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EARLY DUTCH LOANWORDS IN POLYNESIA[1]

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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).

The purpose of this paper is twofold. 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. We will demonstrate that at least three words that have been considered indigenous are in fact early Dutch loanwords, two dating from either Le Maire and Schouten's 1616 visit to Niuatoputapu and Futuna, or Tasman's 1643 visit to Tonga, and the third from Roggeveen's 1722 visit to the Tuamotus. Secondly, the subsequent spread of the 17th century loanwords throughout much of Polynesia provides additional evidence of the extent of Polynesian inter-island voyaging before Cook.

HISTORICAL BACKGROUND

In the 16th century, the European exploration of the South Pacific was almost entirely the domain of the Spanish (Mendaña 1567-1569, Mendaña-Quiros 1595-1596, Quiros 1605-1606, Torres 1606-1607). This changed, however, in the early years of the 17th 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 1615-1617, Abel Janszoon Tasman and Franchoys Jacobszoon Visscher in 1642-1643, and Jacob Roggeveen, Corneliszoon Bouman, Roelof Rosendaal and Jan Koster in 1721-1722 (see Fig. 1). 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 1614-1617, Jacob l'Hermite 1624-1625), but none of these ventured south of the Line.

The Voyage of 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 only been formed 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 while being breamed on Conincx 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 Hoorn. 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 Humboldt Current.

The *Eendracht* then headed north-west and then west into unknown reaches of the South Pacific Ocean, sighting previously unknown 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 Le Maire and Schouten's journals (Engelbrecht and van Herwerden 1945, Schouten 1968 [1619]) and the extant fragment of the journal of 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 loanwords 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, with which they were pleased, and also beads (*coralen*).

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

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Tafahi (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*), while another took a mattress (*bultsack*), pillow (*oorcussen*) and a fish trap (*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 Tafahi was shown a comb (*cam*) and a mirror (*spieghel*) which he coveted, but they were not given to him. Instead, he was given "a fathom" (6 ft/1.8 m) of linen (*vaem lijnwaets*), an axe (*bijl*) and two bunches of beads. The Dutch also traded some fish hooks (*vishoecken*) with him.

Niuatoputapu and Niuafo'ou, 13-14 May. Le Maire only mentions that items were traded and the islanders were 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 (*scheerken*), some beads, as well as one nail and a small string of beads for one fish.

On 24 May, Le Maire's men went ashore to present to the islanders 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 becxken*) with 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, 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 (*goutdraet*) 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 who boarded the ship were shown the galley and the entire ship. Each was "honoured" with a bunch of beads, a knife, a comb, and some nails, each nobleman among them receiving an extra nail.

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* (with a crew of 60) and the *Zeehaen* (with a crew of 50), left Batavia on 14 August 1642. After a voyage of some four 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 on 19 January 1643, 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, a 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 dinner-plate (*schaff-schootel*), a piece of copper wire (*cooperdraet*),[2] more nails, beads, a 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 canon was fired, which frightened the Tongans. The leader of a group which 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 trade or gifts.

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The Voyage of Jacob Roggeveen, 1721-1722.

In 1721 the *West Indische Compagnie* (United Dutch West India Company), in recession and seeking new trade openings, sponsored Jacob Roggeveen in an expedition aimed at discovering the great southland by way of Cape Hoorn. The company provided and fitted out three ships: the 32-gun *Den Arend* with 111 hands (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), skippered by Jan Koster; the *Thienhoven* (named after a Dutch town), with 24 guns and 80 hands, under Corneliszoon Bouman; and the *Africaensche Galey* (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 Galey* 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. 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 (1968:557 n.) 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".

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.

Thereafter, Roggeveen made no landfalls in Polynesia, though on 6 June they sighted Borabora and Maupiti in the Society Islands.

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 loanwords, 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 (Ketting, pers. comm. 28/7/95), and they very often omit place of origin. Nevertheless, it is well known that the crews on board Dutch ships in the 17th and 18th centuries often consisted of a large proportion of non-Dutch speakers--Emmer (pers. comm. 27/4/95) estimates about 40 percent--and those on board who were Dutch often came from diverse dialect areas within the Dutch Republic (Slot 1992:20).

