- (5) *We onong marak kaing bo tällokaing kädoro wäkking.*  
 3PL inside dry already and three.of.them invite RECP  
 They were thirsty and the three of them challenged each other.

- (6) *Kəɔoro wəkking mərrə hewai bo hela tapo.*  
 invite RECP say who FOC climb coconut  
 They challenged each other by asking who would climb the coconut palm.
- (7) *Kotong Dake mərrə ro bo hela.*  
 head sharp say 3SG FOC climb  
 Pointed Head said that he would climb.
- (8) *Ubo Dake di mərrə ro bo hela.*  
 butt sharp also say 3SG FOC climb  
 Pointed Back also said that he would climb.
- (9) *Aleng Kele di ro mərrə ro bo hela.*  
 waist slender also 3SG say 3SG FOC climb  
 Slender Waist also said that he would climb.
- (10) a. *Kaing təllokaing mərrə we səkali hela bo*  
 already three.of.them say 3PL all(MLY) climb and  
 Then the three of them said that they would all climb and
- b. *we kəɔoro wəkking.*  
 3PL invite RECP  
 they challenged each other.
- (11) a. *We kəɔoro wəkking mərrə we plae,*  
 3PL invite RECP say 3PL run  
 They challenged each other saying that they would run,
- b. *we plae ke he bo n-olo sampe ekang kənnə,*  
 3PL run LOC.PROX who FOC 3SG-precede arrive(MLY) garden then  
 they would run and the one who would arrive first,
- c. *ro bo hela.*  
 3SG FOC climb  
 he would climb.

- (12) a. *Kaing təllokaing mulai tide hama kaing bo*  
 already three.of.them begin(MLY) stand together already and  
 So, the three of them began standing next to each other and
- b. *we rekeng, we rekeng tou rua təllo,*  
 3PL count 3PL count one two three  
 they counted, they counted one two three,
- c. *lansung plae bo kətte.*  
 right.after(MLY) run and DEM.DIST  
 and then ran.
- (13) a. *Kotong Blaha kotong ba talalu bo*  
 head long head heavy too(MLY) and  
 Pointed Head, his head was too heavy and
- b. *plae di kotong səmbuno ekang.*  
 run also head crash garden  
 when he ran, he got his head stuck into the ground.
- (14) a. *Ubo Dake ubong ba talalu bo plae mu*  
 butt sharp butt heavy too(MLY) and run SEQ  
 Pointed Back, his back was too heavy, he ran and
- b. *sepang meheng bo doli.*  
 curved only and can.not  
 he bent down so he could not run.
- (15) a. *Aleng Kele aleng kele aleng kl-kele bo kaing*  
 waist slender waist slender waist RDP slender and already  
 Slender Waist, his waist was thin, his waist was very thin and
- b. *plae hapa n-ai mu doli.*  
 run come.vicinity 3SG-go SEQ can.not  
 he ran but he couldn't.
- (16) a. *Kaing bo,*  
 already and  
 And then,
- b. *Kotong Dake mərre: “Kaing tite plae doli bo*  
 head sharp say already IPL.INCL run can.not and  
 Pointed Head said: “That’s it, we can’t run and

- c. *hapa r-ahi ke go bo hela*.  
 come.vicinity 3PL-go PROX 1SG FOC climb  
 they went I climb”.
- (17) a. *Kanne Ubo Dake merre:*  
 then butt sharp say  
 Then Pointed Back said:
- b. *“Kaing bo ruangkaing tobo go bo hela,*  
 already and two.of.them sit 1SG FOC climb  
 “That’s it the two of you sit and I climb,
- c. *mi ruang tobo seru masia*.  
 2PL two sit see person  
 you two sit watching for people”.
- (18) a. *Aleng Kele merre:*  
 waist slender say  
 Slender Waist said:
- b. *“Iyo kette kanne kame ruang baing mo bo hela.*  
 yes DEM.DIST then 1PL.EXCL two wait 2SG FOC climb  
 “Yes then the two of us wait and you climb”.
- (19) *Kaing Ubo Dake bo gere.*  
 already butt sharp FOC go.up  
 Then, Pointed Back went up.
- (20) a. *Ubo Dake bo gere,*  
 butt sharp FOC go.up  
 Pointed Back went up,
- b. *hela gere, paha tapo klappang.*  
 climb go.up hold coconut leaf.midrib  
 he climbed up, and held the midrib of the coconut leaf.
- (21) *Tapo klappang marak.*  
 coconut leaf.midrib dry  
 The midrib of the coconut leaf was dry.

- (22) a. *Tapo klappang hape te,*  
coconut leaf.midrib snap DEM.DIST  
The midrib of the coconut leaf snapped,
- b. *karang-karang lodo dei ekang kalli tana lolong.*  
RDP equally descend throw garden LOC.LOW landsoil top  
so they both fell down onto the ground.
- (23) *Dei ekang kette ubo lodo mula kalli tana onong.*  
throw garden DEM.DIST butt descend plant LOC.LOW landsoil inside  
Falling down, his back stuck into the ground.
- (24) *We ruakaing geki.*  
3PL two.of.them laugh  
The two of them laughed.
- (25) a. *We ruakaing geki geki, Ubong Dake nang*  
3PL two.of.them laugh laugh butt sharp with  
The two of them laughed and laughed, Pointed Back with
- b. *Kotong Dake nang Aleng Kele geki.*  
head sharp with waist slender laugh  
Pointed Head with Slender Waist laughed.
- (26) *Geki nɛmuang Kotong Blaha Kotong Dake ke ro mɛrre:*  
laugh just head long head sharp DEM.PROX 3SG say  
They laughed and Pointed Head he said:
- (27) *“Kaing bo, go bo hela”.*  
already and 1SG FOC climb  
“That’s it, I climb.”
- (28) a. *Hela gereng, gereng sampe katti mau*  
climb go.up go.up arrive(MLY) LOC.HIGH want(MLY)  
He climbed up, went up to the top
- b. *natong limang gere paha tapo klappang.*  
stretch hand go.up hold coconut leaf.midrib  
to stretch his hands up to grab the midrib of the coconut leaf.

- (29) *Tərre wəkking gereng kətte.*  
 pull body go.up DEM.DIST  
 He pulled his body up.
- (30) a. *Kotong gere tadu tapo klappang te,*  
 head go.up get.caught coconut leaf.midrib DEM.DIST  
 His head went up and stuck into the midrib of the coconut leaf
- b. *kaing nang da-daha mu*  
 already with RDP strong SEQ  
 it stuck firmly and then
- c. *ro gəppar apa kətti tapo lolong bo*  
 3SG scream what(MLY) LOC.HIGH coconut top and  
 he screamed something from the top of the coconut and
- d. *kaing bo hewai bisa gere gute ro.*  
 already and who can(MLY) go.up take 3SG  
 (he asked) who could go up and help him.
- (31) a. *Aleng Kele ke tana lolong te ro geking,*  
 waist slender LOC.PROX landsoil top DEM.DIST 3SG laugh  
 Slender Waist was on the ground and he laughed,
- b. *geking geking geking geking.*  
 laugh laugh laugh laugh  
 laughed, laughed, laughed and laughed.
- (32) *Nehe kənne aleng gəttong kaing mate.*  
 not.long.after then waist break already die  
 After a while his back broke and he died.
- (33) *Take kənne məsia wonok beta sampe we.*  
 NEG then person other come arrive(MLY) 3PL  
 Not long after, some people arrived.

- (34) a. *Sampe we kaing bo ata r-ahi maring*  
 arrive(MLY) 3PL already and people 3PL-go say  
 They reached them and then the people went to say
- b. *na nina mama maring: “ela.*  
 POSS mother father say INTJ  
 to their mother and father, they said: “Ehi.
- c. *Bireng tallo ke r-ai gena pai nuwella bo*  
 children three DEM.PROX 3PL-go search what just.mentioned FOC  
 The three children who went to search for something earlier
- d. *tou la katti kotong tarang, kotong gere dahang*  
 one ? LOC.HIGH head get.stuck head go.up strong  
 one up there got his head stuck firmly into
- e. *katti tapo klappang bo kalli teleng mu*  
 LOC.HIGH coconut leaf.midrib and LOC.LOW hang SEQ  
 the midrib of the coconut leaf and hanging up there
- f. *n-ang mate.*  
 3SG-use die  
 he then died.
- g. *Tou ke gæsseng n-olo hela ke*  
 one DEM.PROX maybe 3SG-precede climb DEM.PROX  
 Another one, maybe the first who climbed
- h. *bo gokal lodong mu*  
 FOC fall descend SEQ  
 fell down and
- i. *ubong bajo kalli tana onong ke mate.*  
 butt stab LOC.LOW landsoil inside DEM.PROX die  
 his back stuck into the ground and he died.
- j. *Na aleng kele ke geki-geki meheng*  
 POSS waist slender DEM.PROX RDP~laugh only  
 The one with the thin waist just laughed and laughed
- k. *ke bo sampe aleng gəttong.*  
 DEM.PROX and arrive.MLY waist break  
 until his waist broke.”

