

Origins for the Rapanui of Easter Island Before European Contact: Solutions from Holistic Anthropology to an Issue no Longer Much of a Mystery

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THIS ESSAY IS NOT JUST ABOUT EASTER ISLAND'S archaeology. Rather the perspective is a multi-field one of a practitioner in historical anthropology of the period before written records (Green in press; Kirch and Green in press). That approach yields an integrated and fairly convincing solution to the language, culture, and biological affinities of the Rapanui who inhabited Easter Island at the time of European contact. As such, the argument advanced has to do with ethnicity - "the product of an empirically available activity, classifying people according to their origins" (Levine 1999:166), and 'origins', as Kawharu (1994: xv) astutely observes for the Maori, "can be said to be about identity. It is also of course about other things like space and time, myth and history, subject and context". Paralleling articles in the volume for the origins of the first New Zealanders (Sutton 1994), this range of evidence also firmly ties the initial Easter Islanders to Polynesia, and in their particular case to the South Marutea-Mangarevan-Temoe-Pitcairn-Henderson Island region of southeastern Polynesia. Maori origins are more likely to be central East Polynesia.

In the last decade, Martinsson-Wallin (1994:116-121) thoroughly reviewed the various sources and schema that have been proposed over the years for the origins of people inhabiting Easter Island. Additional such listings with appropriate citations are set out by Green (1998:88-90) and Chapman (2000:29). For the Polynesian origin advocates, the Marquesas has long topped the list as a favored source, but locations further south including the Southern Cooks, Australs, Mangareva, and the eastern Tuamotus have all had their champions, while various degrees of input from South America, especially at the time of first settlement, still have their staunch adherents. Martinsson-Wallin (1994:118) identifies me (Green 1985,1988) as one holding to a Mangarevan connection for the main origin of Rapa Nui's first inhabitants. Fischer (2000a:110, footnote 1) believes the Mangarevan source viewpoint may initially go back to Katherine Routledge in the period 1921-1923, when she spent 15 months in Mangareva after having worked extensively on Easter Island. Other researchers, of course, have canvassed this position since (Buck 1938; Métraux 1940; Shapiro 1940).

My views on Rapanui origins were based on conducting five months of archaeology within the Mangarevan group in 1959. Some of them were summarized in a paper given in 1984 at the First International Congress, Easter Island and East Polynesia in Easter Island. Much of the evidence presented at that time was linguistic (Green 1985). The general contention for a Mangarevan connection did not have much sale among many subsequent writers on Easter Island as is evident from discussions in the books or monographs by Bahn and Flenley (1992), Fischer (editor, 1993), Van Tilburg (1994) and Martinsson-Wallin (1994) herself, although the linguistic component of the

argument seems to have found some acceptance.

For this reason when attending the Second Congress in Rapa Nui during October 1996, I expanded considerably on the range of evidence from which one could draw to make the claim that Mangareva, or more accurately the South Marutea-Mangarevan-Temoe-Pitcairn-Henderson interaction sphere, was the most likely source for the settlement of Rapa Nui by Polynesians. This presentation was published in a Chilean volume for that Congress (Vargas [editor]:1998), although delayed in its circulation by printing problems until well into 1999.

My presentation employed information from oral tradition, biological anthropology, voyaging (simulated and real), plants, the Pacific rat and Asian jungle fowl, plus various lines of evidence with early dates from archaeology (adzes, fishhooks, coral files, drills, harpoon heads and house forms) to support the robust nature of a general claim that the initial inhabitants of Rapanui were from a Mangareva interaction sphere source. Significantly, in this paper I also allowed for contact with South America well *after* the time of Easter Island's initial settlement by Polynesians. In the view of at least some scholars including myself, descendants of these settlers sailed from Rapa Nui on to South America circa 1100 AD (or perhaps in the century before) and then returned to the central part of East Polynesia with the sweet potato and the bottle gourd. These plants were distributed shortly thereafter to the Polynesian margins in Hawai'i, Easter Island, and New Zealand. From the time of the Second International Congress, colleagues have proved somewhat more receptive to the main thrust of the propositions put forward.

Since writing that paper a number of things have happened to make certain of the propositions advanced in it even more attractive, because they are supported by additional lines of evidence bearing on the overall picture. These additions are set out below.

1. A colleague who first demonstrated the prehistoric Mangarevan-Pitcairn-Henderson or Southeast Polynesian interaction sphere dating from 800 to 1600 AD, is one with whom I am also writing up the Mangarevan archaeological sequence (Weisler 1996, 1998a; Green and Weisler ms). In the course of working up these materials, Weisler (1998b) has sourced some of the adzes I recovered in Mangareva during the 1959 fieldwork, including one dating to the 12th-13th century AD. Two of the 14 Mangarevan adzes [including the dated one], proved to be from a quarry on a small island in the northeastern part of the Marquesan group. Such contacts with the Marquesas also find support in certain forms of Mangarevan fishhooks and a grooved octopus lure sinker found in the mid-part of its sequence (Green 1998: Fig. 14i-k).

