

6 *From lowlands to islands: Dutch loans in Polynesia*

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[The Polynesian islands] share in common the fact that the first European language they came into contact with was the English brought first by Captain Cook, spread by whalers and traders and later consolidated by missionaries. (Romaine 1991:623)

1 Introduction

The purpose of this paper is twofold.¹ First, we will present evidence that, contrary to claims such as the above, the honour of being the first European language to contribute to Polynesian vocabularies falls not to English, but to Dutch, the language of some of the earliest European explorers of the Pacific.² We will demonstrate that at least six words, possibly seven, that have been considered indigenous are in fact early Dutch loan words. Three, possibly four, of these words originate from either Le Maire's 1616 visit to Niuatoputapu and Futuna, or Tasman's 1643 visit to Tonga, the other three from Roggeveen's 1722 visit to the Tuamotus. Secondly, the subsequent spread of some of these loan words over a very large geographic area provides additional evidence of the extent of Polynesian inter-island voyaging before Cook.

¹ This paper is based on 'Early Dutch loanwords in Polynesia' *Journal of the Polynesian Society* 106(2):131–160 (June 1997), and 'More early Dutch loanwords in Polynesia' *Journal of the Polynesian Society* 106(4):395–403 (December 1997). An abridged version of the first paper, entitled 'The linguistic legacy of early Dutch explorers in Polynesia', also appeared in *Leuvense Bijdragen* 85(2):347–369 (1996). We are grateful to Robert Langdon, whose response to the first paper (Langdon 1998) provided much useful information on *tuluma* and prompted us to reconsider our position.

² There is, however, a possibility that the honour may fall to the Spanish: for the argument that Marquesan *peto* 'dog' was borrowed from Spanish *perro* 'dog' (see Geraghty 1997).

Jan Tent and Paul Geraghty, eds *Borrowing: a Pacific perspective*, 99–143
Canberra: Pacific Linguistics, 2004.

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2 Historical background

In the sixteenth and into the seventeenth century, the European exploration of the South Pacific was almost entirely the domain of the Spanish (Mendaña 1567–69, Mendaña-Quiros 1595–96, Quiros 1605–06, Torres 1606–07). This began to change, however, in the early years of the seventeenth century when the Dutch ventured into the South Pacific in search of new markets and the Great Southland. The most significant of the Dutch expeditions were those of Jacob Le Maire and Willem Corneliszoon Schouten in 1615–17, Abel Janszoon Tasman and Franchoys Jacobszoon Visscher in 1642–43, and Jacob Roggeveen, Corneliszoon Bouman, Roelof Rosendaal and Jan Koster in 1721–22. There were a number of other Dutch expeditions during this period (Jacob Mahu and De Cordes 1598–1600, Oliver van Noort 1598–1601, Joris van Spilbergen 1614–17, Jacob l’Hermitte 1624–25), but none of these ventured south of the Line.

2.1 The voyage Jacob Le Maire and Willem Corneliszoon Schouten, 1615–1617

Le Maire and Schouten’s objective was to legally circumvent the monopoly of the *V.O.C.* (*Vereenigde Oost-Indische Compagnie* ‘United Dutch East India Company’) by finding a new passage into the Pacific. This company, which had been formed only in 1602, had exclusive rights to trade with the East by way of the Cape of Good Hope and the Straits of Magellan. Other Dutch companies and individuals were thus forbidden to send ships to the East via these routes.

Schouten was the skipper of the *Eendracht* (‘Unity’, ‘Concord’), a 220-ton vessel with a crew of 65. The *Hoorn* (named after Schouten’s birthplace) was a 110-ton vessel with a crew of 22, skippered by Jan Schouten, Willem’s brother. Le Maire was the ‘President’ (i.e. in overall control) and the supercargo of the expedition.

They set sail from Texel on 14 June, 1615. The *Hoorn* was accidentally burnt on 19 December whilst being beamed on Coninx Eylandt (Kings Island) in the Rio Deseado, and its crew had to be accommodated on the *Eendracht*. On 24 January 1616, this now appropriately named ship made its way past the southern tip of the South American continent, which they named Cape Horn. The expedition then headed north. On 1 March they sighted the island of Juan Fernandez, but could not land due to the lack of wind and the strong Humbolt Current.

The *Eendracht* then headed north-west and then west into uncharted South Pacific waters, sighting previously unexplored islands and often making contact with their inhabitants. Wherever they went, Le Maire’s men traded many items for coconuts, bananas, greens, fish, pigs and chickens. The following sketch, based on the journals of Le Maire and Schouten (Engelbrecht and van Herwerden, eds 1945; Schouten 1968 [1619]) and Aris Claeszoon, the chief merchant of the *Hoorn* (Claeszoon 1646), indicates the length of stay in different parts of Polynesia, and the goods that aroused interest, or were traded or presented as gifts. The Dutch words for such goods are also included in the hope that, as more material on Polynesian languages becomes available, researchers may be able to identify more loan words than we have been able to.

Pukapuka (Tuamotu), 10 April. The Dutch found that the people of this island showed much desire for iron (*yser*), so much so that they would have pulled the iron nails (*spijckers*) and bolts (*bouten*) out of the ship if they could have. They were given two or three nails and beads (*coralen*), with which they were very pleased.

Takapoto and Ahe (Tuamotu), 15–16 April. Brief landings were made on each of these islands. A few items were presented as gifts on Takapoto; and on Ahe, they obtained water and greens without making contact with the inhabitants.

Tafari (Tonga), 10–12 May. On the first day, Le Maire sent some men with baubles ashore to ‘honour’ the women. The following day, the Tongans stole a small barrel (*vaetjen*) that was lowered down the side of the ship. They were presented with nails and other goods. Again, the islanders were very thievish, stealing everything they saw, pulling out nails, taking bullets (*cogels*), and pulling a knife (*mes*) out of the galley boy’s hands cutting his fingers badly. One Tongan took a small copper ink-well (*coperen inckt-cokerken*), whilst another took a mattress (*bultsack*), pillow (*oorcussen*), and a type of raincoat (*bolckvangher*) and then jumped into the sea. Another seized the plumb (*diep-loot*) from the helmsman.

On the final day, Le Maire’s men traded one nail and two single strings of beads (*snoerkens met coralen*) for five coconuts each. The headman of Tafari was shown a comb (*cam*) and a mirror (*spiegelhel*) which he coveted, but they were not given to him. Instead, he was given ‘a fathom’ (6ft/1.8m) of linen (*vaem lijnwaets*), an axe (*bijl*), and two bunches of beads. The Dutch also traded some fishhooks (*vishoecken*) with him.

Niutopotapu and Niuafou’ou, 13–14 May. Le Maire mentions only that items were traded and the islanders presented with gifts.

Futuna and Alofi, 21 May–2 June. Much trade was conducted during the two-week stay at these islands. On the first day, the islanders were given some beads and nails, and were very thievish. The next day, the Dutch traded nails and beads for coconuts, bananas, fish, pigs and chickens. They also traded a knife, a small pair of scissors (*scheercken*), some beads, as well as one nail and a small string of beads for a large fish.

On 24 May, Le Maire’s men went ashore and presented the islanders with beads, burning-glasses (*brant-spieghels*), a glass chain (*glase ketting*) and a cap (*mutse*). The king was given a shirt (*hemt*). All manner of items were traded. The king was also presented with a small copper bowl (*coperen beccken*), a quantity of white beads and some radish seed (*radijs zaet*). A man who presented the Dutchmen with a pig was given a knife, a nail and some beads. Some of the islanders who came aboard were shown elephants’ tusks (*oliphants tanden*), watches (*horlogien*), bells (*bellen*), mirrors, and pistols (*pistoolen*), and were presented with various items. The king was further given a pewter spoon (*tinne lepel*), a glass chain, some beads, a small hammer (*hamerken*), a burning-glass, more beads, gold thread (*goudtraet*) and sequins (*lovertjes*). The Dutch sailors also played on drums (*trommels*) and trumpets (*trompetten*), much to the delight of the islanders.

On 29 May, the king was given a bell, two knives and some other trifles. The next day, the islanders were given beads, an axe, two knives, copper bowls (*coper beckens*) and rings (*ringen*), which were divided among those who had brought pigs to the ship. Then, on 31

May, some islanders were shown through the galley and the rest of the ship. Each was 'honoured' with a bunch of beads, a knife, a comb, and some nails, and the noblemen among them each received an extra nail.

2.2 The voyage of Abel Janszoon Tasman and Franchoys Jacobszoon Visscher, 1642–1643

Tasman was commissioned by the *V.O.C.* to make a voyage of exploration to the Great Southland. His two ships the *Heemskerck* (named after a Dutch town), with a crew of 60, and the *Zeehaen* ('Sea rooster'), with a crew of 50, left Batavia on 14 August 1642. On 19 January 1643, after a voyage of some five months, during which he sighted Tasmania and the two main islands of New Zealand, Tasman's ships came upon one of the islands of the Tonga group, which he named Pijlstaert. The next day, two other islands were sighted, Tongatapu, which Tasman named Amsterdam, and 'Eua, which he named Middelburgh. The following account is based on Tasman's journal, edited by Posthumus Meyjes (1919).

Tongatapu, 21–23 January. On 21 January, three men in a canoe approached Tasman's ships. The Dutch threw them a piece of linen (*lijnwaet*), and a piece of wood to which were tied two large nails, a small Chinese mirror (*chinees spiegeltien*), and a chain of Chinese beads. Another canoe approached and its occupants were given a Chinese mirror, a knife, dungaree (*dongrij*), two nails and a rummer (i.e. large drinking-glass) of wine (*romer/roemer wijn*). The Tongans poured out the wine and took off with the rummer. Other canoes approached and coconuts were exchanged for nails. A chief came on board and was presented with a knife, a mirror and a piece of dungaree. The skipper's pistol and a pair of slippers (*muijlen*) were stolen, but later returned.

When the Dutch went ashore, other items presented or traded were: a serving dish (*schaffschootel*), a piece of copper wire (*cooperdraet*),³ more nails, beads, dungaree, knives, a piece of linen, and a piece of old sail cloth. The Tongans were shown tobacco, but had no knowledge of its use. On 22 January, a cannon was fired which frightened the Tongans. The leader of a group of islanders who boarded the ship was presented with a shirt, a pair of breeches (*brouck*), a mirror and some beads. The Dutch sailors played on violins (*violons*), a trumpet and a German flute (*duijtsche ffluijt*).

Nomuka (Tonga), 25 January. The Tongans were presented with nails, for which they had a strong desire, a mirror, a knife and a small flag (*vlaggeken*). Once again, the islanders were very thievish and stole whatever they could. On two occasions a pike (*pieck*) was stolen. Tasman stayed until 1 February. No other mention is made of gifts.

³ This particular item prompts us to speculate about the origin of Tongan and Futunan *ukamea* 'iron, metal', Samoan *u'amea* etc., since copper wire could be conceived of as a line (*uka*) of reddish colour (*mea*), and the word could have been subsequently generalised to cover other forms of metal. However, since the term had previously been recorded in Futuna by Le Maire and Schouten (Engelbrecht & van Herwerden 1945, vol 1:134), copper wire must have either drifted to Futuna before then, or been given by European visitors of whom there is no extant record.

2.3 The voyage of Jacob Roggeveen and Corneliszoon Bouman, 1721–1722

In 1721 the *West Indische Compagnie*, in recession and seeking new trade openings, sponsored Jacob Roggeveen in an expedition aimed at discovering the Great Southland by way of Cape Horn. The company provided and fitted out three ships: the 32-gun *Den Arend* (presumably named after Jacob's father (Mulert 1911:3) who had proposed such a voyage of discovery and trade to the *W.I.C.* back in 1673–75) with 111 hands, skippered by Jan Koster; the *Thienhoven* (named after a Dutch town), with 24 guns and 80 hands, under Corneliszoon Bouman; and the *Africaensche Galeij* (African Galley), with 33 hands, under Roelof Rosendaal. Roggeveen was the 'President' of the expedition. They sailed from Texel on 1 August 1721. The following account is based on the journals of Roggeveen (Sharp 1970) and Bouman (Mulert 1911).

