Talking about strings: The language of string figure-making in a Sepik society in Papua New Guinea

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The practice of making string figures, often called cat's cradle, can be found all over the world and is particularly widespread in Melanesia. It has been studied by anthropologists, linguists and mathematicians. For the latter, the ordered series of moves and the resultant string figures represent cognitive processes that form part of a practice of recreational mathematics. Modern anthropology is interested in the social and cultural aspects of string figures, including their associations with other cultural practices, with the local mythology and songs. Despite this clear link to language, few linguists have studied string figures, and those who have, have mainly focused on the songs and formulaic texts that accompany them. Based on a systematic study of string figures among the Awiakay, the inhabitants of Kanjimei village in the Sepik region of Papua New Guinea, with six hours of transcribed video recordings of the practice, this paper argues that studying string figure-making can be an important aspect of language documentation – not just through the recording and analysis of the accompanying oral literature, but also as a tool for documenting other speech genres through recordings of the naturalistic speech that surrounds string figure-making performances. In turn, analysing the language associated with string figure-making offers valuable insights into the meaning of string figures as understood by their makers.

1. Introduction   String figure-making is a practice whereby one or more persons manipulate a string, which is usually joined together at the ends, with their fingers, teeth, toes, etc., in order to make various kinds of designs. This practice, in English also known as 'cat's cradle', can be found all over the world, and is particularly widespread and elaborated in Melanesia. In some societies – though not all – it is accompanied by formulaic texts, songs, or chants, which are believed to have magical properties, or the power to influence natural processes (e.g., Landtman 1914:221; Senft & Senft 1986:166–167).

This is clearly interesting for language documentation. But is the same true of string figure-making traditions where this activity is not accompanied by formulaic texts? Based on a systematic investigation of string figure-making among the Awiakay people, the inhabitants of Kanjimei village in East Sepik Province, Papua New Guinea, which includes both elicitation and observational video footage, this paper argues that broadening the focus of the study of this practice to include examining the spontaneous speech that often accompanies string figure-making performances

can yield valuable materials for documentary linguistics, regardless of whether or not string figure-making in a particular society is associated with specific oral texts.[1]

Figure 1. Darja Munbaŋgoapik making the string figure called *ambay* 'goura pigeon'

The paper begins with a brief overview of the history of research on string figure-making. Researchers from various disciplines have tried to develop a universal code to document this practice. But by focussing only on the technical part of the activity, some of them have moved further and further from its social and cultural aspects (see §2 for some examples). By introducing local ways of talking about string figures, this paper points out the shortcomings of these globalised nomenclatures, and highlights the importance of the local understandings of string figure-making.

As the paper moves through different aspects of documenting string figure-making among the Awiakay, it illustrates the relevance of this practice to language documentation. The repertoire of all the string figure designs known to people in this community

opens up many new lines of inquiry. It provides insights into traditional ecological knowledge (§4.1 and 4.2), reveals domains of language that have otherwise been replaced by the regional lingua franca, and sheds light on the way speakers creatively manipulate meanings and constructions from everyday language in the domain of string figure-making.

Recording string figure-making in an observational manner rather than through elicitation meant that there was much more 'chaos' around the performer. While it may seem that such recordings are less appropriate for both the documentation of string figures and of language, the bystanders' random remarks and comments, which would otherwise be considered as unnecessary 'background noise', provide a window into the context of each design. This turns out to be essential for a deeper understanding of the practice, as well as providing examples of different categories of naturalistic speech, including imperatives, instructions, make-believe games, etc. Moreover, the context illustrates the transmission of string figure-making, which has resonances in language learning (§7).

Both elicitation and observational footage contributed to the compilation of a glossary of expressions commonly used in string figure-making, which appears in the Appendix. Analysis of the spontaneous speech and conversation that surrounds string figure-making performances sheds light on more general patterns of language use (§8).

Figure 2. Verbal language alone becomes inadequate when it comes to describing moves like this one (a still frame from a video-recording of the string figure called 'ripe bananas')

The text in this paper is interspersed with video clips, and they are best watched 'on the spot', where they appear in the text, rather than saved for later, as they are not just illustrations of the textual discussion, but an integral part of the argument.[2]

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[2]In case of any problems with video links, please contact the author.

2. A brief overview of the history of string figure research   The first researchers to start paying attention to string figure-making were anthropologists. Their fascination with string figures goes back to Franz Boas, who first described some Inuit string figures in 1888 (Boas 1888:229–230). Several anthropologists of the time then embarked on studying this practice; the first ones to delve into documenting string figures in Melanesia were Alfred Cort Haddon and William H.R. Rivers, during the Cambridge expedition to the Torres Straits in 1898 (A.C. Haddon 1912).[3] Being in the field for the first time, Haddon discovered that he could get close to people by making string figures. His daughter Kathleen, a zoologist, photographer and keen string figure researcher, who joined her father on his three-month survey to the Torres Straits and Southern New Guinea in 1914, was even more convinced that making string figures with people in the field was a way of getting to know them and establishing relationships (K. Haddon 1911:xvi). In this way she pre-figured participant observation in the field, a method that was elaborated by Malinowski who pioneered long-term intensive study and building close relationships with people in the field.[4] From then on, participant observation became the norm in anthropological research, succeeding the 19th century approach of 'surface ethnography' with survey-type fieldwork (cf. McKenzie 2016:106; Stocking 1983).

The study of string figures was not a straightforward task. Even though the Torres Strait expedition was equipped with the most sophisticated equipment available at the time, including a movie camera and a phonograph (Sillitoe 1976:19), these were the earliest days of cinematography, and the amount that could be recorded on film was, of course, limited. It was thus impossible for Haddon to record procedural activities, and he had to find a way to clearly and accurately – and in as few words as possible – describe how different string figure designs were made. For this purpose, he and Rivers invented a nomenclature with which they described the moves of the string and the fingers, and the turns of hands, etc., which led to the completion of individual string figures, i.e. to their final designs or the so-called 'final figures'. They later published this nomenclature in a paper entitled *A Method of Recording String Figures and Tricks* (Rivers & Haddon 1902) for future researchers of string figures to follow, and indeed many of them (e.g., K. Haddon 1911; Landtman 1914; Compton 1919; Jenness 1920; Rosser & Hornell 1932; Maude & Wedgwood 1967, to mention just a few who documented string figures in Melanesia) published books and papers

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[3]The Cambridge Anthropological Expedition to Torres Straits started as a zoological expedition, whose original purpose was to study marine biology. However, in spite of Haddon's resolution 'not to waste time on the natives, he first took interest in the study of people' (Sillitoe 1976:18). The expedition turned out to be revolutionary for British anthropology. Most importantly, it was the first time that it placed scholars in the field – something that later became a model for all anthropologists. The expedition broke new ground in many other ways as well. Consultants were cross-checked, speech and songs were recorded on wax-cylinders, and Haddon made some of the earliest ethnographic films, some of which are still preserved in the British Library and in the National Film and Sound Archive of Australia (Haddon 1898). Moreover, it was during this expedition that Rivers pioneered the use of genealogy to explore social organisation (Rivers 1914).

[4]Malinowski was anything but impressed by Kathleen Haddon's near-obsessive study of string figures. Irritated by her and her father's visit on Mailu island during his early period of fieldwork in Southern New Guinea he complained about them in his diary: "In the village Haddon and his daughter loafed about; he– [with] boats, she– cat's cradle" (Malinowski 1967:36).

containing page after page of laborious descriptions of how string figures are made, similar to the following description of a string figure called 'The Fish-spear' from the Torres Straits:

> "Position I.
>
> Take up with the right index the transverse string on the left palm from its proximal side, give it one twist and return. Pass the left index through the right index loop from the distal side and take up the transverse string of the right hand from the proximal side and return through the loop.
>
> Drop the thumb and little finger loops of the right hand and draw the hands apart."
>
> (K. Haddon 1911:7)

While early string figure researchers were not very consistent in such descriptions, the International String Figure Association (ISFA), founded in 1978,[5] started encouraging the contributors to its bulletin (BISFA) to use a notation that is consistent and well explained – either Rivers & Haddon's (1902), or the verbalized version of Tom Storer's (1988) notation devised by ISFA member Joseph D'Antoni (1994). Those researchers who focus on the making of string figures mainly use one of these nomenclatures. Below is a description of how to make the string figure called *Niu* from the Solomon Islands, written in a combination of the above-mentioned nomenclatures (Vandendriessche 2015:124–125).[6]

> Step 1: Opening A
>
> Step 2: Distally, insert 1 into 2 loops. 1 pick up 2f. 1 return to position.
>
> Step 3: Proximally, insert 3 into proximal 1 loops. 3 pick up proximal 1f. 3 return to position.
>
> Step 4: Release 1 and extend.
>
> Step 5: Distally, insert 1 into 2 loops. 1 pass proximal to 3 loops. Proximally, insert 1 into 5 loops. 1 pick up 5n and return to position.
>
> Step 6: Release 5 and extend.
>
> Step 7: Release 2 and extend.

It was not only anthropologists who were influenced by Haddon's enthusiasm for string figures. It was taken up by mathematicians, the earliest being Haddon's colleague at Cambridge, Walter William Rouse Ball, author of *Mathematical Recreations and Essays* (1892), who first connected the ordered series of moves (often called 'procedures') in string figure-making with mathematics (Vandendriessche 2015:6,71–110). A more contemporary mathematician and string figure enthusiast, Thomas

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[5]The International String Figure Association (http://www.isfa.org/isfa.htm) is a non-profit organization founded in 1978 by mathematician Hiroshi Noguchi and an Anglican missionary Philip Noble with the goal of documenting, preserving and distributing string figure knowledge for future generations.