Teiwa free narrative by Martheda, title *Ikan gabus* ‘k.o. fish, *Channa striata*’

- (1) a. *Uy quaf nuk ga'an u,*  
 person woman one DEM DIST  
 There was a woman,
- b. *ga-kraian war ga-xapan ga'an u,*  
 3SG.POSS-work day 3SG.POSS-support DEM DIST  
 her daily work (was),
- c. *amidan, xar la qai ga'-uyan terus.*  
 what fire.wood FOC just 3SG-search continue  
 ehm, just looking for fire wood.
- (2) *Xar la qai ga'-uyan ma anan a-bangán urus.*  
 fire.wood FOC just 3SG-search come sell 3SG.POSS-life maintain(MLY)  
 Just looking for fire wood to sell to maintain her life.
- (3) a. *Ma nuk g-ax ga'an a gi, xar ga'-uyan si,*  
 come one 3SG-possession DEM PROX go fire.wood 3SG-search SIM  
 One day when she went searching for fire wood,
- b. *a gi bo'oi kul nuk me si,*  
 3SG go river crown one be.at SIM  
 she got to the head of a river and
- c. *a bali si xaf ga'an i, un da tiri.*  
 3SG see SIM fish DEM FORTHC CONT ascend float  
 she saw a fish floating up.
- (4) *Hasi yir siis.*  
 but water dry  
 But the water was low.
- (5) a. *Yir siis ba a daa tiri ba xaf waal ta,*  
 water dry SEQ 3SG ascend float SEQ fish that.mentioned TOP  
 The water was dry so it floated up the fish,
- b. *amidan, o'on usan daa-n gula' ta sambayang.*  
 what head lift ascend-REAL finish, then pray(MLY)  
 ehm, lifted up its head and prayed.



- (6) a. *A sambayang ga'an xaran:*  
 3SG pray DEM thus  
 It prayed like this:
- b. “*Nome, ha ni'in wan sayan si mam,*  
 1PL.EXCL.POSS-father 2SG 1PL.EXCL be love(MLY) SIM right  
 “Our Father, if you really love us
- c. *xal eran a yaa le ni bisa bangán so'o.*”  
 rain that 3SG descend or 1PL.EXCL can(MLY) live please  
 please let it rain so that we can live.”
- (7) a. *Uy quaf waal ta, amidan,*  
 person old.woman that.mentioned TOP what  
 That woman, ehm,
- b. *xaf xu'u ga-sambayang ma a 'ena'.*  
 fish that 3SG.POSS-pray come 3SG remember  
 memorized the prayer of that fish.
- (8) a. *A ta gi xar warak-an gula',*  
 3SG TOP go fire.wood search-REAL finish  
 After she finished collecting fire wood,
- b. *ewar a-yaf ma gi.*  
 return 3SG.POSS-house come go  
 she returned to her home.
- (9) a. *Ha si wa ge'ef a... walas xorán ga'an u,*  
 then SIM go recent.past 3SG tell thus 3SG DIST  
 But while she was memorizing,
- b. *uy kaya' nuk ga'an u un ga-si...*  
 person rich(MLY) one DEM DIST CONT 3SG.POSS-voice  
 a rich person her voice...
- c. *ge-'er ga-si wuraq.*  
 3SG-make 3SG.POSS-voice hear  
 heard her voice.

- (10) a. *A wa “o insi ana’ gi si,*  
3SG say INTJ maybe long.time go SIM  
He thought, “Oh, maybe later,
- b. *a’an yip ana’ sambayang mo xaf wa ge’eg,*  
3SG also long.time pray(MLY) like fish say just.now  
she will also pray like that fish
- c. *a bali un sambayang a wa,*  
3SG see CONT pray(MLY) 3SG say  
said just now (that) he saw praying saying,
- d. *Kari Uaad gasoi xal eran yaa-n u.*  
old.man big 3SG-order rain that descend-REAL DIST  
requesting Big Lord to let it rain.”
- (11) a. *Eran si a’an yip ana’ sambayang xoran ba,*  
that SIM 3SG also later pray(MLY) thus SEQ  
(Thinking) that later she would also pray like that,
- b. *a mulai a-anabua non gi-soi gi amidan,*  
3SG begin(MLY) 3SG.POSS-folk(MLY) PL 3PL-order go what  
he began to order his folks to ehm,
- c. *piring qas-an non tona’ ma karung mi’-an gula’,*  
plate(MLY) broken-REAL PL gather come sack(MLY) sit-REAL finish  
collect broken plates and put them in a sack,
- d. *a ta ga-walas xaran...*  
3SG TOP 3SG-tell thus  
he told them like this...
- (12) a. *“Ana’-an kalo hi bali uy quaf u*  
later-REAL if(MLY) 2PL see person old.woman DIST  
“Later if you see that woman
- b. *a ti’-in a sambayang si hi ta, amidan,*  
3SG lie.down-REAL 3SG pray(MLY) SIM 2PL TOP what  
go lie down and pray you, ehm,
- c. *in u... pin gi ma ga-yaf luxun me-en gula’,*  
it.thing DIST hold go come 3SG-house high be.at-REAL finish  
take this stuff on top of her house,
- d. *ga-man baaq u er-an gula’,*  
3SG.POSS-grass hole DIST make-REAL finish  
make a hole in its roof,

- e. *ta karung u eran ma ga'an ta moxod,*  
TOP sack(MLY) DIST that come 3SG on drop  
then drop that sack on top of her,
- f. *eran si a wa ga'an u sen la xu'u be'."*  
that SIM 3SG say 3SG DIST money FOC that.one indeed  
she will think it is money."
- (13) a. *Qau uy quaf waal ta gi-in gula',*  
good person old.woman that.mentioned TOP go-REAL finish  
When that woman went (home),
- b. *iqa'an si a mulai sambayang.*  
night SIM 3SG begin(MLY) pray(MLY)  
at night she began to pray.
- (14) a. *A sambayang xaran,*  
3SG pray(MLY) thus  
She prayed like this,
- b. *"N-ome, kalo ha na'an wan sayan si, amidan,*  
1PLE.EXCL-father if(MLY) 2SG 1SG be love(MLY) SIM what  
"Father, if you love me, ehm,
- c. *berkat ma na-mian dagar mo,*  
blessing(MLY) come 1SG-put.at.s.o. look.like like  
give me blessing like
- d. *xaf wa ge'ef sambayang xoran."*  
fish go recent.past pray(MLY) thus  
the fish (who was) praying earlier."
- (15) a. *A sambayang xoran ga'an uy non wa ge'ef*  
3SG pray(MLY) thus DEM person PL go recent.past  
While she was praying like that, people were going
- b. *un yaf luxun me-en ga'an ta*  
CONT house on.top be.at-REAL DEM TOP  
on top of that house
- c. *ga-sambayang wuraq ba inam ta*  
3SG.POSS-pray(MLY) hear SEQ 3PL TOP  
hearing her prayer so they
- d. *in qas-an ga'an ta ma ga'an ta moxod.*  
it.thing broken-REAL DEM TOP come 3SG on drop  
dropped those broken things on her.

- (16) a. *Ga'an ta moxod-an gula' a wa ta* “O trimakasi, Kari.  
3SG on drop-REAL finish 3SG say TOP INTJ thank.you(MLY) old.man  
Having dropped it on her she said, “Oh thank you, Lord,
- b. *ha berkat ma na-mian la xa'a.*  
2SG blessing(MLY) come 1S-put.at.so. FOC this  
you gave me this blessing.”
- (17) a. *Ana' maan bees qai a tup-an si*  
long.time NEG morning only 3SG get.up-REAL SIM
- b. *a-karung buka' si,*  
3SG.POSS-sack(MLY) open SIM  
Not long after that in the morning she woke up and opened that sack,
- c. *amidan, sen maas qai ga-g-om me wal.*  
what money(MLY) gold only 3SG.POSS-3SG.POSS-inside be.at be.full  
what, it was (was) full with golden coins.
- (18) a. *A ta mulai tupan sambayang,*  
then TOP begin(MLY) get.up-REAL pray(MLY)  
Then she got up to pray,
- b. “*N-ome, bangan dum-dum!*”  
1PL.EXCL.POSS-father ask.for RDP much  
“Father, thanks very much!”
- c. *A ta mulai sen eran u pin gi blanja.*  
then TOP begin(MLY) money(MLY) that DIST hold go shopping(MLY)  
Then she went shopping with that money.
- (19) a. *Uy kaya' waal ta*  
person rich(MLY) that.mentioned TOP  
That rich man
- b. *ge'er ga-si wurag a sambayang xoran ba*  
3SG-make 3SG.POSS-voice hear 3SG pray(MLY) thus SEQ  
heard her voice praying like that and
- c. *a'an yip ta a-anabua non gi-soi gi-in,*  
3SG also TOP 3SG.POSS-folk(MLY) PL 3PL-order go-REAL  
he ordered his folks to go
- d. *piring gas-an non ma tona'.*  
plate(MLY) broken-REAL PL come gather  
collect broken plates.

