

## PROTO OCEANIC SOCIETY WAS MATRILINEAL

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Matrilineal descent is still general, but even this seems to have become only one of several means for the regulation of marriage; it carries with it few, if any, of the other social functions which are shown by tradition and survivals to have been once essential to its nature. It is evident that great changes have taken place in Melanesia in these respects, and that the existing matrilineal descent is little more than the last surviving relic of a social state in which matrilineal institutions were far more general and important.

W.H.R. Rivers (1914 [II]: 319)

This article considers the distribution of matrilineality in the daughters of Proto Oceanic (POc) society and asserts that this distribution is most conveniently explained by Per Hage's (1998) suggestion that POc society/Ancestral Lapita society may have been matrilineal. I here dismiss the possibility that the modern distributions could be the result of a patrilineal, cognatic or double descent POc society. There is, in fact, little patrilineality or double descent to explain and Oceanic cognatic societies are viewed, in the present model, to have become cognatic locally or at the level of one of their post-POc society interstages. Like Oceanic speaking double-descent societies, patrilineal societies and, of course, those that are still matrilineal, the Oceanic speaking cognatic societies show high levels of matricentricity compared to other world cultures (Hage 1998). The matrilineal distributions are best explained by common history and not by diffusion or parallel development. In only one instance uncovered does diffusion between adjacent Oceanic speaking peoples seem a possible source of matrilineality. Matrilineality or at least its intensity is seen to be fading, as noted by Rivers in the quote above, and in what follows I continue Hage's notion (Hage and Marck 2002, 2003a, 2003b and P. Hage pers. comm.) that this is because the reasons for matrilocality (migration and seafaring) have faded. Abandonment of Oceanic matrilineal institutions seems a very slow process as Divale (1984) has suggested, still running its course in some areas two and three millennia after settlement and the apparent reasons for matrilocality and hence matrilineality began to wane. The process is slowed, as Allen (1984) noted, by complementary male institutions (e.g., age-grade societies) giving order to male political ambitions in matrilineal contexts. Finally, and in addition to the distributional arguments, the human genetics of modern Polynesians is consistent with the view that,

during the Polynesian ancestors' centuries in Melanesia ca. 3400-3000 years ago, the ancestors were matrilineal. This follows from the observation that gene flow between Polynesian ancestors and Melanesian indigenes during those centuries gives the appearance of sex-bias (Hage and Marck 2003a, Kayser *et al.* 2006). By measure of Kayser *et al.*'s recent data, it is here suggested that during the Polynesian ancestors' centuries in Melanesia approximately one father in ten may have been an indigenous Melanesian while hardly one mother in one hundred would seem to have been an indigenous Melanesian, a clear indication of matrilineality. As Murdock (1949: Ch.8) argued, residence, over time, tends to bring descent into its pattern.

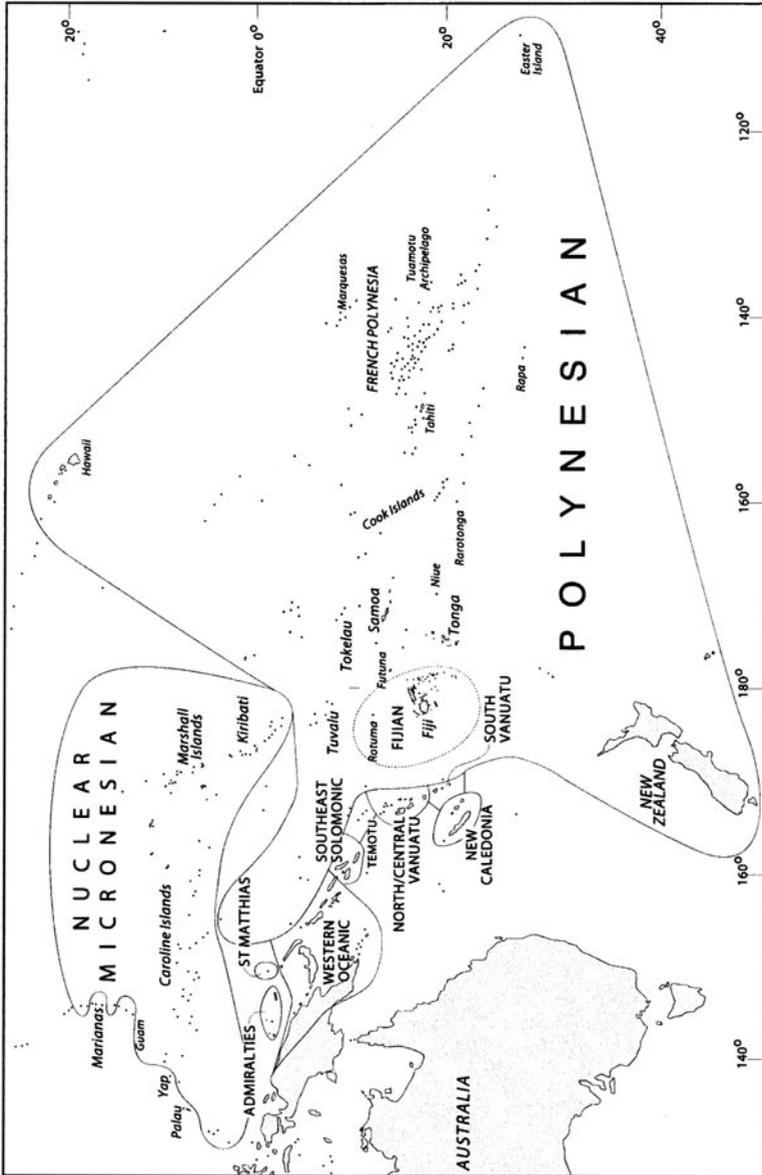
#### BACKGROUND AND HISTORY OF IDEAS

Proto Oceanic was the Austronesian interstage ancestral to all the Austronesian languages in Oceania with the exception of two—the Western Micronesian languages Palauan (Palau Island) and Chamorro (Mariana Islands). POC speakers were the bearers of Early Western Lapita culture which appears in the archaeological record in the Bismarck Archipelago between 3400 and 3300 BP (Specht 2005, Summerhayes 2007).

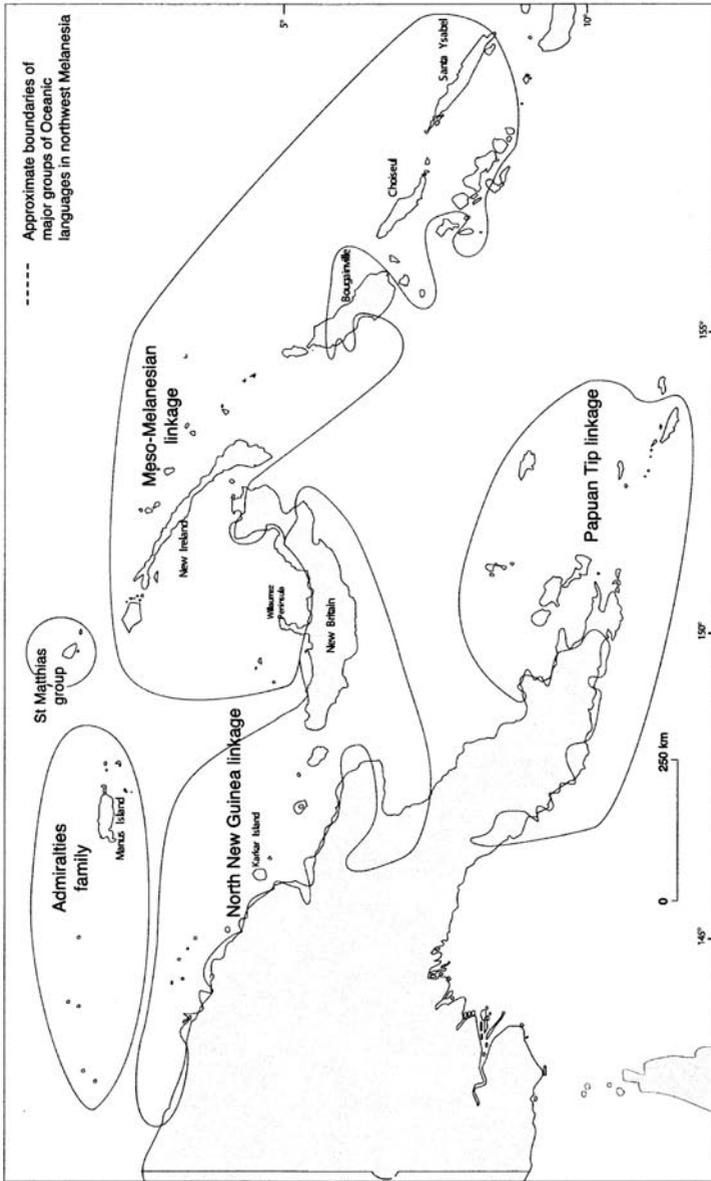
POC society is defined as the society of POC speakers who were spread through portions of the Bismarck Archipelago at about 1200-1000 BC after which time some of those speakers burst into farther reaches of the Pacific and linguistic unity began to break down (Pawley 2007, 2008). “Ancestral Lapita society” (Green 2002, Green 2003) is the archaeological term for these peoples' society when reconstruction is through archaeology, comparative ethnography and other means. It is synonymous with “Proto Oceanic society” which is the term for their social world when reconstruction by linguistic methods comes to the fore. The linguistic subgroups that resulted after they spread are shown on Maps 1 and 2. As can be seen, languages descended from the spread of these peoples account for all Austronesian speech in Oceania (Micronesia, Polynesia and Melanesia) with the exception of two of the westernmost Micronesian languages previously mentioned.

This paper is concerned with the question of whether POC society had lineal descent groups and if so, whether there were patrilineal groups, matrilineal groups or both.

