

29 *Cat's cradle: a disappointing field for lexical reconstruction*

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This paper was prompted by a footnote in Kirch and Green's 2001 volume, *Hawaiki, ancestral Polynesia*. The footnote reads (p.301):

There is a substantial ethnographic literature on the subject of string figures, which are ubiquitous in Polynesia (e.g. Handy 1925; Hornell 1927; Firth and Maude 1970). One aim of this early twentieth-century ethnographic concern with string figures was comparative analysis to infer culture-history (Hornell 1927:6–9). Given the rich lexical data associated with the figures themselves, a renewed analysis informed by a modern phylogenetic approach might well be worth the effort. Blust (pers. comm., 1999) also informs us that such string figures have a very deep history among Austronesian speakers, and that the PPn term **fai* probably derives from PAn **paRiS* ('stingray', term applied to the constellation Scorpio, Southern Cross, or other astronomical features).

String figure games, collectively known as cat's cradle, were played in traditional societies across the world long before recorded time. They have been recorded on every inhabited continent. In this respect I am mindful of Bob Blust's forays into other cultural universals such as the taboos on pointing at rainbows and the thunder complex. The ubiquity of string figures leads to the assumption that they must have been invented independently in a number of places. They are, however, readily learnt and highly borrowable. They are attractive (both in the sense of attracting curiosity, and of visual appeal), they are played frequently by children, and so are within the capabilities of anyone with normal dexterity, they require no equipment apart from a length of string, and they can be transmitted with minimal language, so language barriers do not impede borrowing.

Early last century, ethnographers like Rivers and Haddon (1902), Jenness (1920), Handy (1925), Hornell (1927), Wedgwood (1932–33), Rosser (1932) collected patterns of string games in various parts of the Pacific, recognising that the same patterns recurred in different parts of the world and believing that there was something of their past history to be gained by comparison of these patterns. Handy, for instance, noting identical patterns that occurred not only between the Marquesas, Tahiti, and the Caroline Islands, but also in far flung locations such as the Philippines and Queensland, suggested that 'patterns handed

down from generation to generation may very often offer sound data for determining past cultural relationships' (1925:8).

The purpose of this paper is to examine the nature and scope of the lexical data for string games within Oceanic languages to see whether there are cognate sets that support reconstructions to POc or other interstages. An immediate obstacle to identifying POc level reconstructions is that while we have good language-specific descriptions from the Central Pacific, and a smaller amount from the Solomons and Vanuatu, our sources from Papua New Guinea are meagre, with Jenness's Bwaidoga terms (Jenness 1920) our only useful published data. Of the other New Guinea ethnographers listed in the references, Wedgwood (Maude and Wedgwood 1967) and Rosser (Rosser and Hornell 1932) name and describe patterns, but only loosely define region of collection, do not specify language, or distinguish Austronesian from non-Austronesian. Although Noble (1979) describes and names 140 patterns from South East Papua and the Highlands, all bar a couple are from non-Austronesian-speaking areas. Dictionaries and some of the more extensive wordlists add a number of additional terms, but here no descriptions of the patterns are included.

In the language-specific descriptions, a generic term is typically given for the activity, one that is frequently both noun and verb. All descriptions contain names and descriptions of dozens of patterns. A few of them include terms for particular moves or sets of moves frequently used. Several also record the chants that typically accompanied the making of particular patterns.

1 Generic term

To cognates of the numerous Polynesian terms supporting the PPN reconstruction **fai*, can be added Bauan Fijian *vei* and possibly, and more significantly, a Motu term, *hari(kau)*, all generic terms. The meaning of the bracketed form *-kau* is unclear but it is included in several net-related terms in Motu, an association of meaning which is echoed in the Tahitian and Hawaiian terms below. Although we need cognates from other subgroups to strengthen the reconstruction, PAn **paRiS* 'stingray' is, as suggested by Blust, a plausible antecedent for the generic term for cat's cradle at POc level. A stingray is roughly diamond-shaped. Probably the most common patterns created in cat's cradle also contain one or more diamond shapes. Reflexes of PAn **paRiS* at times refer to both a stingray and to a constellation seen as stingray-shaped, usually the Southern Cross or Scorpio. It may be relevant that both fish shapes and constellation shapes are well represented in the names of particular Oceanic cat's cradle patterns.

No non-Oceanic reflexes of PAn **paRiS* with the meaning 'cat's cradle' have been located.

