What’s in a Name? The Practice and Politics of Classifying Māori Textiles

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Textiles form an important part of Māori culture, of interest to Europeans since contact with New Zealand in 1642. The need to describe Māori textiles in English has determined the terminology chosen to describe them, and also affected understandings of Māori weaving. Ethnographic observation and recording of Māori textile production by European non-weavers, inaccurate translation of Māori words, as well as incorrect use of terms have all contributed to difficulties in understanding Māori textile structures. The development of current terminology for describing Māori textiles is discussed, highlighting how it arises as a result of temporal, cultural and political factors, and the consequent importance of names. The values implicit in names given to Māori textiles then affect knowledge, scholarship and communication of their attributes. One Māori textile form, rāranga, illustrates how basing classification on structure alone could clarify understanding, remove implicit value judgements, and enable accurate communication of the properties of artefacts.

INTRODUCTION

Māori are the indigenous people of Aotearoa New Zealand. Textiles are highly valued in Māori culture and have been described and depicted for non-Māori since Europeans first sighted New Zealanders. From the time of Isaac Gilseman’s depiction of Māori dress (December 1642) until the present day, debate by non-Māori regarding the form and structure of Māori textiles has occurred. While English was not the language of all who engaged in these debates, most record of Māori textiles and their production has occurred in English; it was the language of the colonisers, and more recently, is the first language of most New Zealanders, including Māori.¹ This need to explain and codify Māori material culture in European terms has not only determined how terminology was chosen to characterise Māori textiles, but also affected assessments of the achievements and skills of
those who made them. Cultural viewpoints and value judgements are implicit in choice of names. Indeed all language and its use in particular contexts can be perceived as intentional, and evidence of time, place and ideals.\(^2\)

There are always different ways of saying the same thing, and they are not random accidental alternatives. Differences in expression carry ideological distinctions (and thus differences in representation).\(^3\)

These distinctions and differences have important implications when they are the basis of classification schemes and museum documentation. Researchers interested in material culture require standardised terminology for cataloguing and comparing textile artefacts. Archaeologists make deductions about prehistoric people based on understanding their material remains. For instance, Gardin proposed a sequential process for development of these inferences in archaeology: inventory (description), ordering (classification), identification (pattern recognition), all leading to explanation.\(^4\) Classification therefore has important implications for how understandings of culture and people are developed: consequently rigorous classification methodologies are required. The names, or classification systems chosen as part of museum documentation also determine how artefacts are compared and related to others (similar or different), and how and if they are accessed by researchers (accurate name).\(^5\)

Classification systems and the museum documentation systems based on them are therefore themselves evidence of social and cultural contexts. For example the names of much Māori material culture has been determined by ethnographers whose interpretation and consequent documentation can be seen as part of a larger agenda of imperialism and colonisation.\(^6\) Te Awekotuku discusses how her attempt to rectify incorrect English classification terms for Māori weaponry, based on her culturally derived knowledge of their actual rather than supposed functional properties, was deemed ‘inappropriate’ by staff at the British Museum.\(^7\)

The accurate and unambiguous description and classification of textiles is therefore important in a number of disciplines and professions. Existing systems for textile classification are based on a number of criteria such as process or techniques used, structure of an object, as well as its appearance, colouration and orientation of warp and weft to selvage. The classification scheme used is guided by information sought, as well as the focus, expertise and aims of the person seeking the information. Choices made during the classification process reflect these influences, and drive the kinds of information
gathered and recorded, ultimately determining how data is interpreted and findings disseminated.

Many accounts of Māori textiles were based on ethnographic record of skills and material culture thought to be in danger of loss. Those who gathered this information were seldom either weavers or experts in textiles. These factors, as well as difficulties inherent in precise translation of Māori terms to English, have contributed to a confusing, contradictory, and inconsistent vocabulary for Māori textiles. A discussion of who was involved in determining terminology for Māori textiles, and how these terms evolved highlights the importance of the names given to artefacts, and how they affect perceptions of them. Studying the development of terminology has exposed contradictions and discrepancies, and allowed the authors to compare terms commonly used in New Zealand with standard international textile terms in English, for the purposes of descriptive clarity. One Māori textile form, rāranga, is used to illustrate how basing classification on structure alone could aid in comprehension and communication of structural properties, and remove historical misinterpretation and misunderstanding.

MĀORI TEXTILES

Textiles, and their production, were important in every aspect of pre-contact Māori society. While cloaks (Fig. 1) are arguably the apotheosis of Māori textile production⁸ a range of other artefacts is also evidence of skilled textile production. A diverse range of functional and decorative bags and baskets (kete; Fig. 2) as well as fine mats (whāriki, takapau; floor and wall coverings, ceremonial mats) are all made using a technique called rāranga.⁹ Rāranga artefacts have been collected since the late eighteenth century and are widely represented in international and New Zealand collections.