[6]Vandendriessche uses a notation that is inspired by the verbalized Storer notation, but uses 'distal' and 'proximal', which is Rivers and Haddon's (1902) nomenclature.

Storer, tried to remedy some of the shortcomings of the existing descriptions of complicated string figures, which he found inconsistent and/or ambiguous. In developing an 'unambiguous formal language' to accurately 'conserve' string figure repertoires (Storer 1988:i), he coded the words of the accepted nomenclature for describing the making of string figures. The fingers, mouth and the big toe were called 'functors' and labelled as L1 'left thumb', L2 'left index finger', etc. Storer also coded the strings, depending on which fingers they hang on, e.g., 1*n* for 'one near' (i.e., the string that hangs on the thumbs and is closer to the string figure-maker), as well as the loops, e.g. 2∞ standing for 'the loop on the index fingers', and individual moves (called 'operations'), which were labelled by arrows above to indicate that a finger needs to go across the strings, or below, if it needs to go underneath, etc.[7] The code

$$\overrightarrow{R2} \ (\underline{R}l5n)$$

represents just one move in the process of making a string figure, and reads as follows: 'pass the right index finger away from you and over all the intermediate strings, and pick up from below the lower string hanging on the right little finger on the side nearer to you'.

The final result of codifying every move in this way is a mathematical formula called 'calculus', which describes the making of a string figure from beginning to end, e.g.:

$$\underline{O}.A \ : \ \overrightarrow{1} \left(\underline{2f}\right) \ \# : \ \overleftarrow{3} \left(\underline{l1f}\right) \ \# : \ \Box 1 \ | \ \overrightarrow{1} \downarrow (2\infty) \ : \ \underset{\rightarrow}{1} \ (\underline{5n}) \ \# : \Box 5 \ | \ \Box 2 \ |$$

(Vandendriessche 2015:126)

Storer went even further: he decided to ignore the 'functors' in order to focus primarily on the movement of the loops, which resulted in an approach called 'the heart sequence'. In this way, the string figure is even physically removed from its maker, and becomes a purely mathematical subject. The following formula, now called 'the heart sequence', refers to the same string figure as the previous one:

$$\underline{O}.A \ : \ \left\{ \begin{array}{l} \overrightarrow{1\infty} \downarrow (2\infty) \ : \ 1\infty \xrightarrow{} 3 \\ \underleftarrow{5\infty} \uparrow (2\infty) \ : \ 5\infty \xrightleftharpoons{} 1 \end{array} \right\} : \Box 2 \ |$$

(Vandendriessche 2015:131)

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[7] For a detailed description of Storer's code system see McKenzie (2016:Vol. 2, 118); for a longer discussion of Storer's mathematical approaches to string figures see Vandendriessche (2015:111–148).

Contemporary ethnomathematician Eric Vandendriessche views the moves in making string figures to be genuine algorithms, i.e., sequences of (mathematical) operations that lead to a final figure (Vandendriessche 2015:67). While analysing these algorithms and heart-sequences has obvious benefits for mathematical purposes, coding all string figure procedures into formulae like the ones above also allows for easy comparison of the technical aspects of string figures from anywhere in the world and the creation of string figure corpora within and across different societies.

A limitation of this approach is that it is purely technical, and promotes a very specific perspective, namely, a Western scientific understanding of string figures, but ignores the aspects of string figure-making that are important to string figure-makers themselves (cf. Shipley & Williams 2019). Nevertheless, this mathematical approach would have been met with enthusiasm by early anthropologists whose interest in string figures was fueled by diffusionism. Haddon and Rivers hoped to compare string figures from different parts of the world to demonstrate the diffusion of cultures (Sillitoe 1976:20). However, Haddon was never convinced that there was sufficient evidence for the kind of study he had in mind, which meant that much of the string figure materials that he and many others collected were never properly analysed and theoretically interpreted (ibid.).

After Haddon and his followers, scholarly interest in documenting string figures declined, to the extent that in 1976 Paul Sillitoe, in a discussion of Haddon's scholarship, stated that '[t]he study of string figures is an oddity, if not something of a joke, to present day anthropologists' (Sillitoe 1976:13). This slightly cynical remark reflects many anthropologists' reaction to seeing papers and books full of instructions for making string figures, but containing little on the people who made them, and their own understanding of the practice. Many contemporary anthropologists are no longer interested in thorough descriptions of how individual string figures are made, but rather seek to understand the social and cultural aspects of this practice, including its associations with other cultural practices, with the local mythology, songs, etc. String figure-making is discussed in connection with children's play (Goldman 1998; Telban 2007; Senft & Senft 2018), and the meanings of this practice and individual string figures are explained in frames of local cosmologies (Harrison 1982; Telban 2007) and traditional environmental knowledge (Damon 2017).

Following the decline in scholarly interest in string figures among anthropologists, they came to be documented not by the researchers themselves, but by their wives,[8] by missionaries (Noble 1979), and so on. Documenting this practice also attracted the attention of linguists, many of whom followed the established nomenclature for describing the figures, but also focussed on the accompanying songs, chants and other formulaic expressions. While much of this material remains unpublished and is only preserved in field notes,[9] a few publications comprehensively document the oral texts accompanying string figure-making. One such example is Barbara and Gunter Senft's

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[8]It was more common at the time for male researchers to be accompanied by their wives than the other way round.

[9]The French linguist Claire Moyse, for example, only recently discovered a wealth of string figure materials in the field notes of her late colleague Françoise Ozanne-Rivierre, who worked on the languages of New Caledonia (Claire Moyse, pers. comm. 2018). See also Henri & Vandendriessche (*in prep.*).

(1986) collection of the repertoire of string figures and their accompanying songs from the Trobriand Islands.

Apart from documenting the making of string figures using established methods, and recording the formulaic texts and songs that accompany this practice, linguists have to date not viewed it as a practice that contributes to the broader goals of language documentation.[10] In the second part of this paper I will show in what ways studying string figures, even in societies where this practice is not necessarily accompanied by oral texts, is beneficial to language documentation, and how, in turn, analysing language used while making string figures helps us understand this practice through the views of its makers. In doing so I will present a case study from Awiakay society.

3. The Awiakay, their language and their string figures The Awiakay people of East Sepik Province in Papua New Guinea live in Kanjimei village, in an area of lowland rainforest on the northern fringe of the New Guinea highlands, their land stretching from foothills in the south into sago swamp in the north. Belonging to the small Arafundi family (Hoenigman 2015; Foley 2018) and spoken by about 400 people, their language, Awiakay, is still learnt by all children in Kanjimei. However, these days everyone is bilingual, speaking Awiakay and Tok Pisin, one of the national languages of Papua New Guinea, and the lingua franca in the area.[11] While there is occasional code-switching, Tok Pisin is mostly used as the language of authority, in church contexts and in connection with anything coming from the outside.[12] String figure-making, as will be shown later in the paper, is a practice that calls for the use of Awiakay in the most unexpected places.

For the Awiakay string figure-making is considered play, a pastime activity. String figures are called *suaim* 'string' and string figure-making *suaim epla* 'taking a string' (making a string figure).

In Kanjimei, string figures can be played at any time of the year. Only a few people indicate that in the past this might have been a seasonal practice. When an elderly man suggested that string figures were played at the time when people eat pandanus (*Pandanus conoideas*), others were sceptical, saying that it might have been so in the past, but they would not know. However, while people seldom spontaneously point to such interpretations, it is not difficult to see the association between the strings and the aerial roots of a pandanus palm, similar to the way the Manambu from the Sepik River associated the strings with the yam-vines (Harrison 1982:149). Harrison reports that among the Manambu the cat's cradle season takes off in September and

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[10]In addition – or as a result of a lack of documentation, Meredith Osmond, who attempted a reconstruction of Proto Oceanic terms associated with string figures, found them a dubious source for lexical reconstruction (Osmond 2009), partly because of a lack of comparative data, and partly because attachment of terms to individual patterns and moves is entirely culturally-subjective.

[11]Throughout the paper, Awiakay text appears in italics, whereas Tok Pisin, often marked as (TP), is italicised and underlined. Abbreviations used in interlinear glosses follow the Leipzig Glossing Rules (http://www.eva.mpg.de/lingua/resources/glossing-rules.php). Non-standard abbreviations are: AWK = Awiakayser (loan-word adaptation); BV = buffer vowel; DIMIN = diminutive; DUPL = reduplication; FRUSTR = frustrative; HORT = hortative; IMMED = immediate; INAL = inalienable; UNCER = uncertaintive.

[12]For a detailed study of the language situation in Kanjimei see Hoenigman (2015).

October, when yam vines start climbing their stakes (ibid.).[13] In Ambonwari, a village downriver from Kanjimei, string figures are reported to be mostly played in February, in the middle of the rainy season, just before the time of the flowering of wild sugar cane (Telban 2007:95).

There might be less contrast between these societies than first meets the eye. We should bear in mind that there has been a time lapse between the reports of earlier researchers and my own research on Awiakay string figures in 2018. Over the years, some knowledge will have invariably been forgotten and certain practices will have become modified or abandoned. There used to be some other prohibitions on string figure-making which the Awiakay no longer adhere to. People say that in the past children were not supposed to make string figures, lest they not grow, and their legs and arms become twisted like the strings. The children of today, however, are not discouraged from indulging in this activity, which they observe already as babies, watching from their mothers' laps, and as toddlers they start attempting to make their own string figures.

String figures are made with any kind of a string available, though most commonly used is traditional string made from 'tulip tree' bark, *Gnetum gnemon*, in Awiakay called *pui*. When the bark is peeled off the tree, the softer inner parts are torn out in strips, and these are split into thinner threads which are then left to dry, and later rolled on the thigh into a string. While men sometimes collect the bark strips, making the string is exclusively women's work (cf. MacKenzie 1991:73). A string made of tulip tree bark is rough and there is a lot of friction. However, this same type of string is also used for making string bags (*bilums*) and fishing nets, and the Awiakay are so used to it that they often find the nylon and cotton strings bought in town too slippery. But in the end, any kind of string is acceptable. When it comes to string figure-making, people often call out to each other trying to find out who has an adequate piece of string lying around in their house or in their net bag.