Table 1: POc **paRi* 'generic term for cat's cradle' (also 'stingray')

PT:	Motu	<i>hari(kau)</i>	'cat's cradle' (<i>kau</i> meaning unclear, but included in a number of net-related terms)
Fij:	Bauan	<i>vei (saŋa)</i>	'general term for cat's cradle when using both hands and feet' (<i>saŋa</i> 'crotch, fork')
		<i>vei (ciu)</i>	'cat's cradle with hands alone' (<i>ciu</i> 'carved, cut to a shape')

Table 2: PPn **fai* 'cat's cradle, string games; play at cat's cradle'

Pn:	Tongan	<i>fai</i>	'cat's cradle'
Pn:	Pukapukan	<i>wai-wai</i>	'cat's cradle; to make string figures'
Pn:	Tuamotuan	<i>fai</i>	'string games, cat's cradle'
Pn:	Tahitian	<i>fai</i>	'name of a game played by children; string game, cat's cradle' (Same word as used for meshes of sorcerer's net – Handy:6)
Pn:	Maori	<i>whai</i>	'string game, cat's cradle; play at cat's cradle'
Pn:	Hawaiian	<i>hei</i>	'cat's cradle; to make string figures' (Also 'net, snare; to ensnare, entangle')

Generic terms for the activity have been collected from all major Oceanic subgroups with the exception of the Admiralties, and that may well be an accidental gap in wordlists. They include: NNG: Lukep Pono *barau*, Manam *kinarua*, Gedaged *mol-mol*; PT: Bwaidoga *giwala*, Dobu *ʔabi*, Kiriwina *ninikula*; MM: Tolai *weweuk*; SES: Gela *hongo*, Tolo *tinabe*, Arosi *raʔuna*; NCV: Ambae *lelegaro*; Mic: Kiribati *wau*; Pn: Tikopia *siko-siko*, Marquesan *pehe*. No cognate sets for generic terms other than **paRi* have been noted except in the Southeast Solomons where three Malaitan languages, 'Are'are, Sa'a and Ulawa all use the term *isu-isu* 'play at cat's cradle'. *isu* also means 'to count, to read' the shared meaning evidently carrying the sense of 'relating in some sort of sequence'. De Coppet, who has collected string figures from 'Are'are writes that there are stories one can tell in doing the figures (p.xvii, preface to Maude 1978). Evidently, successive patterns are associated with particular parts of the story. To move through the stages of a particular pattern is in effect to tell its story. This attribution of an ulterior purpose to the playing of cat's cradle may be the last traces of a function formerly widespread but now all but lost. It is mentioned by Noble in his description of patterns known in the Managalas-speaking (non-Austronesian) regions of South East Papua. He writes that string games 'appear to have served a purpose as a repository of traditional knowledge with regard to hunting, gardening, building; a kind of primitive picture folk lore. Warnings are implicit in the snake bite, the tree that falls down, and the danger of letting the dog get into the bush hen's nest to break the eggs' (Noble 1979: foreword). He believes further that this associated meaning is usually the first aspect of a game to be lost.

2 Names of patterns

Although dozens of terms have been listed for particular patterns, they are a dubious source for reconstruction because attachment of term to pattern is so subjective. Patterns are seen as resembling objects familiar to the community, and thus named by the local term for the object. In the Oceanic world, motifs like crab, fishing net, bowl, the setting sun and so on recur. But a pattern seen as a food bowl in Tikopia may be labelled a well in Lifu and a basket in Bwaidoga. Conversely, although pattern names such as the local term for the Pleiades occur in various widespread languages including Bwaidoga (*yavunuga*), the Marquesas (*mataʔiki*), and the Gilbert Islands (*nei auti*), the patterns so labelled may differ substantially. Named patterns like 'Ten Men' (Caroline Islands), 'Navel of Maui'

(Tuamotus), ‘Woman showing her backside’ (‘Are’are) or ‘Man crazed by betelnut’ (Bwaidoga) are more likely to be local inventions, referring to local identities, historical events or legends. The name may be little more than a rough clue as to shape, and possibly relevant only within a community. If it is the shape of the pattern itself rather than its label that is the clue to its traceable cultural history, this is surely a matter for semiotics rather than linguistics. A possible answer for linguists lies in the third kind of lexical data, terms given for the various moves involved in the creation of multiple shapes.

3 Starting positions and other moves

What seized ethnographers’ interest was the evident recurrence not just of completed patterns but also particular moves, or sets of moves. They looked at traditional starting positions, opening gambits and recurring moves. Although there may be no theoretical limit to the number of patterns possible, in practical terms games tend to start with a few basic patterns, and proceed using a variety of familiar moves. These would evolve through trial and error, the more attractive, or the simpler the operation for a pleasing result, the more likely to be retained and passed on. Davidson (1941), in an examination of string games among Australian aborigines, noticed that people in different regions sometimes favoured different ways of reaching the same pattern or the same stage in a pattern, and suggested that an expert might be able to identify where a game was played by examining its moves.