“Matrilineality” is here taken to mean any minimal female-based exogamy system in the same manner as Rivers (1914), Murdock (1949, 1967) and others working on Pacific and world kinship have used the term: where there are clans or lineages or moieties in which membership is determined by one's mother (and mother's mother etc.) and exogamy is practiced with reference to these groups. Also following Murdock (1949, 1967), “matrilocal” refers



Map 1. Oceanic subgroups.



Map 2. Detail of Admiralties and Western Oceanic.

to preferential residence with a wife's uterine kin and "uxorilocal" refers to preferential residence with a wife's uterine kin in the absence of matriline or matrilineal moieties. "Patrilineal", "patrilocal" and "virilocal" are the equivalent patrifocal terms. With reference to our current topic, one need not be concerned a great deal about competing patterns within a single society. Works cited here from before the Second World War and into the following decade or two are generally rather specific about alternate patterns and they are usually described as occurring according to rank rather than optional patterns within the population of commoners. Works cited here from after the Second World War and especially since about 1970 take a similar pattern but this is the approximate end of routine reporting on residence and descent for Pacific societies and one can observe that most sources with information relevant to our present task come from before 1970.

Hage (1998, 1999) details the history of ideas on descent in POC society more fully than I will here. Rivers (1914) had an early diffusionist notion that matrilineality came into his Melanesian areas of study with "Dual Organisation"<sup>1</sup> peoples. Allen (1984: 27) observed that Rivers's suggestions died away with diffusionist anthropology in general and were never specifically refuted. I would add that there seem no examples of matrilineality spreading by diffusion between two Oceanic speaking peoples except for an apparent case in the instance of a Polynesian Outlier in South Vanuatu (Lynch and Fakamura 1994) described in the section below on Southern Oceanic societies.

After Rivers, the next suggestion concerning descent in POC society seems to have come from Murdock (1949: 228-31, 349-50) who surmised that (what we would today call) POC society (or a descended interstage that spawned Polynesian) was cognatic. Goodenough (1955, 1956) accepted Murdock's notions and added that land tenure may also have been cognatic/bilateral. But Lane (1961) outlined his reasons for believing the earliest local ancestors in North and Central Vanuatu were matrilineal and Lévi-Strauss (1969: 70, 466) considered matrilineality the ancestral pattern for Micronesia and patrilineal incidence in Oceanic speaking Melanesia to be growing while matrilineality was declining, matrilineal institutions "by reason of their well known instability, [having] a tendency to evolve spontaneously towards other forms" (Lévi-Strauss 1984: 183). Murdock gave too much weight to Polynesian evidence and not enough to the situations in Melanesia and Micronesia.

Hage's matrilineal model (Hage 1998, 1999; Hage and Marck 2003a) is the first general model of POC social organisation articulated since Murdock. Hage's model has considered all of the Oceanic speaking Pacific, not just Polynesia and the few cognatic areas of Melanesia and Micronesia. The

model is not, perhaps, indisputable but after ten years it remains uncontested. Hage's works were grounded in comparative linguistics, comparative social organisation, comparative ethnography in general and Murdock's ethnological typologies.

Here I emphasise that distributions of descent systems among contemporary Oceanic speaking societies are supportive of a POC matrilineality thesis, the distributions being something Hage and I were working on at the time of his death<sup>2</sup> (Hage and Marck 2003b). I go further. I claim that based on the distributions we can dismiss any notion that POC society was patrilineal or cognatic and that only a matrilineal POC society could have resulted in the modern distributions. I then revisit Hage's matrilineality model in the light of Divale (1984) and Allen (1984). Finally, I refer to data from human genetics (Kayser, *et al.* 2006) supporting our observation (Hage and Marck 2003a) that POC society was not only matrilineal but matrilocal and saw occasional indigenous Melanesian males marrying "in" but indigenous Melanesian females doing so only rarely, a classic case of sex-biased gene flow owing to matrifocal<sup>3</sup> (matrilocal or uxorilocal) residence practices (mtDNA is passed on to succeeding generations only by women and NRY only by men; together they offer a view, respectively, of a population's female and male ancestry).

#### ARGUING DESCENT PREHISTORY FROM HISTORIC DISTRIBUTIONS

Hage (1999) considered social structural reasons for suggesting lineality in POC society and (Hage 1998) indices of matricentricity which suggest POC society was specifically matrilineal. Here a third line of inquiry is explored: consideration of the modern distributions of descent systems and questioning how such distributions could have arisen and how they could not. I argue below that the hypothetical notions that POC society could have been patrilineal or cognatic should be dismissed. They are individually untenable and especially weak when compared to a hypothesis that POC society was matrilineal.

While Murdock's (1949: 230-31) suggestion of a cognatic POC society has been abandoned, that same work laid out what is now taken to be the standard long-term trend in relations of residence to descent and descent to kin terms. Murdock asserted that residence tends, over time, to bring descent into its own pattern and that change in descent will, over time, have a range of well-recognised responses in the kin terms. So our general model wants to know something about time lag in these changes under the various circumstances of a patrilineal versus a matrilineal versus a cognatic forebear society. How much lag, for instance, is involved with each when the reasons for residence change, residence then in fact changes, descent then changes and kin terms then change.

The most conservative pattern in the literature seems to be that described by Divale (1984). Societies in his sample<sup>4</sup> took an average of 1800 years to become patrilineal after having become uxorilocal and then matrilineal upon migration. Uxorilocality is rather rare (Murdock 1967). I would suggest this is so because uxorilocality, by definition, soon becomes matrilocality as uxorilocal societies tend to soon see the emergence of formal matrilineal and, therefore, formal matrilocality (Divale 1984). Virilocal residence, on the other hand, only slowly draws a society out of matrilineality and into patrilineality. Through an average 1800 years Divale's societies saw matrilineal institutions, beginning with matrilocality, fading into the past and, at the end of the 1800 average years, emergence of patrilineal "concordant"<sup>5</sup> with residence. Matrilineality seems often in Oceanic speaking subgroups to be losing its final grip on the societies when matrilineal institutions are reduced and limited to exogamous matrilineal moieties and the moieties are then eventually abandoned. In the Oceanic situation, loss of matrilineality and even matrilocality is delayed, even permanently, by two sorts of matrifocal residence preference factors—matri-oriented horticultural production (see Divale 1974; Ember and Ember 1971; Harris 1980, 1985; Petersen 2006) and extended male absences owing to long-distance seafaring (Hage and Marck 2002, 2003a). It would also seem to be delayed by emergence of male age-grade societies as discussed by Allen (1984) (below).

Early ethnographers again and again encountered Melanesian societies that were matrilineal, in the exogamy sense, but where neither residence nor inheritance nor political organisation was matrifocal. This may not have been what they expected but such have been the ravages of time and these societies are best understood as running the end-game of Divale's natural drift, "return" he called it, to patrifocal practices and institutions.

The historical distributions are not suggestive of patrilineality in POC society. Aside from the "Peripheral" (below) Papuan Tip sub-subgroup, there are no regions of patrilineality among the Oceanic subgroups and patrilineal groups are island isolates which are seen by all previous students of the situation as having become patrilineal *in situ*. This is true of Micronesia (Hage and Marck 2002) and Polynesia (Marck forthcoming-a). Beyond Peripheral Papuan Tip the Melanesian generalisation is the same as for Micronesia and Polynesia: patrilineality occasionally occurs but always in isolates.

Murdock's hypothesis of a cognatic early Oceanic ancestor of Polynesian is not compatible with the wide distribution of matrilineality in Micronesia and Melanesia. Like patrilineality, the cognatic suggestion would require that matrilineality developed independently in all the subgroups. Oceanic speaking societies in Near Oceania<sup>6</sup> are mainly lineal societies and a cognatic forebear

seems terribly unlikely. We get a similar picture in the Melanesian portions of Remote Oceania<sup>7</sup> where there is often matrilineality in a residual way (e.g., matrilineal moieties with no role in politics or land issues). One otherwise finds cognatic kindreds there. The exception is the occasional patrilineal isolate. If we say that the common ancestor of the Remote Oceanic groups were cognatic we again have to motivate independent shifts to (what are now moribund) matrilineal systems.

Divale (1984) tested a hypothesis of a progression of decay in matrilocal and then matrilineality among peoples who had become matrilocal upon migration. Over a period averaging 1800 years,<sup>8</sup> societies often became virilocal in residence and thence patrilineal and patrilocal. By simply knowing how much time had passed since migration, about half of all variation was explained on a continuum of matrilocal to matri-avunculocal to avunculocal<sup>9</sup> to avuncu-virilocal to virilocal or double descent to patrilocal. Divale's general notions were that, over millennia, male behaviours conspire to control residence and descent and that patrifocal residence is the natural direction towards which societies usually drift. But, Divale noted, in many demonstrable cases, patrifocal residence has been quickly upset by migration and uxorilocality. The added variable of extended absences of men owing to long-distance seafaring (Hage and Marck 2002, 2003a) seems an important Oceanic variable as well. The root crop horticultural regimen and arboriculture were probably also significant elements of Oceanic matrilineal tendencies in the sense that Harris (1980, 1985) observed. Men were freed to pursue their seafaring in light of women's major contribution to subsistence activities (horticultural, arboricultural and fishing/shellfish collection).

These factors:

- migration into previously occupied territories,
- women's horticultural and arboricultural labouring that allowed extended male absences, and
- the actual extended absences of men due to resource procurement and trade of resources, exploration of new territories and visiting other existing Austronesian speaking territories,

pre-dated the Austronesian intrusion into Melanesia and, under Divale's model, would have been amplified upon the migration front each time a group budded off and began taking a new territory already inhabited by "others". Divale's model would suggest that the recurrent budding off into territories of "others" would have set more or less continuous pressures towards matrifocal residence into play in the recent history of the Austronesian speakers who first came to Melanesia. Considering the emerging human genetic evidence of the time, Hage and Marck (2003a: S123) suggested that

“[b]y Proto-Oceanic times residence (matrilocality), descent (matrilineality), and kinship terminology (bifurcate merging) were perfectly aligned.” Through our current distributional method we cannot make such forceful assertions about residence but still end up asserting that descent in POC society must have been matrilineal. Since it was matrilineal, the question becomes one of when the society had been matrilocal for if it was matrilineal it was or had recently (ca. 2000 years) had been matrilocal.