Rapanui, 5–12 April. After visiting Juan Fernandez for refreshment, the expedition headed north-west into unknown parts of the South Pacific Ocean. On 5 April 1722 (Easter Day), Rapanui was sighted, which Roggeveen named Paesch Eylandt (Easter Island). Both Roggeveen and Bouman describe the people of Rapanui as being very thievish, taking all manner of things from the ships. Roggeveen makes no mention of trading items or presenting gifts to the islanders. However, Bouman remarks that an islander who boarded his ship was given a small mirror, a glass of brandy, and a piece of sail cloth (*zeyldoek*) to cover his nakedness. The men of the *Thienhoven* also played the violin for him. Bouman relates that the islanders had no knowledge of iron, steel, or other metals, weapons, or any other item shown them, which included small scissors (*schaartjes*), needles (*naalden*), beads and mirrors. No other items are mentioned by either Roggeveen or Bouman. The Dutch left after a week, and sailed north-west towards the latitudes where Le Maire and Schouten had traversed the Pacific.

Takapoto (Tuamotu), 19 May. The expedition arrived at Takapoto in the Tuamotus, where the *Africaensche Galeij* ran aground on the south-eastern side of the atoll during rough weather. She had on board most of the expedition's food that was still in good condition, all of which was lost. An attempt was made to salvage as much clothing, bedding and personal belongings as possible by hauling it in sloops over the reef, across the lagoon and over to the western (lee) side of the atoll where *Den Arend* and *Thienhoven* were anchored. Much of what was salvaged, however, was lost in rough seas or had to be left on the eastern beach of the atoll.

Before the two remaining ships left Takapoto on 21 May, five men deserted, and refused to leave the island. These included the *Thienhoven's* quartermaster, Baltus Jansse, two other sailors from the *Thienhoven* and two from *Den Arend* (Poort 1991:69–70, Mulert 1911:111). Nothing is known of the fate of these five men, though Spate (1983:224) speculates that they may have 'survived long enough to reach Anaa (150kms south), and are perhaps responsible for the wooden cross seen on that island by Tomás Gayangos in 1744'. Beaglehole (ed., 1968:557n) reports that in 1769 Joseph Banks recorded a Tahitian tradition of some crew of a European ship being stranded and massacred on a 'small Island adjacent', but believes that the massacre refers to the 'fatal brush with the people of Makatea in the following month' (see next paragraph).

Makatea (Tuamotu), 2 June. Roggeveen's two remaining ships arrived at Makatea where they were able to obtain greens to combat scurvy, but had to leave in a hurry after a skirmish in which a number of islanders and two Dutchmen were killed.

Manua group (Samoa), 14 June. Off Tau, Roggeveen's ships were greeted by two or three canoes, the occupants of which traded some coconuts for some rusty nails. Later, off the island of Nuu, a few strings of beads were traded for some coconuts and flying fish. Roggeveen (Sharp 1970:152) notes that a young woman in a canoe had 'a string of oblong blue beads' around her neck, and 'asked the Mate by signs if he had any such, pointing to the said string'. Sharp (1970:153n.) speculates that the beads could be of European manufacture and could have come from the Tongan islands visited by Le Maire and Schouten, and Tasman.

This seems very plausible, for it is most unlikely that Polynesians ever manufactured blue beads (Janet Davidson, pers. comm. 26/2/1999). Blue pigment occurs very rarely in natural form. Most commonly, it is a compound of copper, but even where copper occurs (as in New Guinea and on Bougainville) local people probably never used it for colouring. The only case where blue was used prior to European contact was among the Lakalai of the central north coast of New Britain, who used a fungus found on taro leaves, as blue face paint. This colouring was naturally ephemeral. Blue pigments were extremely rare in so-called 'primitive' art around the world, before European pigments became available (Anne Chowning, pers. comm. 10/3/1998).

3 Languages on board

The names of items traded or presented as gifts catalogued above are taken from officers' journals, but there may have been different names and pronunciations in the spoken languages used on board. Before presenting evidence for possible Dutch loan words, we will discuss what potential donor languages are likely to have been spoken by the officers and crew on these voyages.

Unfortunately, there are very few extant muster-rolls of the period (Herman Ketting, pers. comm. 28/7/95), and they very often omit crew members' place of origin. Nevertheless, it is well known that the crews on board Dutch ships in the seventeenth and eighteenth centuries often included non-Dutch speakers—Emmer (pers. comm. 27/4/95) estimates about 40%—and those on board who were Dutch often came from diverse dialect areas within the Dutch Republic (Slot 1992:20).

Other authorities put the Dutch component at rather more. Ketting (pers. comm. 28/7/95) reports that 77% of the crews of the 4th *V.O.C.* Fleet to the Dutch East Indies, which sailed in 1599, came from the provinces adjoining the *Zuiderzee* (i.e. North and South Holland, Utrecht, Gelderland, Overijssel and Friesland). In 1635, 51% of the crew of five *V.O.C.* ships came from the areas around the *Zuiderzee*—26% from Amsterdam, 13% from North Holland, Utrecht, Overijssel and Friesland. Playford (1996:42) has also established that 80% of seamen aboard two *V.O.C.* ships (the *Zuytdorp* and the *Belvliet*) on a voyage from Vlissingen (Zeeland) to Batavia in 1711–12 were Dutch. However, Dutch nationals comprised less than 40% of the soldiers on the *Zuytdorp*. All in all, it seems that most of crew members on Dutch ships in the seventeenth and eighteenth centuries were Dutch. A similar situation aboard Le

Maire's, Tasman's and Roggeveen's ships is indicated by what we have been able to piece together from the journals of these explorers and other relevant documents.

Resolution (b) of the *Resolutiën van Gouverneur-Generaal en Raden van Indië* (Resolutions of the Governor-General and Councils of India) of 2 and 4 November 1616 (Engelbrecht and van Herwerden 1945:213–214) is a list of payments owed to some of the crew of the *Eendracht*. It contains 27 names, all of which are Dutch. This suggests that a high proportion of the complement of the *Eendracht* were Dutch.

The Memorie van de betaling door de Bewindhebbers der V.O.C. in Zeeland aan de gerepatrieerde bemanning der 'Eendracht' (Memorandum of the payments by the Administration of the V.O.C. in Zeeland to the repatriated crew of the 'Eendracht') of 1617 (Engelbrecht and van Herwerden 1945:215) lists almost the entire crew of the Hoom who came to the East Indies as passengers aboard the *Eendracht*. The list comprises 20 Dutch names, all identified as having joined the ship either from Zeeland or Amsterdam. It excludes the skipper, Jan Schouten, who had died en route. Therefore, the Hoom's crew of twenty-two was made up of at least 95% Dutchmen. It should also be remembered that captains tended to recruit from their own areas, and that both Schouten and Le Maire were from the province of North Holland. We suggest, therefore, that a large proportion of Le Maire and Schouten's crews spoke the Hollands dialect.

We have not been able to discover much of the make-up of Tasman's crews, though the officers were mostly Dutch. Tasman came from Lutjegast in Groningen, but was living in Amsterdam by the age of twenty-eight (Posthumus Meyjes 1919:i–ii). Visscher, Tasman's pilot and adviser, was born in Vlissingen (Zeeland). The *Zeehaen's* skipper, Gerrit Janszoon, was from Leiden, and its chief merchant and supercargo, Isaak Gilsemans, was from Rotterdam (both in South Holland). The skipper of the *Heemskerck*, Yde T'Jercxsoon Holman, was born in Jever (Oldenburg, north-western Germany). The origins of the *Zeehaen's* first mate, Hendrik Pietersen, and quartermaster, Cornelisz. Joppen, and the *Heemskerck's* second merchant, Abraham Coomans, are unknown.

Of Roggeveen's crews we have been able to discover little more. Roggeveen came from Middelburg (Zeeland) and Bouman from Oostzaner Overtoom (North Holland). The origins of Jan Koster, skipper of *Den Arend*, and Roelof Rosendaal, skipper of the *Africaensche Galey*, are unknown to us. The *Uittreksel uit de Monsterrolle van de Thienhoven* (Extract of the Muster-roll of the *Thienhoven*) (Mulert 1911:130) contains only six names. The rest of the crew are identified by their on-board position or occupation. Apart from the skipper, Bouman, the muster-roll lists: Willem Willemsen Espeling (first mate) from Amsterdam (North Holland); Cornelisz. Mens (second mate) from Medemblik (North Holland); Barend Sanders (third watch) from Wismar (northern Germany); Martinus Keerens (ensign) from Wessum (Limburg); and Jan Rijkse Appeldoorn (sergeant) from Hardewijk (Gelderland, on the coast of the Zuiderzee and on the border of the Hollands-speaking dialect area).

The final sentence of the muster-roll is significant, however. It reads: 'The crew largely consisted of foreigners namely, French, Germans and Danes'. One of the Germans was Carl Friederich Behrens, from Rostock (Mecklenburg, northern Germany), the corporal of the soldiers on board *Den Arend* (Mulert 1911:9).

Several other seamen are specifically identified in Bouman's journal. These are: Pieter Jonasse, from Tönning (Schleswig Holstein, northern Germany) who drowned at Takapoto

(Mulert 1911:109); an ordinary seaman from *Den Arend*, by the name of Martinus van Gelder, from Amsterdam, who was sentenced to stay behind on the island of Saint Sebastian for drunkenness and threatening others with a knife (Mulert 1911:24); and a trumpeter, Johan Samuel Hantoen, from Breda (North Brabant), who died of scurvy (Mulert 1911:104). Finally, Mulert (1911:8) mentions Jacob van Groeneveld (no origin given), the first mate on *Den Arend*, and a Philip Hendrix van Straalsund (no origin given) who was killed on the island of Juan Fernandez.

Apart from some of those already mentioned, Roggeveen (Sharp 1970) identifies ten crew members, most of whose names appear to be Dutch.

Of the twelve crew for whom we do know the place of origin, three were from Germany, but more significantly, seven originated from areas that spoke *Hollands* or *Zeeuws* (the dialect of Zeeland) which are quite similar. The high proportion of Dutch names at officer level is also significant, for it would probably have been these mainly *Hollands/Zeeuws*-speaking men who traded with the Polynesians or presented them with gifts. In doing so, they may have handed over not only trinkets, but new lexical items as well.

With a large proportion of ships' crews originating from foreign countries, what language was spoken on board? In his book about Dutch sea-shanties between the seventeenth and nineteenth centuries, Davids (1980) draws the conclusion that the *lingua franca* on Dutch ships was Dutch (i.e. probably *Hollands*). However, we need to draw a distinction between the language of commands and that used by the seamen amongst themselves. Ketting (pers. comm. 11/9/95) is of the opinion that in the seventeenth and eighteenth centuries commands were given in Dutch, but that the foreign seamen often used their mother tongue and that someone had to act as interpreter.

And what of the five Takapoto deserters? What are their places of origin? All we are told (Mulert 1911) is that they were the *Thienhoven's* quartermaster, Baltus Jansse (from Amsterdam), and four others (two each from the *Thienhoven* and *Den Arend*). After his desertion, it is quite likely that Baltus would have been eager to maintain his status and authority. If so, it would have been he who exerted the most influence socially, and perhaps linguistically. Once again, then, the *Hollands* dialect is indicated.

4 Dutch loan words

The officers' journals provide abundant evidence that many novel goods were traded, presented or shown to the people of Tonga, Futuna, Rapanui and the Tuamotus by the early Dutch explorers. Moreover, the five sailors who deserted Roggeveen's expedition may have stayed long enough to make contributions to the vocabulary of the Tuamotus, and possibly even further afield. However, although novel items typically provide a strong motivation for linguistic borrowing, we have found no evidence so far that the Dutch word for any of the items mentioned in the journals was borrowed into a Polynesian language. Typically, names for such items are either extensions (e.g. *fao* 'nail' < 'dowel (pin)') or relatively recent loans from English or French.

We will argue, nonetheless, that at least six, perhaps eight, Dutch words were borrowed during this period. Two of the loan words refer to containers, and although they were not

specifically mentioned in the accounts as being traded or presented to Polynesians, they must have been used on board, and may have contained some of the items that changed hands. Their distribution suggests they originate from either the Le Maire or Tasman expeditions. Five other loan words refer to implements, four of which have quite restricted distributions which suggest that two of the words originate from Tasman's visit to Tonga, and the other two from Roggeveen's five Takapoto deserters. The final loan word, a vulgarism, is confined to Tuamotu and Tahiti, which also suggests the Takapoto deserters as its source.