Comparison of patterns was facilitated by Rivers and Haddon who, in 1902, published a method of recording string figures and tricks. They compiled a small standardised lexicon of English terms. Included were terms like ‘Position 1’ and ‘Opening A’, to which others have been added—‘Navaho thumbs’, ‘Caroline extension’, ‘Murray Opening’, and so on. ‘Position 1’ and ‘Opening A’ occur in every collection we have of Oceanic string games, albeit not in every pattern recorded. Unfortunately we have minimal local terms for these. Handy (1925:9,10) lists Tahitian names for ‘Position 1’ (*e fai*) and ‘Opening A’ (*e tui*) together with half a dozen Tahitian terms for other moves. They are *taviri* ‘any twisting movement either of digits or strings’, *e pana* ‘to pick up a string or loop on the dorsal side of a finger’, *e iti* ‘to lift the proximal thumb loop with the mouth and drop it between the thumb and index finger’, *e tuʻu* ‘to exchange loops between fingers or withdrawing a finger from the figure’, *iriti* ‘to remove a loop from one digit to another’, *taume* ‘to pull a string down on the palmar side of a finger’, *taamu* ‘to wrap a string round a finger’. Jenness recorded two movements that recurred with great frequency in Bwaidoga, *nauwa* and *luatataga*, although neither are opening moves. The Tikopia utilise two movements, called *tao* and *ta*, in nearly half their figures ‘thus providing a characteristic technique pattern not hitherto found to be predominant in any other locality’ (Firth and Maude 1970:9).

Other than these, no terms for moves or sets of moves have been located in the Oceanic literature. Moreover, none of the moves named by Rivers and Haddon are restricted to the Oceanic region. Honor Maude, recognised early as the authority on Oceanic string figures, writes that ‘Position 1’ and ‘Opening A’ ‘are the most common openings in almost any part of the world’ (Maude and Wedgwood 1967:203). ‘Navaho thumbs’, widespread in Oceanic patterns, is so named because the movement is a familiar one among the string games of the Navaho Indians. The ‘Caroline Extension’, widespread in Oceania except for peripheral regions of Polynesia (Marquesas, Tahiti, Tuamotus, Hawaii) is also well represented in Australian patterns where it is called ‘Pindiki’ (Davidson 1941). In their

account of the pastime in the Gilbert Islands, Maude and Maude write that repeated questioning failed to elicit any native terms for the commoner movements involved in construction of the figures (1958:3).

4 Chants

A limited examination of the chants which accompanied the making of a considerable number of the string figures as a source of lexical data has also proved fruitless. Collectively these accompaniments are known as *vinvina* in Kiriwina, *patautau* in Tahitian and *haʔa-naunau* in Marquesan. Although a number of early ethnographers recorded particular chants and in some cases attempted translations, many are described by their own speakers as untranslatable, perhaps because they have been borrowed from a language unknown to the player, have become distorted through transmission over time, or are simply meaningless jingles of the fol de rol variety. Handy (1925:10) suggests that 'so hazy is the native memory regarding the ancient legends and tales whose events and characters are referred to in a fragmentary way in these sing-song jingles, that few of them could be explained'.

5 Conclusion

Overall then, very little has been gained by an attempt to use the terminology of cat's cradle as a tool in tracing culture history. On distributional grounds we can be confident that speakers of Proto Oceanic played cat's cradle, but we can say little more than that. The largest obstacle in reconstructing higher-level terms is undoubtedly the dearth of recorded terms to do with the activity. And the data with perhaps the greatest potential for reconstructing culture history, terms for standardised or most frequently used moves, may turn out to be little more than an artefact to facilitate ethnographers' descriptions of pattern construction. If terms for opening gambits or frequent moves were ever in widespread use among the players, they have disappeared almost without trace.

Other considerations that weigh heavily against the regular transmission of old terms from generation to generation include the proclivity of the activity for borrowing, mentioned earlier, and the game's potential for creativity. Most of the descriptions available to us mention that string games also provide an outlet for creativity, sometimes with overtones of ridicule or humour. As an example, string games in Tikopia constituted a living art in which new figures were invented or traditional ones modified. Firth (1970:5) writes that 'One of the most striking features of Tikopia string figures is the overt recognition of inventiveness in them ... As in their songs so in their string figure they have recognised individual creativity by the attribution to specific persons of responsibility for particular examples'. The Nauruans in recent times have been encouraged to reinvigorate an almost forgotten art, and have added many previously unknown variations to those recalled by older people (Maude 2001). Variations to the basic figures are frequently mentioned. Creating new figures is an admired activity.

It is tantalising to believe that there may have been substantial folklore bound up in the nature of the patterns, the names of the patterns, the stories behind them, and the chants that accompany them, but such knowledge is at this stage beyond recording. The playing of string games is a disappearing art, submerged under the increasing exposure to western-style activities and sources of entertainment. Most of the traditional terms and associated

rituals were disappearing or were already lost when ethnographers first became interested in their collection early last century. Any re-emergence of the activity as in Nauru will include new patterns and associations with non-traditional objects. So although it seems entirely possible that string games and frequently used moves were known to Proto Oceanic speakers, it is unlikely that comparative linguistics can ever offer lexical proof beyond the somewhat tentative reconstruction of POC **paRi* as the generic term for string games and the activity of playing them.

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