I now consider the geographical areas of Oceanic by linguistic subgroup, relating what I know of social organisation descriptions for each. Relevant sources may have been overlooked but I do not think they would hold many surprises. All interstage societies (Proto Micronesian, Proto Polynesian,<sup>10</sup> Proto Fijian, Proto Papuan Tip and the others) seem to have been matrilineal. We have some degree of social organisation description for most Micronesian and Polynesian societies. A smaller portion of Oceanic societies in Melanesia have detailed ethnographies. Four main trends, some overlapping, dominate the Melanesian, Polynesian and Micronesian landscapes.

- The first is one where the ancient system is sometimes retained: some subgroup societies are still matrilineal and in some subgroups are even still occasionally matrilocal or avunculocal<sup>11</sup> (Admiralties, North New Guinea, Papuan Tip, Meso-Melanesia, Southeast Solomons, North and Central Vanuatu, Micronesia, Fiji, Polynesia and perhaps even, in the recent past, certain Southern Oceanic groups).
- The second is one where matrilineal moiety systems occur and appear to be retreating, leaving mainly cognatic systems (Meso-Melanesia, Southeast Solomons, North and Central Vanuatu, Fiji and perhaps Southern Oceanic and Polynesia).
- The third is relatively rare and shows a shift to double descent<sup>12</sup> (Admiralties, Yap, Pingelap [Nuclear Micronesia], Pukapuka [Polynesia]).
- The fourth path involves groups which have shifted to patrilineality (Peripheral Papuan Tip and various isolates in Admiralties, North New Guinea, [non-Peripheral] Papuan Tip, North and Central Vanuatu, Fiji, Micronesia and three Polynesian Outliers<sup>13</sup>).

#### *Admiralties Societies*

The languages of the Admiralties form a closed subgroup of Oceanic (Blust 1978, Ross 1988). The Admiralties are composed of 18 main islands, the second largest, Rambutyo (80 km<sup>2</sup>) being much larger than any of the others besides Manus. Most of the islands of the subgroup are in a compact area around Manus which is 600 km<sup>2</sup> and voyaging in much of this area is between islands that are inter-visible. The Western Islands are beyond the inter-visibility

zone but begin less than 100km west-northwest of Manus, an easy overnight voyage (see Marck [1986] on dialects and the overnight voyage).

Since the time of Mead's (1934) description of a number of Manus and nearby societies, a picture emerged of double descent for many members of the group: both matriline and patriline are reckoned by many of the groups described and these double descent groups are patrilocal. As will be seen in later subsections, the development of double descent is otherwise rare for Oceanic speaking groups (occurring only in the Admiralties, Yap, Pingelap [Nuclear Micronesia] and Pukapuka [Polynesia]).

Chinnery (1925: 52-54) includes materials on Aua and Wuvulu (Durur and Matty islands), from among the Western Islands of the Admiralties. He describes a situation where the commoners are matrilineal and matrilocal but the chiefs are more ambilateral and the highest chiefs patrilineal. Chinnery (1925: 55-59) also gives information on the island of Pak, a small island immediately east of Manus, relating that the people are patrilineal, and on the Emirau ("E Mira") of the St Matthias group<sup>14</sup> who are matrilineal and matrilocal (Chinnery 1925: 116-26). I have emphasised elsewhere an apparent period in Early Polynesian Society something like that described by Chinnery for the Aua and Wuvulu (Marck forthcoming-a) where descent varied by social or lifeway group.

#### *Social Organisation in Yap*

Yap is an Oceanic isolate in Micronesia related most closely, perhaps, to Admiralties languages (Ross 1996). Schneider (1953) relates that the Yapese are patrilocal within a double descent system with exogamy practiced in relation to both one's patriclan and one's matriclan.

#### *North New Guinea Societies*

Milke (1958, 1965) recognised this subgroup in a general way and Ross (1988) delineated what its membership is taken to include today. The subgroup is spread from West New Britain and the adjacent Huon Gulf on the New Guinea mainland and then discontinuously westwards along the New Guinea coast to the border with West Papua. Bits of information are available for the North New Guinea societies in New Britain and the Huon Gulf but for the coast northwest of the Huon Gulf I found descriptions of only Manam and Wogeo, close linguistic relatives on offshore islands.

A New Britain source (Chinnery 1927: 17) notes that A Nato (Gasmata) exogamy is based on matrilineal principles while residence is usually "in the village of [a wife's] husband". I cannot determine from his statements whether residence is virilocal or avunculocal. Also from New Britain, Sepsep

men are said to follow the line of their father and Sepsep women the line of their mother and this is then said to be true of numerous other groups in the area. But Chinnery (1927: 17-18) does not elaborate on how this plays out in terms of residence nor are the details of descent and exogamy clear.

Also from the southwest New Britain area are the Aviklo speakers of Eglap Island which is off-shore from and protects to some extent Mōwehafen Harbour. They are described by Todd (1934) as having descent groups called *endit* which are “multilateral” (Todd 1934:91) and non-exogamous much in the Polynesian cognatic/ambilinal/bilateral pattern. The Aviklo practice cross-cousin marriage (second or more distant cousins but not first cousins). A man might remove to his wife’s village upon marriage and farm his wife’s land but may also “cultivate land which they hold in their own right through their mothers” and such land is commonly available due to cross-cousin marriage (Todd 1934: 88), i.e., a man marrying into his mother’s *endit*. Chiefly succession is through male primogeniture and the heir apparent stays in his father’s village while “[o]ne finds quite often that the second son of an important family goes and lives on the land of his mother” (Todd 1934: 92).

Beyond the western tip of New Britain are the Vitiaz and Dampier Straits. There are found the Siassi islanders whom Freeman (1967) describes as “patrivirilocal”.

For the Huon Gulf, immediately south of New Britain’s closest proximity to New Guinea, the Busama and nearby groups have been described by Hogbin (1951, 1963). Murdock (1967: 98) codes the Busama as having double descent with virilocal residence. This is not the picture one gains from Hogbin. Hogbin (1963: 17) relates that “rights to land alone are transmitted in the female line” and that such is done through avunculocal residence. The matrilans are exogamous but “[u]nlike lineage mates in many societies, they do not form a political faction, a blood-revenge group, or a group that arranges the marriages. They are united solely by their joint concern with certain areas of land” (Hogbin 1963: 19). That statement is reminiscent of descriptions of matrilineal Bantu groups (Marck and Bostoen MS.) and is probably more indicative of the common absence of complex political organisation than devolvement of matrilineality.

For the vast stretch of lands from north of the Huon Gulf to the end of the group’s western edge, I have found only descriptions of Manam (Wedgwood 1959) and Wogeo (Hogbin 1970). Wedgwood (1959: 240-42) describes the Manam as being patrilineal and “patri-virilocal”. Their close linguistic relative, the Wogeo, are described (Hogbin 1970: 17-19) as having matrilineal moieties and virilocal residence.

*Papuan Tip Societies*

Lithgow (1976) first named this group and Ross (1988) gives the most extensive list of innovations. Papuan Tip languages are spread through the Massim (Trobriands [Kilivila], D'Entrecasteaux Islands [Dobu and others], the Louisiades [Misima and others]) and from the coast of mainland New Guinea adjacent to the D'Entrecasteaux Islands to Milne Bay (the tip of southeast New Guinea) and thence along the southeast coast as far west as Cape Possession. The group seems entirely matrilineal except for the patrilineal "Peripheral" (linguistic) group on the southeast coast, a patrilineal to matrilineal transition area on either side of Milne Bay opening onto the patrilineal area of the southeast coast and patrilineal isolates on, at least, Goodenough Island (adjacent to the matrilineal Dobu to the east).

The Dobuans (Fortune 1932) and Trobrianders (Malinowski 1929) are said to be matrilineal and avunculocal, but Weiner (1977: 42) points out that only the highest ranking male Trobrianders, the ones who actually manage matriclan land, are avunculocal while other men "live in their father's hamlet" and A. Chowning (pers. comm.) typifies the Dobu situation as one of "shifting residence".

Where Papuan Tip groups are no longer matrilineal, they seem everywhere to be patrilineal rather than cognatic. This is true of the Bwaidoga of Goodenough Island (Jenness and Ballantyne 1920), the transition zone through the Milne Bay area <sup>15</sup> (Seligmann 1910) and the groups along New Guinea's southeast coast (Mekeo [Mosko 1985], Motu [Groves 1963, Rosenstiel 1953], Roro [Monsell-Davis 1981] and all the others for which I have seen data). Transition seems local in the case of the Bwaidoga: "neither in the terms which denote relationship, nor in the inheritance of property, nor in the legends and folk tales handed down from past times, is there any trace of a matrilineal system such as prevails in the Trobriands" (Jenness and Ballantyne 1920: 63-64), or we might now add, as among the Dobu who are nearer the Bwaidoga (geographically) than the Trobrianders. The single case of a Papuan Tip cognatic society that I am presently aware of is that of the Molima of the central south coast of Fergusson Island, described by Chowning (1962). Chowning (1962: 98-99) points to a number of similarities between functions of a Molima matrifocal grouping and functions of similar (but fully matrilineal) groupings among the Dobu, Wagawaga, Tubetube and Bartle Bay peoples. Chowning (1962: 99-100) then raises the question of whether, on the basis of those and additional reasons, the Molima may have once been matrilineal.

Around Milne Bay there is a grading from the patrilineal groups on the southeast coast of New Guinea into the matrilineal groups on the northeast

coast north of Milne Bay: “It is obvious that the Massim are generally in a condition of transition from matrilineal to patrilineal descent while at the extreme west of the Massim area transition has actually taken place” (Seligmann 1910: 436).