Other studies put the Dutch component at rather more. Ketting (pers. comm. 28/7/95) reports that 77 percent 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 percent of the crew of five *V.O.C.* ships came from the areas around the Zuiderzee--26 percent from Amsterdam, 13 percent from North Holland, Utrecht, Overijssel and Friesland. Further to this, Playford (1996:42) establishes that the ratio of Dutch to foreign seamen aboard two *V.O.C.* ships (the *Zuytdorp* and the *Belvliet*) on a voyage from Vlissingen (Zeeland) to Batavia in 1711-12 was in the order of 8:2. However, Dutch nationals comprised less than 40 percent of the soldiers on the *Zuytdorp*. All in all, it seems that a very large proportion, if not the bulk, of crew members on Dutch ships in the 17th and 18th centuries

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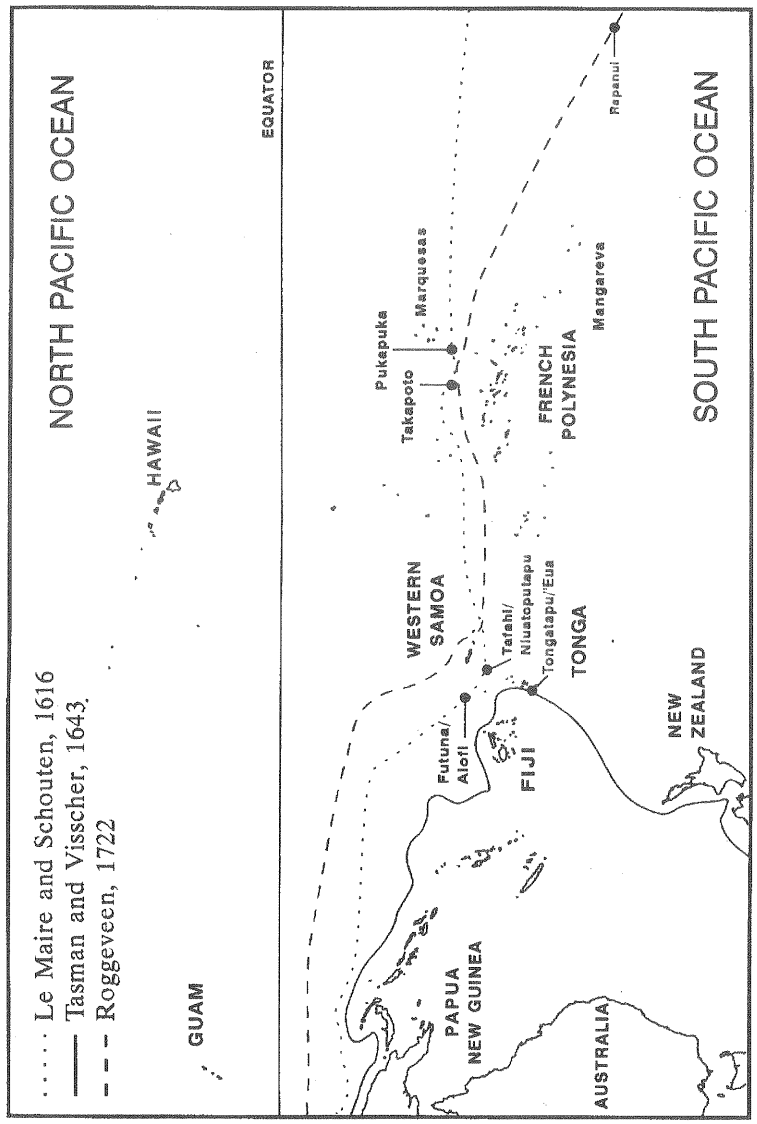

Figure 1: Routes of the Dutch explorers

were Dutch. A similar ratio of Dutch nationals to foreigners 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 extant documents relating to their voyages.