[Figure 1] [Figure 2] [Side by side / half page each/ colour]

Systematic British colonisation of New Zealand from the early nineteenth century had a negative impact on traditional Māori textile production, as European dress was rapidly and widely adopted by Māori. However, the Māori cultural renaissance of the 1970s led to resurgence in interest and scholarship and, ultimately, to continued production of Māori textiles. In contemporary New Zealand culture Māori textiles are highly valued and exhibitions of Māori fibre arts are held nationally and tour internationally (for example
The Eternal Thread - Te Aho Mutunga Kore, 2004-2007 Wellington, Christchurch, New Zealand (NZ), San Francisco, Seattle, Salem (USA). However, for those interested in Māori textiles difficulties of terminology make accurate and appropriate description problematic.

HISTORIC DEVELOPMENT OF TERMINOLOGY FOR MĀORI TEXTILES

Early written testimony provides information about manufacturing and construction, use, and history of textiles in Māori society. After systematic European colonisation of New Zealand, fears of losing knowledge about the production and use of traditional Māori textiles became a compelling justification for their record. While designed to preserve knowledge about Māori fibre craft, the information presented in many of these publications can be confusing. Māori terms are sometimes used without an English translation, conflicting ethnographic information is presented, and standard textile terminology is either not used, or used incorrectly. Contemporary publications on Māori textiles clarify little in this area, as the presumptions on which historically-used terminology were based are perpetuated. Understanding how terms describing Māori textiles came into common use enables a clearer view of how Māori textiles were, and are, understood and described.

Perhaps the strongest influence on contemporary views of Māori textiles is the anthropologist Sir Peter Buck. Buck (c.1877-1951, Māori name Te Rangi Hiroa), was a New Zealander of European and Māori (Ngati Mutunga) ancestry, whose life work included recording the material culture of Māori and other Pacific peoples. Buck was a medical doctor who served in WWI (during which he was awarded the DSO), and who developed a passionate interest in anthropology, eventually writing influential articles and books about Māori material culture, including “The Evolution of Maori Clothing” in the Journal of the Polynesian Society. Professionally employed as an anthropologist from 1926, Buck became Director of the Bishop Museum (Hawaii) (1936-c.1948). Buck's comprehensive and informative fieldwork and published research about Māori and Pacific material culture remain key texts. His thorough writing on Māori textile structure, production and use also heavily influenced many who followed.

In early writing on Māori culture, Buck presented a common view of the time: Māori cultural forms, such as weaving, were disappearing as a result of European colonization:

The flood of blankets, prints and cheap clothing introduced by civilised man has overwhelmed the picturesque clothing of the Neolithic Maori, and few varieties have survived this deluge.
Buck articulated concerns that those with the skills and knowledge to produce traditional Māori textiles were dying, resulting in the loss of traditional knowledge. Buck also expressed the difficulty of adequate comparison of Māori artefacts with those of other Pacific nations without standardised terminology and clear diagrammatic representations of structure, issues he attempted to redress in later works. Māori textile production, in which no loom was used, was characterised by Buck as primitive when compared with other forms of Māori technology such as carving, a gendered activity traditionally linked to masculinity:

> it is surprising that the megacephalic Maori, so advanced in many of the arts of the Stone Age, should in this particular case have remained on the threshold of progress.

Buck's interpretations of Māori textile structures may well have been influenced by negative judgments of production methods used, in line with evolutionary paradigms popular in anthropological theory of the time. Victorian ideas of technology as progress and evidence of social complexity and advancement meant that non-mechanised production was considered primitive.

In the initial stages of his research Buck discussed at length the differences between ‘weaving’ and other forms of Māori textiles (‘plaiting’, ‘twining’ ‘basketry’). Despite other anthropologists of the time using the term ‘weaving’ to refer to Māori textile (Macmillan Brown is mentioned specifically) Buck quite vigorously defended his position that no ‘true’ weaving was practised in the entire Pacific. Buck quite vigorously defended his position that no ‘true’ weaving was practised in the entire Pacific.

Technique was the basis on which textiles should be characterised according to Buck:

> There is only one sure criterion and that is the technique of the strokes used in the manufacture of the garments.

He further elaborated that:

> [In] plaiting, weaving, and basketry...some of the ...strokes are identical, but they are made with different material and with a modified technique.

Therefore, when characterising Māori textiles, Buck was concerned primarily with the technique used for construction, his knowledge about processes of manufacture garnered from anthropological fieldwork, and materials used (which in his opinion also partly determined construction method).
In the garments available for the whole area [the Pacific], there is no trace of the technique of true textile weaving, and, as a consequence, no indication of any form of loom.  

To Buck use of a loom, or some other mechanical means, predicated use of the term weaving. Therefore, Buck used his understanding of technological processes and their relationships to materials of construction, rather than an assessment of structure in his initial descriptions of Māori textiles. This approach is counter to current views about textile classification: most commonly *structure* is considered the essential defining characteristic, as it alone can be discerned from the artefact itself.