Both boys and girls in their early years are exposed to, and later make string figures. However, boys tend to drop this activity as mid- to late teenagers, which is when they start hunting. While teenage girls spend more time minding their younger siblings, boys spend more time out in the bush, hunting, fishing, helping others to build houses, clearing trees for gardens, etc. The boys therefore never reach the same level of string-figure skill as the girls do, and even if there are no taboos on men making string figures, adult Awiakay men, who are simply not as skilled as younger women, hardly ever make string figures, even if they recognise the designs and remember how to make some of them. Once married and having a few children, women become more talkative on the subject of string figures, but not having much time to practice, their technical skills in string figure-making start fading away.

String figures can be made anywhere and at any time: during public talks, during a funeral, even in church (by bored children), but mostly string figure-making is done in people's houses, on the verandas, or in the open roofed shelters used for socialising.

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[13]In many other yam-growing societies, e.g. among the Kiwai (Landtman 1914:22), on Nuakata island (Mallet 2003:197), on Goodenough (Jenness 1920:300), etc., string figures were reported to be associated with yams, and played at different stages in the maturation of the yams.

They are made when one is alone, for one's own pleasure, but more often with others, in which case several people fetch strings so each can make them themselves. It is an activity which, once started, spreads very quickly, and no one wants to be left out. Those who do not have a string to fiddle with by themselves, participate as commenting bystanders.

4. The Awiakay string figure repertoire In 2018 the Awiakay collectively remembered 71 different string figures (Table 1). Nearly half of them represent animals, a quarter of them various objects, the remainder represent various actions, non-human beings, geographical features and natural phenomena, and body parts.[14] Together they are like vignettes of the Awiakay lifeworld, ones whose meaning lies behind several layers of abstraction, understood by the members of a face-to-face society of about 400 people on the basis of their shared common ground.

Table 1. Awiakay string figures (2018)[15]

ID #	Awiakay name	English/common name
ANIMALS		
1	*abis*	juvenile freshwater prawn
2	*aiwa*	white cockatoos
3	*ambay*	goura pigeon
4	*ayngwaŋ*	flying fox
5	*kakoy*	white heron
6	*kamaŋ*	crocodile
7	*kamao-kamao tawa*	bandicoot → bandicoot stick nest
8	*kambam*	catfish
9	*kanay*	small bird from the Sepik River
10	*kaŋgam*	bird of paradise
11	*kayma*	cassowary
12	*kiandok*	wallaby
13	*mamgway*	eel
14	*nam komboŋa*	fresh water mussel 'female'
15	*nambok*	grouper (TP *bikmaus*)
16	*nerut*	cicada
17	*oluk komboŋa*	fresh water mussel 'male'
18	*omboyn*	garfish
19	*opum*	pigeon
20	*puriŋ*	frog

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[14]While this kind of categorisation is useful for the purposes of this paper, the real organising principle of Awiakay taxonomy is one that grows or spreads out of a key central point, like e.g., ridges seemingly radiating out of a big mountain (Hoenigman 2015:v). The order in which the ridges are enumerated would not be deemed important, which is also the case with a listing of the string figures.

[15]Some string figures fit into two categories, and are thus listed twice. When listed for the second time, their ID number appears in brackets.

Continued from previous page

ID #	Awiakay name	English/common name
21	*taka kunma (taka tisay)*	possum's tail (possum's anal glands)
22	*tasam kola*	grasshopper's legs
23	*toŋgayk tay*	a paper wasp's nest
24	*wanday*	chicken

OBJECTS

ID #	Awiakay name	English/common name
25	*wao toiplakay*	threading sago grubs
26	*yay*	pig
27	*yay tokopa*	pig's anus
28	*yomgoŋ*	fresh water turtle
29	*tam 1 (Momay)*	dog 1: two dogs sitting on a bridge and the bridge falls down
30	*tam 2 (Momay)*	dog 2: two dogs waiting for their owner
31	*kapay*	knife
32	*koek*	stretcher for displaying a dead body
33	*kokosik anda kamboya*	an axe with the blade facing down
34	*kuna pasa = tapuka nambay isipon*	front fringe of a grass skirt = an old woman peeing
35	*mimbikin*	imitator
36	*monaŋ*	paddle
37	*sisis*	moon-woman → scissors
38	*nok anda kamboya*	an axe with the blade facing up
39	*punjim*	hand-drum (TP <u>kundu</u>)
40	<u>*munmeri*</u>*-tepa nambay*	moon-woman
41	*taŋgun*	spear
42	*tawak*	sago pounder
43	*temgwayn*	kina shell decoration
44	*tepuŋ*	side-blown trumpet
45	*umbuŋ → Wasim umbuŋa*	slit-drum (TP <u>garamut</u>) → Wasim spirit slit-drum
46	*tasia aplasa*	water spirit's fireplace

PLANTS

ID #	Awiakay name	English/common name
47	*awiamañ*	red pandanus
48	*kas mundia*	ripe bananas
49	*kiakay kunda*	wild pandanus roots (TP <u>wail karuka</u>)
50	*kombañiŋ (teplakay)*	(painting [faces] with) Annato tree pigment (*Bixa orellana*)
51	*mañ*	red pandanus (fruit) (TP Sepik <u>karuka</u>; TP Highlands <u>marita</u>)

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ID #	Awiakay name	English/common name
52	*tomba kunda*	roots of the 'oil tree' (*Campnosperma brevipetiolata*)
53	*yambiam kuma*	bioluminescent mushrooms
54	*yambuk*	a fig (fruit of *Ficus copiosa* or *Ficus wassa*)

PEOPLE AND THEIR ACTIVITIES

ID #	Awiakay name	English/common name
55	*koy kukuplakay*	scraping coconut
(34)	*kuna pasa = tapuka nambay isipon*	front fringe of a grass skirt = an old woman peeing
56	*nambokoyn (tuka wanjiŋ)*	young unmarried girls (some pregnant)
57	*tandam kundambaŋ umbuyaplakay*	dancing upon the roots of wild yam
58	*tapuka oluka koy kuriapongoy*	old man climbing up a coconut tree
59	*tapuka oluka pokomba mokonan*	bent-over old man
(25)	*wao toiplakay*	stringing sago grubs
60	*yawiyam*	young unmarried men (fighting)

NON-HUMAN BEINGS

ID #	Awiakay name	English/common name
61	*emay*	assault sorcerer (TP <u>*sanguma*</u>)
62	*manjime kausaŋa*	the ladder of a fig-tree spirit
63	*mema injua kumapa*	an enormous vagina of a dead woman's spirit
64	<u>*munmeri*</u> — *tepa nambay*	moon-woman
65	*tasia aplasa*	a water spirit's fireplace

BODY PARTS

ID #	Awiakay name	English/common name
66	*isik*	breasts
(63)	*mema injua kumapa*	an enormous vagina of a dead woman's spirit
67	*panba kiñandakay*	crippled leg (one leg)

ELEMENTS, GEOGRAPHICAL FEATURES, NATURAL PHENOMENA

ID #	Awiakay name	English/common name
68	*Amiao*	the Yuat River
69	*memek-pokoluŋ*	lightning and thunder
70	*tepa*	moon
71	*yam*	fire

The very task of identifying various animals and plants represented in a string figure repertoire can be illuminating about various aspects of traditional ecological knowledge and local taxonomy. Below is an example of identifying a bird with the help of string figures and another one revealing local ways of naming mussels.

4.1 The curious case of *mimbikiñ* One of the Awiakay string figures is called *mimbikiñ*. Once finished, the string figure-maker puts it in front of his/her mouth and imitates whatever the person in front of them utters. The Awiakay say that this is a 'bad figure', as it tends to make the person whose speech is being imitated angry. The string figure-maker is supposed to be stubbornly persistent, so that, not being able to stop them any other way, the person whose speech is being repeated often just walks away, annoyed. The spectators, however, find this very amusing.

While I was first told that the word *mimbikiñ* meant nothing beyond the name of that particular string figure, I later found out that it is derived from 'imitate the talk' in the second or third person.

(1) *mimbia   iki-ñ*
      talk   imitate-PRS.2DU|PL
      '[you] imitate the talk'

Mimbikiñ as a string figure name is therefore best translated as 'the one who imitates the talk' or 'the imitator'.

In consideration of the string figures that represent animals I was checking through my photographs of Awiakay fauna when I came across one that was labelled *mimbikiñ*. It was a photo of two hatchlings in a nest made from a part of a termite mound and some twigs (see Figure 3). The bird specialist who nearly ten years ago helped me identify other bird species from Awiakay country, was at the time not able to say anything more than 'baby parrots of an unknown species'. However, assuming that this particular parrot was named 'the imitator' because sound imitation is what they are particularly good at, I contacted him again with this additional information. This time he and his colleague managed to identify the birds in the photo as Pygmy parrots (*Micropsitta pusio*; Bruce Beehler and Thane Pratt, pers. comm. by email Nov. 2019). Curiously though, Pygmy parrots do not imitate sound. Rather than with an answer, we are thus left with a few more questions, though ones that can teach us about the intricacies of acquiring local ecological knowledge in the societies we work with.

It would seem possible that *mimbikiñ* was a family name of all parrots, on the basis that many of them imitate sounds. However, in Awiakay the general word for 'parrot' is *kaypunuŋ*. It is thus possible that the Awiakay person who identified the hatchlings in the picture was mistaken, and that they are called something else, whereas *mimbikiñ* is another parrot species – one that does imitate human speech. It is clear that not all members of a community have the same knowledge of the local flora and fauna (cf. Si, forthcom.), and it is even more tricky with birds, as they are

often identified by their calls rather than by their appearance, especially in the case of fledglings.