#### *Meso-Melanesian Societies*

Ross (1988) first named this subgroup and listed its members. Meso-Melanesian languages are spoken along the northeast coast of New Britain, in all of New Ireland and throughout the northwest Solomons as far east as Santa Isabel. Epstein (1969, 1992) describes the Tolai of East New Britain as matrilineal with land tenure vested in the matrilineal *vunatarai*. Allen (1984: 26) states that “most of New Britain” is matrilineal but this seems mostly in its east. Goodenough (1976: 30) mentions in passing that the Bola of the Willamez Peninsula (New Britain) are patrilineal while the Lakalai/Nakanai group, “their closest linguistic kinsmen”, are matrilineal. Chowning and Goodenough (1971) describe the Lakalai as having more than 60 agamous matrilineal sibs that hold land. Goodenough (1976) considered how these predominantly virilocal peoples may have become matrilineal in the absence of matrifocal residence, but he allowed that his was a complex suggestion and that “[w]e cannot say, of course, that the several source populations of the present Lakalai did not already have matrilineal clans” (Goodenough 1976: 33), which is the position taken here.

The Karavar of Duke of York Island between New Britain and New Ireland has matrilineal moieties and residence is commonly virilocal (Errington 1974).

For New Ireland I found several descriptions of (matrilineal) “moiety” societies which are said to still be matrilocal, no other moiety society from anywhere else in Melanesia apparently following this pattern. Matrilocality seems otherwise abandoned in Melanesia before clans or lineages merge into moieties. The Lesu of east New Ireland have matrilineal moieties and matrilocal residence (Powdermaker 1933). The Barok of central New Ireland have matrilineal moieties and residence is mixed involving both virilocal and matrilocal patterns (Wagner 1986). Men have higher virilocal residence rates than women and women have higher matrilocal rates than men, a pattern made possible because some married couples do not cohabit, a transitional pattern, perhaps, between a system that was more matrilocal and one that is becoming more virilocal. Their neighbours immediately to the northwest, the Mandak, also have matrilineal moieties and inheritance of residential and garden land is matrilineal (Clay 1977). Clay (1977: 19) relates that through the centre of New Ireland and into its far south “are found matrilineal,

exogamous moieties. The dual divisions contain exogamous matrilineal clans which may be further subdivided into subclans and sub-subclans.” It is not clear to me how a moiety’s clans could be exogamous beyond the exogamy of the moiety itself.

I have only two descriptions for the central and northern Solomons: for the Buka and for the Varisi. Buka is immediately north of Bougainville. The Buka are matrilineal and ambilocal (Blackwood 1935). Speaking of the Varisi of Choiseul, Scheffler (1965: 37) observes: “Choiseulese society and land tenure are, I think, not difficult to comprehend, at least in general features, but an ‘organizational’ rather than a rigid ‘structural’ approach... is mandatory to their understanding.” Scheffler was speaking to the question of lineality and the passage quoted is one of many that emphasises that Varisi society is formally cognatic.

#### *Southeast Solomon Societies*

The Southeast Solomon Islands are those islands southeast of Santa Isabel. They are inhabited by a single, closed subgroup of Oceanic called by the same name. Although there are lineal groups at the southern extremity of the group, the Southeast Solomons are in the main a region of cognatic kindreds (Fox 1924, Ivens 1927, Rivers 1914), commonly with exogamous hamlets built around agnatic kin but without patrilineal clans. Ross (1973: 137) observes for the Baegu of Malaita that “basic norms of Baegu social organization are that people *ought* to affiliate and cooperate with the patrilineal kinsmen, that patrilineal descent ought to be important, and that corporate groups ought to consist of agnatic relatives” (but that the “oughts” are ideological rather than structural and that corporate patrilineal groups do not exist). They are, formally cognatic although one group, at least, has patrilineal clans—the Lau (Ivens 1930) of Malaita.

Areas of matrilineality exist in the Southeast Solomonian speech area: among the Kaoka and certain other Guadalcanal groups (Hogbin 1964) with their dispersed matrilineal clans and “patrilineal” political succession, among the Arosi of San Cristoval who have matrilineal clans (Fox 1924: 12-15), among the Bauro of San Cristoval who were consolidating matrilineal clans into (two) moieties (“dual organisation”) about 100 years ago (Fox 1924: 33-34), and among the Kahua and Ugi of San Cristoval described by Fox (1924: 65-66) as drifting towards the same matrilineal moieties as the Bauro. There remain matrilineal clans among the people of the small islands of Santa Ana and Santa Catalina off the southeast tip of San Cristoval. Fox (1924: 344) related that the commoners of Ulawa were matrilineal while the chiefly clans were patrilineal but Ivens (1927: 60-61), who spent time on San Cristoval, held that patrilineal bilateral groups known as *komu* were the basic unit of

descent throughout Sa'a and Ulawa and that "no trace of the mother-right" occurred. Still, Fox's observations were rather specific in terms of Ulawa having matrilineal exogamy among the commoners, of these clans being called *komu* but of the *komu* not having names or clear totems.

#### *North and Central Vanuatu Societies*

Allen (1984: 26) stated that "much of north and central Vanuatu" is matrilineal. Few of these societies are described. Rivers (1914) believed that moiety systems had spread to the area in past times through diffusion. Although certainly in error in this belief, Rivers' observations on matrilineal moiety systems in North Vanuatu provide valuable data on distributions and types. He describes such systems for the Banks Islands, where men inherit ancient cultivated land from their mother's brothers but recently cleared bush from their fathers. For the Torres Islands he describes systems with three moieties rather than two. No information is given about residence patterns for the Torres group.

Lane (1961) reports what later happened to those matrilineal North Vanuatu groups and posits matrilineality in the common ancestor. Bonnemaïson (1986: 205-22) offers a more recent description of aspects of the matrilineal Raga society of north Pentecost and observes the "caractère mobile de la société matrilineaire" among the Raga and the closely related groups to its north in and beyond Pentecost (1986: 224). Bonnemaïson (1986: 223-24) speaks of "patrilinéaire" groups to the south of the Raga on Pentecost and relates typical patrilineal patterns of warfare ("plus violentes"—and more internal than external).

Layard (1942: 54) describes the Malekula people as patrilineal and patrilocal, an isolate perhaps.

#### *Southern Oceanic Societies*

The Southern Oceanic subgroup is composed of the languages of Southern Vanuatu, New Caledonia and the Loyalties (parallel to and northeast of central and southeast New Caledonia). Polynesian Outliers occur in Southern Vanuatu (West Futuna and Aniwa) and in the Loyalties (West Uvea).

Humphreys (1926) is the main source I am aware of for Southern Vanuatu (the islands of Tanna, Anejom and Erromanga, and the Polynesian Outliers of West Futuna and Aniwa). Humphreys (1926: 107) states that nothing was known about descent for Anejom but that Erromanga (Humphreys 1926: 129) was visited, investigated closely and seemed entirely cognatic.

Humphreys describes Tanna as "patrilineal" but without clans (Humphreys 1926: 14, 34), which I take to mean cognatic and virilocal. He states that no matrilineal moieties existed. But other sources find it convenient to speak

of Tanna “moieties”. Lynch and Fakamuria (1994) discuss an interesting relationship that obtains between Tanna and Futuna-Aniwa which involves “moieties”. They posit that “Tanna societies appear to have borrowed a moiety system from Futuna or Aniwa, but Futuna and Aniwa have borrowed the Tannese names for these moieties” (Lynch and Fakamuria 1994: 79). Lindstrom (1981: 72-73) is also content to call these features of Tanna society “moieties” and notes that they were endogamous and constituted opposing polities in matters of conflict and had become geographically sited away from each other, men being “afraid to marry a woman of the opposite moiety lest she betray them to her brothers”. Elsewhere, Lindstrom (1985) writes that “descent” is absent in Tanna society in the normal social organisation sense (lineality) and that locally based groups are the core social organisation structure and are maintained through naming practices rather than “descent” pure and simple.

It seems possible that the ethnographers may have captured Tanna society in the final throes of divesting itself of a matrilineal moiety system. Lane (1961) (above) relates a relatively rapid procession of such events in North and Central Vanuatu in the context of depopulation upon the onset of Western diseases. Perhaps the Tanna case provides us with an example of how such a transition can happen autochthonously and more slowly in the absence of catastrophe. The general model I propose in the present work requires that this happen severally around Melanesia.

In any event, we need not posit, as did Lynch and Fakamuria, that Futuna-Aniwa, with their less devolved matrilineal moiety system, were the source of the Tanna moieties. Although I am uncomfortable with the notion of borrowing matrilineality and reiterate that I know of no other cases demonstrated for Oceania or elsewhere, the Tanna and Futuna-Aniwa situation does suggest that such a borrowing occurred. But if there was borrowing between Tanna and Futuna-Aniwa I would be more comfortable with the hypothesis that the Futuna-Aniwa Polynesians assimilated a moiety system through a period of intermarriage with the much more populous Tanna. Then, as I think Lynch and Fakamuria correctly suggest, Futuna-Aniwa borrowed the Tanna moiety names (but did so when they borrowed the moiety practice rather than being the source of the moiety system themselves). It is even possible that both had moiety systems from their earliest contacts and that we do not need a borrowing explanation at all (except for Futuna-Aniwa borrowing the Tanna moiety names once they began intermarrying).

Beyond Southern Vanuatu, I have found no descriptions of New Caledonian or Loyalty Island societies from the classical period of social organisation description<sup>16</sup> nor have I found any ethnographic works produced since that time which lay out the details of residence and descent.

*Nuclear Micronesian Societies*

Nauru, Kiribati, the Marshalls, Kosrae, the Pohnpei speaking area and the Chuukic speaking area comprise the Nuclear Micronesian speaking areas of Micronesia. Proto Micronesian is the name of their commonly shared ancestor. Chamorro of the Marianas and Palauan of Palau are Austronesian but non-Oceanic. Nukuoro and Kapingamarangi southwest of Pohnpei are Polynesian Outliers. Yapese is Oceanic but not Nuclear Micronesian and has been considered previously.