Some changes became evident in Buck’s approach. Rather than portraying Māori textile production as primitive, Buck stated in *The Coming of the Maori* (1950), that ‘The Maoris reached the highest peak in Polynesia in the manufacture of clothing’. He then used the term ‘downward weaving’ to describe how twined garments, such as cloaks, were made. These are manufactured without a loom, suspended between two upright weaving sticks, or *turuturu*, to keep the textile off the ground. Cloaks were weft-twined (single, or double-paired; *whatu* in Māori). The weaver stands or sits, and works downward, rather than pushing new wefts away from the body, as in much loom weaving. Buck recommended using either the prefix ‘finger’, or ‘downward’ to describe these textiles, to distinguish them from those produced by a loom. So, while Buck eventually accepted weaving did not require machinery, a qualifying statement was still required for Māori textiles. Buck’s choices of terminology have continued to affect understanding of Māori textile structures, as well as assessments of the accomplishments of Māori weavers.

**CHANGING APPRECIATION OF MĀORI TEXTILES**

The Māori cultural renaissance in New Zealand (starting c.1970s) included the revival of traditional Māori arts such as weaving. There was consequent resurgence in interest in describing and categorising Māori textiles. Details of traditional Māori weaving techniques, of actual textile structures (so they could be reproduced), and of Māori textiles held in museums were written in English and published. Notable among these publications were the works of Mick Pendergrast (1932-2010), one-time ethnologist at Auckland War Memorial Museum, who, inspired by the works of Buck attempted to standardise terminology, and provided clear and precise diagrams of both artefacts and their structures. No longer a dying art, these publications helped characterize Māori textile production as part of a living and vibrant culture. While creating and using some of his own descriptive terms, Pendergrast largely adopted the terminology of Buck which he
considered 'the most appropriate available', whilst also acknowledging the work of others.\textsuperscript{29} Unfortunately the continued use of terminology grounded in the ethnographic and colonial perspective of the late nineteenth and early twentieth century, has affected description, classification and ultimately judgements about Māori textiles.

\textit{Rāranga: An example of the importance of names}

A discussion of rāranga (Fig. 3) used to make a number of types of Māori textiles, illustrates the confusing nature of terminology for description, and enables exploration of the implications of names. Use of both Māori and English words, development of terminology by anthropologists and museums practitioners rather than textile specialists, and the availability of a number of different textile classification systems all conspire against clarity of description.

[Figure 3] [Third page]

\textit{Rāranga} is commonly translated into English as ‘weave, plait’.\textsuperscript{30} The English translation of \textit{rāranga} does not necessarily embody Māori understandings of the word. Many Māori words have both esoteric and exoteric meanings. Breaking the word down, \textit{ra} can be translated as day and \textit{ranga} as raise-up.\textsuperscript{31} The nature of weaving (structure of linked components) means it is often used by Māori to describe relationships. In \textit{te ao} (Māori world) weaving is used often as a metaphor for \textit{whakapapa} (genealogy) a keystone of Māori culture.\textsuperscript{32} The word \textit{rangatira} (chief) or \textit{ka rāranga i te tira} denotes weaving the people together.\textsuperscript{33} The purpose of the \textit{pōwhiri}, the act of welcoming guests onto the \textit{marae} (the meeting place/focal point of a Māori community) is to weave the people as one and make them equal as chiefs; the meaning of the word \textit{rangatira}.\textsuperscript{34} McCallum speculated that as the universe can be seen as woven like fabric, the esoteric meaning of the word \textit{rāranga} relates to the raising or lifting of light in the heavens to be woven together. The ‘hidden’ meanings of the word \textit{rāranga}, only understood by those possessing in-depth \textit{mātauranga}
(knowledge), such as the *tohunga* (knowledge keepers and priests), underscore the importance and centrality of weaving in Māori culture.

While *rāranga* has been given as a term used for all Māori weaving, it most commonly describes the process of making artefacts from strips of plant material, usually leaves of New Zealand flax (*Phormium tenax, harakeke*), rather than fibre (*whatu* is the term for weaving with fibre). In the Pacific the leaves along one side of the central spine of the palm frond were used as a commencement edge for *rāranga*, a selvage simulated in New Zealand by braiding leaf material together (Fig. 4). Once joined, each alternate element of plant material was turned in the opposite direction, forming a set of sinistrals (pointed to the left, away from the weaver), and a set of dextrals (pointed to the right, away from the weaver) which were then placed over and under one another, forming the body or *kaupapa* of the artefact.

**[Figure 4 ] [Third page]**

Many Māori objects were made using *rāranga*; baskets (*kete*), mats (*whāriki, takapau*; floor and wall coverings, ceremonial mats), carrying straps (*kawe*), belts for men (*tātua*) and platters for food (*rourourau/potikōnae*). *Rāranga* is usually translated in English as 'plaiting' rather than 'weaving', a practice justified systematically in the writings of Buck. When referring to differences between 'plaiting', 'weaving' and 'basketry', Buck stated that, 'some of the movements or strokes are identical, but they are made with different material, and with a modified technique.' Confusingly, when the same technique 'plaiting' was used to make ropes, cords or narrow textiles of the same structure, Buck called this 'whiri' or braiding.