Figure 3. *Mimbikiñ*; Pygmy parrot hatchlings

4.2 Misleading mussels   Another interesting case is the example of the string figures called *nam komboŋa* 'female (freshwater) mussel' and *oluk komboŋa* 'male (freshwater) mussel'.[16]   These string figures are made in a nearly identical way, with only a single move being decisive in whether the resulting figure will be a male or a female mussel. When I was shown shell specimens as examples of male and female mussels, these turned out to be not the local freshwater molluscs, but saltwater estuarine ones. From this I learned that, in addition to the local freshwater shells, the Awiakay 'import' empty seashells from Wewak in order to burn them to produce lime for chewing with betelnut. I also learned that the names *oluk komboŋa* 'male mussel' and *nam komboŋa* 'female mussel' have nothing to do with biological sex differentiation (it turned out that the names refer to two different species), but are, just like the names of string figures, called 'male' and 'female' on the basis of their shape, which can be associated with male and female genitals (Figure 4).

While I have highlighted only two examples connected with the local fauna, the repertoire of Awiakay string figure designs opens up many lines of inquiry which might remain hidden without considering the context in which string figures are made.

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[16]Biologically, mussels can be either male or female, but there are also some species that are hermaphrodites, which are not distinguished by the Awiakay.

Figure 4. Left: *nam komboŋa* 'female mussel' (*Geloina* sp.); right: *oluk komoboŋa* 'male mussel' (*Batissa humerosa*) – both from the family Cyrenidae

5. Who is the string figure-maker?   A century after Haddon, we have the technology available to record string figure-making in as much detail as we want. We have the technical capacity to record the process simultaneously with several cameras from different angles, and in this way document each move from different perspectives. But how much more can that tell us about string figures than the earlier descriptions of how to make the different designs? While video-recording all the moves undoubtedly helps in reconstructing a string figure, especially when it comes to complicated moves and twists of the hand that are very difficult to describe with words, such documentation by itself contributes little to understanding the practice in context. In addition to using modern technology we need to redefine the subject of our interest and ask: Who are the string figure-makers?

If we take it that they include not only the person who physically manipulates the string, but also the bystanders, who participate in the process by making comments (and thus creating the context), we come closer to understanding local perspectives on string figures.

6. String figures and language documentation   It is desirable that language documenters adopt a holistic approach to language, and document language in context through a variety of speech genres and naturally occurring conversations. However, linguists often struggle to record naturalistic speech. Various visual stimuli have been developed to prompt speakers to discuss what is happening in pictures (e.g. *The family problems picture task*; Carroll et al. 2009; San Roque et al. 2012) in order to get to some near-natural interaction in a controlled activity. In the following section I will show in what ways studying and recording string figure-making can be a useful stimulus for recording naturally occurring conversation.

Recording a procedural activity which is accompanied by an oral text is an obvious choice in linguistic documentation. However, not all string figures are accompanied by such texts. But when we let go of the idea that we need to isolate the speaker/string figure-maker by placing them into a quiet neutral space in order to 'properly' record their speech and actions for the purposes of our research, we notice that string figure-making typically involves much informal commentary and conversation. When we make the move from elicitation to observation, we have made a step from recording decontextualized linguistic data to documenting language context.

There are several other benefits to the linguistic data we obtain from recordings of string figure-making. When people concentrate on this activity, they tend to speak more slowly than usual and such speech is easier to transcribe than, e.g., quarrels or other instances in which people concentrate on speech only.

When we record figure-making as spontaneous activity we may discover that there is more to individual string figures than would ever be observed when they are only elicited. It sometimes happens that at a certain moment bystanders, or even those who have previously not been paying any attention to the activity at all, join in like a flash mob, and play a crucial role in the process. Take for example the Awiakay string figure called *kas mundia* 'ripe bananas'. When I recorded it by elicitation,[17] the string figure seemed to be 'finished' as soon as the final design was in place.

> → **Please click the following link to watch VIDEO 1:**
> <https://vimeo.com/419931065/6b1aec94b9>
>
> Darja Munbaŋgoapik[18] and Hilta Waŋgam making 'ripe bananas'

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[17]I asked two girls to make this figure for me in order to record it, and we went to a quiet place to do so. I liken this manner of recording to linguistic elicitation in which the focus is on the elicited, usually achieved by artificially eliminating the 'disturbing external factors'. In other words, one avoids the presence of screaming children, commenting bystanders, etc. In reality, this way one cuts out all situational as well as cultural context.

[18]Darja Munbaŋgoapik was born just two weeks after I first arrived in Kanjimei, and was named after me. As it happened, she became one of the most skilled string figure makers in the village. I am adding this explanation in order to avoid any confusion with the names.

Yok kondakay, the girls say in the video, 'That's it!' This is when the design of this string figure is finished, and this is where a documentation might stop. However, had the 'annoying bystanders' not been chased away, this is actually when the fun would have begun.

In a natural setting the string figure-makers are seldom alone. There is normally a crowd of curious children around, leaning on top of one another in order to be able to see what their older role model is doing, some voraciously taking in every move they see, trying to practice on the side and hoping that they will soon learn how to make the same figure, and will be able to impress younger kids with their expertise. Others divide their attention, scrutinising every move of their expert peers, and perhaps, a moment later, becoming distracted by an argument between siblings over a stolen grasshopper, and off they go playing with a ball that someone throws from a nearby house. But they are always nearby, and when the 'technical' part of making the string figure is over, it is their turn to jump in.

In the following video, Sipola and Munbaŋgoapik are making the same string figure that we saw before, 'ripe bananas'. However, this was not an elicited performance, and it continues beyond what we saw in the previous video.

→ **Please watch VIDEO 2:** <https://vimeo.com/419932358/6b4a1be08e>

Sipola and Munbaŋgoapik making 'ripe bananas' – recorded in observational way.

In a natural performance the string figure-makers do not describe their moves. They only mark the stages which are important for this string figure: holding *wambinjimba* 'the stem', and waiting for the bananas to ripen.

When a bunch of bananas is brought from a garden and hung in the house, it takes a few days before the fruit ripen. They start ripening one by one, and while people wait for them to be ready, rats take their share at night. As a result, most bunches of bananas look like the one in Figure 5, with the best bananas partly eaten by rats.

While the string figure-makers are finishing the figure, one of the bystanders prompts a child to go and get some ashes from a fireplace. The game continues with the string figure-makers pretending to go to sleep, which is when a group of children (the 'rats'), come and steal their string (the 'bananas'). When the string figure-makers 'wake up', they look for their 'bananas', wondering who might have taken them. They continue pretending it is real life, describing a situation which is all too familiar to every Awiakay child: when they wake up and want to eat ripe bananas, they are nowhere to be found – all that is left are the 'torn bags' (cf. Goldman 1998 for a discussion of make-believe in Huli children's play).

In the meantime, the 'rats' are eating the stolen bananas, indicated by the children untangling the string. The younger children are excited at the thought of doing something forbidden, namely eating the stolen 'bananas' before people come to chase them, while the older ones act like adults, repeating the often heard phrases such as *waoaniŋeŋ* 'don't fight over food', or *aka muim, menda kumbrakanay* 'don't look at him while he's eating, he might bite his tongue'. When spotting the group of 'rats',

Figure 5. When a bunch of bananas is brought to a house to ripen, rats come to take their share every night, leaving half-eaten bananas like the one on the left

the string figure-makers pretend to take a spear to go and kill them. When all the 'bananas' are eaten (that is, when the string is untangled), the 'rats' need to go and return the empty stem. The 'angry people' (the two string figure-makers) are waiting for them, promising to take their revenge by impaling the thieving rats with fishing spears, embellishing their words with details drawn from real life. The more detailed the descriptions of what they'll do to the 'rats', the more laughter they entice from the audience. When the 'rats' finally get the courage to come and return the bare banana stem, the people take their revenge by blowing ashes into their faces.

The string figure, which seemed to have been completed in the first video, only came to life in the second one, when we allowed the game to take its natural course.

7. Transmission of string figures among the Awiakay   With string figures recorded in their natural context, we can also observe the process of their transmission. In the following section I propose that this practice is not only being passed down to the younger generation, but is a two way process, a fact which also resonates in language transmission.

"*Yawŋ tui aka piakambem membiŋ, nan ambla. Kaykay kolokotay yambopla, nombem wakanjipla suaŋ.*" 'You should not sneak out of the house at night,' says my brother Pupi to his 4-year-old son Amson, who comes to my house looking for his father when his mother is already asleep. 'All kinds of things come out at night, searching for food.'

"Aka muim, menda kumbrakanay." 'Don't look at him while he's eating, he'll bite his tongue,' says Palomay to her five-year-old son Iŋgasim when he's looking hopefully at a house guest eating rice with instant noodles, hoping that the man will not eat it all and the kids will be able to share his leftovers.

"Iss, taŋan aka kolopla, <u>maket</u> imika yakalakay." 'Iss, you can't sit like this, everyone can see your 'market',' Mesia scolds her little daughter who sits on the floor in a way that reveals her crotch to everyone's eyes.

"Nangoy nuŋgulia mupa, yawŋ wambopon, kalak naimbem, kalak." 'Look, your 'brother's daughter' is coming up [into the house], give her this [smoked leg of a bandicoot],' my Awiakay mother Kununda said, while teaching me about who was related to me in what way and what obligations I had towards them.