4.1 A word for 'box'

The ongoing Proto Polynesian word list *Pollex* (Biggs 1995) includes the reconstruction **pusa* 'box'. It is our contention that the reflexes of this apparent protoform all derive ultimately from Dutch *bus~bos* 'box, cylindrical container, canister'.

Bus~bos is derived from Middle Dutch *busse* or *bosse*, with cognates in Middle Low German *busse*, and Old High German *buhsa* < Vulgar Latin *buxis* (hence French *boîte*) < Greek *pixis* 'wooden box' (de Vries & de Tollenaere 1991). The *bus* variant is originally from Flemish and Hollands (the dialect of the provinces of North and South Holland) (Berteloot 1984:67; Pieter van Sterkenburg pers. comm. 23/1/1996). After the Middle Dutch period (twelfth to sixteenth century), *bus* gradually became the form used in Dutch in general (Pieter van Sterkenburg pers. comm. 23/1/1996).

The authoritative Dutch dictionary the *Woordenboek der Nederlandsche Taal* (vol. III, I, 1902:1924–1925) states that *bus~bos* in olden times was the name for all sorts of containers, including those which are now usually called something else, for instance a little box in which medicines are stored. However, later on it became particularly associated with a container that is taller than it is wide, which is its current meaning. The *Woordenboek* does not state when this narrowing of meaning took place.

Van Winschooten's 1684 dictionary cross-references *bos* and *bus*. *Bos* is defined as 'something in which an item is placed to protect it from being damaged'. The entry under *bus* reads: 'BUS, of Doos, zie Bos'. This entry is significant as the gloss 'of Doos' ('or box') indicates that *bus~bos* still had its wider meaning of box in general in the late seventeenth century.

The Dutch lexicographer van Sterkenburg (pers. comm. 23/1/1996) holds that up until the eighteenth century the two meanings of *bus~bos* ('box' and 'cylindrical container or canister') were used concurrently, with the more general meaning of 'box' appearing to be more common. From the eighteenth century onwards the narrower, and present, meaning becomes predominant, with the general meaning being lost. The original meaning of *bus* (a box in general) is retained in the Modern Dutch words *brievenbus* 'letter-box' and *postbus* 'post-office box'.

The term is also etymologically linked to *bus~bos* meaning 'gun, pistol' or 'cannon' (cf. Dutch *buks* 'air-rifle', English *blunderbuss* < Dutch *donderbus*, French *obus* 'artillery shell' and *arquebuse* 'gun, hook-cannon', and German *Büchsenlauf* 'gun/rifle barrel'). Both Le Maire and Schouten make reference to *Bosse cruyt* or *Bos cruyt* 'gun-powder' (lit. 'gun spice')

in their journals (Engelbrecht & van Herwerden 1945:57, 175).⁴ From about the mid-sixteenth century *bus* was also used to refer to the metal casing (i.e. 'bush') around the axle-hole of a wheel (de Vries 1971:96).

The only reference we have found to *bus~bos* ('box') by any of the explorers is in Le Maire's journal. On 7 January 1616, after losing his ship the *Hoorn* at Port Desire, some 250 miles north of the Straits of Magellan, Le Maire wrote a letter telling of their arrival there, and put it in a container fixed to a pole which was then erected on the beach of Conincx Eylandt (Kings Island). The word used for the container is *busken*, a diminutive form of *bus*, to which Le Maire then adds '*of cokerken*' ('or small tube'). While it is possible that Le Maire was just offering a synonym, if van Sterkenburg is correct in his assertion that the two meanings of *bus~bos* were concurrent in Holland until the eighteenth century, then Le Maire was probably using the gloss to ensure correct interpretation of the shape of the container.

Fifty-four years later, on 13 March 1670, Captain John Narborough found the *busken*, and described it in his journal as a 'latten [thin sheet metal] or tin Box' (Narborough 1969 [1694]:36).

Although the explorers' journals make no other references to *bussen~bossen*, evidence for their use aboard Dutch ships of the period comes from a recent discovery in Western Australia. In June 1712 the *V.O.C.* ship *Zuytdorp* was wrecked on the West Australian coast between Kalbarri and Shark Bay. In April 1990 an expedition to Wale Well (approx. 50 kms north of the *Zuytdorp* wreck-site) was mounted by Dr Philip Playford to try to find evidence of *Zuytdorp* survivors. Some 20 metres from the well, a beautifully preserved elliptical brass tobacco-box lid (10.5 x 8.5 cm) (i.e. the lid of a *bus~bos*) was found (see Figure 1.). It is inscribed with the name of the town Leyden, together with an idealised depiction of the town. In all probability, the lid comes from the *Zuytdorp* (Phillip Playford pers. comm. 28/7/1996; Playford 1996:214–215).

⁴ It is also possible that Dutch *bus* 'gun, pistol, cannon' may be the source of such Eastern Polynesian forms as the Marquesan *puihi*, Tahitian *pupuhi* and Rarotonga *pupu'i*, all meaning 'gun'. We have not pursued this possibility because there is a plausible alternative etymology: Proto Polynesian **pusi* 'blow air from the mouth'.

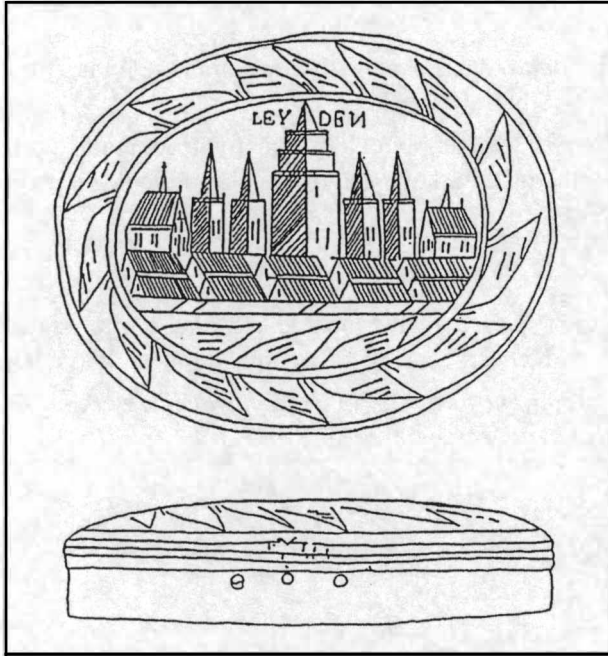


Figure 1: Brass tobacco-*bus-bos* lid from the *zuytdorp*, found at Wale Well (Western Australia).

The current distribution of the Polynesian *pusa-puha* is:

Tonga:

Anderson 1773 (Lanyon-Orgill 1979:63) *Buhā* [the last letter also bears an acute accent] ‘a round Box’.

Mariner c.1810 (Martin 1818) *Booha* ‘A box; a chest’. *Boohavy* ‘a cask, a liquor-box’.

Churchward (1959) *puha* ‘box, case, coffin; barrel (of beer etc.); post-office box, spectacle case’.

Niue:

McEwen (1970) *puha* ‘box, case, coffin’.

Sperlich (1997) *puha* ‘box, case, coffin, wardrobe’.

East Uvea:

Bataillon (1932) *puha* 'caisse, malle, boîte, commode [crate, trunk, box, chest of drawers]'; *puhavai* 'baril [barrel]'.

Rensch (1984) *puha* 'caisse, boîte, barrique, tonneau, malle, coffre; moule (en maçonnerie) [crate, box, cask, barrel, trunk, chest; mould (in stonework)]'; *puha mate* 'cercueil [coffin]' [...].

East Futuna:

Grézel (1878) *pusa* 'caisse, malle, meuble, armoire, coffre [crate, trunk, piece of furniture, cupboard, chest]'; *pusavai* 'barrique, tonneau [cask, barrel]'.

Moyse-Faurie (1993) *pusa* 'malle [trunk]'; *pusa vai* 'réservoir d'eau [water container]'; *pusa mate* 'cercueil [coffin]'.

Samoa:

Pratt (1911 [1862]) *pusa* 'box, coffin'; *pusa'apa* 'case'.⁵

Newell (1893) *pusa/puha* 'box'.

Milner (1966) *pusa* 'box, chest, trunk'.⁶

Mele-Fila:

Biggs (1975) *puso* 'box'.

Biggs (1995) no data.

Marquesas:

Dordillon (1931–32) *puho* 'cage, cabine, petite chambre, panier [cage, cubicle, small room, basket]'.

Zewen (1987) *puho* 'coffre, cage [chest, cage]'.⁷

⁵ These entries are found only in the English–Samoan section. Pratt seems to have listed loan words in this way, which suggests that he may have considered *pusa* to be a loan word; but it is not among 'A list of some foreign words in use among the natives' (Pratt 1911:103–104). Even more curious, the first edition (1862) lists both *pusa* and *puha*, which may indicate that the word was introduced from Tonga, and that both the Tongan and Samoanised pronunciations were then current; later editions list only *pusa*. Newell may simply have followed Pratt (1862).

⁶ In his lexicon of loan words in Samoan, Cain (1986:162) cites *pusa* only in the compound *pusa 'aisa* 'icebox, refrigerator', regarding *pusa* as a Samoan word, but '*aisa* as an English borrowing. Murray and Wesselhoeft (1991:110) seem to have misinterpreted Cain's entry and list *pusa* 'box' as an American English loan word probably introduced into Samoan by the United States military or Peace Corps. They give no account of how *pusa* is derived from 'box', or any evidence of its putative American origin.

⁷ The final vowel in *puho* is irregular; however, Marquesan vowels do seem to have undergone many irregular changes (Mark n.d.:20–21).

Tuamotu:

Stimson and Marshall (1964) *piha* '(modern) room, partitioned place'; *puha*, *puiha* (Hao) 'water container of 2–4 hollowed logs lashed together'; *puha* (Anaa) 'small wood or stone cubicle for confining children till maturity; box, casket'; (Vahitahi) 'carved box with lid for sacred red-feather plume of god'.

Mangareva:

Tregear (1899) *puha* 'chair without back'.

Tahiti:

Bougainville 1768 (Lanyon-Orgill 1979:241): *Picha* 'coffre [chest]'.

Anon [Magra?] 1771 (Lanyon-Orgill 1979:23): *Pear* 'A box'.

Foster/Anderson 1773–4 (Lanyon-Orgill 1979:105) '*Pēēha* 'Chest'; *Pēēha* 'Quiver for holding arrows'.

Davies (1851) *piha* 'box, chest, room'.

Jausen (1987) *piha* 'chambre, coffre, cercueil [room, chest, coffin]'.

Rapanui:

Fuentes (1960) *piha* 'room, apartment'. [This form is noted, though it is almost certainly a recent loan from Tahitian.]

Manihiki and Rakahanga:

Buck (1932) *puiha*, *turuma* 'round wooden box 10" dia at bottom, 8" top, 9" high, 10 short legs, with lid, cord, and lugs. Only one seen, introduced from Tokelau'.

Rarotonga:

Savage (1962) *pia* 'something constructed of wood or other material that has four sides and bottom or floor, lid or ceiling or roof, such as a box, chest, trunk, room, or coffin [...]', *piakura* 'receptacle for sacred objects'.

Buse and Taringa (1995) *pi'a* 'Box, or any box-like container, e.g. crate, chest, case, drawer, cage, hive, coffin; room, compartment; rectangular section of land, square, check in pattern'.

Note that no form was found in Pukapuka,⁸ the northern and southern outliers (Nukuoro, Kapingamarangi, Rennell-Bellona, West Futuna, West Uvea), or the extremities of Eastern

⁸ Pollex records '*pia.*: Box, trunk, chest (Mta)' as a possible reflex. Since PPn *s is regularly realised as Pukapuka y, e.g. *iyu* 'nose' < PPn *isu, this form is likely to be a borrowing from Tahitian or another Cook Islands language.

Polynesia (Hawaii, Rapanui, New Zealand Māori⁹). The single apparent reflex in the central outliers (Mele-Fila *puso*, Biggs 1975) is suspect on two counts: the unexpected final vowel, and the fact that it is not listed in Biggs (1995).