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 1945:213-14) 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 *Hoorn* 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 *Hoorn*'s crew of 22 was made up of at least 95 percent 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 28 (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'Jercxzoon 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.

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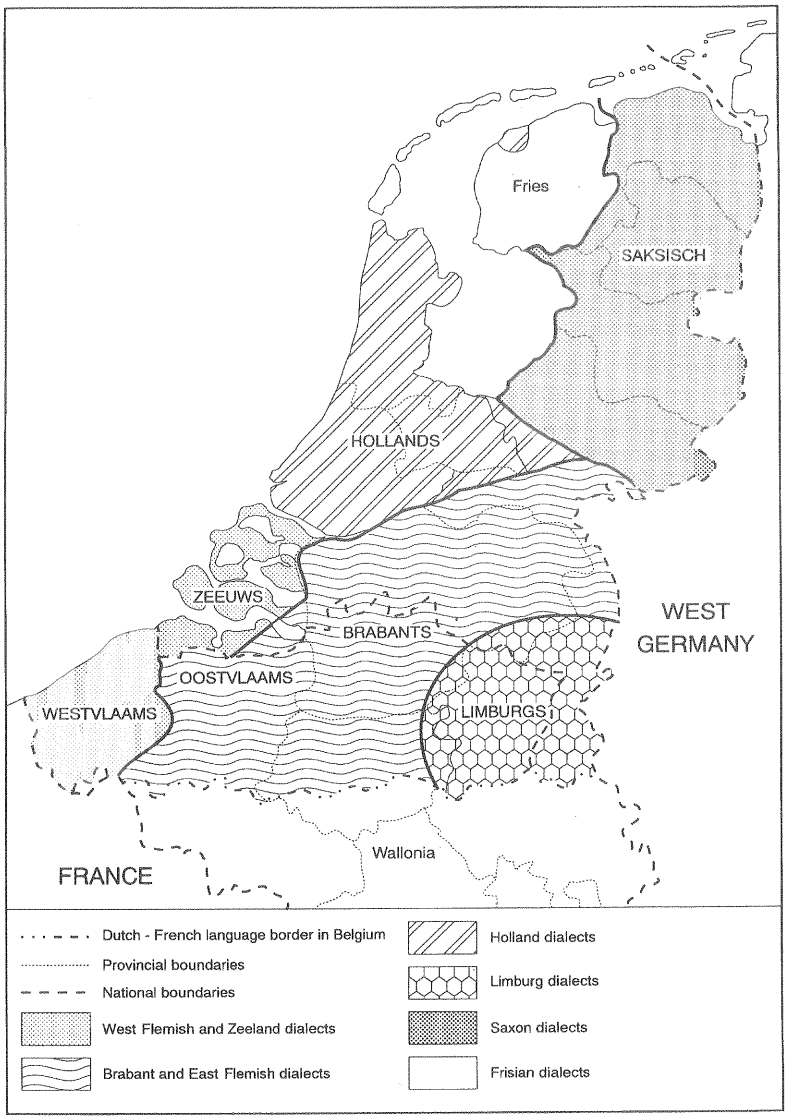

Figure 2: Dialect areas of The Netherlands

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 Wessem (Limburg), and Jan Rijkse Appeldoorn (sergeant) from Hardewijk (Gelderland, on the coast of the Zuiderzee and on the border of Hollands-speaking dialect area).

The final sentence of the muster-roll is significant. 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 St. Sebastian for drunkenness and threatening others with a knife (Mulert 1911:24); and a trumpeter, Johan Samuel Hantoe from Breda (North Brabant), who died of scurvy (Mulert 1911:104).

Finally, Mulert (1911:8) mentions Jacob van Groeneveld (no place of 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. These are both Dutch names.

Apart from some of those already mentioned, Roggeveen (Sharp 1970) identifies 10 crew members by name, most of whose names appear to be Dutch.

Of the 12 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).[3] 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 more than just 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 17th and 19th 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 17th and 18th centuries commands were

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But 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.

DUTCH LOANWORDS

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 words for any of these items mentioned in the journals were borrowed into a Polynesian language. Typically, names for such items are either extensions (e.g., *fao* 'dowel (pin)' > 'nail') or relatively recent loans from English or French.