The Awiakay teach their children about their immediate environment and its possible dangers from an early age, they socialise them into their lifeworld by telling them what they should and should not do and by scolding them when they misbehave, demonstrating proper etiquette, and praising them when they start to recognise their social obligations. Fathers proudly take their sons to the bush to teach them how to hunt, and mothers take their daughters to pound sago and gather food in the bush. However, neither men nor women ever teach their children activities that they do in their 'leisure time', such as carving, making *bilums* (string bags), weaving baskets and mats – or making string-figures, until the children already possess some skill and interest in them. Until then, the Awiakay believe the child's knowledge hasn't 'opened' yet (cf. Telban's (1998:59–61) discussion of Heart in Ambonwari), or they say that they're <u>bikhet</u>, which is Tok Pisin for 'big headed', 'stubborn', as they do not want to learn.[19] *"An aka opepon,"* 'he/she does not know', a parent would dismiss a child struggling to make a string figure. However, even as babies in their mothers' laps, children passively observe how their mothers try to remember the string figures which they used to make as teenage girls. Slightly older children might find a string of their own, and try to imitate their older siblings and mothers. It is in this way that they learn the basic moves, sometimes being shown by their mother, at other times by a benevolent sibling, though older siblings would more often scold the younger ones and call them stupid for not knowing how to do it. Wanting to be as skilled as the older kids they look up to, the younger children put a lot of effort into observing and trying to teach themselves, mostly by trial and error, how to make string figures. It is only when they can demonstrate a certain level of knowledge that their older siblings and skilled peers will start taking them seriously and show them how to make the more complicated figures.

When it comes to the figures themselves, the best teachers are teenage girls, who are the most proficient string figure-makers. A few of them know the whole repertoire of 71 figures (if they fail with one or two of them, they have an ability to learn these after a couple of trials), and most know at least half of the figures. However, string figure-making is more than just being able to create the designs: a part of it is knowing

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[19]This can be compared with the way Awiakay children acquire language. Parents do not actively teach them how to speak Awiakay – instead, they start speaking to them by giving them orders in Tok Pisin (cf. Kulick 1992). A child who starts speaking Tok Pisin rather than Awiakay is considered stubborn, as it is considered 'natural' that everyone must acquire Awiakay with the mother's milk.

how to act or what to say with particular string figures. As the teenage girls are normally quite shy, they are not the best performers when it comes to the text that goes with a string figure. A girl only overcomes her shyness after she becomes a mother, so it is grown-up women who are the most eloquent performers. However, once they start having children, Awiakay women have little time to make string figures, and their technical skill becomes rusty. It therefore often takes the younger, unmarried girls to remind them how to make certain figures. The knowledge of string figure-making is therefore not only being passed down from one generation to another, but is going in two directions. While the 'performative' part of the knowledge (telling the young string figure-makers how to act and what to say while making particular figures) is being passed down to the younger generation, the 'technical' part of it, i.e., the ways to manipulate the string in order to create particular designs, is often transmitted upwards, back to the generation from whom the most skilled string figure-makers originally learnt, as well as down to the curious children and younger siblings.

In the following video we see Apimaŋ trying to make the string figure representing a 'slit drum'. The girls who are standing at the side, observing her, immediately spot where she goes wrong and correct her.

→ **Watch VIDEO 3:** <https://vimeo.com/419934023/44cef41601>

Yesay is a very eloquent woman in her early 50s, who often tells young girls what to say or how to act when they make string figures. When she wants to make a string figure that the two of us had talked about before, the situation is reversed: not having made string figures for several years, she has forgotten how to make it, and is helped by the girls whom she would usually instruct about the right words to say when making the figures.

→ **Please watch VIDEO 4:** <https://vimeo.com/419934607/767fa4a0cd>

With her youngest son Braguel asleep in her lap, and her oldest daughter, Tuanja, minding her own son Pilomon in the corner of the house, Robina Tikinjao tries to make a string figure representing a river shrimp.

→ **Please watch VIDEO 5:** <https://vimeo.com/419935293/96e630b739>

Tikinjao is being watched by her classificatory daughter Darja Munbaŋgoapik, a fifteen-year-old who is one of the most skilled string figure-makers. When Tiki hesitates, Munbaŋgoapik helps her. In instructing her mother, she does not only use words, but also gestures, which typically show how to move the hands. It is an example of how multimodal language is – gestures are not only used to accompany speech, but to help it out when words fail. In this way the Awiakay elegantly solve the problem that challenged those who tried to describe the figures with only written language.

Another interesting feature of Munbaŋgoapik's instruction is that she mostly speaks Tok Pisin, but switches to Awiakay when she uses the names of fingers – a prevailing feature of string-figure-making speech in general, which is discussed in the following section.

8. Talking about strings   Western nomenclature (as discussed in §2) is designed to describe the movements of the fingers and the loops of string, but it does not go beyond that. What it overlooks or considers unimportant are actions that are considered essential by the local string figure-makers – either for the physical outcome of the string figure (in making the string figure called *Amiao* 'the Yuat River' everyone in the vicinity must spit out, rather than swallow the saliva, lest the string figure not emerge) or simply for fun (e.g. the string figure-makers touching with their clenched fists when finishing 'ripe bananas', as seen in Videos 1 and 2). While such actions are often hard to describe, the Awiakay deploy a right combination of words, gestures and sounds in order to talk about such actions and teach others.

While they too have created some technical terms that are used only in the string figure-making context, the Awiakay mostly talk about string figure-making using ordinary Awiakay terms. Due to the difficulty inherent in describing complicated moves, the Awiakay combine verbal language with gestures and onomatopoeic words or sounds. They have overcome the inadequacy of the verbal language by using an efficient combination of different modes.

In the following video we see Wamay who is both a skilled string figure-maker and a good storyteller. Being married into Kanjimei from the neighbouring Asangamut, she understands Awiakay, but usually uses Tok Pisin when speaking herself. Here she explains to the girls how to make a string figure representing an eel, and instructs them what sounds to make with it.

→ **Watch VIDEO 6:** < https://vimeo.com/419935845/d40c73fca1>

Wamay's explanation is a combination of verbal language, gesture and a sucking sound made with pursed lips, which denotes the disappearance of the eel. Without this sound the string figure would simply not 'feel' right. This is an example that shows that the actual design made of strings is only part of the string figure.

String figure-making is associated with particular kinds of social setting, and speaking about this practice requires certain expressions which are not frequently used in other contexts. On the basis of the transcripts of six hours of video-recordings of string figure-making in Kanjimei I compiled a glossary of Awiakay string-figure-making expressions (see Appendix). Many of them are descriptive, consisting of words that are frequently used in everyday language rather than specific to string figure-making. Some of the words are nearly archaic, i.e. no longer frequently used in present-day Awiakay, but there are also some collocations that are restricted to the context of string figures.

String figure-making itself is called *suaim epla* 'they are taking a string'. In the string figure-making context I translate the verb *e-* as 'make', as this is more idiomatic in English. The final design is called *kaway*, literally 'decoration, pattern, design'. When someone is making a string figure, the bystanders scrutinise the process and often say *aka yakanayŋay* 'I don't think it'll come up.' When the string figure is made, the maker may say, *elakay, tungumjaŋ yakay* 'that's it, mine came up / emerged'.

For the purpose of this paper I divide Awiakay string figure expressions into the following categories in order to give the reader an idea of what one can come across

when documenting this practice:[20] (a) words relating to the string; (b) names of the so-called sub-procedures; (c) names of body parts; (d) expressions denoting ways of making string figures; (e) verbs used to denote particular moves in the string figure-making process; (f) names of particular moves in individual string figures; (g) names of particular stages in certain string figures; and (h) onomatopoeic expressions. I discuss some of these expressions in more detail below.

(a) **Words relating to the string**

Words relating to the string and its properties (*suaim* 'the string', *punjukandeŋge* 'long', *maŋgumba* 'short, etc.) are all found in everyday language. Although *suaim* and *im* both mean 'string' or 'rope', and can both be used for the string for making string figures, only the former, which is used only for strings and ropes made from bush materials, is used to denote 'string figure-making': *suaim epla*.

(b) **Names of the so-called sub-procedures**

In Western string figure-making nomenclature the term 'sub-procedure' refers to a series of moves which are not particular to an individual string figure, but can be used at various stages in making various designs, or repeated within the same procedure (cf. Vandendriessche 2015:33). There are two Awiakay terms that denote such sub-procedures, and are indigenously recognised as a series of moves that are repeated in making various designs. One of them is called *ipindiwaki* and the other *tasam kola* 'grasshopper's legs'.

Coincidentally, **ipindiwaki** denotes a sub-procedure which roughly corresponds to the one called Navaho in ISFA nomenclature.[21] *ipindi-* is a verb that means 'release from'. However, it does not seem to be used other than in the string figure context. The Awiakay say that *ipindiwaki* is a word that is only used when talking about string figures. As -*waki* is not recognised as an Awiakay morpheme, and *ipindiwaki-* can be used as a verb, meaning 'to make *ipindiwaki*', it is fair to assume that -*waki* comes from Tok Pisin verb <u>wokim</u> 'make/do something'

(2) *ipindi-waki-mbali-k*
     ipindi-waki-PRS-1SG
     'I'm making *ipindiwaki*'

This is strengthened by the fact that in some cases it is used as *ipinde-e-*, the Awiakay verb e- 'take' being used as 'make' in the sense of 'making string figures'.

(3) *ipinde-e-palu-ŋ*
     release.from.thumb-make-PRS-1PL
     'we're releasing the string (from thumbs)'

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[20]Note that the Awiakay themselves do not classify these expressions in this way.

[21]The term Navaho, referring to a sub-procedure in string figure-making, was introduced (and used as a verb) by Kathleen Haddon (1911:5) who found this series of moves frequently occurring in Navaho string figures.

However, the 'default' meaning of *ipindiwaki* (or *ipinde-*) is releasing the lower of the two strings from the thumbs. If the term is used in connection with any other finger then the finger is mentioned explicitly, e.g.