- (20) *Inam aga' ma tona' karung yusan.*  
 they all come gather sack(MLY) five  
 They collected five sacks altogether.
- (21) a. *Pi-n ri'-an gula',*  
 hold-REAL bring-REAL finish
- b. *a ta a-anabua non gi-walas xaran,*  
 3SG TOP 3SG.POSS-folk(MLY) PL 3PL-tell thus  
 After bringing (the stuff), he ordered his folks saying,
- c. *“Ana'-an taran ma saman na'an yip*  
 later-REAL night come same 1SG also  
 “Later tonight when I also
- d. *kalo quri ma walas xoran si,*  
 if(MLY) be.sleepy come tell like.that SIM  
 sleep and talk like that,
- e. *hi ta mulai in xu'u ma na'an ta moxod ee.”*  
 2PL TOP begin(MLY) it.thing that come 1SG on drop INTJ  
 you drop that stuff on top of me, hey.”
- f. *Ha si inam a wa, “Ha'e.”*  
 then SIM 3PL 3SG say yes  
 So they said, “Yes.”
- (22) a. *“Ana'an ha sambayang xoran si,*  
 later-REAL 2SG pray(MLY) thus SIM  
 Later when you are praying like that,
- b. *ni ta in u ma ha'an ta moxod-an be'.”*  
 1PL.EXCL TOP it.thing DIST come 2SG on drop-REAL indeed  
 we will indeed drop the stuff on top of you.”
- c. *Qau, uy kaya' waal ta*  
 good person rich(MLY) that.mentioned TOP  
 Right, that rich person
- d. *iqa'an ti'-in gula' a sambayang.*  
 night lie.down-REAL finish 3SG pray(MLY)  
 laid down at night (and) he prayed,
- e. *sambayang xoran,*  
 pray(MLY) thus  
 while praying like that

- f. *ga-anabua non ga'an ta in xu'u ma ga'an ta*  
 3SG.POSS-folk(MLY) PL DEM TOP it.thing that come 3SG on  
*moxod.*  
 drop  
 his folks dropped those things on him.
- (23) a. *In u ma ga'an ta moxod-an waal,*  
 it.thing DIST come DEM on drop-REAL that.mentioned  
 That stuff dropped on top of him,
- b. *gi-bos waal ta min-an, min-an gi gula',*  
 3PL.POSS-boss(MLY) that.mentioned TOP die-REAL die-REAL go finish  
 their boss died, died on the spot,
- c. *karena inam gi-sambayang ga'an dagar mo inam,*  
 because(MLY) 3PL 3PL.POSS-pray(MLY) DEM look.like like 3PL  
 because their prayers looked like they...
- d. *dagar mo ma iga' miar-miar xoran.*  
 look.like like come many RDP play thus  
 looked like game playing.
- (24) a. *Tapi uy quaf ga'an a yakin a wa,*  
 but(MLY) person old.woman DEM 3SG expect(MLY) 3SG say  
 But that old woman she believed saying
- b. *Kari Uaad a na-berkat ma ga-mian*  
 old.man big PROX 1SG.POSS-blessing(MLY) come 3SG-put.at.s.o.  
 Big Lord will give me (lit. her) my blessing
- c. *dagar mo wa ge'ef xaf un sambayang xoran, gula'.*  
 look.like like say recent.past fish CONT pray(MLY) thus finish  
 like when the fish was praying, the end.

**Appendix B. Frog stories**

Alorese Frog story by Jakobus.

- (1) a. *Mərreng tou ke kamar tou onong bai klake tou,*  
 night one LOC.PROX room(MLY) one inside child man one  
 One night, inside a room there is a boy,
- b. *Bai klake anang tou, aho tou nang tamba nang taling mətto.*  
 child man small one dog one with add(MLY) with add frog  
 one little boy, one dog and one frog.
- (2) a. *Bai klake anang ke nang na aho tobo...*  
 child man small DEM.PROX with POSS dog sit  
 The little boy and his dog sit...
- b. *tobo seru mətto ke toples onong.*  
 sit see frog LOC.PROX jar(MLY) inside  
 sit looking at the frog inside the jar.
- (3) *Tobo seru-seru mu matang toki.*  
 sit RDP~see SEQ eye sleepy  
 They look and look and their eyes become sleepy.
- (4) *Bai klake ke nang na aho ke gere turu.*  
 child man DEM.PROX with POSS dog DEM.PROX go.up lie.down  
 The boy and his dog get up to sleep.
- (5) *We blupa tera toples matang.*  
 3PL forget close jar(MLY) eye  
 They forget to close the jar lid.
- (6) *We blupa tera te bo mətto ke lodong.*  
 3PL forget close DEM.DIST and frog DEM.PROX descend  
 They forget to close the jar lid and the frog jumps out.

- (7) a. *Ekang wura boir bai klake ke boir*  
 place morning awake child man DEM.PROX awake  
 In the morning he wakes up, the boy wakes up
- b. *nang na aho di kaing.*  
 with POSS dog also already  
 and his dog too.
- (8) *Mene pas ke deki wutung.*  
 come.LEVEL exactly(MLY) LOC.PROX raised.platform end  
 He goes to the end of the bed.
- (9) *Seru toples onong kanne toples onong amuk.*  
 see jar(MLY) inside COMP jar(MLY) inside empty  
 They look inside the jar and see that it is empty.
- (10) a. *Ruakaing ke tobo seru, seru toples onong amuk*  
 two.of.them DEM.PROX sit see see jar(MLY) inside empty  
 The two of them sit looking, they look at the empty jar
- b. *ke bo onong susa bea.*  
 DEM.PROX and inside difficult(MLY) big  
 and they feel very sorry.
- (11) a. *Ruakaing deki lolong lodo,*  
 two.of.them raised.platform top descend  
 The two of them go out of bed,
- b. *mulai gena matto nuwella.*  
 begin(MLY) search frog just.mentioned  
 and start searching for the frog.
- (12) a. *Sepatu hireng ro pleging,*  
 shoe(MLY) PL 3SG dig.in  
 He checks inside the shoes,
- b. *gena kätte hapa n-ai mene.*  
 search DEM.DIST come.vicinity 3SG-go come.LEVEL  
 looking for it back and forth.



- (13) *Aho ke di dərre gena boing.*  
 dog DEM.PROX also follow search all.of  
 The dog also helps him searching.
- (14) a. *Aho ke natong kotong maso*  
 dog DEM.PROX stretch head enter(MLY)  
 The dog stretches its head
- b. *kəlli toples onong, mərre seru mətto bo*  
 LOC.LOW jar(MLY) inside say see frog and  
 into the jar to look for the frog and
- c. *toples mate na kotong.*  
 jar(MLY) tight POSS head  
 its head gets caught into the jar.
- (15) *Ro mau gute bo ro mau tərre na kotong bo doli.*  
 3SG want(MLY) take and 3SG want(MLY) pull POSS head and can.not  
 It wants to take it and it wants to pull its head out but it can't.
- (16) *Kaing toples te karang-karang nang na kotong nəm kətte.*  
 already jar(MLY) DEM.DIST RDP~equally with POSS head like.that  
 That's it, its head is still stuck into the jar like that.
- (17) a. *Bai klake nang aho ke mulai pusing we*  
 child man with dog DEM.PROX begin(MLY) worried(MLY) 3PL  
*gena-gena,*  
 RDP~search  
 The boy and his dog start being confused, they search and search,
- b. *gena leka jendela niring kətte uma pukong,*  
 search open window(MLY) leer LOC.DIST house side  
 to search they open the window and look at the side of the house,
- c. *ane mərre mətto kətte lodong kətte uma awing hireng.*  
 suppose say frog DEM.DIST descend LOC.DIST house side PL  
 thinking that maybe the frog jumped down to the side of the house.
- (18) *We mulai, bai klake ke mulai guo.*  
 3PL begin(MLY) child man DEM.PROX begin(MLY) call  
 They start, the boy starts calling.