We will argue, nonetheless, that at least three Dutch words were borrowed during this period, two of which refer to containers. Although containers 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. The third loanword is a vulgarism confined to Tuamotu and Tahiti, which suggests that the Takapoto deserters may indeed have stayed long enough to affect the vocabulary of their hosts.

A word for 'box'

The ongoing Proto Polynesian word list *Pollex* (Biggs and Clark 1995) includes the reconstruction **pusa* 'box'. It is our contention that the reflexes of this apparent proto-form 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 and de Tollenaere 1991). The *bus* variant is originally from Flemish and Hollands (the dialect of the provinces of North and South Holland) (Berteloot 1984:6; van Sterkenburg, pers. comm. 23/1/1996). After the Middle Dutch period

(12th to the 16th century), *bus* gradually became the form used in Dutch in general (van Sterkenburg, pers. comm. 23/1/1996) (see Fig. 2).

The *Woordenboek der Nederlandsche Taal* (Vol. III, 1, 1902:1924-25) 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 17th century.

The Dutch lexicographer van Sterkenburg holds that up until the 18th 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 18th century onwards the narrower, and present, meaning becomes predominant, with the general meaning being dispensed with (van Sterkenburg, pers. comm. 23/1/1996). 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 kruyt* 'gun-powder' (lit. 'gun spice') in their journals (Engelbrecht and van Herwerden 1945:57, 175). From about the mid-16th 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, Le Maire lost 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 18th century, then Le Maire was probably using the gloss to ensure correct interpretation of the shape of the container.

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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 1969:36).[4]

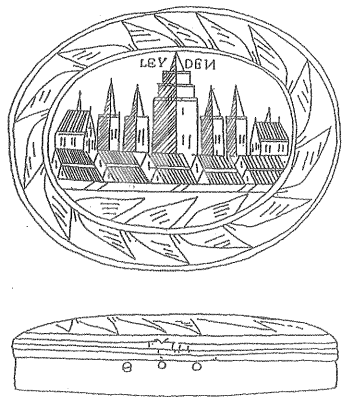

Figure 3.
Brass tobacco-*bus~bos* lid from the *Zuytdorp*, found at Wale Well (W.A.).

The following is a list of Polynesian reflexes of *pusa~puha*:

TONGAN:
Anderson 1773 (see Lanyon-Orgill 1979:63): *Buh* [the last letter also bears an acute accent] 'a round Box'.
Mariner c.1810 (see 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'.

EAST UVEA:
Bataillon 1932: *puha* 'caisse, malle, boîte, commode'; *puhavai* 'baril'.
Rensch 1984: *puha* 'caisse, boîte, barrique, tonneau, malle, coffre; moule (en maçonnerie)'; *puha mate* 'cercueil' [...].

EAST FUTUNA:
Grézel 1878: *pusa* 'caisse, malle, meuble, armoire, coffre'; *pusavai* 'barrique, tonneau'.
Moyse-Faurie 1993: *pusa* 'malle'; *pusa vai* 'réservoir d'eau'; *pusa mate* 'cercueil'.

SAMOA:
Pratt 1911: *pusa* 'box, coffin'; *pusa'apa* 'case'.[5]
Milner 1966: *pusa* 'box, chest, trunk'.[6]
Newell 1893: *pusa/puha* 'box'.

TOKELAU:
Tokelau Dictionary 1986: *puha* general term for any size box-shaped container; 'box, case, chest, trunk, coffin'.

TUVALU:
(Nanumea) Ranby 1980: *pusa* 'trunk, chest'.
Jackson 1994: *pusa* 'box, chest'.

MELE-FILA:
Biggs 1975: *puso* 'box'.
Biggs and Clark 1995: no data.

MARQUESAS:
Dordillon 1931-32: *puho* 'cage, cabine, petite chambre, panier'.
Zewen 1987: *puho* 'coffre, cage'.[7]

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'.