(4) *niŋgit kot   ipind-a-kay*
     little   finger release-BV-3PL.HABIT
     'they release little finger'

Some of the Tok Pisin translations of *ipindiwaki* offered by the Awiakay are

(5) *mi lusim mama pinga* 'I release the thumb'
     mi lusim nau 'I release now'
     lusim tamblo suiam 'release the lower string'
     rausim, lusim long pinga 'get rid of it, release from the finger'

The other sub-procedure that the Awiakay recognise as such and name separately is ***tasam kola*** 'grasshopper's legs'[22] in which the string figure-maker exchanges the loops on their index fingers by inserting them one into another and re-inserting the fingers, this time into the loop that was previously on the other finger. *Tasam kola* roughly corresponds to the sub-procedure that ISFA nomenclature calls 'loop exchange'. At the same, time *tasam kola* is also a distinct string figure.

(c) **Names of body parts**
The Awiakay make string figures with the help of the fingers and hands (*kola*), toes (*panba kola*), mouth (*mamba*), teeth (*kanja*), neck (*tokomba*), head (*kopa*), elbows (*numuŋga*), armpits (*kakaya*), knees (*akumba*) and thighs (*wambia*). All of these terms are also used when speaking about string figure-making, especially by the by-standers who tell the makers what to do.

My most frequent consultants, performers and teachers of string figures were teenage girls, all of whom are fluent both in Awiakay and Tok Pisin. Some of them tend to use more Tok Pisin than Awiakay in their ordinary daily conversations. However, even when they were speaking Tok Pisin, in the string figure context they almost invariably used Awiakay names for fingers: *maŋga kot* 'thumb', *punje kot* 'index finger', *injiŋ kot* 'middle/ring finger' and *niŋgit kot* for the 'little finger'. This is particularly interesting because the majority of Awiakay, even those who hardly ever code-switch between Awiakay and Tok Pisin, have adopted Tok Pisin terms for fingers and numbers, to the extent that many adults cannot immediately name all the fingers in Awiakay.

This was already the case 15 years ago, when I started working with the Awiakay. I remember my adoptive mother Kununda and father Aymakan, both of them fluent Awiakay speakers, trying to demonstrate the traditional counting system whereby numbers start with fingers of one hand, going across the hand, naming elbow, shoulder, then climbing up to the head, naming ear, eye, forehead, nose, lips and then

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[22]The Awiakay expression is literally 'grasshopper's hands'.

continuing on the other side again. Already then, they both had trouble remember-ing all the names of fingers. This body-tally system was formerly only used when counting string bags for exchange, or when counting the enemy's warriors, and is nowadays obsolete. When the cash economy entered the scene in mid-1990s, and the Awiakay started selling eaglewood (TP *garu*), their contact with outsiders increased. Moreover, the numbers that people had to use went higher than those of the tradi-tional counting system, and Tok Pisin numbers became far more useful. With the decline of the traditional counting system, Awiakay names for fingers came to be less frequently used, to the point that they gave way to Tok Pisin ones. However, it seems that string figure-making is perceived as an inherently Awiakay practice, in which even the youngsters, who otherwise readily use Tok Pisin, revert to Awiakay terms for fingers.

It is worth noting here that the Awiakay use of Tok Pisin words for fingers reflects Awiakay terminology in which the middle finger and ring finger have the same name, *injiŋ kot* 'middle finger' (Table 2). The occurrence of 'ring finger' in speech is quite rare, presumably also because of the fact that it is one of the less agile fingers.[23] At least in Oceania, ring finger is the one that is the least used in making string figures (Eric Vandendriessche, pers. comm.).

Table 2. Awiakay, Tok Pisin and English names for fingers

Awiakay	Tok Pisin (+ variants used in other parts of PNG)	English
maŋga kot	*mama pinga* *namba 5 pinga*	thumb
punje kot	*pointa* *yu pinga* *namba 4 pinga*	index finger
injin kot	*namel pinga* *namba 3 pinga*	middle finger
injin kot	*namel pinga* *paspas pinga* *namba 2 pinga*	ring
niŋgit kot	*liklik pinga* *las pinga* *namba 1 pinga*	little finger

[23]Several Papuan languages (e.g. Awiakay, Bena Bena, Chini, Karawari) have the same or a similar name for the middle and ring fingers, whereas in some languages (e.g., Central Asmat, Kalam, Manambu, Usan) these are simply referred to as 'fingers'. I thank Alexandra Aikhenvald, Joseph Brooks, Carola Emkow, Nicholas Evans, Don Niles, Andrew Pawley, Ger Reesink, Alan Rumsey, J. A. J Sanchez, Catherine Scanlon, Jeff Siegel, Edgar Suter and Borut Telban, who sent me the information from the languages they are familiar with.

(d) Expressions denoting ways of making string figures
An interesting example in this category is ***paswanuŋ*** 'quickly'. It is composed of a
Tok Pisin borrowing *paswan*, which itself came into Tok Pisin from the English 'fast
one', with the Awiakay instrumental suffix *–uŋ*, to denote the way something is done.

(6) *pas-wan-uŋ*
    fast-one-INSTR
    'with a fast one' i.e. 'quickly'

It is often used in the negative, uttered by those who want to learn how to make a
particular figure by watching the skilled string figure makers.

(7) *pas-wan-uŋ   e-ŋan*
    fast-one-INSTR take-2SG.NEG.IMP
    'don't make it (too) quickly'

(e) Verbs denoting particular moves in the string figure-making process
String figure-making involves a multitude of movements of fingers, hands, and other
body parts, many of which are rather complex and not performed in other contexts.
Awiakay string figure-makers usually do not talk about their moves, but we can hear
these expressions from the bystanders who give unsolicited advice to the string figure-
makers. In describing these often complex moves, the Awiakay resort to a very cre-
ative aspect of their language, one which offers nearly limitless possibilities of expres-
sions: serial verb constructions.[24] Some of the serial verb constructions used by string
figure makers reflect collocations used in everyday life, others are specific to particular
moves in making string figures, e.g. ***kapiŋgi-wamo-a-*** (cut-go.up-go) 'cutting-going
up, sliding up (with a hand) by picking strings on the way'. This verb sequence seems
to have been coined for a particular move in a string figure called 'ripe bananas'.

→ **VIDEO 7:** <https://vimeo.com/419936812/ec3c8f6572>

(8) *kaway kapiŋgi-wamo-a-mbalu-ŋ*
    design cut-go-up-go-PRS-2DU
    'we're cutting/sliding up the design (with a hand, picking up strings on the way)'

moko-kumbus- (hold-rub) 'hold the string in one's hands and rub it between the
palms'. At a certain point in the process of making string figure called *Amiao* 'the
Yuat river', one of the makers grabs all the strings in his/her palm, places the other
palm on top and starts rubbing it. It is an important part of the process, as the string
may get tangled while doing so, and the design will not come up. If that happens, it is
ascribed to someone in the vicinity swallowing his/her own saliva, which is believed
to ruin the string figure.

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[24]Serial verb constructions are commonly found in both Austronesian and non-Austronesian languages of
the New Guinea region (cf. Crowley 2002; Pawley 2009; Aikhenvald 2018, among others). For Awiakay
serial verb constructions see Hoenigman 2015:320.

→ **VIDEO 8:** <https://vimeo.com/419937016/e1ef3c7669>

(9) *moko-kumbusu-pali-k*
     hold-rub-PRS-1SG
     'I'm holding it and rubbing it between my hands'

moko-paŋgasi- (hold-turn) 'turn (while holding it)'. Turns are difficult to explain and it is far easier to learn them by watching. Sometimes, however, a bystander wants to explain how to do a particular move and does not have a string at hand, so they resort to explaining it verbally.

→ **VIDEO 9:** <https://vimeo.com/419937141/98fc0d3e30>

(10) *elaŋan   piaka-pep,   moko-paŋgaka-nm-an*
      like.this let.go-PERF hold-turn-FUT-2SG
      'when you've let it go like this, you'll turn it while holding'

poko-papak- (hit-throw) 'push away'. This is sometimes also expressed by Tok Pisin term <u>*sakim*</u> (see below).

(11) *taŋan   poko-papak-ŋge*
      like.this hit-throw-1PL.HORT
      'let's hook [the string] by pushing another one away'

<u>*sakim*</u> (TP) 'push away, turn it around'

(12) <u>*yu*</u> <u>*sakim*</u>   <u>*go*</u> <u>*olsem*</u>
      2SG push.away go like.this
      'push it away like this'

(13) <u>*sakim*</u>   <u>*em*</u>   <u>*kam*</u> <u>*olsem*</u>   <u>*gen*</u>
      push.away 3SG.ACC come like.this again
      'turn it around again'

Tok Pisin verbs which are used in talking about string figures are often used in Awiakay with the suffix *–(m)bape*, an 'Awiakayser' (AWK) following which the usual Awiakay suffixes can be used (cf. Hoenigman 2012:195; 2015:316), e.g. <u>**taitim-**</u>'tighten'

(14) *nan aka <u>taitim-bape-m</u>*
       you not tighten(TP)-AWK-2SG.NEG.IMP
       'don't tighten it'

Some verbs denote straightforward actions, but their translation requires some explanation beyond a simple English gloss. One such example is *pikis-* 'tie' or *pikisi-palepe-* 'tie-shoot'

(15) *pikisi-palepe-p-on ya kopa im-ba*
       tie-shoot-PRS-3SG now head string-DEF
       'she's tying the ends of the string now'

(16) *Amiao yom-ba pikisi-palepe-pali-k*
       Yuat river-DEF tie-shoot-PRS-1SG
       'I'm tying the Yuat River now'

The second example might be more accurately translated as 'twist-tie' or 'tie by twisting', as it refers to the traditional Awiakay way of tying which does not involve making knots. The Awiakay do this kind of tying when using ropes (ligatures) made of bush materials such as rattan to 'tie' the posts in house-building (instead of nailing them), to finish attaching strings to bows, etc. In that, they do not make a knot at the end of the process, but twist the rattan in a particular way, which makes it stay in place. Such a way of tying is also used with the flattened dried grass used in mat-weaving and basket-making. Making a knot would break the rattan (or the grass), whereas this kind of twisting does not. Besides, because the ligature is flattened rather than round like commercial rope, the ligature stays in place even after the material has dried.[25]

Another verb commonly used in the string figure-making context which needs some further explanation is *pondanji-* 'take out', 'pull out'.