4.1.1 Linguistic correlations

According to Donaldson (pers. comm. 2/9/1993) the pronunciation of *bus* has not changed since the seventeenth century. The vowel <u> is variously transcribed as [y], [ʌ] (Donaldson 1983:48), [ü], [ə] (Hermkens 1971:29), or [œ] (Simpson 1994:1073). The transcription adopted here will be /ø/—the IPA symbol for a half-close front rounded vowel, or Cardinal Vowel #10.

All authors agree that the vowel is short and rounded. Hermkens (1971:30, 31, 32) describes the vowel as being a half-close front vowel, but notes that other authors regard it as mid-central with possible front realisations, or equate it to [ə]. Using F₁ and F₂ frequency data of *ABN* (*Algemeen Beschaafd Nederlands* 'General Cultured Dutch') speakers from Koopmans-van Beinum, Daan et al. (1985:31) depict /ø/ as a half-close central vowel. On the other hand, van Loey (1959:104) classifies it as a close central vowel. Hermkens (1971:30) summarises the chaos aptly by saying that all texts differ in their descriptions of the Dutch vowel system, that the boundaries between front, neutral (central) and back are not clearly defined, and that no vowel can be given an absolute value, as there are many articulatory variants. This is certainly borne out in the descriptions of /ø/.

Given the phonetic value of the vowel /ø/ (be it rounded half-close front or rounded half-close/close central), it is not easy to see how the tonic vowels in *pusa-puha* are derived from *bus*, since the Polynesian vowel is a short close back vowel. The only phonetic features the two vowels have in common is length and rounding. The match thus far does not look all that convincing.

However, we indicated above that *bus* has a dialectal variant, *bos*,¹⁰ and it is here that we may find the solution to the problem. Of course it is not possible to give a flawless reconstruction of the seventeenth-century linguistic situation; the differences among regional varieties were considerable and have been poorly described. Nevertheless, we can arrive at quite a plausible, if cautious, hypothesis.

Hermkens (1971:34) notes that in an earlier stage of Dutch, there were two <o> sounds: a half-close form [ó], and a half-open form [ɔ] or [ð]. The phonetic distinction between them is still maintained by some speakers, though for most speakers of *ABN*, the distinction has been lost (van Loey 1959:94; Hermkens 1973:25; Donaldson 1983:136). Nevertheless, Donaldson (1983:48) observes that '[d]epending on the phonetic environment, some speakers of Dutch distinguish between an open and more closed pronunciation of *o* (i.e. *hòk* and *bók* [...]) but

⁹ *Pollex* lists New Zealand Māori *kōpiha* 'pit for storing potatoes or taro' as cognate. While there are parallel instances of prefixation of /kō-/ , e.g. *kōura* 'crayfish' <PPn *'ura, the meaning discrepancy casts doubt on the relatedness of this item.

¹⁰ *Bos* also has other meanings: (a) 'bush/forest/wood', (b) 'bunch (of bananas/beads etc.)'. Both of these meanings are used in the journals of Le Maire, Schouten, Tasman, and Roggeveen.

north of the Meus and Rhine, at any rate, there is an ever-growing tendency to favour the more open vowel, as the difference is not phonemic. Thus a falling together of once distinctly separate vowels has occurred among some speakers'.

The difference in the two pronunciations of /o/ is partly due to their different origins (i.e. from <o> or <u>); in some cases the variation is phonetically determined, the close [ó] always being heard before nasals and after labial consonants (van Loey 1959:94; Donaldson 1983:136). The vowel in the *bos* variant in the seventeenth century would therefore have been the close variety, since it follows a labial consonant. This vowel is phonetically closer than the half-open [ɔ] to the Polynesian short close back vowel /u/. It is likely then that *pusa~puha* is derived from *bos* rather than *bus*.

The question that arises now is, did the men on board Le Maire's and/or Tasman's ships use *bos* or *bus*, or both?

Berteloot (1984:map 62 'bus/bos') clearly shows that in the thirteenth century *bos* and *bus* were used concurrently in Zeeland, South Holland and North Holland, with a preference for *bos* in North Holland. These are, as we have seen, the provinces from which a good proportion of Le Maire's men, and the officers on Tasman's and Roggeveen's ships, originated.

For further evidence we call upon Afrikaans, where <u> appears as <o>, e.g. *konst* (Mod.D. *kunst* 'art'), *mos* [sic]¹¹ (Mod.D. *mus* 'sparrow') (Donaldson 1983:136). Afrikaans developed from Dutch to become a distinct language from the mid-seventeenth century, when the Cape was colonised by large numbers of speakers of the Hollands dialect, and is in some respects closer to the Hollands of the seventeenth century than modern Dutch is (Brachin 1985:139). Accordingly, the preference of Afrikaans for <o> rather than <u> in words such as the above may derive from a similar situation in seventeenth-century Hollands.

Yet further evidence is provided by spellings adopted by at least three famous seventeenth-century Dutch writers, all of whom were concerned with linguistic matters, and actively strove to use the Hollands dialect in their writings (Brachin 1985:20). For instance, Vondel (1587–1679) uses *plonderen* (Mod.D. *plunderen* 'to plunder'), and Bredero (1585–1618) and Huygens' (1596–1687) use *konst* (van Loey 1959:94–95).

Finally, Le Maire, Schouten and Tasman use <o> rather than <u> in a number of words, including: *Bos kruyt~Bosse cruyt* (Mod.D. *buskruit* 'gunpowder'),¹² *gecrolt* (Mod.D. *gekruld* 'curled'), *drock* (Mod.D. *druk* 'busy'), and *connen* (Mod.D. *kunnen* 'can, able to'). Tasman is inconsistent in his spelling of the word 'double', using both *dobbele* and *dubbele* (Mod.D. *dubbele*). Interestingly enough, both Le Maire and Tasman consistently use *locht* (Mod.D. *lucht* 'sky, air') in their journals, whereas Bouman uses *lught* throughout his. This may reflect the <o> to <u> change in progress.

So, it is likely that *bos* and *bus* were used concurrently, with a preference for *bos*, by the men on Le Maire and Tasman's ships.

¹¹ The form *mos* is incorrect, it should read *mossie* (Bruce Donaldson pers. comm. 26/4/1995).

¹² Given the etymological link between *bus* 'box' and *bus* 'gun' (and hence *buskruit*) it is significant that Le Maire and Schouten use *o* in *bosse cruyt*, since it suggests they also used the *bos* pronunciation in the word for 'box'.

Having resolved the problem of the apparent lack of vowel correspondence, we will now turn to the nativisation of *bos~bus* as *pusa~puha*. This is easily explained. Since no Polynesian language has a /b/, this sound is regularly adapted as /p/, the closest corresponding Polynesian stop (the reflex *puha* occurs in languages that do not have /s/). The paragogic vowel in *pusa~puha* is the result of conforming to the open syllable structure of Polynesian languages.¹³

There are some reflexes of *pusa~puha* which unexpectedly display an unrounded close front tonic vowel. They are *piha* (Tuamotu), *piha* (Tahiti), *puiha* (Manihiki and Rakahanga), and *pi'a* (Rarotonga), and are restricted to the eastern Pacific. How can we account for their irregular form?

Although the <u~i> alternation is common (if sporadic) in eastern Polynesia, there is another plausible, if less likely, explanation. We mentioned above that the use of *bus* over *bos* in general Dutch gradually increased after the sixteenth century. By the time of Roggeveen's expedition in 1722 it would be reasonable to assume that *bus* would have been quite well established. If the five deserters in Tuamotu used this form rather than *bos*, they could well have been the source for an independent reborrowing of *bus* in that part of the Pacific. The vowel of *bus* would have been either rounded half-close front or rounded half-close/close central. In either case, the closest corresponding Polynesian vowel would be /i/. Similarly, Donaldson (pers. comm. 2/9/1993) has pointed out that modern Dutch *bus* (the abbreviated form of *autobus*) has been borrowed into Indonesian as *bis*.

The box below summarises the nativisation of seventeenth century Dutch *bos* as Polynesian *pusa~puha*.

<i>bos</i>	→	<i>pusa~puha</i>
/b/	→	/p/
/ɔ/ [ũ]	→	/u/
/s/	→	/s/~h/
	+	paragogic /a/

4.2 Another word for 'box'

The word *tuluma*, with meanings including 'small container', has also been noted in the Proto Polynesian word list *Pollex* (Biggs 1995), but assigned neither gloss nor level. We believe that *tuluma* is borrowed from Dutch *trommel*, meaning a metal box for storing a variety of items, with a loose or hinged lid, generally distinguished from a *bus* in that its height does

¹³ The choice of vowel is not, of course, entirely arbitrary, and it may yet be used to argue for initial borrowing in one Polynesian language rather than any other. However, our preliminary survey of vowel choice in other early loan words suggests that whatever patterning there may have been has been confused by inter-island borrowing and by 'borrowing' (or rather 'loaning') by non-native speakers, especially missionaries. It is also possible that the plural form, *bussen~bossen*, was borrowed, in which case the final vowel is as expected, Polynesian /a/ being the closest vowel to Dutch [ə].

not exceed its width (*Woordenboek der Nederlandsche Taal* vol. 17, p.3117). *Trommel* also means ‘drum (musical instrument)’, and is used as such in Le Maire’s journal. A *trommel* can be of any shape—square, rectangular, elliptical, and very often round.

The current distribution of *tuluma* is:

Samoa:

Pratt (1862, 1911:352) *tulula* ‘basket to keep oil-bottles in’.¹⁴

Milner (1966) *tunuma* ‘cylindrical container (hollowed out from a block of wood and used for storing tattooing implements)’ and ‘a case for tattooing instruments’ (Pratt 1911 [1862]).¹⁵

East Uvea:

Rensch (1984) *tuluma* ‘petit coffre de pêche en bois dans lequel on garde les hameçons et les lignes de pêche [small wooden fishing box for storing fishhooks and lines]’.

Pukapuka (Cook Is.):

Beaglehole and Beaglehole (1991) *tuluma* ‘plaited envelope-like container for fishhooks and other valuables’.

Tokelau:

MacGregor (1937) *tuluma* ‘elliptical covered container, primarily to carry fishing gear in canoes, also carried over shoulder in reef fishing, and for storage containers in house’.

Office of Tokelau Affairs (1986) *tuluma* ‘waterproof wooden box of traditional design carved of *kanava* (*Cordia subcordata*)’.

Fakaofu: Hale (1968 [1846]) *tuluma* ‘box, bucket’.

Tuvalu:

Koch (n.d.) *tuluma/faoga* ‘lidded wooden box, used in houses and kitchens for various small objects, but primarily for fishermen’s hooks and lines while at sea. Larger chests of this kind (up to 60cm deep) were used for skirts and headrests during long voyages [...] still made and used at Nukufetau’.

Vaitupu: Hale (1968 [1846]) *tuluma* ‘box, bucket’.

¹⁴ May be related, though the <*m*> to <*l*> change is irregular.

¹⁵ The /*n*/ rather than /*l*/ is unexpected, but not unusual in Polynesian languages; cf. Tongan *nima* ‘five’ < **lima*.

Kiribati:

Sabatier (1971) *turuma/tiruma* 'ancient basket with lid, small tin or box with lid closing tightly'.¹⁶

Manihiki and Rakahanga:

Buck (1932) *puiha, turuma* 'round wooden box 10" dia at bottom, 8" top, 9" high, 10 short legs, lid, cord, lugs. Only one seen, introduced from Tokelau'.

Given that the word appears to have been recently introduced to Kiribati and Manihiki and Rakahanga, its earlier distribution was confined to East Uvea, Samoa, Pukapuka, Tokelau, and Tuvalu.

The following mostly East Polynesian forms are noted:

Tahiti:

Davies (1851) *turuma* 'a place in the outside of the back part of the native houses, where all refuse was cast, a sort of dung-hill; but was sacred, and no one ought to walk over it'.

Rarotonga:

Savage (1980); Buse and Taringa (1995) *turuma* 'ghost, apparition'.

Pukapuka:

Beaglehole and Beaglehole (1991) *tuluma* 'grave'.

New Zealand:

Biggs (1995) *turuma* 'ritually restricted place; latrine'.