Hage and Marck (2002) have considered descent in Nuclear Micronesian speaking groups. Proto Micronesian society is posited by Hage and Marck to have been matrilineal because all the descended societies are today but for Kiribati and certain small, isolated islands around Pohnpei and in the remote northwest of the Marshalls.

Abandonment of matrilocality and matrilineality among the Nuclear Micronesians is clearly associated with abandonment of regular long-distance seafaring (Hage and Marck 2002). When men are no longer persistently absent, residence drifts towards virilocality. This has occurred in Ulithi, which has become virilocal in its residence and succession of chiefs is patrifocal (Lessa 1966). It is also seen in Pingelap, far to the east of Pohnpei, which now has double descent (Damas 1981, 1994, Schneider 1980) and is patrilocal. The isolated northwest Marshall Islands of Enewetok and Ujelang have abandoned seafaring and matrilineality altogether and are patrilineal and patrilocal. Otherwise, the Marshalls and Chuukic speaking atolls are profoundly matrilineal—“hyper-matrilineal” as Hage called them (e.g., Hage and Marck 2002)—being matrilocal and, in the Marshalls, even having strict vertical succession of chiefs and avunculocal residence among the higher chiefs.

Complete loss of matrilocality and matrilineality has occurred in Kiribati where the cognatic social organisation is consistent with the Kiribati abandonment of regular long-distance seafaring. This may have occurred in concert with Polynesian cultural influence which, in general, is quite substantial in the lexicon, cultural memory and cultural practices (Hage and Marck 2002). I know of no reasons to order the seafaring change and Polynesian influences with respect to each, either temporally or with respect to their relative impact on matrilineality. Hage (pers. comm.) believed that abandonment of regular seafaring was the more compelling cause of the Kiribati abandonment of matrilineality.

However, abandoning long-distance seafaring has not deterministically doomed matrilineality or even matrilocality in Nuclear Micronesia. Pohnpeians had abandoned regular long-distance seafaring by historic times and seemingly well before but they remain matrilocal <sup>17</sup> to the present day.

I know of no information on early historical residence practices for Kosrae but the society was matrilineal. It seems possible to me that the “breadfruit revolution” has, as Petersen (2006) suggests (see below), had a conservative and intensifying effect on Pohnpeian matrilineal institutions, female labour inputs freeing men for investments in the Western Polynesian-style title system, Micronesia’s only parallel to Allen’s (below) male voluntary societies of Melanesia.

Petersen (2006) has recently considered Micronesian matrilineality in the context of new, highly productive breadfruit hybrids that developed around Kosrae and Pohnpei about 1000 years ago. But Petersen makes too much of the “breadfruit revolution”<sup>18</sup> with respect to the diffusion of matrilineal institutions in Micronesia. Petersen (2006: 83) tells us several matrilineal clans are spread “from Kiribati to Pohnpei and from Kosrae to the Marianas...”. That is quite impossible. Kiribati has no clans, matrilineal or patrilineal, and, to my knowledge, no list of the names of the Mariana Chamorro clans was ever recorded before they were abandoned under Spanish influence nor, to my knowledge, have the Kosrae clan names ever been published or otherwise circulated. I have investigated the clan names of Micronesia as much as anyone else (Marck MS.) and find no basis for those claims by Petersen.

Petersen (2006: 83) also emphasises that “[m]odern Micronesia’s matriclans are distinctly different than those of eastern Melanesia, but are quite similar to one another”. The model I here suggest attributes the relative weakness of eastern Melanesian matriclans to a loss of motive for matrilocality: the decline of long-distance seafaring. But this is also a loss shared by firmly matrilocal Pohnpei of Micronesia and perhaps also Kosrae about which we know less. Petersen’s “breadfruit revolution” explains the vigorousness of matrilocality in Pohnpei in spite of the absence of long-distance seafaring in the way that Ember and Ember (1971) and Harris (1980, 1985) do, attributing it to low male horticultural/arboricultural inputs.<sup>19</sup>

### *Fijian Societies*

The Fiji group shows considerable diversity in social organisation, just as it does in languages (Geraghty 1983, 1996). The regional social organisation diversity has not been documented as it has for Polynesia. Thomson (1908: 175-76) attempted to generalise Fijian marriage and residence patterns, or perhaps, just Vanua Levu and Viti Levu patterns: “When the young man reached the age for marriage his mother chose a wife for him from among his concubitant cousins, i.e. the daughters of his maternal uncle,<sup>20</sup> and immediately after the marriage he removed from the [men’s house] to a house of his own, or to that of his parents. In parts of Vanua-Levu, where uterine descent was still recognized, he removed to the village of his wife’s

parents.” Quain (1948) also produced materials on descent for Vanua Levu, describing the Nakoroka and their two matrilineal moieties. I found nothing in that source about residence and (land) inheritance. Quain’s village is said to have been an amalgamation of peoples, residual populations that came together after significant depopulation in the historical period “so it is not surprising that there were no principles of residence and descent” (Judith Huntsman, pers. comm.).

Capell and Lester (1945, 1946a, 1946b, 1946c) consider cross-cousin marriage patterns for Viti Levu. Like other sources their general failure to mention patrilineages suggests such do not exist formally, yet they do mention (Capell and Lester 1945: 175) a “patrilineal exogamous group” in western Viti Levu. On the whole, there is the impression of patrifocal cognatic groups with some remaining matrilineal moiety groups.

Nayacakalou (1955: 46) states flatly that the Tokatoka (in eastern Viti Levu near Bau Island) are patrilineal. Parenthetically, the Tokatoka have Dravidian cousin terminologies.<sup>21</sup> Such appears to have developed locally among the Tokatoka and perhaps some of its lesser described neighbours (Hage 2001). Sahlins (1962) has described the social organisation of Moala, an island situated about 200km southeast of Viti Levu in the Lau group. The Moalans are patrilineal and reside patrilocally. Moalan patrilocality is consistent with what is seen in the Admiralties, North New Guinea, Papuan Tip, Meso-Melanesian, Southeast Solomons, North and Central Vanuatu, Nuclear Micronesian subgroups (above) and the Polynesian subgroup (below) where patrilineality in Oceanic speaking societies tends to occur individually or among groups with a certain amount of geographical isolation (e.g., the Papuan Tip).

### *Polynesian Societies*

Polynesian languages are spoken over the entirety of geographical Polynesia and in the Outliers found dotted through Melanesia and southwest of Pohnpei in Micronesia. Polynesian societies are almost exclusively cognatic, the only exceptions being the Outliers Anuta, Tikopia and Rennell/Bellona that are patrilineal, the early Nuclear Polynesian<sup>22</sup> offshoot Pukapuka in geographical East Polynesia that has double descent and the Outliers West Futuna and Aniwa that have memories of matrilineal moieties as discussed previously in the Southern Oceanic subsection.

Anuta and Tikopia both have the term *kainanga* ‘patrilineal descent group’ and Pukapukan has *keinanga* ‘matrilineal sublineage’. Other reflexes of Proto Polynesian *\*kainanga*, from Western Polynesia and Eastern Polynesia, attest to a meaning of something more like ‘commoner’, ‘attendant’, etc. I have considered the history of Polynesian descent and *\*kainanga* elsewhere

(Marck 1996: 205-7, 2000: 186-90). The model I presently argue (Marck forthcoming-a) begins with the c.950 BC arrival of a matrilineal people more or less immediately descended from POc speakers. These earliest geographical Polynesians called some level of their matrilineal descent groups *\*kainanga*,<sup>23</sup> as did the Proto Micronesian speakers.

Also on the subject of *\*kainanga*, we can note that there is no other candidate for an early Oceanic ‘descent group’ or ‘matrilineal descent group’ reconstruction (but see Chowning [1991: 69] for some faint evidence of an early Oceanic *\*(q)apusa* possibly having to do with descent groups). Such terms were apparently susceptible to change as, perhaps, they came to be replaced by subordinate terms (as ‘lineages’ and ‘sub-lineages’ became larger and a higher order focus of organisation), replaced by metaphorical terms (e.g., ‘blood’ in the Trobriands [*dala* ‘sub-(matri)clan’]) and other terms (e.g., ‘grandparent’ among the Peripheral Papuan Tip speakers) or lost altogether due to abandonment of lineality.

In Marck (forthcoming-a) I consider the history of ideas about Proto Polynesian *\*kainanga*. Although I presently posit that Proto Polynesian Society (c.AD 1-500) was, in the main, cognatic, the old Proto Eastern Oceanic *\*kainanga* ‘matrilineal descent group’ experienced the two kinds of survivals mentioned previously: ‘lineal descent group’ (Anuta, Tikopia and Pukapuka) and ‘commoner, attendant’ (Western Polynesia and East Polynesia). The model (Marck forthcoming-a) of early developing Polynesian society asserts something like the situation that obtained in Aua and Wuvulu in the post-contact Admiralties (above): early Polynesians eventually came to calculate descent differently according to rank. After some centuries in Western Polynesia, *\*kainanga* had come to mean ‘the matrilineal clans of the commoners’ and then, by Proto Polynesian times, just ‘commoners’ in its normal sense to most people. But a secondary sense, ‘matrilineal descent group’, lingered on applying, by that time, just to certain sub-populations that still had them: East Futuna and East Uvea, perhaps, and perhaps among some of the fisher-folk and seafaring transport specialists on Tonga and Samoa as well. By this model, the reason that Pukapukan *keinanga* today means ‘matrilineal sublineage’ is that it always has, just as *keinek* still means ‘matrilineal subclan’ in Micronesia’s Pohnpeian and *\*kainanga* ‘matrilineal clan’ in Micronesia’s Proto Chuukic.

The model avoids the unsatisfactory appeal to borrowing for the Polynesian and Micronesian *\*kainanga* similarities. It avoids the weaknesses of saying the basic word for ‘descent group’ was borrowed at such great distance. It avoids claiming matrilineality was borrowed at any distance. It allows both prehistoric Micronesians and Polynesians to make expected sorts of retentions and local transformations out of a matrilineal past.