- (19) *Ro guo-guo, guo na mətto.*  
 3SG RDP~call call POSS frog  
 He repeatedly calls his frog.
- (20) *Aho ke di natong kotong seru.*  
 dog DEM.PROX also stretch head see  
 The dog stretches its head to look.
- (21) a. *Le take kənnə kotong lodo buno ekang.*  
 long.time NEG then head descend kill place  
 After a while its head falls down and sticks the ground.
- b. *Toples ba.*  
 jar(MLY) heavy  
 The jar is heavy.
- (22) *Toples mate kotong bo kotong ba, gokal lodong.*  
 jar(MLY) tight head and head heavy fall descend  
 Its head is caught into the jar, and its head is heavy, it falls down.
- (23) *Gokal lodong kotong lodong bajo tana.*  
 fall descend head descend stab landsoil  
 Falling down, its head goes down and stick the ground.
- (24) *Toples battang.*  
 jar(MLY) break.into.pieces  
 The jar breaks into pieces.
- (25) a. *Bai klake ke tide jendela lolong,*  
 child man DEM.PROX stand window(MLY) top  
 The boy stands at the window,
- b. *jendela ke seru na aho ke.*  
 window(MLY) DEM.PROX see POSS dog DEM.PROX  
 at the window, looking at his dog.

- (26) *Ro onong susa.*  
 3SG inside difficult(MLY)  
 He feels sorry.
- (27) a. *Ro onong susa nang na aho kaing bo lodo,*  
 3SG inside difficult(MLY) with POSS dog already and descend  
 He feels sorry for his dog and then he goes down,  
 b. *lodo seru na aho, na aho pai-pai lahe.*  
 descend see POSS dog POSS dog RDP~what NEG  
 goes down to see his dog, but his dog is fine.
- (28) *Kaing ro bote, aho dila na piping.*  
 already 3SG cradle dog lick POSS cheek  
 Then he holds it, and the dog licks his cheek.
- (29) *We rua pana gena mətto sampe lawo babir.*  
 3PL two walk search frog arrive(MLY) village border  
 The two of them go to look for the frog up to the village border.
- (30) *Gena-gena r-ai sampe dehek onong.*  
 RDP~search 3PL-go arrive(MLY) forest inside  
 Searching and searching they arrive into the forest.
- (31) a. *Kəlli dehek onong we seru kənne*  
 LOC.LOW forest inside 3PL see COMP  
 Inside the forest, they see that  
 b. *kətte dehek onong kətte ada nuo tou.*  
 LOC.DIST forest inside DEM.DIST be(MLY) hole.on.ground one  
 inside the forest there is a hole on the ground.
- (32) a. *Ada kajo, kajo pukong bea tou di di*  
 be(MLY) wood wood trunk big one also also  
 There is a tree, a big tree and also  
 b. *seru kənne wanggo.*  
 see COMP hole  
 they see a hole.

- (33) *Dehek onong kətə di ada kotanabang.*  
 forest inside DEM.DIST also be(MLY) k.o.bee  
 Inside the forest there are also bees.
- (34) *Ada kotanabang umang peing tou kətə teleng.*  
 be(MLY) k.o.bee house big one DEM.DIST hang  
 There is a big bees nest hanging there.
- (35) *Bai klake ke mene seru ke nuo.*  
 child man DEM.PROX come.LEVEL see LOC.PROX hole.on.ground  
 The boy goes to look inside the hole on the ground.
- (36) *Ro niring lodo, ro guo-guo na mətto.*  
 3SG leer descend 3SG RDP~call POSS frog  
 He peers down, he calls his frog.
- (37) a. *Aho ke seru kotanabang ke teleng ke bo,*  
 dog DEM.PROX see k.o.bee DEM.PROX hang DEM.PROX and  
 The dog looks at the bees nest hanging and,  
 b. *ro bowong bakung kotong gere bowong kotanabang.*  
 3SG bark lift.up head go.up bark k.o.bee  
 it barks, it lifts its head up and barks at the bees.
- (38) a. *Bai klake nuwəlla le take kənne*  
 child man just.mentioned long.time NEG then  
 The boy, after a while  
 b. *kəmore gere gaki nirung.*  
 mouse go.up bite nose  
 a mouse comes up and bits his nose.
- (39) a. *Aho nuwəlla te ro bowong-bowong mu*  
 dog just.mentioned DEM.DIST 3SG RDP~bark SEQ  
 The dog, it barks and barks and  
 b. *onong hala.*  
 inside wrong  
 it feels pity.

- (40) a. *Kaing hapa n-ai leda limang gere latang*  
 already come.vicinity 3SG-go lean hand go.up lie  
 Then, it goes to lean its paws onto
- b. *kajo pukong kaing bo ota.*  
 wood trunk already and shake  
 the tree and it swings it.
- (41) a. *Ro ota bo ke kotanabang ke*  
 3SG shake and DEM.PROX k.o.bee DEM.PROX  
 It swings it and the bees nest
- b. *le take kenne gokal, gokal lodong.*  
 long.time NEG then fall fall descend  
 after a while it falls, falls down.
- (42) a. *Bai klake anang nuwella hapa n-ai hela kajo*  
 child man small just.mentioned come.vicinity 3SG-go climb wood  
*gere,*  
 go.up  
 The little boy goes to climb the tree,
- b. *niring kette kajo wanggo onong.*  
 leer LOC.DIST wood hole inside  
 to peer into the tree hole.
- (43) a. *Niring kette kajo wanggo onong,*  
 leer LOC.DIST wood hole inside  
 He peers into the tree hole,
- b. *ane merre tmaeng ke na matto nuwella*  
 suppose say probably DEM.PROX POSS frog just.mentioned  
 thinking that probably his frog
- c. *gæsseng dawwu kette kajo wanggo onong.*  
 maybe hide LOC.DIST wood hole inside  
 may be hiding inside that tree hole.
- (44) *Kaing, hapa n-ai niring seru kette kajo wanggo onong.*  
 already come.vicinity 3SG-go leer see LOC.DIST wood hole inside  
 Then, he goes to peer inside the tree hole.

- (45) *Ro mulai guo, ro guo-guo.*  
 3SG begin(MLY) call 3SG RDP~call  
 He starts calling, he calls and calls.
- (46) a. *Le take kenne nehe kenne*  
 long.time NEG then not.long.after then  
 After a while
- b. *mea peing tou bakka gere kette kajo wanggo onong*  
 owl big one fly go.up LOC.DIST wood hole inside  
 a big owl flies out of the tree hole
- c. *gere tadu ro.*  
 go.up hit 3SG  
 and hits him.
- (47) *Ro kagur langsung gokal lodo kalli tana lolong.*  
 3SG frightened right.after(MLY) fall descend LOC.LOW landsoil top  
 He gets scared and immediately falls down on the ground.
- (48) a. *Ro gokal lodong, ro seru kenne kotanabang nang*  
 3SG fall descend 3SG see COMP k.o.bee with  
 He falls down, he sees that many bees
- b. *walang-walang kette bak kang kette na lolong.*  
 RDP~many DEM.DIST fly LOC.DIST POSS top  
 are flying above him.
- (49) *Kaing, ro seru kenne kotanabang ke tute aho.*  
 already 3SG see COMP k.o.bee DEM.PROX chase dog  
 Then, he sees that the bees are chasing the dog.
- (50) *Na aho plae kotanabang tute.*  
 POSS dog run k.o.bee chase  
 The dog runs, the bees chase him.

- (51) a. *Ro bangung kənnə meə nuwəlla tute ro,*  
 3SG get.up(MLY) then owl just.mentioned chase 3SG  
 He stands up and the owl chases him,
- b. *tute ro, bo ro plae.*  
 chase 3SG and 3SG run  
 it chases him, and he runs.
- (52) a. *Ro plae-plae nami limang,*  
 3SG RDP~run raise.up hand  
 He runs with his hands up,
- b. *nami limang gere hada kotong,*  
 raise.up hand go.up lay head  
 putting his hands on his head,
- c. *taku mərre*  
 scared say  
 he is afraid that
- d. *meə ke toto ro.*  
 owl DEM.PROX pierce(MLY) 3SG  
 the owl pecks him.
- (53) a. *Hapa n-ai, plae-plae hapa n-ai,*  
 come.vicinity 3SG-go RDP~run come.vicinity 3SG-go  
 He goes running,
- b. *dapa, ada wato peing tou.*  
 get(MLY) be(MLY) rock big one  
 he finds, there is a big rock.
- (54) a. *Wato peing tou ke, bai klake ke gəlla*  
 rock big one DEM.PROX child man DEM.PROX confused  
 This big rock, the boy isn't aware,
- b. *ro ane mərre ada ruha peing.*  
 3SG suppose say be(MLY) deer big  
 he thinks that there is a big deer.