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TAHITI:

Bougainville 1768 (see Lanyon-Orgill 1979:241): *Picha* 'coffre'.
Anon [Magra?] 1771 (see Lanyon-Orgill 1979:23): *Pear* 'A box'.
Foster/Anderson 1773-74 (see Lanyon-Orgill 1979:105): *Pēēha* Chest' (a); *Pēēha* 'Quiver for holding arrows'.
Davies 1851: *piha* 'box, chest, room'.
Jaussen [1987]: *piha* 'chambre, coffre, cercueil'.

RAPANUI:

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

MANIHIKI AND RAKAHANGA:

Buck 1932:83: *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 reflex was found in Pukapuka,[8] the northern and southern outliers (Nukuoro, Kapingamarangi, Rennell-Bellona, West Futuna, West Uvea), or the extremities of Eastern Polynesia (Hawai'i, Rapanui, New Zealand Maori[9]) (see Fig. 4). 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 and Clark 1995.

Another word for 'box'

The word *tuluma,* with meanings including 'small container', has also been noted in Biggs and Clark 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

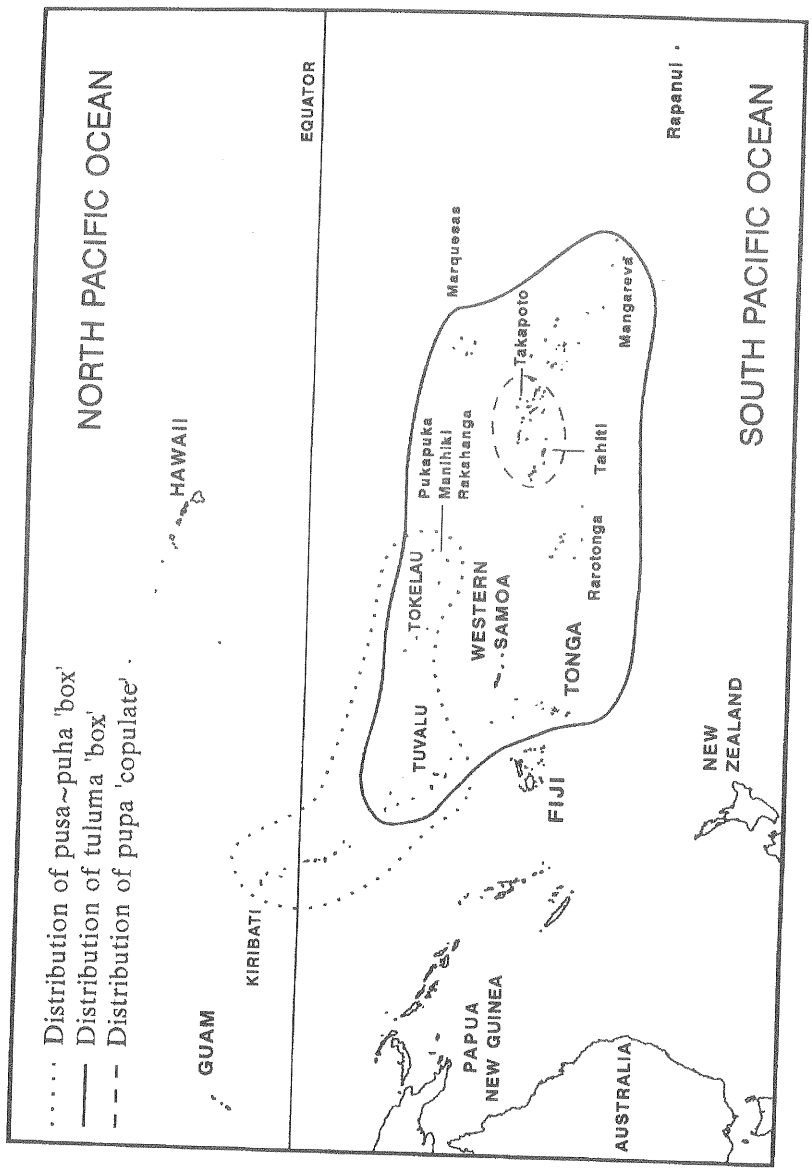
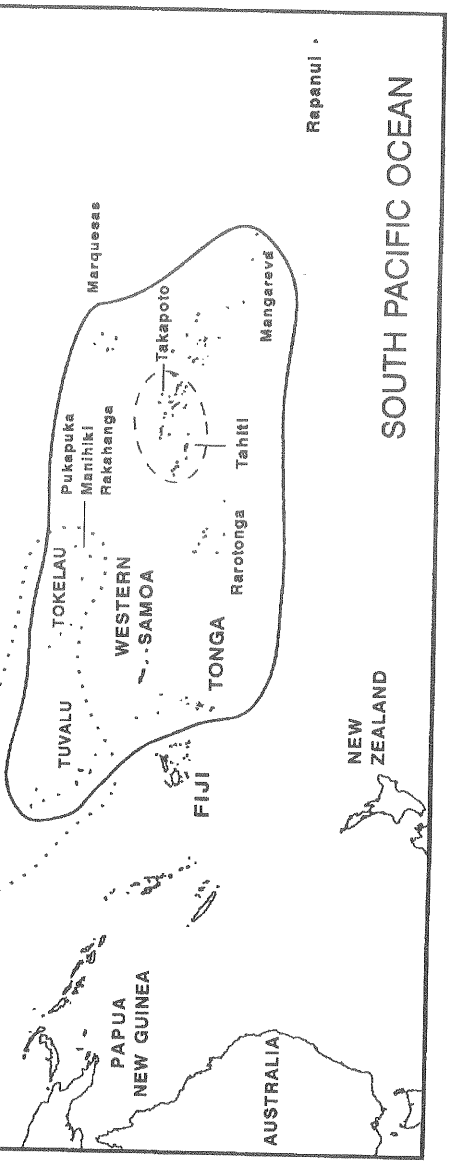