According to Buck, weaving required one set of horizontal (weft) elements and one set of vertical elements (warp), which then intersected at right angles. As *rāranga* often began by plaiting elements together to form a commencement edge, Buck initially perceived this as using only one set of elements despite the subsequent arrangement of the plant material into two sets (Fig. 4). Buck's criteria for use of the term of plaiting to refer to *rāranga* were firstly that 'though the elements cross one another at right angles, they move diagonally across the surface of the article', and secondly that *rāranga* used *one* set of elements, as opposed to weaving, which used *two*. Buck also noted that Māori did not
distinguish between ‘wefts’ used to weave (whatu) cloaks (New Zealand flax fibre) or those for rāranga (strips of leaf material), calling both ‘whenu’. Buck thus indicated that Māori did not distinguish between the level of processing of plant material when it fulfilled the same structural function in a textile.

In 1923 Buck cited Notes and Queries on Anthropology as the source for distinctions between weaving and plaiting. Artefacts, he noted, ‘may be woven (where there are two elements), or plaited (where all of the elements start and end parallel, sometimes confused with weaving)’. He also referred to the Bureau of American Ethnology as a source for classification of textiles. Notes and Queries on Anthropology: For the Use of Travellers and Residents in Uncivilised Lands was first published in 1874 by the British Association for the Advancement of Science, together with the Royal Anthropological Institute (UK) with later editions in 1892, 1899, 1912, 1929 and 1951. This text, compiled by a committee of ‘most distinguished British anthropologists’, was intended as a guide for anthropologists in observation, accurate description and recording of data while in the field. The distinction between weaving and plaiting in the work of Buck seems derived from this source.

Buck’s later work departed from using the number of sets of elements as the distinguishing factor between weaving and plaiting, focusing instead on differences in technique and methods of manufacture. Indeed by 1930, when referring to plaiting in the context of Samoan material culture, Buck referred to plaiting, like weaving as having two sets of elements, ‘Weaving resembles plaiting in using two sets of interlacing and intercrossing elements to form a fabric.’ In Samoan Material Culture (1930) the differentiating factors between weaving and plaiting were that plaiting ‘was older and simpler’, that broader strips of material were used, and possessed a commencement edge with two sets of elements joined. For weaving, finer, processed elements, and looms were used, as well as one fixed set of elements at the edge where weaving started:

Apart from the use of mechanical contrivance and the nature of the material, the fundamental difference between plaiting and weaving begins at the very commencement edge of the article in process.

Therefore Buck's distinguishing criteria for characterising rāranga as different from weaving were materials of construction and processes of manufacture. The focus on process was reiterated in Buck’s later work:
Plaiting and weaving are distinct crafts though many ethnologists still use the term weaving as if it were a synonym of plaiting. ...both crafts using a process of interlacing two sets of soft elements to form what may be regarded as a textile but the methods of obtaining the results are different.48

When reviewing Henry Ling Roth’s *The Maori Mantle: With over 250 Line Illustrations and Diagrams and 22 Collotype Plates and Some Comparative Notes on N.W. American Twined Work* (1923) Buck was critical of the author extrapolating from his knowledge of general weaving techniques to determine the processes used to make Māori artefacts.49 This criticism revealed the focus of Buck’s attempts to classify Māori textiles: Buck wished to understand how items of material culture were made, preventing the loss of Māori techniques as European ‘civilisation’ swept through New Zealand. Buck differed from Roth (a museum practitioner) as a field anthropologist who observed construction of Māori fibre objects first hand. Rather than simply analysing artefacts held in collections divorced from a cultural context, Buck was working in the field, witnessing the production of textiles, and applying that knowledge of process and technique to investigate those held in museum collections. Buck was, therefore, primarily concerned with techniques and processes of construction, which resulted in his categorisation of Māori textiles in ways that obscured the essential structural similarities among various finished forms.

Buck's early stated opinion that Māori textiles technology was crude, may well have also contributed to his difficulty in using the term weaving to describe rāranga. While it is impossible to know exactly what Buck meant, the implication is that absence of mechanical means of manufacture such as a loom relegated Māori textiles to a secondary status. Despite this assessment Buck proudly asserted the excellence of Māori textiles in the Pacific context.

**AFTER EMERY - OTHER NAMES FOR RĀRANGA**

Difficulties in classifying textiles consistently and appropriately are not peculiar to New Zealand artefacts. Several classification schemes based on different criteria exist, and provide insight into ways of thinking about textile names and their implications. One classification scheme, developed by Emery50, has affected how rāranga is thought of and described.