- (55) a. *Ruha tou ke gabang ke wato peing punung ke,*  
 deer one DEM.PROX shelter LOC.PROX rock big back DEM.PROX  
 A deer is sheltering behind the rock,
- b. *ro gəlla, kaing bo ro hela wato gereng.*  
 3SG confused already and 3SG climb rock go.up  
 he isn't aware, then he climbs on the rock.
- (56) a. *Ro hela wato gereng nəmuang*  
 3SG climb rock go.up just  
 He climbs on the rock and
- b. *paha ruha na huar ke,*  
 hold deer POSS antler DEM.PROX  
 holds the deer's antlers
- c. *guo-guo na mətto.*  
 RDP~call POSS frog  
 calling his frog.
- (57) a. *Aho nuwəlla*  
 dog just.mentioned  
 The dog
- b. *kotanabang nu tute ro nuwəlla te kaing.*  
 k.o.bee just.now chase 3SG just.mentioned DEM.DIST already  
 the bees stopped chasing it.
- (58) *Ro plae mene leda wəkking kətte wato peing pukong.*  
 3SG run come.LEVEL lean body LOC.DIST rock big side  
 It runs and leans itself to the side of the rock.
- (59) *Ro guo, guo-guo na mətto.*  
 3SG call RDP~call POSS frog  
 He calls, calls and calls his frog.
- (60) *Ruha kagur, ruha bakung kotong kətte.*  
 deer frightened deer lift.up head DEM.DIST  
 The deer gets scared, the deer raises its head.



- (61) a. *Bai klake nuwəlla langsung tarang kətə huar*  
 child man just.mentioned right.after(MLY) get.stuck LOC.DIST antler  
*lolong,*  
 top  
 The boy immediately gets stuck on the antlers,
- b. *ruha na huar.*  
 deer POSS antler  
 the deer’s antlers.
- (62) a. *Kaing, ruha la kagur,*  
 already deer ? frightened  
 Then, the deer gets scared,
- b. *bote wəkking plaeng,*  
 hold body run  
 it lifts itself and runs,
- c. *plaeng dongo bai klake kətə.*  
 run carry(MLY) child man DEM.DIST  
 runs carrying the boy.
- (63) a. *Bai klake kətə keti ruha na kotong lolong*  
 child man DEM.DIST LOC.HIGH deer POSS head top  
 The boy is stuck on the deer’s head
- b. *nang da-daha mu*  
 with RDP~strong SEQ  
 very firmly and
- c. *kaing bo ruha mulai plae, plae, na aho di plae.*  
 already and deer begin(MLY) run run POSS dog also run  
 then the deer starts to run, it runs, and his dog also runs.
- (64) a. *Plae tapi ke sementara plae,*  
 run but(MLY) DEM.PROX temporary(MLY) run  
 They run, but while running,
- b. *aho ke niring gere bowong ruha ke,*  
 dog DEM.PROX leer go.up bark deer DEM.PROX  
 the dog peers out at the deer while barking,
- c. *seru bai klake nu kətə*  
 see child man just.now DEM.DIST  
 looking at the boy

- d. *tarang keti ruha kotong lolong nuwəlla.*  
 get.stuck LOC.HIGH deer head top just.mentioned  
 who is stuck on the deer’s head.
- (65) *Plae-plae hapa r-ai dapa ekang blolo.*  
 RDP~run come.vicinity 3PL-go get(MLY) place tall  
 They run and run until they reach a cliff.
- (66) a. *Dapa ekang blolo,*  
 get(MLY) place tall  
 The reach a cliff,
- b. *ke laung kəlli ada ada wai, wai nebo,*  
 LOC.PROX under LOC.LOW be(MLY) be(MLY) water water stagnate  
 on the bottom there is water, stagnant water,
- c. *wai kolang di lahe boing,*  
 water lake also NEG all.of  
 it is not a lake,
- d. *tapi ke wai nebo.*  
 but(MLY) DEM.PROX water stagnate  
 but stagnant water.
- (67) a. *Hapa n-ai pas dabe ekang blolo kətə,*  
 come.vicinity 3SG-go exactly(MLY) near place tall DEM.DIST  
 It goes near the cliff border,
- b. *ruha kagur nang wəkking.*  
 deer frightened with body  
 the deer gets scared.
- (68) *Ruha tərre wəkking gede wəkking tideng.*  
 deer pull body ? body stand  
 The deer pulls itself to stand.
- (69) a. *Bai klake nuwəlla langsung gokal lodong*  
 child man just.mentioned right.after(MLY) fall descend  
 The boy immediately falls down
- b. *kəlli ekang blolo onong lodong nang na aho di kaing.*  
 LOC.LOW place tall inside descend with POSS dog also already  
 into the ravine together with his dog.

- (70) *We rua gokal lodo maso wai onong.*  
 3PL two fall descend enter(MLY) water inside  
 They both falls down into the water.
- (71) a. *Bai klake gokal n-olo lodo kaing bo*  
 child man fall 3SG-precede descend already and  
 The boy falls first and then  
 b. *na aho dərre gokal lodong piku ro.*  
 POSS dog follow fall descend press 3SG  
 his dog follows him and falls on him.
- (72) a. *Ro n-olo na aho dərre lodo,*  
 3SG 3SG-precede POSS dog follow descend  
 He first and his dog follows,  
 b. *piku ro kəlli wai onong.*  
 press 3SG LOC.LOW water inside  
 it presses him into the water.
- (73) *We ruakaing bangung.*  
 3PL two.of.them get.up(MLY)  
 The two of them stand up.
- (74) a. *Aho ke taku nang wai bo*  
 dog DEM.PROX scared with water and  
 The dog is afraid of the water and  
 b. *kaing ro bai klake ke bote aho ke gereng,*  
 already 3SG child man DEM.PROX hold dog DEM.PROX go.up  
 then the boy holds the dog up,  
 c. *latang ke na hanang lolong.*  
 lie LOC.PROX POSS shoulder top  
 and puts it on his shoulders.

- (75) a. *Jadi aho ro saraluka, saraluka aho kaing bo*  
 so(MLY) dog 3SG carry carry dog already and  
 So he carries the dog on his shoulders and
- b. *kətte wai onong ro kwager kənne,*  
 LOC.DIST water inside 3SG hear COMP  
 inside the water he hears something,
- c. *bakanma apa tou ada alang.*  
 it.seems what(MLY) one be(MLY) sound  
 it seems like something made a sound.
- (76) *Bakanma apa tou ada alang.*  
 it.seems what(MLY) one be(MLY) sound  
 It seems like something made a sound.
- (77) *Kaing, ro mulai seru, ro pnikung.*  
 already 3SG begin(MLY) see 3SG turn.head  
 Then, he starts looking, he glances.
- (78) a. *Hapa n-ai kənne*  
 come.vicinity 3SG-go then  
 He goes and
- b. *ada kajo odang bea tou kətte mapak.*  
 be(MLY) wood stick big one DEM.DIST put  
 there is a big trunk laying.
- (79) *Kajo ke di wanggo kaing.*  
 wood DEM.PROX also hole already  
 In the tree there is also a hole.
- (80) a. *Ro kwager pas apa alang,*  
 3SG hear exactly(MLY) what(MLY) sound  
 He listens carefully at what made the sound,
- b. *jadi ro mərre ro nami limang gere*  
 so(MLY) 3SG say 3SG raise.up hand go.up  
 so he says, he raises his hands
- c. *latang nuhung nang oro na aho ke.*  
 lie mouth with LOC POSS dog DEM.PROX  
 and puts them on his mouth to say something to his dog.