*Evaluation of the Distributions*

Proposing that POc society was patrilineal fails on distributional grounds because the patrilineal Oceanic groups are mainly isolates (e.g., the Pak of the Admiralties group, the Wogeo of the North New Guinea group, the Bwaidoga isolate and the Peripheral subgroup of the Papuan Tip group, the Malekula of the North and Central Vanuatu group, the Enewetok and Ujelang of Micronesia, the Moala of Fiji and the Anutans, Tikopians and Rennell/Bellona of the Polynesian group). There is no continuous region of patrilineality among the Oceanic speaking peoples other than the Peripheral Papuan Tip which has so obviously developed locally and is *not* attributable to POc ancestry.

Proposing that POc society was cognatic fails on distributional grounds because the cognatic areas of Oceanic speaking societies are so obviously encroaching on areas that were formerly matrilineal (Meso-Melanesia, Southeast Solomons, North and Central Vanuatu and Fiji). The exception is cognatic Polynesia which I interpret above and elsewhere (Marck forthcoming-a) as a case where this process had run much of its course by 1500-2000 years ago.

Proposing that POc society had double descent fails on distributional grounds as it occurs only in isolates (Yap, Nuclear Micronesia's Pingelap, Polynesia's Pukapuka and, more widely, in the Admiralties group). It is the least frequent sort of system in world cultures compared to cognatic, patrilineal and matrilineal and, it presently seems, does not exist in the other subgroups and was probably not the system in POc society. Most cases known from Oceanic speakers (e.g., Ulithi, Pingelap, Pukapuka) are clearly post Proto Oceanic local developments out of a matrilineal system.

No one since Rivers (1914) has adopted his view that multiple waves of immigrants introduced matrilineality to Melanesia. But the passage from Rivers quoted at the head of this article shows that he understood the direction of change with respect to matrilineal institutions (at the time of his study [the first decade of the 20th century]): they were in the process of reduction and abandonment, not in the process of growth and elaboration. Rivers' information about Melanesian societies was even less complete than what little we know today. He does not refer to the matrilineal Trobrianders and Dobu and other matrilineal constituents of what we now call the Papuan Tip linguistic group or to the matrilineality and double descent of the Admiralties. Nor does he refer to the distribution of matrilineal groups in the North New Guinea linguistic subgroup and the Germans were yet to publish their great books on the situation in matrilineal Micronesia. It is no coincidence that Seligmann (1910) came to the same conclusion concerning the Peripheral Papuan Tip groups through the same kind of dogged ethnographic inquiry and comparison: matrilineality is retreating where there has been change.

Proposing a matrilineal POc society has much stronger distributional support than the alternatives. It wins not only because the patrilineal and cognatic options are so unappealing but because the direction of change is so clearly away from matrilineality in most of the subgroups.

We are now in a position to study the general demise of what Hage (Hage and Marck 2002, 2003a, 2003b) came to call a “hyper-matrilineal” POc society (residence, descent and kin terms <sup>24</sup> were fully concordant rather than in any way discordant). The matrilocality of POc society, Hage often said (pers. comm.), resulted from no one factor so much as the common long absences of men on overseas travels. In reflecting upon the motives for matrilocality I occasionally mentioned to Hage the common mortality of seafarers. He allowed that it was a factor but felt it almost irrelevant, in the Oceanic seafarer context, compared to the regular absence of men (who regularly came back). Such men, Hage related, had good reason to leave their property in the charge of their sisters rather than their wives. But in the year before his death, Hage (pers. comm.) had begun to speak more frequently of Divale’s (1984) observations about shifts to uxorilocality and then matrilocality upon migration regardless of circumstances beyond the resulting conflict with the “others” there encountered. Lineality may have been a part of the Eastern Indonesian past, though not necessarily matrilineality, but Ancestral Lapita/POc society was certainly matrilineal and matrilocal by the time of their dispersals out of their homeland into the farther reaches of Melanesia, Western Polynesia and, apparently somewhat later (Rainbird 2004), Nuclear Micronesia.

In the following section I consider Divale (1984) and Allen (1984) in light of a model of matrilineality in POc society. There follows a section that considers the human genetics of modern and ancient Polynesians and the reasons for now believing that POc society was not only matrilineal, it was matrilocal.

#### DIVALE (1984) AND ALLEN (1984) REVISITED

I here argue that matrilineality has survived partly by developing political functions quite unlike those served by the patrilineal dogma and partly by stimulating, through its own internal limitations and contradictions, alternative forms of political association. The principal contradiction I have in mind is that between the indispensable flexibility of political process and the relative inflexibility of matrilineal affiliation. The evolutionary response to such a contradiction, no doubt further stimulated by the various associated disorders mentioned above, has taken two principal forms in Melanesia: an increased disjunction between descent and locality as structural principles, and the development of additional forms of political association based on predominantly nonkinship criteria. (Allen 1984: 28)

It is now useful to compare the findings of Divale (1984) to those of Allen (1984) concerning matrilineality and suggest what a combination of their models might look like for the daughters of POc society. Divale's migration model for the origin of uxoriolocality, thence matrilocality and thence an average 1800 years to abandon matrilineality has been summarised above. Allen's model of the decline of matrilineality in North Vanuatu is multifaceted. Its most direct relevance to our present problem can be seen in the following:

It is most especially my intent to point to the close correlation that obtains between the most elaborately structured and least kinship-influenced forms of political association, especially voluntary male status hierarchies based on ritual achievement, and matrilineal descent groups. (Allen 1984: 21)

I observe elsewhere (Marck and Bostoen MS.) that the most basic difference in the outcome of Proto East Bantu Society matrilineality and POc society matrilineality is its tenacious retention in most East Bantu societies.<sup>25</sup> This retention, in contrast to the Oceanic pattern where there is often drift into cognatic, double descent and patrilineal systems, might have involved two different sources of conservatism inherent in Proto East Bantu Society. The first is the apparent presence in Proto East Bantu Society of male age grades/warrior societies (Marck 1997) and the role of these societies in providing an outlet for male political ambitions outside their matrilineages (Marck and Bostoen MS.). Male age grade societies are found in parts of Oceanic speaking Melanesia (Allen 1984) but no one has ever suggested they existed in POc society. The second is the linguistically obvious presence of cross (first) cousin marriage in Proto East Bantu Society which may have held the logic of lineality in bolder relief among its daughter societies (Marck and Bostoen MS.). In POc there were no cross cousin or other special cousin terms, no prescriptive alliance terms (Marck forthcoming-b) and, I would say on comparative ethnographic grounds, insufficient reason to suggest that cousin marriage was practiced in POc society.

On the matter of age grades and cousin marriage, the Nuclear Micronesian and Polynesian evidence is in general accord: there are no reports of age grades and, but for the Marshall Islands, there are no reports of first or second cousin marriage.<sup>26</sup> So we are left wondering what the scattered reports of age grades and cousin marriage might mean when considering the evidence of Oceanic speaking peoples in Melanesia. First off, descriptions are found for a much smaller sample of societies than what we find for Micronesia and Polynesia which, together, have only some few dozens of more or less distinct societies. In Oceanic speaking Melanesia there are many hundreds of local polities, definable ethnic groups, dialects, languages and intermarriage networks. Few of them are described well in print.

There is no reconstructable POC term for ‘age grade’ or ‘initiation’ or ‘initiation school’ (Marck forthcoming-b) but this is also true for Proto Bantu which certainly had them (Marck 1997). So one then wonders, for Melanesia, what we might find on a cline considering the intensity of matrilineal institutions compared to intensity of age grade leadership. Given the model Allen’s study suggests, one would test whether weak matrilineal institutions correlated with weak male achieved-status institutions across Oceanic speaking Melanesia as a whole and ascertain whether strong matrilineal institutions correlated with strong male achieved status institutions (i.e., whether strong matrilineal institutions result in strong male achieved status institutions to balance that mix, as Allen’s work showed). Unhappily, there is hardly enough data for Melanesia to move beyond Allen’s (1984) start. We are at the limits of the data. I suggest that with more data we might find that certain mixes are “prolonging” the demise of matrilineality beyond Divale’s (average) 1800 year time line.

For Proto East Bantu and Proto Oceanic we have 3000 year and 3500 year time lines since arrival to their respective dispersal centres. For the people remaining in the homelands, migration ceased and, by Divale’s model, the 1800 years begin ticking away.

The East Bantu homeland area (roughly Bantu Zone J) is, in fact, patrilineal as Divale’s model predicts. Elsewhere East Bantu groups are in the main matrilineal but for Zone S, the last area to be settled, beginning about 2000 years ago. The POC dispersal centre area (the Bismarcks) is mainly matrilineal or, in the Admiralties, has an apparent predominance of double descent. Beyond the dispersal centre of POC patrilineality exists in isolates except for the continuous and expanding territories of patrilineality in the area occupied by the Peripheral Papuan Tip languages from 2000 years ago. So East Bantu Zone S and Oceanic Peripheral Papuan Tip follow Divale’s prediction (of being patrifocal and no longer matrilineal) in the approximately expected 1800 years.

The question is, in both instances, why so many of their linguistic relatives, who have been *in situ* longer, would still be matrilineal. I wonder if there is not some areal phenomenon associated with the farming expansions of both groups. They created continuous expanses of common language and society whereas Divale was more often studying intruders who remained isolates or outliers in their new geography.

Otherwise, I remain most curious about Allen’s Melanesia work on North and Central Vanuatu and the common appearance there of strong male achieved status institutions where there are strong matrilineal institutions. Perhaps such institutions support each other through time in a way that escaped Divale’s study.