Figure 4: Distribution of Dutch loanwords (excluding recent loans)



loanwords (excluding recent loans)

distinguished from a *bus* in that its height does not exceed its width (*Woordenboek der Nederlandsche Taal* Vol. XVII:3117.)[10] A *trommel* can be of any shape—square, rectangular, elliptical, and very often round.

PUKAPUKA (Cook Is.):
Beaglehole and Beaglehole [1991]: *tuluma* 'plaited envelope-like container for fishhooks and other valuables'.
TOKELAU:
MacGregor 1937:157: *tuluma* 'elliptical covered container, primarily to carry fishing gear in canoes, also carried over shoulder in reef fishing, and for storage containers in house'.
Tokelau Dictionary 1986: *tuluma* 'waterproof wooden box of traditional design carved of *kanava* (Cordia subcordata)'.
TUVALU:
Koch n.d.:139 *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 60 cm deep) were used for skirts and headrests during long voyages [...] still made and used at Nukufetau'.
KIRIBATI:
Sabatier 1971:394: *turuma/tiruma* 'ancient basket with lid, small tin or box with lid closing tightly'. [The phonology makes it clear that this is a loan from a Polynesian language, presumably its close neighbour Tuvalu.]
MANIHIKI AND RAKAHANGA:
Buck 1932:83: *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 Pukapuka, Tokelau and Tuvalu (see Fig.4).[11]

A word for '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 loanwords.[12] The remaining form is the following:

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

TAHITI:
Davies 1851: *pupa* 'cold shivering at onset of disease; desire other sex'.
Lemaître 1986: *pupa* 's'accoupler, avoir des rapports sexuels'.

We believe that *pupa* is probably derived from one of the following three vulgar Dutch expressions for the verb 'to copulate', all of which were current during the 17th and 18th centuries: *pompen*, *poppen*, *poepen* (*Woordenboek der Nederlandsche Taal*, Vol. XII, 2:3235, 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.

The limited geographical extent of the word *pupa*, in contrast to *pusa~puha* and to a lesser extent *tuluma*, calls for comment. First, the borrowing of *pupa* took place at a much later date, which means that it has had less time to spread. At any rate, by the time it was borrowed (i.e., 1722) Polynesian voyaging was already on the decline. Furthermore, whereas *pusa~puha* and *tuluma* in some cases refer to introduced items, so are "necessary borrowings", and are needed as long as their referents are in use, *pupa* is an unnecessary borrowing for which many synonyms no doubt already existed.