- (81) a. *Bakanma ro tutu apa, ro maring aho mərre*  
 it.seems 3SG speak what(MLY) 3SG say dog say  
 It seems that he says something, he says to his dog
- b. *mərre: “ssh aki nako”.*  
 say ssh NEG.IMP noisy  
 say: “ssh don’t be noisy”.
- (82) a. *Aho la, bai klake nuwəlla lepas na aho*  
 dog ? child man just.mentioned let.go(MLY) POSS dog  
 The dog, the boy lets the dog go
- b. *kəlli wai onong, aho kətte nangge-nangge gopak.*  
 LOC.LOW water inside dog DEM.DIST RDP~swim put  
 into the water, the dog is swimming.
- (83) *Apa alang nuwəlla te bo ro mulai gere*  
 what(MLY) sound just.mentioned DEM.DIST FOC 3SG begin(MLY) go.up  
*seru.*  
 see  
 He starts looking at what made the sound.
- (84) a. *Ro mulai leda wəkking kətte kajo odang nuwəlla,*  
 3SG begin(MLY) lean body LOC.DIST wood stick just.mentioned  
 He leans himself against the trunk,
- b. *kaing bo mulai seru*  
 already and begin(MLY) see  
 then he starts looking
- c. *pai bo alang nuwəlla*  
 what FOC sound just.mentioned  
 what made the sound.
- (85) a. *Apa alang nuwəlla di gəsseng ro maring*  
 what(MLY) sound just.mentioned also maybe 3SG say  
 What made the sound he says that maybe it was
- b. *mərre mətto alang.*  
 say frog sound  
 the frog making noise.

- (86) a. *Abo nuwəlla di kaing hela gere keti kajo lolong*  
 dog just.mentioned also already climb go.up LOC.HIGH wood top  
 The dog also gets on the tree,
- b. *keti kajo odang lolong kaing bo*  
 LOC.HIGH wood stick top already and  
 on the trunk and
- c. *ruakaing seru lodo.*  
 two.of.them see descend  
 the two of them look down.
- (87) a. *Ro seru kənne mətto rua kətte kajo kajo awing tobong,*  
 3SG see COMP frog two DEM.DIST wood wood side sit  
 He sees that there are two frogs sitting next to the tree,
- b. *kətte dahe kajo pukong nuwəlla.*  
 LOC.DIST near wood trunk just.mentioned  
 near the trunk.
- (88) a. *Kaing, bai klake nuwəlla bote wəkking gere*  
 already child man just.mentioned hold body go.up  
 Then, the boy lifts himself up
- b. *turu kətte kajo odang lolong*  
 lie.down LOC.DIST wood stick top  
 and lies down on the trunk
- c. *kaing bo seru mətto rua kətte.*  
 already and see frog two DEM.DIST  
 and then sees the two frogs.
- (89) a. *Mətto rua te, tou bea tou kihu,*  
 frog two DEM.DIST one big one small  
 The two frogs, one is big and one is small,
- b. *tmaeng tou bea ke na inang bo aru*  
 probably one big DEM.PROX POSS mother FOC or  
 probably the big one is the mother
- c. *na amang bo aru, tite gəlla.*  
 POSS father FOC or 1PL.INCL confused  
 or the father, we don't know.

- (90) *Ro baung tobong kätte kajo odang lolong.*  
 3SG get.up sit LOC.DIST wood stick top  
 He gets up to sit on the trunk.
- (91) a. *Le take kənnə mətto gəsseng nəmmu pito kätte*  
 long.time NEG then frog maybe six seven DEM.DIST  
*mene,*  
 come.LEVEL  
 After a while maybe six or seven frogs come,  
 b. *tapi kätte mətto kərri-kərri.*  
 but(MLY) DEM.DIST frog RDP~small  
 but those are small frogs.
- (92) a. *We rua tobo kəlala kätte lalu*  
 3PL two sit look DEM.DIST then(MLY)  
 The two of them sit looking at them then  
 b. *bai klake ke onong bea.*  
 child man DEM.PROX inside big  
 the boy is happy.
- (93) *Onong bea, ro lodong kaing bo ro bote tou.*  
 inside big 3SG descend already and 3SG hold one  
 Being happy, he goes down and takes one.
- (94) *Ro bote tou, tou ke ro tanda kaing.*  
 3SG hold one one DEM.PROX 3SG sign(MLY) already  
 He holds one, this one he has chosen.
- (95) a. *Tanda kaing, gəsseng na mətto nuwəlla*  
 sign(MLY) already maybe POSS frog just.mentioned  
 He has chosen it, maybe it is his frog that  
 b. *nu lodo nekang nuwəlla te bo ro dapa.*  
 just.now descend go.away just.mentioned DEM.DIST FOC 3SG get(MLY)  
 he had caught and that went missing before.

- (96) a. *Bo kaing, ro bote, paha ke na limang papa,*  
 and already 3SG hold hold LOC.PROX POSS hand side  
 Then he holds it, he holds it in his hands,
- b. *kaing bo limang papa nami gere naking matto hire*  
 already and hand side raise.up go.up greet frog PL  
*nuwəlla.*  
 just.mentioned  
 then he raises his hands to greet the other frogs.
- (97) a. *Le take kənnə matto hire nuwəlla*  
 long.time NEG then frog PL just.mentioned  
 After a while the other frogs
- b. *di gere tobo kətə kajo lolong.*  
 also go.up sit LOC.DIST wood top  
 also get up to sit on the tree.
- (98) *Ada inang anang bea rua ke.*  
 be(MLY) mother child big two DEM.PROX  
 There is the mother with two big children.
- (99) a. *Matto inang nang matto amang na hireng ke*  
 frog mother with frog father POSS PL DEM.PROX  
 The mother frog with the father frog and their
- b. *gəsseng na ana-ana hire.*  
 maybe POSS RDP~child PL  
 maybe their children.
- (100) a. *Kaing, we di nami limang naking bai klake*  
 already 3PL also raise.up hand greet child man  
 Then, they also raise their hands to greet the boy
- b. *nang na abo nuwəlla.*  
 with POSS dog just.mentioned  
 and his dog.



Teiwa Frog story by Martheda.

- (1) a. *Taran nuk ga'an u wur di paan,*  
 night one DEM DIST moon only candle.nut  
 One night when the moon is (like) a candle nut
- b. *bif goqai nuk ma a-yifar goqai nuk ga'an un mis-an.*  
 child child one come 3SG-POSS-dog child one DEM CONT sit-REAL  
 a child and his puppy are sitting.
- (2) a. *Ha si iman gi-yaf ga'an u,*  
 then SIM 3PL 3PL.POSS-house DEM DIST  
 In that house of theirs,
- b. *iman un mauqubar nuk ga-rian.*  
 3PL CONT frog one 3SG-take.care.of.s.o.  
 they look after a frog.
- (3) *Mauqubar ga'an un toples g-om me.*  
 frog DEM CONT jar 3SG-inside be.at  
 That frog is inside a jar.
- (4) *Iman yarig ta mis-an.*  
 3PL three TOP sit-REAL  
 The three of them live (together).
- (5) a. *Yifar iraxau a-manak ga'an ta*  
 dog 3.DU 3SG.POSS-master DEM TOP  
 Dog and his master they two
- b. *gi-eet qud ba ta mir-an ti'.*  
 3PL.POSS-eye be.sleepy SEQ TOP ascend-REAL sleep  
 their eyes are sleepy so they climb up to sleep.
- (6) a. *Ti'-in tranmasaman waal,*  
 lie.down-REAL middle.of.night that.mentioned  
 (While they are) sleeping in the middle of the night,
- b. *mauqubar waal a de'er toples g-om ma suk-an*  
 frog that.mentioned 3SG jump jar 3SG-inside come exit-REAL  
*gi.*  
 go  
 that frog jumps from the jar and goes.

- (7) *Iraxau ta ti'-in gula', i ta liar.*  
 3.DU TOP lie.down-REAL finish it.place TOP shine  
 They two finish sleeping, it dawns.
- (8) a. *Bees qai iraxau tup-an, bali si toples waal hasak*  
 morning only 3.DU get.up-REAL see SIM jar that.mentioned empty  
*a,*  
 PROX  
 Early morning they two wake up, see that the jar is empty,
- b. *mauqubar waal a de'er gi tau,*  
 frog that.mentioned 3SG jump go PFV  
 that frog has jumped out and left,
- c. *a de'er suk-an gi tau.*  
 3SG jump exit-REAL go PFV  
 it has jumped out and left.
- (9) a. *Iraxau ta tup-an gula',*  
 3.DU TOP get.up-REAL finish  
 They two get up
- b. *mulai kamar g-om u bali si ada' maan,*  
 begin(MLY) room.MLY 3SG.POSS-inside DIST see SIM be(MLY) NEG  
 start to look inside that room but (it) is not there,
- c. *sepatu non aga' usan bali ma palan,*  
 shoe.MLY PL all lift see come inspect  
 they lift up all the shoes to inspect (them)
- d. *ga-g-om ma palan, ada' maan.*  
 3SG.POSS-3SG.POSS-inside come inspect be(MLY) NEG  
 inspect their inside, (it) is not there.
- (10) a. *Yifar ga'an ta o'on kul ma toples g-om mansarun-an,*  
 dog DEM TOP head crown come jar.MLY 3SG.POSS-inside seek-REAL  
 That dog sticks his head in the jar seeking,
- b. *mauqubar i warakan-warakan, ada' maan.*  
 frog FORTHC RDP~search-REAL be(MLY) NEG  
 searching the frog, (it) is not there.