Emery's *The Primary Structures of Fabrics: An Illustrated Classification* (1966, 1980) is an internationally recognised text providing textiles terminology for those undertaking research on textile artefacts. While certainly not used or accepted by all,
Emery has been widely acknowledged as ground-breaking, cited ‘in nearly every biography on a textile subject since it appeared’.¹ Emery was a self-taught weaver, frustrated with use of conflicting and incorrect textiles terminology. Her attempts to develop standardised and accurate descriptive vocabulary led to later employment at the Textile Museum (Washington, DC). *The Primary Structures of Fabrics: An Illustrated Classification* was the outcome of twenty years of examining, cataloguing and describing a large corpus of historic textiles.²

Emery felt that:

>a basic vocabulary of essential terms, mutually understandable and free of special connotations, is necessary if information from one field (or individual) is to be available to others for comparative or other purposes.³

Her classification scheme was based on structure:

>the structures of fabrics have been classified with as little reference to process (construction methods) as possible, since structure inheres in the fabric and its elements and is almost invariably ascertainable; whereas evidence of process is seldom retained.⁴

Emery’s classification was nevertheless criticised. Despite statements to the contrary, Emery’s classification system incorporated aspects of process, particularly in those textiles classified as using ‘one set of element’.⁵ While two textiles may have been structurally identical, the number of sets of elements used in their construction process resulted in different classifications being reached. As noted by Rowe the phrase ‘one set of elements’ itself denoted an element of technique: the same textile structures could be produced using a single element (‘linking’ and ‘interlinking’) or ‘two sets of elements’ (‘interlacing’ and ‘twining’).⁶

According to Emery the orientation of a fabric structure in relation to the selvage was another defining characteristic for differentiating identical structures (‘interlinking’ as opposed to ‘weaving’), again showing that technique and process of construction, rather than structure alone, determined the classification assigned. Seiler-Baldinger⁷ also claimed Emery was unable to separate structure and process. For example, a ‘plaited fabric’ made by hand was structurally the same as a fabric produced by weaving, ‘which calls for sophisticated equipment’, yet each was classified differently by Emery.⁸ Seiler-Baldinger noted that if Emery had classified textiles strictly on structure alone, ‘plaiting’ and
‘weaving’ would have been given the same name. Instead Emery distinguished between ‘plaiting’ and ‘weaving’ based on the method used for production: despite clear statements to the contrary, her classification system was based on process and structure.

In *The Primary Structures of Fabrics* (1966, 1980), Emery distinguished between plaiting and braiding; both had *one* set of elements, in plaiting these interlink with adjacent ones, while in braiding, they interlaced with oblique ones (Fig. 5).

[Figure 5] [Third page]

Therefore, according to her schema, rāranga was classified as oblique interlacing (braiding). The term weaving applied to structures with *two* sets of elements, where warp and weft interlaced. This meant that:

> A plain (over-one-under-one) oblique interlacing [is] entirely comparable to a plain weave textile except for the oblique trend of all elements without differentiation.  

Emery defined a 'set of elements' (element as a unit of textile structure, e.g. fibre, yarn, cord etc) as:

> a group of such components all used in a like matter, that is, functionally undifferentiated and trending in the same direction. When certain elements are differentiated from others in the fabric, either in the direction they take or by the purpose they serve in the structure, they constitute a separate *set of elements*.  

Using the number of ‘sets of elements’ as the basis for classification, Emery defined fabric structures as falling into one of four categories; ‘single element’; ‘two single element’; ‘one set of elements’; or ‘two or more sets of elements’. Of interest in examining rāranga are the categories 'one set of elements' and 'two sets of elements'. According to Emery, a ‘one set of elements’ structure had at least three elements, oriented in the same direction, functionally the same, that were interworked with one another. Structures called ‘two sets of elements’ consisted of at least two groups of elements (warp and weft) that were oriented in different directions: weft elements were transverse, and warp elements were longitudinal. In ‘one set of elements’ structures, there was a common starting point, either
fixed together or not, from which elements were oriented in the same direction prior to commencement of construction.\textsuperscript{64} ‘Oblique interlacing’ was seen by Emery as different to weaving:

The common starting point and directional trend of the elements – elements that are oblique to the edge of the fabric and do not necessarily cross each other at right angles – distinguish oblique interlacing from weaving proper even when the order of the interlacing is the same.\textsuperscript{65}

In this instance, orientation, an aspect of process apparent only at the time of manufacture, was provided by Emery as the single distinguishing factor, rather than structural differences. Indeed, perceiving rāranga as being constructed from one set of elements depended on knowledge of production methods that involved securing together elements that trended in the same direction. Despite this common starting point in rāranga every alternate piece of plant material was then turned in the opposite direction, therefore fulfilling Emery’s own definition of two sets of elements. Rāranga is therefore anomalous according to Emery’s classification system.