These data suggest PEP **turuma* (or PNP if the Pukapuka form is not a loan) meaning something like 'pit, grave'. We believe this to be unrelated to the *tuluma* form under discussion, though perhaps connected with East Uvea *tānuma* 'grave' and related forms.

4.2.1 Linguistic correlations

There is little difficulty in accounting for the derivation of *tuluma* from *trommel*.

- The epenthetic <u> and the paragogic <a> are the result of once again conforming to the open syllable structure of Polynesian. The epenthetic vowel /u/ is the result of

¹⁶ The phonology makes it clear that this is a loan from a Polynesian language, presumably its close neighbour Tuvalu.

vowel harmony with the tonic vowel, which is close because of the following nasal (see above).

- The nativisation of <r> as <l> is due to the fact that none of the languages concerned contrast /r/ and /l/.
- The final consonant is lost (rather than being supported by a paragogic vowel, as with /pusa/ from /bɔs/) because it is preceded by an unstressed vowel.

The box below summarises the nativisation of seventeenth-century Dutch *trommel* as Polynesian *tuluma*.

<i>trommel</i>	→	<i>tuluma</i>
/t/	→	/t/
	+	epenthetic /u/
/r/	→	/l/
/ɔ/ [ũ]	→	/u/
/m/	→	/m/
/ə/	→	/a/
/l/	→	∅

4.2.2 A Hawaiian connexion?

Langdon (1998) has provided much additional information on *tuluma* and proposed that both the artefact and its name were introduced to Tokelau in 1830 by Hawaiian castaways. While we find plausible the argument that Hawaiians were shipwrecked in Tokelau in 1830, we cannot agree that they introduced either the *tuluma* or its name.

Our case for the Dutch origin of the *tuluma* is now considerably strengthened by the inclusion of the form from East Uvea, which we previously overlooked, so that the problem of its spread to Tokelau and beyond from the islands visited by the Dutch explorers is now largely resolved.

Regarding the shape of these containers, Langdon points out that they are ‘generally taller than they are wide’, whereas with Dutch *trommel* the reverse is generally true. Our view is that two ‘generally’s allow a great deal of latitude; that in any case both are very often round; and that the change in relative height may well have been a result of scarcity of large-girth trees on atolls.

On the other hand, Langdon has failed to point to a specific Hawaiian artefact that might have been the model for *tuluma*, merely referring to ‘neatly carved wooden bowls and dishes, some with lids’, nor has he cited a Hawaiian word that could have been the source for the word *tuluma*. Finally, we find the proposed etymology (a non-existent compound of Hawaiian *tu* ‘stand’ and *luma* ‘douse, duck; upset, tumble, as in the surf’) totally implausible on phonological, morphological and semantic grounds, and a clear case of clutching at straws.

4.3 A word for 'axe'

We believe the following Eastern Fijian and Rotuman forms are derived from the seventeenth-century Dutch *bijleken* /beiləkən/ (or perhaps *bijlken*) 'small axe', and that they originate from either the Le Maire and Schouten or the Tasman and Visscher expeditions:

Eastern Fiji:

Richardson 1811 *bellico* 'a chissel [sic]'; *bellico ouboonah* 'a plane iron' (Schütz 1985:576).

Endicott 1829 (1923:73) *Par'-lee-Co* 'Chizzel [sic]'.¹⁷

Oliver 1831 *bellico* 'chisel' (Schütz 1985:606).

Cargill et al. (n.d.) [c.1840] *veleko* 'a chisel'.

Hazlewood (1850) *veleko* 'a chisel, the primitive idea seems to be that of sharpness, or beauty; as the polished part of an edged tool is called a kena veleko'.

[Hunt and Hazlewood] (1856: Exodus 32:4) *veleko* 'graving tool'.

Neyret (1935) *veleko*, *veleveleko* 'the polished part of a tool; hence the iron of an axe or tool'.

Capell (1968 [1941]) *velekō* 'the polished part of a tool, so in modern use the steel of a tool'.

Geraghty (n.d.) [c.1985] *velekō* 'kind of adze with the narrowest concave blade' (used by the traditional carpenters in the Kabara area of southern Lau).¹⁸

Rotuma:

Churchward (1940) *ver'ō* 'steel blade, steel'.

We know axes were carried on board their vessels because the logbooks of Le Maire, Schouten and Claesoon (Le Maire's chief merchant) mention that an axe was given to the chiefs of both Tafahi (Northern Tonga) and Futuna (Engelbrecht & van Herwerden 1945:57, 72, 184; Claesoon 1646:91). Furthermore, each of the manifests of Tasman's ships (the *Heemskerck* and the *Zeehaen*) includes the entry: *50 bijltges* '50 small axes' (Posthumus

¹⁷ 'When it came to exchanging trading goods for the native labor necessary to obtain the beche-le-mer—the principal article of trade in the islands—a common chisel made by the blacksmith on board from old hoop iron could be bartered for a day's labor. To earn a chisel the islander must leave his hut early in the morning, sail fifteen to twenty miles to the reef and then work knee-deep in the water for six to eight hours gathering the beche-le-mer, a species of sea-snail; after which he must carry his spoil to the ship—and all for a barrel-hoop chisel! The trading goods most esteemed in the Fijis at that time were iron tools, knives, scissors, whale's teeth, beads and trinkets, but especially muskets, pistols and ammunition.' (Endicott 1923:8–9)

¹⁸ Note that in all of the Fijian sources except Geraghty, marking of vowel length is absent or inconsistent.

Meyjes 1919:158, 159). Although Tasman's logbook makes no specific mention of axes being given to or traded with the Tongans during his stay at Tongatapu and Nomuka, it is not unreasonable to assume that they were, since he had them on board his ships and there was a prolific trade in local foodstuffs for European cloth, trinkets, tools, and utensils.

Moreover, on Dutch ships of the seventeenth century, the diminutive form of the word *bijl* (or its older form *bijle*, which was still very common during the first half of the seventeenth century)¹⁹ had two referents: 'axe' and 'ship's carpenter'. Under the entry for *bijl*, the authoritative dictionary of the Dutch Language, the *Woordenboek der Nederlandsche Taal* (Vol II, 2:2619), notes: 'Bij overdracht: scheepstimmerman, dikwijls in het verkl. bijltje' ('By transfer: ship's carpenter, often in the diminutive *bijltje*'). This suggests that the *bijl* (or *bijltje*-*bijleken*) was a common tool in a ship's carpenter's tool-kit, and might well have been presented to the Tongans. Many contemporary illustrations depicting ships' carpenters show them working with a *bijl*. In the illustration below, a shipwright is seen using such a *bijl* [axe]. (Engraving by Jan Luijken in *Human industry*, Amsterdam 1694.)



¹⁹ For instance, Le Maire uses *een bijle* (Engelbrecht & van Herwerden 1945:72) when listing items that were presented to the kings of Futuna and Alofi. And in the Old Testament of the 1637 *Statenbijbel* (i.e. the States' General Bible—a Bible whose language was designed not to favour the Dutch of one regional dialect over another) 'axe' appears as *bijle*.

Before we explain how we believe *velekō* is derived from *bijleken~bijlken*, we need to outline some aspects of the development of the Dutch diminutive suffix.

In the first half of the seventeenth century the Dutch Language (and especially the Hollands dialect upon which Modern Standard Dutch is based) was very much in a state of flux. One of the many, and very rapid, changes that occurred during this period was the palatalisation of the Middle Dutch diminutive suffix *-ken* /-kən/ to *-tje(n)* /-tə(n)/²⁰ variously spelt as: *-tje(n)*, *-tgie(n)*, *-tje(n)*, *-tie(n)*, *-ge(n)*, *-je(n)*, and *-ie(n)* (van Loey 1959:229; Weijnen 1956:23, 51). The co-existence of the velar and palatal diminutive forms is attested by their many instances in the logbooks of Le Maire, Schouten, Claeszoen, and Tasman. And as the following list shows, both forms were used concurrently:

Le Maire, Schouten and Claeszoen:

bladeken and *blaetjens*²¹ 'small leaf/leaves' (Mod. D. *blaadje(s)*)

bosken and *bosjens* 'small bunch(es)' (Mod. D. *bosje(s)*)

coraelkens, *coraeltjens*, *coraeltjens*, *coraeltjens*, and *coraelgens* 'small beads' (Mod. D. *kraaltjes*)

dorpkens and *dorpjens* 'small villages' (Mod. D. *dorpjes*)

drommelkens and *trommeltjen* 'small groups' and 'small drum' (Mod. D. *drommeltjes* and *trommeltje*)

huyskens and *slackenhuysjen* 'small houses' and 'small snail-shell' (Mod. D. *huisjes* and *slakkenhuisje*)

mutsken and *mutsgen* (a measure of liquid, 1 *mutske* = 0.15 litre—Claeszoen uses both forms, Le Maire uses *mutskens* exclusively, and Schouten *mutsgen*)

praeuken and *praeutjen* 'small proa' (a Malay sailing boat) (Mod. D. *prauwtjes*)

scheepken and *scheepjen* 'small ship/boat' (Mod. D. *scheepje*—Le Maire and Schouten use both forms within a few lines of each, and Claeszoen uses each of the two forms twice within 9 lines!)

tacxken and *tackjens* 'twig(s)' (Mod. D. *takje(s)*)

vaetkens, *vatekens* and *vaetjens* 'small barrels' (Mod. D. *vaatjes*—the latter two forms are used within a few lines of each other in Le Maire's logbook)

Tasman:

eijlandeken and *eilantjens* 'small island(s)' (Mod. D. *eilandje(s)*)

praeukens, *praeutien* and *praeutjens*

windeken and *windetjen* 'a breeze' (Mod. D. *windje*)

²⁰ In casual speech, there is almost always elision of the final nasal, reducing the ending to [ə].

²¹ The -s ending indicates a plural form.

In Table 1, we summarise the use of the two diminutive suffixes by the four diarists. It shows that Le Maire favours neither form while Schouten and Claeszoon favour the innovative *-tje(n)* form only slightly more than *-ken*. Tasman, on the other hand, uses *-tje(n)* almost twice as much as *-ken*.

Tasman's preference for the palatalised form may be indicative of the rapid change from *-ken* to *-tje(n)*. The almost thirty-year stretch between the Le Maire and Tasman expeditions is, of course, an extremely short period—ordinarily not long enough to reveal any significant linguistic change. However, according to Daan (pers. comm. 9/5/1997) this period was marked by an unprecedented rate and degree of linguistic change, so that the change in the use of the diminutive form during that thirty-year interval is not unlikely.²²

Table 1: Frequency of use of the diminutive suffixes *-tje(n)* and *-ken*

Source texts	Diminutive suffix		
	<i>-ken</i>	<i>-tje(n)</i>	Total
Le Maire's logbook (1615–17)	39 (50%)	39 (50%)	78
Schouten's logbook (1615–17)	21 (45%)	26 (55%)	47
Claeszoon's logbook (1615–17)	24 (47%)	27 (53%)	51
Tasman's logbook (1642–43)	13 (36%)	23 (64%)	36
Totals	97 (46%)	115 (54%)	212

Although we have not found any instances of the form *bijleken* (or *bijlken*) in any of the explorers' journals, we are nonetheless confident that these forms were current because of the well-known pervasiveness of the diminutive in Dutch, which is evident in the examples above. Furthermore, we note that Le Maire and Claeszoon use the phonologically analogous *belleken* /*beləkə(n)*/ 'small bell'.

Incidentally, a number of languages of New Britain show a form *vele* meaning 'iron or steel adze' (Goodenough 1997:291). We tentatively suggest that this may also be a loan from Dutch *bijl* or *bijle*, possible via an Indonesian language.

4.3.1 Linguistic correlations

Although Fijian and Rotuman are not Polynesian languages, they nevertheless have a very rich history of Polynesian borrowing, especially from Tongan (Biggs 1965²³; Geraghty 1983:99–102). The absence of recorded reflexes in the languages of west Polynesia (the area visited by Le Maire and Tasman) may well be a lexicographic accident, especially since the

²² It seems that only eighty years after Tasman's journal (1642–43) the palatalisation from *-ken* to *-tjen~-tien* was complete. Bouman's journal (1722) (Mulert 1911) has 35 diminutives, all of which are palatalised.