Polynesia represents one extreme of reconstructable ancestral systems with respect to Divale's 1800 year timeline. But this would not surprise Divale. There were no "others" to fight off in the Polynesian homeland nor in the places they had most immediately come from in eastern Melanesia. Within about 1000 years of first settlement, the early Western Polynesians had, in the main, abandoned matrilineality (Marck forthcoming-a) and were getting set to take their cognatic lifeway to the Ellicean Outliers and Eastern Polynesia. As mentioned in the Polynesian subsection above, I suggest (forthcoming-a) that some residual matrilineality existed among specialist seafarers in Proto Polynesian society as it does among seafaring Micronesians in a general and vigorous way through parts of Micronesia today. But this was not transported to the Ellicean Outliers or East Polynesia where society seems always to have been cognatic.

With respect to East Polynesian settlement we can further modify Divale's model by saying migration is not a sufficient condition to foster uxorilocality and thence matrilocality in the absence of "others", but of course that is what Divale would expect. This was in the context of what were surely regular absences of men engaged in long-distance seafaring. The cognatic descent principles of early Polynesian society, upon migration to central and thence peripheral East Polynesia, did *not* have to conspire to limit patrilineal foci of (internal) warfare organisation, were *not* incapable of expanding uxorilocality when their men were commonly voyaging and did *not* have matrilineality to abandon once time wore on and the average male became more sedentary. So we have also learned that long-distance seafaring is not always a sufficient condition to result in matrilineality, it is only a commonly observed condition to sustain matrilineality and matrilocality where it already exists.

But is it a *necessary* condition? We can not make the long-distance seafaring argument for much of Melanesia beyond the settlement period which began 3000 years ago in the case of the initial budding off of the primary Oceanic subgroups. Did vigorous seafaring delay the demise of matrilineality in Oceanic speaking Melanesia? I think, in most instances, not. There would be more linguistic unity within each of the subgroups as aggressive seafaring prolongs linguistic unity (e.g., the Marshalls which are only somewhat differentiated in their general linguistic unity and the Chuukic speaking atolls which are all mutually intelligible from one atoll to the next). The periods of common development for most of the Melanesian subgroups would only take us up to about 2500 years ago and not, by Divale's model, seem to predict that so much Melanesian matrilineality would remain.

The more extreme Micronesian exceptions to Divale come from societies which have continued regular long-distance voyaging. And this was in spite of an absence, as in all Remote Oceania, of "others" suggesting that, as previously

mentioned, we must modify Divale's model to slow the rate of matrilineality's loss under conditions of common absences of males due to long-distance seafaring. In fact, the rate of loss is zero through all of Nuclear Micronesia when the seafaring variable is taken into account. This, we might imagine, would not surprise Divale, who did not present the cessation of migration as deterministic but only offered the observation that 50 percent of variability was accounted for by simply knowing the time passed since migration.

I leave off content that the Oceanic situation supports Divale very well indeed, but with lingering questions, in light of the much longer Bantu and East Bantu timelines (Hage and Marck MS., Marck and Bostoen MS.). These might be resolved if we knew more, for Bantu and Oceanic, about the correlation Allen (1984) has described between intensity of matrilineality and intensity of "voluntary" male societies/organisations. Proto Bantu and Proto East Bantu had such voluntary associations (Marck 1997). POc apparently did not and they developed locally and disparately in Melanesia but not Micronesia or Polynesia.

#### POLYNESIAN Y-CHROMOSOMES AND PROTO OCEANIC SOCIETY MATRILOCALITY

Hage's (1998) suggestion that POc society may have been matrilineal was in the main based on comparative ethnography with reference to indices of matricentricity. Then came evidence from Polynesian human genetic studies that the period of Polynesian ancestry passed in Melanesia was specifically a period of matrifocal residence (matrilocal or uxorilocal) (Hage and Marck 2003a), a picture of Polynesian's past that continues to find support in further studies of Polynesian (mtDNA) DNA and Y-chromosome (NRY) DNA (Kayser *et al.* 2006).

Kayser *et al.* is the most comprehensive study (312 geographical Polynesians) that seems likely to be available for some time. From Kayser *et al.*'s (2006) data I calculate that only 1.7 percent of Polynesian mtDNA is of Melanesian origin while 65.6 percent of Polynesian NRY is of Melanesian origin. Those percentages are mine (Table 1) and are approximate after disaggregating geographic Polynesians from Kayser *et al.*'s "Polynesians" in which Fijians are lumped with Polynesians rather than being classed as Melanesian or some intermediate category. A further refinement involves discounting European DNA of historic origin, as did Kayser *et al.*

As Kayser *et al.* note, this is sex biased gene flow characteristic of matrifocal residence. The very low incorporation of Melanesian mtDNA suggests an intense and inflexible sort of matrilocality. Some element of the very low level of Melanesian mtDNA could be attributable to founder effects in Polynesia and not represent a clear picture of the situation current

Table 1. Asian vs. Melanesian haplogroups in Fijians and Polynesians, disaggregated from Table 2 in Kayser *et al.* (2006).

	“Asian” NRY	“Asian” mtDNA	“Melanesian” NRY	“Melanesian” mtDNA
Fijians – Kayser <i>et al.</i>	14.0%	79.6%	78.5%	20.5%
“Polynesians” – Kayser <i>et al.</i>	28.3%	93.8%	65.8%	6.0%
Inferred geographical Polynesians	32.5%	97.9%	62.1%	1.7%
“Missing” data corrections	34.4%	98.3%	65.6%	1.7%

Note: “Asia”—known to be of Insular Southeast Asian origin and not of Melanesian Papuan origin.  
The “missing” data are from the exclusion of European historic additions.

in POC society as a whole. Nevertheless, Polynesians have remained the most genetically isolated descendants of Ancestral Lapita Society/POC society and constitute the optimal populations from which to build a picture of gene flow c.3400-3000 BP.

Archaeology places the first settlement of Western Polynesia, by bearers of the Lapita cultural complex, very close to 3000 BP (Burley, Nelson and Shutler 1999). Their Austronesian speaking ancestors arrived in northwest Melanesia at some less certain time about 400 years before (Green 2003). Thus we are interested in endogamy rates over as many as 400 years, the period of potential intermarriage with indigenous Melanesians (“Papuan = non-Austronesian”-speakers who inhabited the more western parts of Island Melanesia before the arrival of Austronesian speakers).

The period of admixture could have been shorter than 400 years. Time in Near Oceania would have seen different opportunities for admixture than time in Remote Oceania. Indigenous Papuan speakers were present in Near Oceania but not Remote Oceania. So if, for instance, Polynesian ancestors spent half their Melanesian years in Near Oceania and half in Remote Oceania, the Near Oceania years would have provided more abundant opportunities for admixture.

Here I reduce Kayser *et al.*'s findings to average endogamy rates per generation by sex for the period during which Polynesian ancestors were residing in Melanesia.<sup>27</sup> Taking into account the variables mentioned for duration of admixture, Table 2 considers how many generations would be involved if admixture occurred over as few as 250 years and as many as 500. We decide how many years in a generation so the available years for admixture in Table 2 can be reduced to numbers of generations. Kayser *et al.* (2006) estimate 25 years for each female generation and 30 years for

each male generation. This is in both cases the subjects' average age at the birth of their average (aged) same-sex child. Human conditions vary. Thus in Table 2 I allow for generations five years shorter and five years longer than Kayser *et al.* From Table 2, the minimum number of generations we want to consider is 7.1 (for men) and the maximum number of generations we want to consider is 25 (for women).

Table 2. Ranges for numbers of generations of males and females through varying time spans.

Period of co-residence	Years per generation			
	20	25	30	35
250 yrs	12.5	10	8.3	7.1
300 yrs	15	12	10	8.5
350 yrs	17.5	14	11.7	10
400 yrs	2	16	13.3	11.4
450 yrs	22.5	18	15	13.0
500 yrs	25	20	16.7	14.3

Table 3 considers men and the endogamy rates necessary to achieve a result of 34.4 percent Asian NRY over 7 to 20 generations (Table 2, numbers immediately above and below 34.4 percent shaded).

The number of generations becomes the exponent of the endogamy rate, 86 percent endogamy giving the desired result at approximately 7 generations, 95 percent endogamy coming closest to the 34.4 percent target at 20 generations (from the upper-left to lower-right diagonal through the table where the approximate solution or target is found and shaded).

The desired result, 34.4 percent Asian Y-chromosomes, is found exclusively at  $90 \pm 5$  percent endogamy for all the generations considered possible. The general picture, discounting drift, is one in which, on average, about one in ten Polynesian male ancestor per generation was an "other" (a Papuan/indigenous Melanesian.).

I have not prepared a table for female endogamy rates. All the solutions (for a result of 1.7 percent Melanesian) are rates of above 99 percent endogamous unions: less than one exogamous (Melanesian) ancestress, on average, out of a hundred per generation.

Table 3. Percentages of remaining Asian NRY haplogroups after variable numbers of generations and for variable average rates of endogamy

	7	8	10	12	14	16	18	20
.85	32.1	27.2	19.7	14.2	10.3	7.4	5.4	3.9
.86	34.8	29.9	22.1	16.4	12.1	9.0	6.6	4.9
.87	37.7	32.8	24.8	18.8	14.2	10.8	8.2	6.2
.88	40.9	36.0	27.9	21.6	16.7	12.9	10.0	7.8
.89	44.2	39.4	31.2	24.7	19.6	15.5	12.3	9.7
.90	47.8	43.0	34.9	28.2	22.9	18.5	15.0	12.2
.91	51.7	47.0	38.9	32.2	26.7	22.1	18.3	15.2
.92	55.8	51.3	43.4	36.8	31.1	26.3	22.3	18.9
.93	60.2	56.0	48.4	41.9	36.2	31.3	27.1	23.4
.94	64.8	61.0	53.9	47.6	42.1	37.2	32.9	29.0
.95	69.8	66.3	59.9	54.0	48.8	44.0	39.7	35.8

Note: Shaded cells show the closest numbers to the “target” of 34.4%

The question of drift then takes centre stage with respect to Polynesian mtDNA. But Kayser *et al.* (2006) also report their results for the Trobriands. After some three millennia of exposure to Papuan mtDNA, the avunculocal Trobriand population’s level of Papuan mtDNA is only 2.5 percent to 5.0 percent, depending on measure. Most of the rest remains Asian (non-indigenous Melanesian/Papuan). Avunculocal and matrilocal populations have little “place” for outside females. They do not, for instance, ever seem to produce reports of bride capture except when such is a charade rather than an act of aggression and “outside” women are never involved.