(17) *pondanji-pali-k ya*
       pull.out-PRS-1SG now
       'I'm pulling it out now'

This verb denotes taking or pulling something out of a narrow opening such as a crack in the *limbum* (Arecoid palm) flooring, often with the help of another object. The action is performed very slowly and often takes more than one try to do it. In everyday context it is most frequently used for someone trying to pull or prise unwanted material such as baby's faeces, flecks of vomit, or fish bones and other food scraps out of cracks in the flooring, usually with a little stick. In string figure contexts

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[25]For more on traditional ligatures and tying see Siegel (1982); Coiffier (1994); MacKenzie (1991); Kuchler (1999); and Bolton & Fyfe (2009).

it is used when one needs to pull a string through a narrow 'path' out of the 'maze' of other strings without interfering with the placement of other strings.

Some verbs denote what is happening to the string, e.g. **konjasinan** 'get entangled'.

(f) Names of particular moves in individual string figures
Some expressions denote a single move, which comes at a particular stage of making a string figure. In such cases the name seems to serve as a mnemonic to what is to be done, e.g., **opumba mok** 'hold the pigeon', or **yai tukumba pondanji-** 'pull out the pig's testicles' (Figure 6).

→ **VIDEO 10:** <https://vimeo.com/419936384/5edf82a8dc>

Figure 6. 'Pulling out pig's testicles'

(g) Names of particular stages in certain string figures
Some stages of certain string figures have particular names, which might, like the names of particular moves, be a mnemonic for the string figure maker. These names are usually part of the story, or somehow fit into the context of the name of the particular string figure, e.g., **ekia kopa** 'belly button' is the name of a stage in making **nambokoyn** 'young girls'. Although traditional pollution taboos are no longer as strictly observed as they used to be, childbirth and anything connected to it, including words denoting placenta (*poŋaya*), umbilical cord (*ekia*) and the baby's navel (*ekia kopa*, lit. 'head of the umbilical cord'), is still not a topic of conversation in the presence of men. However, the string figure maker who makes 'young girls' does indicate when they come to the stage of making *ekia kopa* 'the belly button', usually expressed with a slight relief, knowing that the 'young girls' will soon emerge. Just as

being entangled with the umbilical cord can be fatal for a baby, entangling the strings before the *ekia kopa* stage may mean that the string figure will not come up.

→ **VIDEO 11:** <https://vimeo.com/419936527/db8fbb0369>

wambinjimba 'banana stem' is a word that is only used in string figure-making and comes up in the string figure called 'ripe bananas' (Figure 7). In ordinary Awiakay speech, a banana stem is called *kas payŋgwa*. When the string figure reaches this stage, the Awiakay say *wambinjimba yakay* 'the banana (stem) has emerged' (or, in TP *kala bilong banana i kamap*), or *wambinjimba mokopalik* 'I'm holding (grasping) *wambinjimba*'.

→ **VIDEO 12:** <https://vimeo.com/419936723/b38c3cc120>

Figure 7. *Wambinjimba* – the word meaning 'banana stem', used only in the context of making string figures (still frame from the video-recording of 'ripe bananas')

(h) **Onomatopoeic expressions**

Some string figures invite the use of onomatopoeic expressions, e.g., ***tsiŋ-paa!*** used to represent lightning (*tsiŋ*) and thunder (*paa!*) Even shy performers utter such expressions very loudly when doing '*tsin-paaa!*'

→ **VIDEO 13:** <https://vimeo.com/419937236/ba5385045d>

Another onomatopoeic expression is a kind of a ***tsssk!*** – a smacking sound made by one's lips shaped into a kiss, which is to represent the sound that an eel makes when it slips away.

→ **VIDEO 14:** <https://vimeo.com/420215322/22e48c6093>

9. Conclusion   Researchers from various disciplines, including linguistics, have shown interest in studying the practice of making string figures, often focusing on the practice from a very specific angle. This paper shows how broadening the focus of the study by redefining its main subject from the person who manipulates the string (i.e., from the procedures) to all those who in any way participate in the process, and embracing both situational and cultural context, results in far richer material, which can both contribute to the breadth of language documentation, and to the better understanding of the practice itself.

I show that documenting string figure-making can be fruitful for language documentation – not just through the documentation and analysis of the accompanying oral literatures, but also as a method for documenting other speech types through recordings of the naturalistic speech that surrounds the string figure-making process. This is achieved by using observational filming techniques, rather than elicitation. A string figure repertoire itself is a good basis for linguistic documentation that can stretch into many areas: from traditional ecological knowledge to the realm of the metaphysical.

From the point of view of language documentation, another valuable aspect of studying string figures is that it sets up a situation where people talk in a relatively slow and well-articulated way while they concentrate on performing a task. But perhaps even more valuable is the benefit that detailed language documentation lends to our understanding of the string figure-making practice itself. So, while the initiation of an activity like string figure-making can set up a neat context for language documentation, a detailed documentation of the way people talk about string figures also provides insights into the way people think about string figures. By studying local ways of performing and talking about string figures, we can go beyond globalised nomenclatures and algorithms and recapture what string figures mean to the people who actually make them.

I agree with Haddon, who maintained that nothing is too insignificant to receive attention by an anthropologist [– or a linguist], not even string figures (A.C. Haddon 1906:v). The value of any such study, however, depends on the depth of its embeddedness in the sociocultural context.

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Appendix

A GLOSSARY OF AWIAKAY STRING FIGURE EXPRESSIONS

Words relating to the string	
Awiakay	**English**
im string/rope	string, rope; used for both ropes and strings made from bush materials and the ones bought in town.
kaway design	design (a 'picture' in a string figure process)
maŋgumba short	short
maŋgum-ba-nja em short.DEF.DIM take 'take the short one' / 'make [the string figure] with the short string'	
punjukandeŋge long	long
im punjukandeŋge string long 'long string'	
suaim string	string Used for a traditionally made string, usually made from the bark of *Gnetum gnemon*.

'Sub-procedures'	
ipindiwaki	see *ipindi-* in VERBS
tasam kola grasshopper hands	'grasshopper's legs' loop-exchange

Particular moves in individual string figures	
opum-ba mok pigeon-DEF hold	hold the pigeon
yai tukumba pondanji pig testicles pull.out.2SG.IMP	pulling out pig's testicles

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Particular stages in certain string figures	
ekia kopa umbilical.cord head	navel, belly button (name of a certain stage in a particular string figure)
wambinjimba banana.stem	banana stem This term is only used in string-figure making – in ordinary Awiakay banana stem has a different name. When the string figure is made to this stage, the Awiakay say that the banana design has emerged (TP *kala bilong banana i kamap).*

Body parts	
kola	hand, fingers
maŋga kot, (TP) *mama pinga*, *bikpela pinga* round/fat finger	thumb
punje kot, (TP) *pointa* long finger	index finger
injiŋ kot, (TP) *namel pinga* middle finger	middle finger, ring
niŋgit kot, (TP) *liklik pinga* little.finger	little finger
niŋgit kot piak little finger release.2SG.IMP 'release the little finger'	
kiña kola the.other.side hand	the other hand
kiña kola-ŋ the.other.side hand-LOC *yaka-palu-ŋ* stand-PRS-1PL 'we're hanging [the string] on the other hand'	
kanj-a tooth/teeth-3SG.POSS.INAL	tooth, teeth
kanji-n-muŋ teeth-2SG.POSS-INSTR 'with teeth'	with teeth, put it in teeth, grab it with teeth

<div align="center">*Continued from previous page*</div>

mamb-a mouth-3SG.POSS.INAL	mouth
mamb-uŋ mouth-INSTR	[grab it] with the mouth (sometimes with teeth)
panb-a leg-3SG.POSS.INAL	leg
ya panbe-k-uŋ now leg-1SG.POSS.INAL-LOC *embe-pe-pali-k* lay.on-shoot-PRS-1SG 'I'm putting it on the leg now'	I'm putting/hanging it on the leg now
panb-a kol-a leg-3SG.POSS.INAL finger-3SG.POSS.INAL	toes, big toe
panb-en kol-a-ŋ leg-3SG.POSS.INAL finger-3SG.POSS.INAL- LOC	on(to) the toe

Ways of making string figures

pas-wan-uŋ fast-one-INSTR 'with a fast one' *pas-wan-uŋ ikaka-pali-k* fast-one-INSTR carve-PRS-1SG 'I'm doing it really quickly' (TP) *mi wok hariap hariap* *pas-wan-uŋ e-ŋan* fast-one-INSTR take-2SG.NEG.IMP 'don't make it (too) quickly' *pas-wan-uŋ e ani-ŋan* fast-one-INSTR take go-2SG.NEG.IMP 'don't go/do it (too) quickly' *pas-wan-uŋ aka e-m* fast-one-INSTR not take-2SG.NEG.IMP 'don't make it (too) quickly'	fast, go fast, make it/do it/go (really) quickly, make it (too) quickly