²³ Reprinted in this volume with some editing.

word has such a specialised referent and would be of relatively rare occurrence.²⁴ It is also possible that the word has become obsolete with the decline of traditional crafts and tools. All things considered then, it is most likely the word was loaned into a Polynesian language and thence into Eastern Fijian and Rotuman.

There is relatively little difficulty in accounting for the realisation of *bijleken* (or *bijlken*) as *velekō* /'vele ko:/:

<i>bijleken</i>	→	<i>velekō</i>
/b/	→	/v/
/ɛi/	→	/e/
/l/	→	/l/
/ə/	→	/e/
/k/	→	/k/
/ə/	→	/o:/
(/n/)	→	∅

- Since Polynesian languages do not have [b], the closest corresponding sound would be /v/ (phonetically [β]) or /p/. Although in all known Polynesian loan words [b] is rendered as /p/, these are all loans from the last two centuries. Phonetically, Polynesian /p/ and /v/ are 'equidistant' from [b], therefore *a priori* there is no reason to prefer one over the other, and the Polynesian realisation of [b] as /p/ may well be a convention of relatively recent origin.
- The pronunciation of the diphthong <ij> in early seventeenth-century Dutch was quite complex (Weijnen 1956:19–20). During the first few decades of the century, the long vowel <i> [i:] was diphthongised to <ij> [ɛi], which was attested in about 1620 (Brachin 1985:17). There were then three co-existing pronunciations: the modern Dutch [ɛi], the middle Dutch monophthong [i:], and an intermediate form [ɛⁱ] (with a vowel colour somewhere between Cardinal Vowels 2 [e] and 3 [ɛ]) (Cor van Bree pers. comm. 26/2/1997; Hermkens 1973:30–31; Weijnen 1956:19). The pronunciations were regionally determined—in more remote areas the monophthong would be heard, whereas in important cities, such as Amsterdam and The Hague, one would have encountered the intermediate form or the diphthong in 'polished' speech. That there was some variation in the pronunciation of <ij> is exemplified by Tasman's spelling of the month *Juni* 'June' as *Iunij*, and in two entries in the *Zeehaen*'s manifest (Posthumus Meyjes 1919:158, 159) where we see modern Dutch *ijzeren* [ɛizərə(n)] 'iron'(ADJ.) appearing as *isere* [isərə] in *25 gesorteerde isere pannen* '25 assorted iron saucepans', and modern Dutch *oliefant* [olifant] 'elephant' appears as *olijphant* [olɛifant] in *19 olijphantstanden* '19 elephant tusks'. By the end of the century [ɛi] was largely used

²⁴ Outside the cluster of small islands of Kabara, Vulaga, Ogea and Namuka in southern Lau, the word *velekō* is now totally unknown in Fiji. Even within this area many individuals do not know the word. Hans Schmidt (pers. comm.) also reports that it is unknown in Rotuma.

throughout central Holland (Amstelland with Amsterdam, and Rhineland with Leiden and The Hague). Since the crews on board Dutch ships of the period were mostly speakers of the Hollands dialect, <ij> probably had either the [ɛⁱ] or [ɛi] pronunciation which gave rise to the vowel /e/ in the first syllable of *velekō*. Similar loan phonology can be seen, for instance, in the following English loan words in Tongan (T) and Fijian (F), where the English rising diphthong /eɪ/ is rendered as /e/: 'Epeleli (T), Epereli (F) < 'April'; Mē (T), Mē (F) < 'May'; keke (T & F) < 'cake'; pepa (T), veva~pepa (F) < 'paper'.

- The derivation of the second syllable of *velekō* is unproblematic whether the donor word was *bijleken* or *bijlken*. In the former, /ə/ would be rendered as /e/. For the latter, since no Western Polynesian language (with the partial exception of Tuvaluan) tolerates consonant clusters, the Dutch consonant cluster [-lk-] in *bijlken* needs to be modified by the insertion of an epenthetic vowel. In this case the epenthetic vowel mirrors the preceding stressed vowel, which appears to be a common pattern (cf. Fijian *bēleti* < English 'belt', Futunan *velevete* < English 'velvet', Tongan *olovete* and *polota* < English 'velvet' and 'bolt').
- The fact that the onset of the final syllable is /k/ indicates that the source word was *bijleken* rather than *bijlten*, for which **veleto* would be expected.
- The final vowel of *velekō* is at first glance somewhat unexpected given the /-kə(n)/ ending of the donor word. However, since Polynesian languages do not have /ə/, the quality of the final vowel is understandable, because Polynesian /e/ and /o/ are not only equidistant from [ə], but also the same height. The choice between /e/ and /o/ is, therefore, quite arbitrary. On the other hand, the length of /o:/ is certainly unexpected since the Dutch [ə] is short. However, if /o:/ were realised as a short vowel, the primary stress in the word (which is penultimate in most Polynesian languages) would be assigned to the epenthetic /e/ (hence **veléko* /ve'leko/), which is the reverse of the stress pattern of the Dutch donor word /'beil(ə)kən/. The lengthening of the final vowel is, therefore, a strategy necessary to retain the stress assignment of the donor word.

The following box illustrates the correspondences between Polynesian and Rotuman:

Polynesian		Rotuman
<i>velekō</i>	→	<i>ver'ō</i>
/v/	→	/v/
/e/	→	/e/
/l/	→	/r/
/e/	→	∅
/k/	→	/'/
/o:/	→	/o:/

The Rotuman form, *ver'ō*, is not what would be expected from a direct loan from Dutch. However, since Rotuma has a history of heavy borrowing from Polynesian languages we

propose that *ver'ō* is a Polynesian loan. The realisation of Polynesian /l/ as Rotuman /r/ is regular (Biggs 1965:402–403). The loss of the medial unstressed vowel is also a common occurrence (e.g. *manpusi* < Fijian *manipusi* 'mongoose', *firimoto* 'wild cherry tree' < Tongan *filimoto* 'k.o. tree', Futuna *filimoto* 'k.o. tree, *Flacourtia rukam*', or Samoan *filimoto* 'k.o. tree, *Flacourtia rukam*'). Although Polynesian /k/ is usually realised as Rotuman /k/ (Biggs 1965:399–401), it is possible that the word was loaned from Samoan where /k/ has been reflected as /ʔ/ since at least Cook's time and probably much longer (Hovdhaugen 1986:314–317) or via Vanualevu in Fiji where the same change appears to have taken place well into prehistory (Geraghty 1978:53–54).

4.4 A word for 'design tablet'

In his authoritative survey of tapa (bark cloth) manufacture in Fiji and Polynesia, Kooijman (1972:Table F) notes that tablets with relief designs, which are placed beneath the tapa to produce a design when a dye is rubbed on the surface, are found only in Fiji and West Polynesia, and nowhere else in Polynesia, or indeed the Pacific. These design tablets are usually rectangular and made of either a slab of wood with the design carved on one or both sides, or coconut midribs or sinnet sewn to the base of pandanus leaves, coconut fibre, or strips of mangrove wood. We believe that they may have been first made in imitation of similar metal objects brought by the early Dutch explorers, and that the name for these artefacts is also of Dutch origin.

The current distribution of *kupeti* is:

Fiji:

Capell (1968) *kuveti* 'a large frame on which masi [tapa] is marked; dail. *kupeti*'.
Kooijman (1972:61) *kuveti* 'design tablets made of leaf and wood'.

Tonga:

Churchward (1959) *kupesi* 'Stencil-like contrivance used in making patterns on tapa cloth. It is placed under the cloth, and the colouring matter is rubbed or dabbed on top, on the same principle as in making a rubbing of a coin'.

Kooijman (1972:307–313) *kupesi* 'design tablet'.

East Uvea:

Rensch (1984) *kupesi* 'planche formé de fils d'écorce d'arbre à pain et de nerures de feuille de cocotier cousues sur des feuilles de pandanus assemblées les unes aux autres, servant à imprimer le *gatu* [tablet made of breadfruit bark fibres and coconut midribs sewn onto pandanus leaves joined together, used in printing bark-cloth]'.

Kooijman (1972:252–254) *kupesi* 'design tablet'.

East Futuna:

Moyse-Faurie (1993) *kupeti* ‘matrice pour dessiner les motifs du “siapo”; motif de dessin en relief pour le “siapo” (nerures des feuilles de cocotier collées ou enfilées sur le “siapo”) [matrix used in decorating bark-cloth; relief design motif for bark-cloth (coconut midribs glued or sewn onto bark-cloth)]’.

Kooijman (1972:259) *kupeti* ‘design tablet’.

Samoa:

Milner (1966) ‘*upeti* ‘tablet (formerly made of pandanus leaf with a raised pattern, but now usually of wood with an incised pattern) used for rubbing designs on bark-cloth’.

Kooijman (1972:219–220) ‘*upeti* ‘rectangular design tablet’.

All the above can be derived regularly from an earlier **kupeti*. The phonology of the Fijian form shows it to be a loan from a Polynesian language, and indeed Thompson (1940:200) and Kooijman (1972:359; 1977:119) both state that the Fijian design tablets, which are restricted to the Lau Islands, the closest part of Fiji to Tonga, are clearly of Tongan origin.

As the Dutch source of these forms we propose *kopertje* ‘small copper plate bearing a design’. The word and its meaning are not actually attested, but there are some grounds for inferring its existence. The Dutch word *koper* ‘copper, brass’ is well attested. Its English cognate *copper* is recorded as having also applied since the seventeenth century to ‘a plate of copper on which a design is engraved or etched’ (*OED*). We believe that Dutch *koper* may also have had this meaning, and that it had a diminutive form *kopertje*. It may seem rather unlikely that these tools of the printer’s trade would have been carried around by Dutch explorers in the South Pacific, but they may have been brought along as novelties. It is also possible that the term could have been applied to various artefacts such as saucers or box-lids with a relief design, such as that illustrated in Figure 1 of this paper. We suggest, then, that a person or persons travelling with Tasman or Le Maire and Schouten showed islanders how to make a rubbing of such a plate or artefact, and that *kupeti* were subsequently manufactured to serve the same purpose. The use of *kupeti* has indeed been likened to brass-rubbing (Troxler 1977:38). This proposal also explains the rather unexpected distribution of *kupeti*, being confined to Western Polynesia and only later spreading to Fiji.

4.4.1 Linguistic correlations

There is relatively little difficulty in deriving *kupeti* from *kopertje*:

- The realisation of Dutch /o/ (phonetically realised as [o.]) as Polynesian /u/ is slightly irregular (Polynesian /o/ would normally be expected), though such a change in an

unstressed vowel is not totally unexpected.²⁵ It is also perhaps pertinent to note that Mariner (Martin 1818, II:278–279, vocabulary) recorded the first vowel as /o/ ('*cobechi* the leaves of the *paoonga* dried and embroidered with the fibres of the cocoa-nut husk, so as to form an instrument for imprinting *gnatoo*'). However, although his recording of vowels was generally true, there are a few instances where he appears to have misrecorded /u/ as /o/, e.g. *polotu*, for *pulotu* and *kopenga* for *kupenga*.

The change in vowel length (from [o.] to [u]) is not altogether unexpected as vowel shortening in foreign loans occurs intermittently, as the following English loans in Fijian illustrate: *kapetā* < *carpenter*, *fosepi* < *forceps*, *moŋia* < *morphia*, '*oketa* < *orchid*.

- The <r> in *kopertje* occurs as the final element of an unstressed syllable. In normal casual speech, the /r/ in this position is very often elided or receives a very weak articulation. It is therefore not surprising that /r/ is not realised in the Polynesian *kupeti*.
- The realisation of the diminutive suffix *-tje* /tjə/ as /ti/ seems at first sight somewhat aberrant, for not only is *-tje* phonetically realised in casual Hollands speech as [t̚ + schwa] (where the /t/ and /j/ have coalesced into the voiceless palatalised stop [t̚]), but there is also a seeming lack of correspondence between the final vowels—/ə/ > /i/. The two problems are resolved in a single explanation. In eighteenth-century Tongan (and presumably Uvean), /t/ before /i/ was palatalised. It is not known when the change to [t̚] occurred, but most likely it had been in place for some hundreds of years. If it was in place in the seventeenth century, which we believe it was, it would explain the realisation of /ə/ as /i/, because the Tongan (and Uvean) phonotactics were such that no vowel other than /i/ could occur after [t̚], which is equivalent to Dutch [t̚].