Using Sailer-Baldinger's schema, rāranga could be classified as ‘diagonal or oblique plaiting’.\textsuperscript{66} Seiler-Baldinger identified as ‘primary textile techniques’ those that produce ‘mesh fabrics’ and ‘plaiting’: according to Seiler–Baldinger these methods were technically less sophisticated than weaving (made by hand, or using simple implements).\textsuperscript{67}

Diagonal or oblique plaiting was defined as interlacing in two directions that occurs at an angle less than 90 degrees to the fabric edge and as structurally identical to plain weave.\textsuperscript{68}

Therefore, in Seiler-Baldinger’s classification, rāranga was identical to plain weave on the basis of structure alone but differentiated from it on the basis of the process used for construction, and therefore the orientation of elements.

\textit{After Buck – New Zealand Names for Rāranga}

Sir Peter Buck’s understandings of the definition of weaving and his concern with process and materials, as well as widespread acceptance of Emery’s classification system among analysts of material culture, have had a continuing effect on how rāranga has been categorised in English. Connor attempted to classify Māori textiles systematically, ‘to bring some of the order of Emery to the study of Maori fabrics’.\textsuperscript{69} Like Emery, Connor stated structure rather than process, was the defining characteristic of her classification scheme.
In this system *rāranga* was perceived as having *one* set of elements (as opposed to two in weaving). Connor felt that Emery’s ‘plaiting’ (interlinking, one set of elements) category was different to the structure described in the Pacific using the same term. Emery’s ‘oblique interlacing’ was rejected as the appropriate term to describe *rāranga* in preference to the one used commonly in the Pacific context: plaiting. A further differentiating feature between ‘plaiting’ and ‘weaving’ was provided: while plaiting has a common starting point for elements, the two sets of elements present in weaving start at different points. As in Emery, Connor’s classification scheme continued to confuse aspects of process with structure.

Pendergrast followed the lead of Buck in descriptive terminology for *rāranga* while also acknowledging the work of Emery and Fraser. He referred to plaiting as diagonal strips of leaf, that were ‘not divided into wefts and warps as in weaving and twining’ implying the judgement that one set of elements were involved as per Buck and Emery. Plaiting with a pattern created by using two colours was referred to as checkerwork (*takitahi*). Pendergrast reiterated Buck’s (1923) comments that weaving involved two sets of elements; warps (vertical) and wefts (horizontal) intersecting at right angles, which were usually so fine that they required tools for working. The elements in plaiting, or *rāranga* were arranged diagonally and large enough to be manipulated by hand. Pendergrast acknowledged his debt to Buck for terminology for Māori textiles: however, through continued usage of Buck’s terminology, process and orientation were retained as the basis of classification, rather than structure.

Still, the use of the term ‘plaiting’ for *rāranga* following Buck, Pendergrast and Connor is not universally adopted. Some translate *rāranga* as weaving:

> In raranga, an equal number of adjacent weaving strips cross diagonally over each other so that alternate strips lie in the same direction. Unlike whiri there are always an equal number of weaving strips.

According to Puketapu-Hetet, a highly respected Māori weaver, *whiri* is more appropriately translated as ‘plaiting’:

> Whiri is the regular interlacing of not less than two plaiting strips to form a continuous band or surface, whether all strips start and end parallel. The number of plaiting strips can be uneven.
Puketapu-Hetet then finishes her discussion of terminology for Māori textiles with the statement:

Perhaps one day scholars will return dignity to Maori weaving and plaiting by using Maori terms. This is part of New Zealand’s unique heritage.⁷⁹

Indeed most Māori textile practitioners do use the relevant Māori terms, and those with knowledge recognise which structures are being referred to, and how they differ. However, most Māori textile practitioners, notwithstanding the structures that are their specialty, speak of themselves in English as ‘weavers’, and in some parts of New Zealand, both whatu and rāranga, are referred to as ‘weaving’. In contrast Evans and Ngarimu, also highly skilled contemporary Māori weavers, argue that Buck’s terms weaving (whatu) plaiting (rāranga) and braiding (whiri) are more correct than describing all forms of Māori textiles in English as weaving.⁸⁰ Retaining Buck’s terminology does enable clear differentiation between the various structures of specific Māori textile forms, as does the use of the specific Māori terms.⁸¹ Perhaps the most important aspect of a discussion of accurately naming Māori textiles is the commonly stated misapprehension (by both Māori and non-Māori New Zealanders) that rāranga is not ‘true’ weaving.

While Emery and Seiler-Baldinger’s systems for classification are commonly used by those in some fields associated with the examination of textile artefacts⁸², other textile practitioners rely on different sources for definitions and names. The Textile Institute first published a dictionary Textile Terms and Definitions in 1954, standardising existing textile terms in common use, and at the time of writing was in its eleventh edition.⁸³ Textile Terms and Definitions is commonly recognised as an authoritative international source for English terminology in the textiles manufacturing, education and retail sectors. Denton and Daniels describe a plain weave as:

the simplest of all weave interlacings in which the odd warp threads operate over one and under one weft thread throughout the fabric with the even warp threads reversing this order to under one, over one, throughout.⁸⁴

The structure of the simplest forms of rāranga (see left and centre, Fig. 3) could be described in this way. While Denton and Daniels described warps as elements running lengthways along a woven fabric, warps were also described as ‘a number of threads in long lengths and approximately parallel’ used for weaving and other construction processes.⁸⁵ Wefts were described as threads or yarns running across the width of a
In rāranga the two sets of elements present do intersect one another at right angles, but are not lengthways and widthways across the fabric. Braiding and plaiting were analogous terms referring to:

The process of interlacing three or more threads in such a way that they cross one another in diagonal formation. Flat, tubular or solid constructions may be formed this way.