- (11) *Iraxau ta tupan gula', jendela buka'.*  
 3.DU TOP get.up-REAL finish window.MLY open(MLY)  
 They two get up, open the window.
- (12) a. *Buka', yifar ga'an ta g-o'on kul ta*  
 open(MLY) dog DEM TOP 3SG.POSS-head crown TOP  
 Open, that dog with his head
- b. *toples ma bu' qai ba,*  
 jar.MLY come stuck only SEQ  
 just stuck in the jar,
- c. *ta pak-an gula',*  
 TOP call.s.o.-REAL finish  
 he cries,
- d. *jendela ma palan yix-in la,*  
 window(MLY) come inspect descend-REAL FOC  
 (the boy) inspects (things looking) down from the window,
- e. *yifar g-o'on kul, pak-an suxur to,*  
 dog 3SG-head crown call.s.o.-REAL heavy INTJ  
 dog's head...yells (it's) heavy right...
- f. *toples g-om me-n ba suxur ba,*  
 jar(MLY) 3SG.POSS-inside be.at-REAL SEQ heavy SEQ  
 (it's) inside the jar head and (it's) heavy and,
- g. *ta jendela ma ba'-an suk.*  
 TOP window(MLY) come fall-REAL exit  
 (dog) falls outside from the window.
- (13) a. *Ga-manak waal ta, ba'-an suk-an ba,*  
 3SG.POSS-master that.mentioned TOP fall-REAL exit-REAL SEQ  
 Its master goes out and
- b. *toples waal ta qas le.*  
 jar(MLY) that.mentioned TOP broken or  
 that jar is broken, right.
- (14) a. *Yifar ga'an ta ga-manak suk-an gula',*  
 dog 3SG TOP 3SG.POSS-master exit-REAL finish  
 That dog's master goes out
- b. *a in ma go'an.*  
 3SG CONT come carry.on.arm  
 he is carrying (dog) on his arm.

- (15) a. *Yifar ga'an ta,*  
dog DEM TOP  
That dog
- b. *a-manak ga'an aye'en aye'en aye'en aye'en gula',*  
3SG.POSS-master DEM lick-REAL lick-REAL lick-REAL lick-REAL finish  
licks, licks, licks, licks its master,
- c. *iraxau ta suk-an gi mauqubar warak-an la xu'u.*  
3.DU TOP exit-REAL go frog search-REAL FOC that  
they two go outside to search frog overthere.
- (16) *Mauqubar ga-pak-an pak-an pak-an yip maan.*  
frog 3SG-call.so-REAL call.s.o-REAL call.s.o-REAL also NEG  
Calling, calling, calling frog but no.
- (17) *Iman ta mulai gi hut ma gi warak.*  
3PL TOP begin(MLY) go forest come go search  
They begin to search in the forest.
- (18) a. *Hut ma gi warak-an si, iman bali si,*  
forest come go search-REAL SIM 3PL see SIM  
Searching in the forest, they see
- b. *tai uaad nuk ga'an un tas ha,*  
tree big one DEM CONT stand then  
a big tree standing and
- c. *amidan, i baaq nuk ga'an un yes.*  
what it.place hole one DEM CONT put  
what, there is a hole (in it).
- (19) *Iman atang bali si, or ga'an un i wan hor.*  
they again see SIM bee DEM CONT it.place be hang  
They also see that bee's nest hanging there.

- (20) a. *Or un i wan hor-an ba yifar ga'an ta,*  
 bee CONT it.place be hang-REAL SEQ dog DEM TOP  
 The bee's (nest) is hanging (there) and that dog
- b. *or wan dokan gula' goxo',*  
 bee be look.up finish bark  
 looks up at the bees barking,
- c. *toxo' toxo' toxo',*  
 bark bark bark  
 barking barking barking,
- d. *ha ga-manak ga'an ta i baaq ga'an ma palan.*  
 then 3SG.POSS-master DEM TOP it.place hole DEM come inspect  
 then that master of his inspects that hole.
- (21) a. *I baaq ma palan suk-an er-an,*  
 it.place hole come inspect exit-REAL make-REAL  
 While (he is) inspecting the hole,
- b. *dur ta daa ga-vinbui ma sin ba,*  
 mouse TOP ascend 3SG-nose come first SEQ  
 a mouse moves up just to his nose so,
- c. *ga-manak waal ta a-vinbui ga'an ta wan pin-an.*  
 3SG.POSS-master that TOP 3SG.POSS-nose DEM TOP be hold-REAL  
 that master grabs his nose,
- d. *ha yifar ga'an i...*  
 then dog DEM FORTHC  
 then that dog...
- (22) a. *Yifar ga'an i, tai luxun ga'an wan dokan*  
 dog DEM FORTHC tree high DEM be look.up  
 that dog still looks up the tree
- b. *or ga'an i goxo' goxo' goxo' la xa'a maan.*  
 bee DEM it.place bark bark bark FOC this NEG  
 barking barking barking at the bee's nest overthere, no.
- (23) a. *Ana' maan waal,*  
 long.time NEG that.mentioned  
 Not long after that

- b. *yifar waal wa ge'ef*  
 dog that.mentioned go recent.past  
 after that dog
- c. *tai wan dokan goxo' ana' maan si*  
 tree be look.up bark long.time NEG SIM  
 has been looking up the tree barking for a bit,
- d. *or waal ga-in ta ba'-an suk le,*  
 bee that.mentioned 3SG.POSS-it.thing TOP fall-REAL exit or  
 those bees fall out of their nest
- e. *ga-manak waal ta ba'-an suk-an ba or ta mulai*  
 3SG.POSS-master that TOP fall-REAL exit-REAL SEQ bee TOP begin(MLY)  
 its master falls down and the bees begin
- f. *yifar i ga-tiran, ga-tiran gi la xu'u.*  
 dog FORTHC 3SG-chase 3SG-chase go FOC that  
 to chase dog, chase him going overthere.
- (24) a. *Ga-tiran, maan,*  
 3SG-chase NEG  
 Chase him, no,
- b. *ga-manak yip ta suk-an gi ta warak-an*  
 3SG.POSS-master also TOP exit-REAL go TOP search-REAL  
 also its master goes searching
- c. *a bali si tai uaad nuk un tas-an ba*  
 3SG see SIM tree big one CONT stand-REAL SEQ  
 he sees a big tree standing and
- d. *a ta ga-baaq g-om ma palan.*  
 3SG TOP 3SG.POSS-hole 3SG.POSS-inside come inspect  
 he inspects inside its hole.
- (25) a. *Ga-baaq g-om ma palan, a bali si atang,*  
 3SG.POSS-hole 3SG.POSS-inside come inspect 3SG see SIM again  
 Inspecting the inside of the hole, he sees again,
- b. *(xa'a ga'an pi-tarau si amidan e?)*  
 this DEM 1PL.INCL.POSS-language SIM what INTJ  
 (what is this in our language?)
- c. *mi'u ta ga-baaq xu'u ma kaluar,*  
 owl TOP 3SG.POSS-hole that come exit.MLY  
 an owl comes out of the hole,

- d. *tai baaq u ma kaluar.*  
tree hole DIST come exit.MLY  
comes out of the tree hole.
- (26) a. *Or ga'an i, yifar i ga-tiran,*  
bee DEM FORTHC dog FORTHC 3  
Those bees are chasing the dog,
- b. *ga-manak iraxau gi-tiran gi-tiran,*  
3SG-master 3.DU 3PL-chase 3PL-chase  
(with) its master they two chase them, chase them,
- c. *bif waal ta tai wan ba'-an suk.*  
child that.mentioned TOP tree be fall-REAL exit  
that child falls down from the tree.
- (27) a. *Ba'-an suk-an ga-yifar yip,*  
fall-REAL exit-REAL 3SG.POSS-dog also  
His dog also falls,
- b. *or ga'an in ga-tiran ga' pati xa'a.*  
bee DEM CONT 3SG-chase take.along PROG this  
being chased by those bees.
- (28) *Iraxau ta bir-an ta ifa'-ifa'.*  
3.DU TOP run-REAL TOP RDP~split.up  
They two run in two directions.
- (29) a. *Ha bif goqai waal ta*  
then child child that.mentioned TOP  
And that child
- b. *a mauqubar i warak-an gi war uaad nuk ga-sar,*  
3SG frog it.place search-REAL go rock big one 3SG-notice  
searches frog and sees a big rock.
- c. *ba ta luxun ta tas-an.*  
SEQ TOP high on stand-REAL  
and stands on top of it.