<i>kopertje</i>	→	<i>kupeti</i>
/k/	→	/k/
/o/	→	/u/
/p/	→	/p/
/ə/	→	/e/
/r/	→	∅
/t̚/	→	/t/
/ə/	→	/i/

²⁵ The vowel /o/ often receives a slightly diphthongal realisation in the Hollands dialect—the end of its articulation receiving an offglide to the position of /u/ (Booij 1995:6).

4.5 A word for 'bowl'

Another possible Polynesian loan word from Dutch is *kumete* 'wooden bowl', which can be derived, on clear semantic and phonological grounds, from Dutch diminutive *kommetje* 'small bowl' (cf. §4.4.1 *kupeti* < *kopertje*). Some of the reflexes of *kumete* are as follows:

<p>Fiji:</p> <p>Capell (1968) <i>kumete</i> 'a wooden bowl; Vanua Levu and Ra word for <i>tanoa</i>.' Thompson (1940:187) <i>kumete</i> 'wooden bowl'.</p>
<p>Rotuma:</p> <p>Churchward (1940) '<i>umefe</i> 'bowl, basin, cup ..., plate ..., collection-plate, dish, jug, dipper, etc.; small short-legged table used at meals by chiefs only; (by metonymy) chief'.</p>
<p>Tonga:</p> <p>Churchward (1959) <i>kumete</i> 'kava bowl'. Thompson and Thompson (1992) <i>kumete</i> 'a kava bowl.'</p>
<p>Niue:</p> <p>Sperlich (1997) <i>kumete</i> 'traditional wooden bowl'.</p>
<p>East Uvea:</p> <p>Rensch (1984) <i>kumete</i> 'bassine; tout contenant en forme de cuvette, auge' [pan; any basin-shaped container, trough].</p>
<p>East Futuna:</p> <p>Moyse-Faurie (1993) <i>kumete</i> 'récipient allongé en bois (sert a préparer l'amidon, le lait de coco, le curcuma, etc.); petite embarcation' [long wooden container used in making starch, coconut-milk, turmeric etc.; small boat].</p>
<p>Samoa:</p> <p>Milner (1966) '<i>umete</i> '(polite) wooden bowl used for cooking purpose'.</p>
<p>Pukapuka:</p> <p>Beaglehole and Beaglehole [1991] <i>kumete</i> 'wooden bowl'.</p>
<p>Tokelau:</p> <p>Office of Tokelau Affairs (1986) <i>kumete</i> 'large wooden bowl'.</p>

Tuvalu: Jackson (1994) <i>kumete</i> 'local basket; local bowl used for preparing food'.
Kapingamarangi: Lieber and Dikepa (1974) <i>gumade</i> 'large wooden bowl used for pounding food'.
Nukuoro: Carroll and Soulik (1973) <i>gumedi</i> 'bowl (wooden)'.
Rennell: Elbert (1975) <i>kumete</i> 'wooden food bowl'.
Tikopia: Firth (1985) <i>kumete</i> 'wooden bowl, of various type'.
Mae: Clark (n.d.) <i>kumete</i> 'wooden food platter'.
Ifira-Mele (Mele-Fila): Biggs (1975) <i>kumete</i> 'wooden bowl'.
West Uvea: Hollyman (1987) <i>kumete</i> 'bol, auge' [bowl, trough].
New Zealand: Williams (1985 [1844]) <i>kumete</i> 'wooden bowl or trough'.
Hawaii: Pukui and Elbert (1986) ' <i>umeke</i> 'bowl, calabash, circular vessel as of wood or gourd'.
Marquesas: Dordillon (1931–32) <i>umete</i> 'malle, caisse, coffre' [trunk, box, case].
Mangareva: Tregear (1899) <i>kumete</i> 'bowl, trough, kneading trough'.
Tuamotu: Stimson and Marshall (1964) <i>kumete</i> 'wooden bowl, trough, dish'.

<p>Tahiti:</p> <p>Davies (1851) '<i>umete</i> 'wooden dish used for various purposes, chiefly to hold food'.</p>
<p>Rarotonga / Cook Islands:</p> <p>Savage (1980 [1962]) <i>kumete</i> 'a wooden bowl or trough which is made in various sizes and shapes, generally from wood of the tamanu or tou trees. The natives of the islands still make them for domestic purposes.'</p> <p>Buse and Taringa (1995) <i>kumete</i> '(wooden) bowl'.</p>
<p>Mangaia:</p> <p>Christian (1924) <i>kuete</i> 'a trough or canoe-shaped oblong wooden vessel used for pounding and preparing food'.</p>

As is evident from the above, this word is widespread in Polynesia, being found in many outliers and in two of the extremes of the 'triangle', Hawaii and Aotearoa (New Zealand), though not the third, Rapanui (Easter Island).

Possible external cognates are Mota (Vanuatu) *wumeto* 'a wooden bowl, used for stone-boiling', and Kiribati *kumete* 'a kind of wooden mortar trough, hollow, empty, concave, thin, ravenous, hungry'. These, along with the Fijian reflex, which is confined to Lau and eastern Vanualevu, seem very likely to be loan words of Polynesian origin. If the Rotuman is also a loan from Polynesia, it must predate the layer of Polynesian loans that was identified by Biggs (1965), since it does not share in their phonology. This is not entirely implausible, since at least the change from *t to /f/ was still in progress during the nineteenth century, Hale (1968 [1846]:469–478), for example, recording consistently a voiceless dental fricative in 1840. It is quite possible, therefore, that previous loans into Rotuman, say before the eighteenth century, were adapted phonologically in a different way from those identified by Biggs.

Apart from *kumete* having a plausible Dutch source, and referring to an item of material culture, there are some linguistic reasons for suspecting this word to be a borrowing rather than inherited from Proto Polynesian. The Samoan reflex, '*umete*', is marked in Milner's dictionary as being 'polite'; that is, it belongs to a particular register in which it is used as a substitute for another word (*týnoa faimea'ai*) of more general use. While there is no certainty as to the origins of words used in this register, Churchward (1951:155) has speculated that some of them may be of non-Samoan origin, and *matau*, the polite word for 'axe', could well be a loan word from Fijian. The parallel register in Tongan contains at least two loan words from English: *uaifi* 'wife' and *husepýniti* 'husband'.

In addition, at least two of the reflexes exhibit loan phonology. In Marquesan, the direct reflex would be **kumete*, whereas the actual reflex '*umete*' suggests a loan, probably via Tahiti. In Mangaia (Cook Islands), the reflex *kuete* shows unexpected loss of medial /m/, a feature shared with *kuala* 'sweet potato', an item that is undoubtedly a loan, because of the relatively recent arrival of this cultivated plant from South America (Yen 1974:329). A third Mangaian item sharing this loss, *ko'ani* 'a cork', is of indeterminate origin (Christian 1924).

Nevertheless, the extent of the spread of this word within Polynesia and beyond is in most respects greater than that of any of the Dutch loan words hitherto identified. There are two possible conclusions. One is that the resemblance in form and meaning between Polynesian *kumete* and Dutch *kommetje* is due to chance. The other is that the spread of the word *kumete* is a true indication of the extent of inter-island communication in the seventeenth century. Given that the earlier loan word *kumala* 'sweet potato' also spread to the extremes of the triangle and well beyond (Yen 1974:339–347), we feel the second conclusion is perhaps a little more plausible.

4.6 A word for 'shovel'

The following is a set of forms we believe are derived from the seventeenth- and eighteenth-century Dutch *schop* /skɔp/~sɣɔp/ 'shovel':

Hawaii:

Pukui and Elbert (1986) *kope* 'rake, shovel, dredge; to rake, scratch, scoop, as of a canoe paddle'.

Tuamotu:

Stimson and Marshall (1964) *kope* 'kinds of small scoop net for fishing'.

A possibly related form with extended meaning is:

Rarotonga:

Savage (1980 [1962]) *kope* 'to collect, to subscribe, to donate, to give a donation in money or other things'.

Buse and Taringa (1995) *kopekope* 'gifts brought to a mourning'.

The following terms may also be related:

Marquesas:

Mosblech (1843) *opeope* 'lier ensemble v. *ope* [to tie up/bind together]'.

Tahiti:

Lemaître (1986) *ope* 'pelle, bêche; pelleter [shovel, spade; to turn with a shovel, shovel]'.

Jaussen (1987 [1969]) *ope* 'pelle [shovel]'.

Tuamotu:

Stimson and Marshall (1964) *ope* 'to scoop, gather up in the hands; of small loose objects or folds of cloth'.

The five men who deserted after Roggeveen lost his ship the *Africaensche Galej* on Takapoto (Tuamotu) in 1722 are probably the source of this loan word. An attempt was made to salvage as much as possible of its cargo and the crew's personal belongings, but most of what was salvaged was lost in rough seas or had to be left on the eastern beach of the atoll. Before Roggeveen's two remaining ships left Takapoto, five men deserted, and refused to leave the island. The five would have had a fairly good supply of equipment and provisions, and it is not unreasonable to assume that spades and shovels were among these goods.²⁶

4.6.1 Linguistic correlations

The derivation of *kope* from *schop* is relatively uncomplicated:

<i>schop</i>	→	<i>kope-ope</i>
/s/	→	∅
/k/~/χ/	→	/k/
/ɔ/	→	/o/
/p/	→	/p/
	+	paragogic /e/

- The simplification of the consonant cluster <sch> /sk/~/sχ/ to /k/ is consistent with Polynesian loan phonology (cf. Tahitian *totini* < English 'stocking'; Hawaiian *kula* < English 'school').
- The digraph <ch> in seventeenth-century Dutch had two co-occurring pronunciations: [k] and [χ]. Either of these would have been realised as Polynesian /k/.
- Up until relatively recently, Dutch <o> (/ɔ/) had two allophones: [ū] and [ɔ] (Donaldson 1983:48); The [ū] allophone occurred before nasals and after labial consonants, whereas the [ɔ] allophone occurred elsewhere (van Loey 1959:94; Donaldson 1983:136). The vowel in *schop* would, therefore, have been [ɔ], which would be unambiguously rendered as /o/ in Polynesian.
- The paragogic vowel in *kope* is, of course, the result of conforming to the open syllable structure of Polynesian languages.

²⁶ Quiros specifically mentions his crew taking spades and crowbars to dig for water on Hao in the Tuamotus in 1606 (Markham 1904:200).

4.7 A word for 'needle'

We believe Tahitian *narreeda* /*narita*/ 'needles' (Forster-Anderson 1773—Lanyon-Orgill 1979:118) was also introduced by the Roggeveen deserters and derives from the Dutch *naald* /*nalt*/²⁷ 'needles'.

We know that Roggeveen carried needles on board his ships as Bouman's journal mentions that needles were shown to the people of Rapanui: 'Zy hadden geen (kennis) van yzer, staal of andere mineralaen, nogh wapenen, ook van genigh dingh, dat wy haar vertoonde. 't sy van welk (ook) schartjes, naalden, coralen, spiegeltjens en meer andere zaken.' ('They had no (knowledge) of iron, steel or other metals/minerals, nor weapons, nor of anything else we showed them. Which included scissors, needles, beads, mirrors and other things.') (Mulert 1911:91).

4.7.1 Linguistic correlations

There is little difficulty in accounting for the derivation of *narita* from *naald*:

<i>naald</i>	→	<i>narita</i>
/n/	→	/n/
/a/	→	/a/
/l/	→	/r/
	+	epenthetic /i/
/t/	→	/t/
	+	paragogic /a/

- The first two sounds of *naald* are unambiguously rendered as the first syllable of *narita*.
- Tahitian has no /l/, the closest corresponding sound being /r/. This, together with the epenthetic /i/, furnishes the second syllable.
- The final syllable of *narita* is unambiguously derived from the final voiceless dental stop in *naald* with the addition of the paragogic vowel to conform to the open syllable structure of Tahitian.