<div align="center">*Continued on next page*</div>

Verbs denoting particular moves in string figure-making process	
alukak- release	release, untangle, let go, slip away
apim (TP) lift	
e- take *kenda e* again make.2SG.IMP 'make it again' *maŋa.kot-uŋ e* thumb-INSTR take.2SG.IMP 'pick it with the thumb'	make (a string figure), take, pick
embe- lay.on *wambi-n-muŋ embe-pa* thigh-2SG.POSS-LOC lay.on-2SG.IMP 'lay [it] on the thigh'	lay on, put on, place on (e.g. on the thigh)
embe-pe- lay.on-shoot *ya panbe-k-uŋ* now leg-INAL.POSS1SG-LOC *embe-pe-pali-k* lay.on-shoot-PRS-1SG 'I'm putting it on the leg now'	put on, hang on
enjeteke- (see also *yaka-*) emerge *kaŋ enjeteke-nay ambay* here emerge-3SG.FUT goura.pigeon 'It'll come up here, the goura pigeon.'	emerge, come up, show up
ipindi- release.from.(thumb).2SG.IMP	release from thumb (sometimes used for other fingers) seldom used alone – usually in combination with 'make'

ipindi-waki-mbali-k *ipindiwaki*-PRS-1SG 'I'm making *ipindiwaki*' *ipinde-e-palu-ŋ* release.from.thumb-make-PRS-1PL 'we're releasing the string (from thumbs)' *niŋgit kot ipind-a-kay* little finger release-linker-3PL.HABIT 'they release little finger'	make *ipindiwaki* (release-from-thumb, usually the lower string) If the term is used in connection with any other finger, that finger is mentioned separately
ipis (put).on.top *ipis embe-* on.top put/place *ya ipis-uŋ embe-pe-palu-ŋ* now on.top-LOC put.on-shoot.PRS-1PL *suaim kay-koy* string another-this 'we're putting another string on top [of this one]'	put, place on top
kapiŋgak- loosen *kapiŋgak-anim an ya* loosen-IMMED.FUT go now 'it's getting loose now'	loosen, get loose
kapiŋgi-wamo-a- cut-go.up-go *kaway kapiŋgi-wamo-a-mbalu-ŋ* design cut-go-up-go-PRS-2DU 'we're cutting/sliding up the desin (with a hand, picking up strings on the way)'	cutting-going up, sliding up (with a hand) by picking strings This verb seems to be coined for a particular move in this particular string figure.
kombok- insert, shoot (sth) inside *nan kombok kele* you shoot.go.inside and 'insert it'	insert (of a string or an object, not a finger or hand)

konja- tangle/tie	tangle, tie (the string is tangled; I will tie it)
kenda konja-ka-na-k again tie-?-FUT-1SG 'I'll tie it again'	
kumbus- rub, roll between palms *ya kumbus-e* now rub.between.palms-2DU.IMP 'rub it between palms now'	rub between palms (when doing it to the string, it gets meshed in the process)
mamge-mok lift-hold/grab *punje kot mamge-mokonde* index finger lift-hold/grab 'lift [the string] with the pointer'	lift (a string with a finger)
minjak- hang.on *minjaka-pali-k ya* hang.on-PRS-1SG now 'I'm hanging [it] on now'	hang on
mok hold.2SG.IMP	hold, take hold of, grab, take, fetch
moko-kumbus- hold-rub *moko-kumbusu-pali-k* hold-rub-PRS-1SG 'I'm holding it and rubbing it between my hands'	hold-rub hold the string in one's hands and rub it between the palms. The string may get meshed in the process.
moko-po-e- hold-?-take *moko-po-e-pali-k* hold-?-take-PRS-1SG 'I'm holding and pulling it'	hold and take, hold and pull
mokonde-mok lift	lift it up

kon mokonde-mok up lift.2SG.IMP 'lift it up'	
moko-paŋgasi- hold-turn	turn (while holding it)
emepanda e, moko-paŋgasi-m well take.2SG.IMP hold-turn-FUT2SG 'do it well, then you'll turn it while holding'	
elaŋan piaka-pep, moko-paŋgaka-nm-an like.this let.go-PERF hold-turn-FUT-2SG 'when you've let it go like this, you'll turn it while holding'	
moko-paŋga mamasi-papa-k hold-turn turn-throw-PST1SG	turn (while holding it) and turn around completely
muŋgo- pull	pull
ya mugo-palu-ŋ now pull-PRS-1DU 'we're pulling [it] now'	
muŋgo-muŋgo-e pull-DUPL-take	pulling (reduplication indicates iterative action)
muŋgo-muŋgo-e-po-n pull-DUPL-take-PRS-3SG 'she's pulling it now'	
pak- pick.up.(and.carry)	pick up (and carry)
taŋan pak-ana like.this pick.up.and.carry-2SG.IMP 'pick it up like this'	
paŋgak- turn	turn (around) (like a canoe in the river)
kaña paŋgak-a-laka-y the.other.side turn-BV-FRUSTR-PRS3SG '[it] nearly turned around'	
paul-a-po-k *(paul-mba-po-k)* fail-AWK-PST-1SG	I failed, I messed it up, I'm wrong

pia-pi- let.go-DUPL	letting it go
pia-pi-ø-mbali-k let.go-DUPL-OBJ3SG-PRS-1SG 'I'm letting it go'	
maŋga kot pia-pi round finger let.go-DUPL.2SG.IMP 'let go (off) the thumb'	

piak- release	release, let it go, leave
maŋga kot piak round finger release.2SG.IMP 'release the thumb'	

pikis- tie	tie (the Awiakay way; 'twist-tie')
Amiao yom-ba pikisi-palepe-pali-k Yuat river-DEF tie-shoot-PRS-1SG 'I'm tying the Yuat River now'	
pikisi-palepe-p-on ya kopa imba tie-shoot-PRS-3SG now head string 'she's tying the ends of the string now'	

pok- hit	hit, slap

poko-e- hit-take	hook
poko-e kendenda hit-take.2SG.IMP again 'hook [the string] again'	
kenda amba i, mae poko-e-m-an pisip again what do before hit-take-PST-2SG like 'do it like before when you hooked it'	

pokonde-pak- hit-carry	diagonally / on the other side carry over/across to the other side
pokonde-paka-palu-ŋ hitting-carry	

poko-papak-ŋge (see also TP *sakim*) hit-throw-1PL.HORT	push away
taŋan poko-papak-ŋge like.this hit-throw-1PL.HORT	hook a string by pushing another one away
pondanji- take.out/pull.out *pondanji-pali-k ya* pull.out-PRS-1SG now 'I'm pulling it out now'	take/pull (sth) out; (of a fissure, a crack in limbum floors etc.,) One usually does this very slowly, or it takes more than one try to do it. In string figure context one does this slowly because one needs to pull a string out of a maze of other strings.
sakim (TP) push.away *yu sakim go olsem* you push.away.2SG.IMP go like.this 'push it away like this' *sakim em kam olsem gen* push.away ACC3SG come like.this again 'turn it around again'	push away, turn it around
senisim (TP) change *aka senisim-bape-m* not change-AWK-2SG.NEG.IMP 'don't change it'	change, swap (hands/fingers)
suaim e- string take	'take' a string make a string figure
supim (TP) insert *ok bai yu kamautim disla han, putim supim* *go insait long hia, supim i go daun* 'OK, you'll take this hand out, insert it here, and 'shoot' it down here. *supim olgeta yet* 'put all of them inside' ('insert all of them')	insert, 'shoot in'

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taitim (TP) tighten	tighten

nan aka taitim-bape-m
you not tighten-AWK-2SG.NEG.IMP
'don't tighten it'

taitim-ba-pep   koŋ piak-aym
tighten-AWK-PERF   and let.go-2SG.IMP
'you tighten it first, then let it go'

tum-pa, tuŋ-ba tighten	tighten

nan tum-pa
tighten-2SG.IMP
'you tighten'

tuŋ-tuŋ-ba,   maŋga kot
tighten-DUPL-2SG.IMP round   finger
tay
ACC3SG
'tighten this one on the thumb'

tuŋ-tuŋ-ba   kele,   maŋgumba
tighten-DUPL-2SG.IMP and   short
suaim
string
'tighten it, though the string is short'

tuŋgu- pull	pull (stretch)

tuŋgu-palu-ŋ
pull-PRS-1PL
'we're pulling it'

uk-poko-e- hook-hit	hook, make by hooking

uk-poko-e
hook-hit-take-2SG.IMP
'hook it'

wakap- fill, put in	put in, go in, insert (finger, hand or string)

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ake, wakapeŋ-ana hey fill.in-go2SG *'hey, put it in / go in (with the hand)'* *maŋga kot wakap-a* round finger fill.in-2SG.IMP 'insert the thumb' *kok wakap-a,* down.there fill.in-2SG.IMP <u>srukim</u>-bap-a pull.back-AWK-2SG.IMP 'insert down there, at the back / from the back side'	
yaka- stand, come up, emerge	(1) hang on, put on, stand (2) come up, emerge, turn out well (the design)
kiña kola-ŋ yaka-palu-ŋ the.other.side hand-LOC stand-PRS-1PL 'we're hanging [the string] on the other hand' *aka yaka-y* not come.up-3SG.PST 'it didn't come up' *aka yaka-na-y-ŋay* not come.up-FUT-3SG-UNCERT 'I don't think it'll come up.' *tuŋgum-jaŋ yaka-y, nan* 1SG.POSS-DIMIN come.up-3SG.PST you *mok* hold.2SG.IMP 'mine came up, you hold it'	

Onomatopoeic expressions	
tsssk!	a smacking sound made with lips shaped like in kissing, made to denote the sound an eel makes when it slips away
tsiŋ-paa! tssk-baang!	onomatopeic word used to represent lightning (*tsiŋ*) and thunder (*paa!*) Even the shy performers go very loud when doing '*tsin-paaa!*'