- (30) a. *Mir-an luxun ta tas-an waal,*  
ascend-REAL high on stand-REAL that.mentioned  
Climbs on top of that,
- b. *a bali si ruus ga'an un war uaad yuu-n ma ti'*  
3SG see SIM deer DEM CONT rock big down-REAL come sleep  
*a,*  
PROX  
he sees that deer is sleeping down the rock,
- c. *ga-dixin la un daa karan tas-an,*  
3SG.POSS-horn FOC CONT ascend branch.MLY stand-REAL  
its antler sticking up (like) branches.
- d. *aan a wa ta tai karan ba*  
3SG 3SG say TOP tree branch.MLY SEQ  
he thinks it's a tree branch
- e. *a ta ga-dixin wan pin le.*  
3SG TOP 3SG.POSS-horn be hold or  
so he holds its antler, right.
- (31) a. *Ga-dixin wan pin-an,*  
3SG-horn be hold-REAL  
(While he is) holding its antler,
- b. *ga-yifar ga'an un war ga'an ga-fiar tewar*  
3SG.POSS-dog DEM CONT rock DEM 3SG-surround walk  
that dog of his is walking around that rock
- c. *a mauqubar ga-pak-an pati.*  
3SG frog 3SG-call.s.o-REAL PROG  
he is calling frog.
- (32) a. *Ana' waal, ana' maan waal,*  
long.time that.mentioned long.time NEG that.mentioned  
After a while, not long after that,
- b. *ruus ga'an ta tup le.*  
deer DEM TOP get.up or  
deer gets up right.
- (33) *Tup-an gi, mau gi holan g-ax.*  
get.up-REAL go want.MLY go endeavour 3SG.POSS-possession  
Gets up to go, wants to get food.



- (34) a. *Tup-an waal,*  
get.up-REAL that.mentioned  
While (deer is) getting up like that,
- b. *bif goqai waal ta ruus ga-dixin luxun ma ti’.*  
child child that.mentioned TOP deer 3SG.POSS-horn high come sleep  
that child is lying on top of its antler.
- (35) *Ruus ta a in pin biran gi.*  
deer TOP 3SG CONT hold run-REAL go  
Deer runs taking him along.
- (36) a. *Yifar yip ta ruus ga-tiran goxo’, gi gi ta...*  
dog also TOP deer 3SG-chase bark go go TOP  
Dog also runs after the deer barking, go go to
- b. *saf nuk, saf tian nuk me.*  
river.bank one river.bank long one be.at  
a riverbank, a steep riverbank.
- (37) a. *Saf tian nuk me a,*  
river.bank long one be.at PROX  
At the steep riverbank,
- b. *ruus waal ta bir-an kancang talalu to,*  
deer that TOP run-REAL satisfied.MLY too.much.MLY INTJ  
the deer has enough of running,
- c. *ba ta bif waal ta, amidan,*  
SEQ TOP child that TOP what  
that child, ehm,
- d. *saf tian u ba’an suk, ma ba’an suk.*  
river.bank long DIST fall-REAL exit come fall-REAL exit  
falls (into) the ravine, falls down into (it).
- (38) *Ha si saf ga-yuun ga’an u yir aga’ un ada’.*  
then SIM river.bank 3SG.POSS-down DEM DIST water all CONT be.MLY  
And down that ravine it’s full of water.

- (39) a. *Iraxau a-yifar waal ta saf u, wan ba'-an suk,*  
 3.DU 3SG.POSS-dog that TOP river.bank DIST be fall-REAL exit  
 They two with his dog fall into that ravine,  
 b. *suk-an waal ta, yir g-om nuk me.*  
 exit-REAL that TOP water 3SG.POSS-inside one be.at  
 fall like that, into the water.
- (40) a. *Iraxau aga' ta yir g-om nuk me,*  
 3.DU all TOP water 3SG.POSS-inside one be.at  
 They two are in the water,  
 b. *ana' maan iman bali si,*  
 long.time NEG they see SIM  
 not long after that they see,  
 c. *tai siis nuk un yes.*  
 tree dry one CONT put  
 a dry tree trunk.
- (41) *Ba a'an ga'an ta a-yifar ga'-wulul a wa,*  
 SEQ 3SG DEM TOP 3SG.POSS-dog 3SG-talk 3SG say  
 So he tells his dog saying
- (42) “*Xuri-xuri, tai nuk un ada' be'.*”  
 RDP~quiet.voice/motion tree one CONT be.MLY indeed  
 “Be quiet, there is a tree trunk.”
- (43) a. *Iraxau ta wa-an gula', iman ta xaran,*  
 3.DU TOP go-REAL finish they TOP thus  
 So they two go, they (go) like this,  
 b. “*Maq a-dan pi-mauqubar un i xa'a me.*”  
 let.it.not.be 3SG.POSS-part IPL.INCL.POSS-frog CONT it.place that be.at  
 “Don't let it be that our frog is overthere.”
- (44) a. *Iraxau ta wa-an gula',*  
 3.DU TOP go-REAL finish  
 They two go,  
 b. *mauqubar u tai wan ga-fiar ga-pak-an ga'-hela pati.*  
 frog DIST tree be 3SG-surround 3SG-call.so-REAL 3SG-pull PROG  
 calling that frog surrounded by the trunk.

- (45) a. *Ga-pak-an pak-an pak-an pak-an, pak-an,*  
 3SG-call.s.o-REAL call.s.o-REAL call.s.o-REAL call.s.o-REAL call.s.o-REAL  
 Call call call call call it,
- b. *ana’ maan waal,*  
 long.time NEG that.mentioned  
 not long after that,
- c. *iraxau bali la mauqubar iraxau,*  
 3.DU see FOC frog 3.DU  
 they two see a pair of frogs,
- d. *mauqubar eqar-masar un mis-an xa’a.*  
 frog female-male CONT sit-REAL this  
 a female and male frog sitting here.
- (46) a. *Ana’ maan, iman atang bali si,*  
 long.time NEG 3PL again see SIM  
 Not long after, they also see,
- b. “*Bifa, goqai non aga’ saran maan xa’a*”.  
 INTJ.startled 3SG-child PL all notice NEG this  
 “Shoot, many children (we) didn’t notice.”
- (47) a. *Saran ma ri’an ba*  
 notice come many SEQ  
 (They) notice many (of them) and
- b. *iman ta g-om ga-sanang ga’an iman ta a wa,*  
 they TOP 3SG.POSS-inside 3SG.POSS-happy DEM 3PL TOP 3SG say  
 they have happy hearts and they say
- c. “*E insi wad wa ge’ef pi-mauqubar itan waal pi*  
 INTJ maybe day go recent.past 1PL.INCL.POSS-frog lost that 1PL.INCL  
*ta,*  
 TOP  
 “Why, maybe today that frog of ours that was lost we
- d. *insi wadisin g-unba’-an la xa’a.*”  
 maybe today 3SG-meet-REAL FOC this  
 maybe found here today.”

- (48) a. *Iman ta, ga-manak waal ta, mauqubar nuk maran gula'*,  
 they TOP 3SG.POSS-master that TOP frog one follow finish  
 They, its master, one frog follows,
- b. *iman ta mauqubar ga-xala' g-oma' ga'-pamit*  
 they TOP frog 3SG.POSS-mother 3SG.POSS-father 3SG-goodbye  
*gula'*  
 finish  
 after they have said the frog's parents goodbye,
- c. *iman ta gi.*  
 they TOP go  
 they go.
- (49) a. *Mauqubar iqap ta*  
 frog 3SG.and.they TOP  
 That frog along with
- b. *g-oqai ga-dan non ta tai luxun ma mis-an gula'*,  
 3SG.POSS-child 3SG.POSS-part PL TOP tree high come sit-REAL finish  
 all the other children sit on top of the trunk,
- c. *tai siis luxun ma mis-an gula'*,  
 tree dry high come sit-REAL finish  
 sit on top of that dry trunk,
- d. *iman ta ga'-pamit la xu'u. Gula'.*  
 they TOP 3SG-goodbye FOC that finish  
 they say goodbye to them. The end.