On the matter of drift effects among the human genetics of the earliest geographical Polynesians, we should also contemplate the possible role of cultural selection. Might, for instance, the earliest geographical Polynesians have specifically selected for lines of women descended from the original intrusion into Melanesia from Eastern Indonesia? An intense sort of conical matrilocal clan system would have sustained this distinction in the cultural memory and could have resulted in selection of women of the higher ranking clans, i.e., those descended from the emigration out of Insular Southeast Asia.

The Melanesian component of Polynesian ancestry could have been obtained through more phasic than static rates of incorporation and different phases might have had different causes and rates. But the nature of the evidence is such that we can do no more than contemplate an average for the period.

This is the picture we get when averaging the sum of generations of intermarriage from the Polynesian picture provided by Kayser *et al.* (2006). The available evidence suggests that residence in POC society was matrifocal. This leaves us with a picture of the average language and general culture learning context in early Oceanic society (before the dispersal of the earliest geographical Polynesians). In their matrifocal residential context, children were surrounded, under average circumstances, by adults who were in more than nine out of ten instances raised in the speech group themselves. Put differently, the men were in about nine out of ten cases “of” the group themselves, as were more than 99 out of 100 women. Papuan cultural influence in terms of marrying “in” was light, on average, and one-sided, consisting almost exclusively of males.

\* \* \*

Hage (1999) presented Murdockian cross-cultural typological and comparative ethnographic arguments for lineality and Hage (1998) provided a comparative ethnographic study of indices of matricentricity, showing that such indices were unusually high in Oceanic speaking societies and that POC society may have been specifically matrilineal. Here I have pursued a third line of attack considering descent distributions, subgroup by subgroup, and have shown that POC society matrilineality is our only option. On distributional grounds, the possibility that descent in POC society was cognatic, patrilineal or structured by double descent have all been dismissed. POC society *was* matrilineal.

The situation for POC society resembles the situations for Proto Bantu society and Proto East Bantu society. There also a population of matrilineal peoples (Hage and Marck MS., Marck and Bostoen MS.) migrated farther and farther yet into a vast region and spawned hundreds of modern daughters. If the social organisation literature for Oceanic seems limited, it is even more so for East Bantu. There is, specifically, the situation where patrilineal groups (Uganda, Ruanda, Burundi and Southern Africa) have seen a reasonable amount of description while the vast matrilineal region between them is hardly described at all.

The most general difference in the outcome of the Proto East Bantu Society (c.2500 BP) and POC society (c.3000 BP) daughters is the presence of cognatic daughters among the POC society daughters where none seem reported for Proto East Bantu society daughters. I am left wondering if the persistence of prescriptive alliance in the East Bantu Societies gave lineality a stronger

logic and *raison d'être* due to the lines manifest in the cousin marriage system. Or perhaps matrilineality persisted among most East Bantu societies because men had the initiation schools and age grades and their concomitant opportunities for male social advancement. Matrilineality, in most instances, never experiencing the final attack of male social and structural pressure because male social status and advancement was not conspiring to organise itself through descent.

If one were to hark back to classic social organisation puzzles, Junod's (1912-13[I]: 253) suggestion of a past stage of matrilineality for Southern Africa's patrilineal Thonga would be one place to start. The suggestion was made owing to the elaborate mother's brother institutions of the Thonga. Radcliffe-Brown then noted that the patrifocal Tonga (Polynesia) also had such elaborations of the mother's brother/sister's child relationship. "The view that I am opposing is that the customs relating to the mother's brother can only be explained by supposing that, at some past time, these people had matrilineal institutions..." (Radcliffe-Brown 1924: 543-44). Now, however, we know that both the Thonga and the Tonga were matrilineal about 2500 years ago (Marck and Bostoen MS.) and may have developed their elaborate mother's brother practices during that time.

The developing picture of Proto Oceanic society as matrilineal well supports Murdock's notions with respect to residence, over time, bringing descent into its own pattern and the kin terms then seeking concordance with descent (lineality and bifurcate merging kin terms are highly associated while cognatic societies are highly associated with Hawaiian kin terms). We can affirm the general pattern rather robustly with the case of the Oceanic speakers. Continuing Hage's (1998) notions, it is argued here that locality (matrilocality), descent (matrilineality) and the kin terms (bifurcate merging [Chowning 1991, Marck forthcoming-b]) were in full concordance in Proto Oceanic society. Daughter societies experienced, in general, the kind of changes Murdock held to be general to human societies as a whole. Possibly Murdock did not imagine how long it sometimes takes to abandon matrilineality after abandoning matrilocality or how long it sometimes takes for the kin terms to respond to changes from lineal to cognatic when lineality is abandoned. But in general the matrilocality/matrilineality model of Proto Oceanic society flows quite naturally from the data of living societies (above), explains the apparent sex biased gene flow with indigenous Melanesian in the period c.3500-3000 BP (Hage and Marck 2003a, Kayser *et al.* 2006), explains why living Oceanic societies (patrilineal, cognatic and matrilineal) are so matricentric compared to much of the rest of the world's societies (Hage 1998) and allows us to dismiss notions of a cognatic or patrilineal Proto Oceanic society as neither would have produced the distributions encountered in the historical societies.

## NOTES

1. Named by Rivers after what he presumed was their matrilineal moiety social organisation.
2. Per Hage died in 2004 (Marck 2006, Milicic 2006).
3. “Matrifocal” and “patrifocal” are convenient terms to speak of matrilocal and uxorilocality at once and patrilocal and virilocality at once, respectively.
4. Thirty-three societies of the world that had migrated.
5. “Harmonised” in Lévi-Strauss’s (1969) parlance.
6. New Guinea, the Bismarcks, the Massim and the north and central Solomons where there were indigenous Papuan speakers before the arrival of Austronesian speakers.
7. Micronesia, Polynesia and Melanesia from the Southeast Solomons east and south where there were no Papuan speakers present before the arrival of Austronesian speakers.
8. There was a large cluster. Six of eleven societies that had become virilocal or patrilocal had done so at about 2000 years since first migrating and becoming matrilocal.
9. A type of matrilocal residence where a groom takes his bride to live on his matriclan land as have his maternal uncles and their maternal uncles before him.
10. Matrilineal subpopulations are suggested in a mainly cognate descent landscape.
11. Land inheritance and adult male residence is through a man’s matriline. He and his wife thus go to live with his maternal uncles upon marriage.
12. Having both patriclans and matriclans at once.
13. Anuta, Tikopia and Rennell-Bellona.
14. Just off the northwestern tip of the Meso-Melanesian group but classified as among the Admiralties group or as an isolate.
15. Seligmann does not tell us exactly how the transition zone manifests itself.
16. The period of description upon which Murdock’s (1949, 1967) categories are based.
17. Riesenberg (1968) related, citing German sources, that chiefly marriages in Pohnpei were virilocal when they were not matrilocal but Hage (pers. comm.) maintained, based on the same German sources, that those marriages were avunculocal rather than virilocal.
18. I accept that this is an important element of Micronesian prehistory and that Petersen’s term for it should become the standard.
19. Arboricultural (breadfruit) inputs are male to some extent in Pohnpei (Petersen 2006) but this only really involves the commonly male Micronesian task of picking the fruit with long hooked poles. Aside from planting, there are no other male or female labour inputs, one of the points of Petersen’s thesis.
20. Andrew Pawley (pers. comm.) notes of this passage from Thomson, “He should have said ‘classificatory cross-cousins’. First cousin marriage is rare, so far as I know.”
21. Social systems with cousin marriage and “Dravidian” terminological systems: characterised by special cross-cousin terms and equations between parents’ siblings and spouse’s parents.

22. “Nuclear Polynesian”—all Polynesian but for Tongan and Niuean (“Tongic”).
23. While *\*kainanga* has no known cognates outside Polynesia and Nuclear Micronesia, the same appeared roughly true of Chuukic and Fijian-Polynesian *\*pasu* ‘man’s sister’s child’ until the identification of Buka and Teop cognates (Marck forthcoming-a, forthcoming-b). So we can now take the distribution of *\*pasu* forms to be most conveniently explained as a shared retention of POc or Proto Eastern Oceanic *\*pasu* ‘man’s sister’s child’ and I think the same holds for a Proto Eastern Oceanic *\*kainanga* ‘matrilineal descent group’. We need not, in any event, resort to borrowing to explain the Polynesian-Micronesian distribution (Marck forthcoming-a, forthcoming-b) contrary to Best and Geraghty’s (2002) reviews of Kirch and Green (2001). Borrowing of matrilineality from one Oceanic speaking group by another is here held to be very unusual. I know of only one possible example (in Southern Oceanic [above]).
24. “Bifurcate merging” in the parental generation kin terms is closely associated with lineal societies. Father’s brother is called as father but there is a unique term for mother’s brother. Less frequently and only when the special mother’s brother term is found, there may be a special term for father’s sister (that is distinct from the mother = mother’s sister term).
25. Historical East Bantu speaking societies are all matrilineal except those in the far north (Bantu linguistic Zone J) and the far south (Bantu linguistic Zone S), those two zones being patrilineal.
26. But for the Marquesans who developed such marriages historically upon the occasion of substantial depopulation and in the instance of some of Polynesia’s Futunic Outliers which also seem to have done so individually.
27. Jonathan Friedlaender (pers. comm.) has warned me that the Polynesian picture could be a result of drift rather than social practices. But he also emphasised that the Polynesian mitochondrial and Y-chromosome distributions could in fact be the result of social organisation practices leading up to the time of POc’s disintegration. Friedlaender also emphasised that the calculations I set out in Table 2, in the event they are the result of social practices, are the way in which one reduces Kayser *et al.*’s (2006) data to endogamy per generation.

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