Parallel examples to this loan phonology are the following two Afrikaans loan words in Fanakalo (a Zulu-based English pidgin with approximately 5% of its vocabulary derived from Afrikaans): *naliti* 'needle' < *naald*, and *toliki* 'interpreter' < *tolk* (Bold 1986),²⁸ and the Mangarevan (*ka'u*) *tirita* < English 'silk' (Rensch 1994:479).

²⁷ In word final position, voiced stops become voiceless.

²⁸ We are grateful to Dr Anthony Paul Grant (University of Saint Andrews, Scotland) for drawing our attention to these examples.

4.8 A word of 'wanton lust'

Poort (1991:71) cites an unnamed person with a declared knowledge of Polynesian languages who was 'struck by the fact that in the Reko Tumu, the language of the Tuamotus, there appear a number of words of obvious Dutch origin, and many of them have to do with the so-called 'wanton lust' of those left behind sailors [of Roggeveen's 1722 expedition].' Poort does not list these words, but they are given in personal correspondence to Poort from Kalsbeek, the self-professed Polynesian etymologist. Three of the words can, for various reasons, be discounted as genuine Dutch loan words.²⁹ The remaining form is the following:

Tuamotu:

Stimson and Marshall (1964) *pupa* (Takume) '(beast) copulate'; (Amanu) 'tremble, thrill, as during orgasm'.

Tahiti:

Foster/Anderson 1773 (Lanyon-Orgill 1979:115) *wa'bubba* 'jolting r...g'.³⁰

Davies (1851) *pupa* 'cold shivering at onset of disease; desire other sex'.

Lemaître (1986) *pupa* 's'accoupler, avoir des rapports sexuels [to couple (mate), to have sex/sexual relations]'.

We believe that *pupa* is probably derived from one of the following three vulgar Dutch expressions for 'to copulate', all of which were current during the seventeenth and eighteenth centuries: *pompen*, *poppen*, *poepen* (*Woordenboek der Nederlandsche Taal*, vol. 12, part 2, pp.3235, 3459; Heestermans et al. 1980:52, 150, 154). Van Sterkenburg (pers. comm. 23/1/1996) explains that *poepen* is derived from *poppen*. We also believe that the five sailors who deserted the Roggeveen expedition in Takapoto in 1722 are a plausible source for this term. Indeed, Roggeveen was in no doubt as to the prime reason for their desertion, writing that 'it is known to them that the island is inhabited, and being driven by drunkenness and wanton lust to have bodily intercourse with the women of the Indians, they will surely be killed' (Sharp 1970:125).

The limited geographical extent of the word *pupa*, in contrast to *pusa~puha*, *kumeti* and to a lesser extent *tuluma*, calls for comment. Firstly the borrowing of *pupa* took place at a much later date, which means that it has had less time to spread. Also, by the time it was borrowed (i.e. 1722) Polynesian voyaging was already on the decline. Furthermore, whereas *pusa~puha*, *kumeti* and *tuluma* in some cases refer to introduced items, so are 'necessary borrowings', and

²⁹ These are: *manihini* 'guest, visitor', *reka* 'experience sexual consummation', and *viki* 'wet with seminal matter', which Kalsbeek derives from Dutch *marinier* 'marine/sailor', *lekker* 'nice, delicious, pleasant', and *vieken* 'to copulate', respectively.

³⁰ Here 'r...g' probably denotes *rogering* 'to copulate with (a woman)' (Grose 1971 [1811]; Ayto & Simpson 1993; Partridge 1972). The first syllable *wa* represents the Tahitian preverbal aspect marker /ʷa/.

are needed as long as their referents are in use, *pupa* is an unnecessary borrowing for which many synonyms no doubt already existed.

4.8.1 Linguistic correlations

There is little difficulty in accounting for the derivation of *pupa* from *pompen*/*poppen*/*poepen*:

- The tonic vowel in both *pompen* and *poppen* follows a labial, and in *pompen* it also precedes a nasal, so in all instances <o> will be a close back vowel.
- If *pupa* is derived from *pompen*, the deletion of <m> is simply a case of cluster reduction, once again a requirement of Polynesian syllable structure.
- With *pupa* <poepen> the correlation is even stronger, as <oe> is also a short close back vowel, essentially identical to the Polynesian /u/ vowel.
- As mentioned above, the {-en} morpheme is usually pronounced without the final nasal—thus, *pompen* /pompə/, *poppen* /popə/ and especially *poepen* /pupə/ ‘translate’ almost identically into *pupa*.³¹

<i>pompen</i>	→	<i>pupa</i>	<i>poppen</i>	→	<i>pupa</i>	<i>poepen</i>	→	<i>pupa</i>
/p/	→	/p/	/p/	→	/p/	/p/	→	/p/
/ɔ/ [ū]	→	/u/	/ɔ/ [ū]	→	/u/	/u/	→	/u/
/m/	→	∅	/p/	→	/p/	/p/	→	/p/
/p/	→	/p/	/ə/	→	/a/	/ə/	→	/a/
/ə/	→	/a/	(/n/)	→	∅	(/n/)	→	∅
(/n/)	→	∅						

Since a large proportion of Roggeveen’s men were foreigners, many of them Germans and Danes (Mulert 1911:130), it is also conceivable that one or more of Baltus Jansse’s fellow Takapoto deserters were of German or Danish origin. The German and Danish cognates of *pompen*—*pumpen* and *pumpe* respectively—could also be the source of *pupa*.

5 Acceptance and spread in Polynesia

In a paper of limited scope it is impossible for us to trace minutely the spread of the proposed borrowings within Polynesia, but we will present here a sketch of what may have happened, and discuss the implications for the extent of inter-island voyaging in Polynesia.

³¹ The Brabant dialects’ *pompen* is also pronounced with the short close back vowel /u/ (L. Draye pers. comm. 4/10/1996).

We have argued above that the borrowing of *pusa~puha* 'box' took place during the voyages of either Le Maire and Schouten in 1616 or Tasman in 1643, since these are early enough dates to account for the tonic vowel being back rather than front. Altogether, Le Maire and Schouten spent two contact days in the Tuamotus, five in northern Tonga, and two weeks in Futuna, while Tasman spent four days in southern Tonga. The balance of probability is, then, that the word was borrowed initially in Tonga or Futuna. From there, it must have spread to Eastern Polynesia, as far as the Marquesas (but not Hawaii) and Mangareva (but not Rapanui).³²

Kumete 'wooden bowl' also probably originates from the same voyage, in view of its very extensive spread through almost all of Polynesia; as to why it appears to have been carried even further than *pusa*, one can only speculate. Both *tuluma* 'small container' and *kupeti* 'design tablet' also seem to have spread from Futuna, though neither has made it as far as Eastern Polynesia. In the case of *kupeti*, the explanation may lie in tapa manufacture being a woman's craft, whereas most long-distance voyages would have been made by men.

Regarding *pupa* 'copulate', the nature of the word and its restricted distribution (Tuamotu and Tahiti) point strongly to it originating from the men who deserted from Roggeveen's expedition in the Tuamotus in 1722. We have already suggested that its restricted distribution may be due to its having been an unnecessary borrowing, and to the fact that interisland voyaging was in decline in the eighteenth century.

Recent years have seen an accumulation of evidence for extensive prehistoric voyaging by Polynesians. The situation at the time of Captain James Cook has been reassessed in a study of the list of islands known to the Tongans collected by Anderson in 1777 (Geraghty 1994). This study indicates that Tongans had knowledge of islands as far away as Kiribati, and may have also known of Eastern Polynesia. The chart drawn by Cook and his men under the direction of the Ra'iatean navigator Tupaia has been variously interpreted, but it is indisputable that it indicates knowledge of islands as far away as the Marquesas to the north (but not Hawaii), the Tuamotus to the east (but not Mangareva or Rapanui), the Australs and the Cook Islands to the south (but not New Zealand), and Fiji and Rotuma to the west (Denig 1962).

Tupaia alluded to the even more extensive knowledge and experience of his father, and there are other indications that voyaging was in decline by Cook's time. The Marquesans, for instance, travelled only within their own group, but had legends of visits to such distant places as Hawaii and Fiji (Denig 1962:109). The sweet potato, now believed to have been introduced from South America by Polynesians some time between 500 and 1000 AD (Irwin 1992:81, 100), spread even to the extremities of Polynesia, along with its South American derived name, *kumara*. Some time after 1000 AD, a group of people originating in Eastern Fiji spread throughout the Polynesian triangle, with the exception of Rapanui (Geraghty 1993:370); and there is evidence, mainly linguistic, that Western Polynesians once voyaged as far as Vanuatu and Pohnpei in Micronesia to procure red feathers (Geraghty 1994:243-245).

³² Regarding the *piha* variant, found in Rarotonga and Tahiti (whence it spread to Tuamotu and Rapanui), we have speculated above that it *may* have been a reintroduction by the deserters from Roggeveen's expedition, based on the *bus* form rather than *bos*, though it is not impossible that irregular fronting occurred. The meaning 'room' appears to be an early nineteenth-century Tahitian innovation.

Given this extent of voyaging in the Pacific, the claim that the words *pusa* and *kumete* spread from Western to Eastern Polynesia, and in the case of *kumete* also to the furthest outliers to the west, seems well within the bounds of reason.

With regard to evidence for long-distance voyaging in eastern Polynesia, the presence of *kope* in Hawaii suggests that Hawaii was still in contact with the Tuamotus in the early eighteenth century.

Finally, an observation on the element of chance in historical lexicography. If Anderson had not noted *nareeda* in Tahiti in 1773, we would never have known about this particular loan word. The contemporary Tahitian word for 'needle' is *nira* < English 'needle'. We wonder how many other early loans from Dutch (or possibly Spanish) sources may have since been lost and replaced with loan words from English or French.

6 Conclusion

The seventeenth century was the Dutch Republic's Golden Age. It was a great power, not only economically but also culturally, with many foreign students attending Dutch universities. The linguistic impact of Dutch upon some of the languages of Europe, although nowhere near as significant as that of French, German or English, was nevertheless noteworthy. Dutch loan words in English, for instance, include: 'beleaguer' < *belegeren*, 'brandy' < *brandewijn*, 'cruise' < *kruisen*, 'dock' < *dok*, 'easel' < *ezel*, 'landscape' < *landschap*, 'ledger' < *ligger*, 'onslaught' < *aanslag*, 'sketch' < *schets*, and 'yacht' < *jacht* (Brachin 1985:23; Jespersen 1962:141).

The influence of Dutch upon the languages of other parts of the world was mainly confined to those in the Dutch colonies. The two outstanding examples are, of course, Indonesian and the totally new language that developed in the Cape colony, Afrikaans. Among the languages which have received a more modest contribution from Dutch, we may now list a number of the Polynesian languages.

Acknowledgements

We wish to acknowledge that this research was financially supported by two University of the South Pacific Research Grants (URC Grant Nos. 6137-1221-70766-15 and 6153-1221-70766-00), the Royal Netherlands Embassy (Canberra), Professor Subramani (Head, Department of Literature and Language, University of the South Pacific) and Professor Konai Thaman (Head, School of Humanities, University of the South Pacific).

We wish to express our most sincere thanks to Dr Bruce Donaldson (The University of Melbourne) for his advice and assistance during our research for this study, and both him and his wife for their hospitality during two study visits to the University of Melbourne by Jan Tent in December 1995 and January 1997. Our thanks also to Professor Andrew Pawley and his wife for their hospitality during a study visit by Jan Tent to The Australian National University and the National Library of Australia, Canberra, in July 1997.

We are also grateful to Professor P.G.J. van Sterkenburg (Director, Instituut voor Nederlandse Lexicologie, Leiden), Dr A.M. Moerdijk (Editor-in-chief, *Woordenboek der Nederlandsche Taal*), Professor Cor van Bree (Rijks Universiteit Leiden) and Dr Jo Daan (former Director of the P.J. Meerten Institute voor Dialectologie, Naamkunde en Volkskunde, Koninklijke Academie voor Wetenschappen en Kunst, Amsterdam) for assisting us with information on Dutch phonology in the seventeenth and eighteenth centuries, and etymologies of various Dutch words. And finally our thanks also to Dr Philip Playford and the University of Western Australia Press for allowing us to reproduce Dr Playford's depiction of the brass tobacco-tin lid (Figure 1) believed to be from the *V.O.C.* ship *Zuytdorp*.

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