FROM DUTCH TO POLYNESIAN – LINGUISTIC CORRELATIONS

To strengthen our contention that *pusa~puha*, *tuluma* and *pupa* are early Dutch loanwords, we will demonstrate how these forms derive from *bus~bos*, *trommel* and *pompen/poppen/poepen*, by establishing correlations between

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According to Donaldson (pers. comm. 2/9/1993) the pronunciation of *bus* has not changed since the 17th 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 No. 10.

All authors agree that the vowel is short and rounded. Hermkens describes the vowel as being a half-close front vowel, but notes (1971:30, 31, 32) that other authors regard it as mid-central with possible front realisations, while another author equates it to [ə]. Using F_1 and F_2 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) summaries 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 treatment 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 opposing vowels have in common is length and rounding. The evidence thus far does not look all that convincing.

However, we indicated above that *bus* has a dialectal counterpart, *bos*, and it is in this variant that we may have the solution to the problem. Of course, it is not possible to give a flawless reconstruction of the 17th 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 [ò]. 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 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 north of the rivers, 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 (1983:48).

The difference in the two pronunciations of /o/ is partially due to its different origins (i.e., from *o* or *u*); however, in some situations these are allophonic variants. The close [ó] is always heard before nasals and after labial consonants (van Loey 1959:94, Donaldson 1983:136).

The vowel in the *bos* variant in the 17th century would have been the close variety, since it follows a labial consonant. If the word *bos* (meaning 'box'[13]) was used by the early Dutch explorers in the Pacific, its vowel would have been phonetically quite near to the Polynesian short close back vowel /ʊ/. 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 13th 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 would have originated.

For further evidence in resolving this question we call upon Afrikaans, where *u* appears as *o*, e.g., *konst* (Mod. D. *kunst* 'art'), *mos* [sic][14] (Mod. D. *mus* 'sparrow') (Donaldson 1983:136). Afrikaans developed from Dutch to become a distinct language from the mid-17th 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 17th 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 17th century Hollands.

Yet further evidence is provided by spellings adopted by at least three famous 17th 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). There is, for instance, Vondel's (1587-1679) use of *plonderen* (Mod. D. *plunderen* 'to plunder'), and Bredero's (1585-1618) and Huygens' (1596-1687) use of *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'),[15] *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

stinctly separate vowels has occurred among

onunciations of /o/ is partially due to its
u); however, in some situations these are
ó] is always heard before nasals and after
9:94, Donaldson 1983:136).
in the 17th century would have been the
abial consonant. If the word *bos* (meaning
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s, Did the men on board Le Maire's and/or
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use *locht* (Mod. D. *lucht* 'sky, air') in their journals, whereas Bouman uses *lught* throughout his. This may reflect the *o* > *u* change in progress.

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

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.[16]

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

Although the *u~i* alternation is common 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 16th 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*.

There is little difficulty in accounting for the derivation of the remaining loanwords, *tuluma* < *trommel* and *pupa* < *pompen/poppen/poepen*. In the former, the epenthetic *u* and the paragogic *a* are the result of, once again, conforming to the open syllable structure. The epenthetic vowel /ʊ/ is the result of vowel harmony with the tonic vowel, which is close because of the following nasal. The phonological adaptation of *r* > *l* is due to the fact that none of the languages concerned contrast /r/ and /l/. In the latter, 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 /ʊ/ vowel. The Dutch *-en*

infinitive morpheme is usually pronounced without the final nasal—thus, *pompen* /pompə/, *poppen* /popə/ and especially *poepen* /pʊpə/ "translate" almost identically into *pupa*.[17]

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*.

ACCEPTANCE AND SPREAD IN POLYNESIA

It is impossible in a paper of this scope 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 interisland voyaging in Polynesia.