A braid or plait was defined, Denton and Daniels continue, as, ‘The product of braiding. Certain types of woven and knitted narrow fabrics are described as braids’ therefore highlighting that in some instances, a braid and a plain weave fabric could be considered structurally identical.

Leaving materials and process aside, rāranga can therefore be classified structurally as a weave. While acknowledging the achievements of Emery and Buck, aspects of process, such as yarn orientation, commencement and production method are discernable in the names they give to rāranga. Additionally the term weave is understood across boundaries of discipline and culture, unlike other terms used.

CONCLUSION

Use of the term plaiting rather than weaving to refer to rāranga can be traced to the work of Sir Peter Buck, a highly respected anthropologist. The main focus of his work was understanding process, including materials of construction and technology used, aspects of production he felt were clearly linked. In the tradition of later nineteenth and early twentieth century ethnology, non-European cultures were placed in a hierarchy of value and achievement determined through contrast to industrialised nations. In this context ‘true’ weaving required a loom. Despite Buck’s work having the positive intentions of preservation and maintenance of traditional knowledge, it could be argued he did characterise rāranga as somehow lesser than ‘true’ weaving by naming it plaiting.

A discussion of the work of Buck and commonly accepted classification schemes, such as that of Emery, highlights the difficulty inherent in naming textiles. By accepting the classification systems of others without examination, imperfections are perpetuated. The level of respect for the enormous achievements of Sir Peter Buck in preservation and maintenance of Pacific culture make criticism of his work difficult. In this way, some names become the accepted canon, difficult to dispute or amend.

Māori words accurately describe the form and structure of Māori textiles, but are not understood by all, limiting precise knowledge to one culture and place. However, as
Aotearoa New Zealand is bicultural, accurate English terms are also important; in the globalised world of museums and scholarship mutually understandable words are also essential.

On the basis of structure alone rāranga can be described using standard textile terminology as a weave; some plain, some twill, some herringbone. While sinistrals and dextrals cannot be characterised as lengthways and crossways along fabric as per warps and wefts, they do intersect at right angles, and can be seen to constitute two distinct sets of yarns. The use of the term ‘weave’ leaves aside considerations of process, such as orientation of completed work, construction, or materials and technology used. It also removes hierarchical value judgements about production methods as a criterion for classification. A plain weave produced either with or without a loom still has the same structure. While other characteristics of Māori textiles, such as process and materials, are of obvious interest and importance, they are not features of structure and should therefore not be referred to as such. Using the simple and internationally accepted term weave cuts across boundaries of culture, time and expertise, enabling clear communication of the essential structure of the Māori textile rāranga.

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7 Te Awekotuku, ‘Who Called This a Club?’


9 While upper body garments are most commonly made using whatu, museum collections do hold a few made using rāranga. Dr Patricia Wallace of the MacMillan Brown Centre for Pacific Studies calls these kahu rāranga puputu (closely plaited capes). Undated examples of such garments are held at the British Museum, London, Te Papa Tongarewa, National Museum of New Zealand, Wellington, the Bernice P. Bishop Museum, Honolulu, Hawaii and Canterbury Museum, Christchurch (New Zealand); Dr Patricia Wallace, Personal Communication, 5 July 2010.


11 Sorrenson, Dictionary of New Zealand Biography.

12 Ibid.


15 Ibid, p.70.

16 While traditional Māori weavers did not use a loom, the contemporary Māori weaver Roka Hurihia Ngariimu-Cameron makes traditional Māori textile forms such as cloaks using both the customary plants and manufactured European materials on a loom, melding the two traditions. For examples of her work, see http://www.rokehurihia.co.nz [accessed 19 July 2011].

17 Buck, ‘On the Maori art of weaving cloaks, capes, and kilts’, p. 76.

18 For a fascinating example of the evolutionary paradigm at work in the classification of textiles, see T. Gavin, Iban Ritual Textiles (Leiden: Royal Netherlands Institute of South East Asian and Caribbean Studies, 2003). Gavin re-examines Alfred Haddon’s (Iban or Sea Dayak Fabrics and Their Patterns : a Descriptive Catalogue of the Iban Fabrics in the Museum of Archaeology and Ethnology, Cambridge (Cambridge: The University Press, 1936) interpretation of Iban textile designs based on ideas expressed in his work Evolution in Art (1895). Haddon presupposed Iban patterns had evolved over time from lifelike representations into simplified forms. Gavin shows that this approach does not actually reflect Iban
understanding of the meaning and derivation of the designs found on their ritual cloth which did not ‘evolve’ over time.