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 Hawai'i) and Mangareva (but not Rapanui).[18]

The point of introduction of *tuluma* 'small container' is far less clear. Excluding recent borrowing, it is confined to Tuvalu, Tokelau and Pukapuka, which are all quite removed from the tracks of the Dutch explorers, though closer to the Tonga-Futuna area visited by Le Maire and Schouten, and Tasman. We must assume that the item has been lost in other parts of Western Polynesia, or that its presence has simply not been recorded by ethnographers and lexicographers.[19]

Regarding the third loanword proposed in this paper, *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 18th 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 re-assessed in a study of the list of islands known to the Tongans (Geraghty 1994) collected by Anderson in 1777. This study

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indicates that Tongans had detailed 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 Hawai'i), 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 (Dening 1962).

Tupaia often 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 Hawai'i and Fiji (Dening 1962:109). The sweet potato, now believed to have been introduced from South America by Polynesians some time between A.D.500 and 1000 (Irwin 1992:81, 100), spread even to the extremities of Polynesia, along with its South American derived name, *kumara*. Some time after A.D.1000, a group of people originating in Eastern Fiji spread throughout the Polynesian triangle, but 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 1994:243-45). Given this extent of voyaging in the Pacific, the claim that the word *pusa* spread from Western to Eastern Polynesia in the 17th century seems well within the bounds of reason.

The 17th 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 on some of the languages of Europe, although nowhere near as significant as that of French, German or English, was nevertheless noteworthy. Dutch loanwords 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 on 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.

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NOTES

1. An abridged version of this paper, entitled "The linguistic legacy of early Dutch explorers in Polynesia", appeared in *Leuvense Bijdragen*, 85:347-69 (1996). Both versions are revised and much expanded renderings of "Ephemeral goods in lasting containers: Early Dutch loanwords in Polynesia", a paper presented at the Second International Conference on Oceanic Linguistics at the University of the South Pacific in July 1995. All translations are our own.
2. 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 and 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.
3. These two dialects are, in fact, quite similar.
4. 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 (approximately 50 km 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. It is inscribed with the name of the town Leyden, together with an

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idealised depiction of the town. In all probability, the lid comes from the *Zuytdorp* (Playford, pers. comm. 28/7/1996, Playford 1996:214-15).

5 These entries are found only in the English-Samoan section. Pratt seems to have listed loanwords in this way, which suggests that he may have considered *pusa* to be a loanword; but it is not among 'A list of some foreign words in use among the natives' (Pratt 1911:103-04). 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*.

6 Cain (1986:162) cites *pusa.* only in the compound *pusa 'aisa* 'icebox, refrigerator', recording *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 loanword, probably introduced into Samoan by the United States military or Peace Corps. They give no linguistic account of how *pusa.* is derived from *box*, or any evidence of its putative American origin.

7 The final vowel in this form is irregular; however, Marquesan vowels do seem to have undergone many irregular changes (Marck, in preparation).

8 *Pollex* (Biggs and Clark 1995) 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 from another Cook Islands language.

9 *Pollex* (Biggs and Clark 1995) lists *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 *Trommel* also means 'drum (musical instrument)', and is used as such in Le Maire's journal.

11 Possibly related reflexes are the following:
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:
Biggs and Clark 1995: *turuma* 'ghost, apparition'.
PUKAPUKA:
Biggs and Clark 1995: *tuluma* 'grave'.
NEW ZEALAND:
Biggs and Clark 1995: *turuma* 'ritually restricted place; latrine'.

12 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.

13 *Bos~bosch* 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.

14 Note that the form *mos* is incorrect; it should read *mossie* (Donaldson, pers. comm. 26/4/1995).

15 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'.

16 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 loanwords suggests that whatever patterning there may have been has been confused by interisland 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.

17 The Brabant dialects' *pompen* is also pronounced with the short close back vowel /ʊ/ (L. Draye, pers. comm., 4/10/1996).

18 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 re-introduction 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 19th century Tahitian innovation.

19 Samoan *tulula* 'basket to keep oil-bottles in' (Pratt 1911:352) may be related, though the *m* > *l* change is irregular.

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