20 Ibid., p. 128, 190.
21 Ibid., p. 25.
22 Ibid., p. 41.
23 Ibid., p.197.
24 Ibid., p.197.
27 Ibid., p.165. Buck was, however, incorrect in supposing that all weaving using a loom involves pushing wefts away from the body. Some vertical looms, including those that are warp-weighted, involve what could be called ‘downward’ weaving using Buck’s terminology, where the weaver stands or sits and works from the top of the loom downwards. The earliest depiction of the warp-weighted loom is found on a Hallstatt period vase found in Ödenburg, Hungary, dated to the 7th century BC (G. M. Crowfoot, ‘Of the warp-weighted loom’, Annual of the British School of Athens, xxxvii (1936/1937), p.36; J. G. D. Clark, Prehistoric Europe: The Economic Basis (Cambridge: Cambridge University Press, 1952), p. 238.
31 Ibid., p.319, 322.
33 McCallum, Personal Communication, 2 March 2011.
34 McCallum, Personal Communication. 2 March 2011.
36 Pendergrast, Māori Fibre Techniques, p. 23; see also W. Arbeiter, Baskets in Polynesia (Honolulu: University of Hawaii Press, 1990), p.10.
37 Ibid., p. 25.
42 Buck, ‘Māori plaited basketry and plaitwork. 1, p.713.
43 Ibid., p.705.
with Interacting Wefts
terminology, for example woven fabrics only. Other researchers have published classification schemes for specific areas of textile culture. The Centre International d’Étude des Textiles Anciens (CIETA), Lyon has developed terminology outside the focus of this article.

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acknowledging that the advantage of providing an assessment of sophistication of the finished textile product while also acknowledging that, in some cases, it was impossible to know or reconstruct processing methods. A. Seiler-Baldinger, Textiles: A Classification of Techniques (Bathurst: Crawford House Press, 1994).

Seiler-Baldinger (1994) expanded, revised and translated into English (from German) a classification system for textiles by Alfred Buhler and others from the Museum für Völkerkunde, Basel. This system is based principally on production processes, using structure as a secondary level of classification. Seiler-Baldinger stated that classification systems based on production techniques rather than structure had the advantage of providing an assessment of sophistication of the finished textile product while also acknowledging that, in some cases, it was impossible to know or reconstruct processing methods. A. Seiler-Baldinger, Textiles: A Classification of Techniques (Bathurst: Crawford House Press, 1994).

56 Emery, Primary Structure of Fabrics.
59 Emery, Primary Structure of Fabrics, p. xi.
60 Seiler-Baldinger, Textiles, p.38.
61 Ibid., p. xv.
62 Ibid., p. 53.
63 Ibid., p. 27.
64 Ibid., p. 60.
65 Ibid., p. 62.
66 Seiler-Baldinger, Textiles, p.38.
67 Ibid., p. 6.
68 Ibid., p.38.
70 Ibid., p. 193.
72 For example, see Pendergrast Māori Fibre Techniques; Pendergrast, Raranga Whakairo Māori Plaiting Techniques; Pendergrast, Te Aho Tapu. The Sacred Thread; Pendergrast, ‘The fibre arts’.
73 Pendergrast, ‘The Fibre Arts’, p.120.
74 Pendergrast, Māori Plaiting Techniques, p.6.
75 Ibid., p.22.
76 Ibid., p.22.
77 Puketapu-Hetet, Māori Weaving, p. 73.
78 Ibid, p. 73.
79 Ibid, p. 73.
81 Māori cloaks are made using the technique known as whatu (‘weave’); Williams A Dictionary of the Māori Language, p.318. However, the structure of Māori cloaks could be more correctly referred to as weft-twining rather than weaving (for example, see M. Blackman, ‘The weft-twined structures of cloaks of the New Zealand Māori’ in Creating Textiles: Makers, Methods, Markets, Proceedings of the Textile Society of America Sixth Biennial Symposium (New York: Textile Society of America, 1999), pp. 72-80; Connor, ‘A descriptive classification of Maori fabrics’; Pendergrast, Māori Fibre Techniques). Discussion of this issue is outside the focus of this article.
82 Other classification systems exist, not all in English, and are used by those who study material culture. The Centre International d’Étude des Textiles Anciens (CIETA), Lyon has developed terminology for textiles in a number of languages. Dorothy K. Burnham’s Warp and Weft: A Textile Terminology. (Toronto: Royal Ontario Museum, 1980) provides the English version of these terms, which are applicable to woven fabrics only. Other researchers have published classification schemes for specific areas of textile terminology, for example J. M. Adovasio, Basketry Technology: A Guide to Identification and Analysis (Chicago: Aldine Publishing Company, 1977) and D. Fraser, A Guide to Weft Twining and Related Structures with Interacting Wefts (Philadelphia: University of Pennsylvania Press, 1989).
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Ibid., p.373.

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Ibid., p.41.

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