2. Irwin (1992:93) argued that supposed voyages direct from the Marquesas to Easter Island, proposed by Sinoto and

many others to accommodate parallels in archaeological artifacts from these two places, were in fact not really feasible. Rather, in terms of Polynesian voyaging capacities—sailing from the Marquesas to Mangareva or from Mangareva via Pitcairn to Easter Island were claimed to be quite achievable kinds of destinations. I agreed (Green 1998:95), citing as additional information the fact that 19th century sailing ships never made voyages from the Marquesas direct to Easter Island (Figure 1), though they often did proceed far to the south and somewhat to the west and thence from Mangareva or Pitcairn to Easter, and sometimes covered the last part within seven to nine days. In the light of the above it was pleasing when the Polynesian replica canoe—*Höküle'a*—sailed from the Marquesas to Mangareva in 33 days (see Figure showing the route of the voyage in *RNJ* 1999 13[4]:119). The very long distance voyaging of the kind discussed above was demonstrated as having a realistic basis for contacts with Mangareva. Irwin's simulation voyages between the two places were supported by both the hard archaeological evidence and an experimental voyage in a replica canoe of a

ney (1994) had predicted to be the most favorable for this particular passage. Note that the crew of the *Höküle'a* had anticipated a passage of 30 to 40 days and replaced the usual Polynesian-style sails with high-performance yacht sails. Yet it turned out the new sails were not really crucial to reaching Rapa Nui as northerly winds caused a series of weather fronts passing to the south and by cyclogenesis to the west, so that instead of having to tack against the trades, the canoe could be sailed most of the way by reaching across the wind, the most favorable angle for a traditionally-rigged Polynesian type craft (Finney 2000:57). Again, what had been predicted as the likely route by which voyagers from southeastern Polynesia had first settled Rapa Nui was shown to be an entirely achievable passage by traditional methods of navigation used in such ventures. Experimental voyaging by a replica canoe had provided yet one more piece of evidence vindicating the proposed origin of the Rapanui founding population in the Mangarevan-Pitcairn interaction sphere. This, however, was not all; new developments on the biological front have also advanced the case.

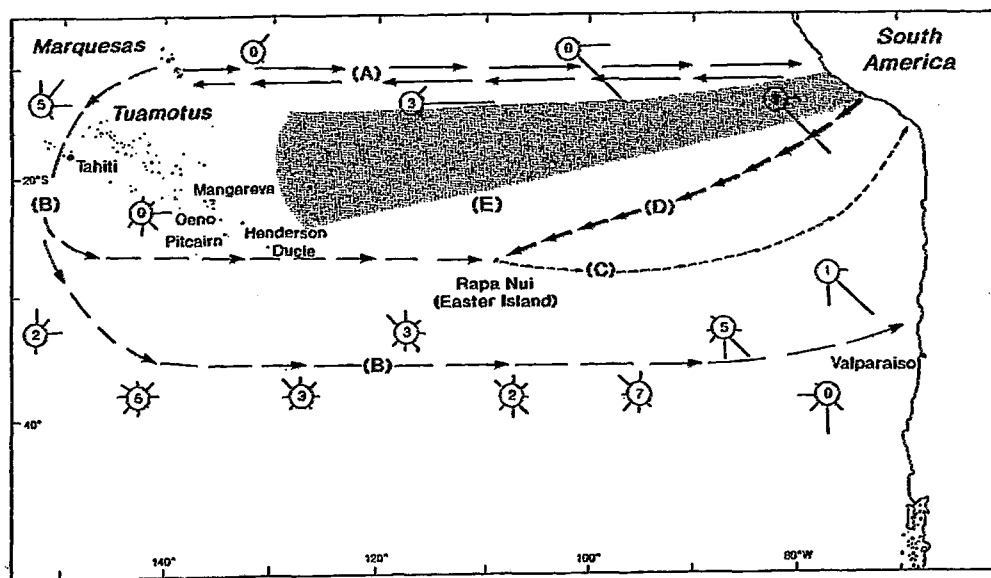


Figure 1. A) Te Rangi Hiroa's [Buck] direct route to South America from the Marquesas and return, of which only the return part has proven feasible; B) The recommended square-rigger route from the Marquesas to Valparaiso, where some vessels also sailed through Pitcairn and Easter Island; C) A reasonably high latitude, though less cold route taking advantage of prevailing westerlies from Rapa Nui to the South American coast favored by Finney (1994) and myself for Polynesians; D) to A. The arc within which a return voyage to Polynesia from South America is feasible according to Irwin (1992 and personal communication); E) The arc for highly likely return voyages to Polynesia, where a screen of islands rather than an individual island group provides the initial destination, after which additional legs within well established interaction spheres permit the achievement of a final one.

Polynesian type sailing craft.

3. The day an e-mail arrived from the editor of the *Rapa Nui Journal* informing me that the *Höküle'a* had arrived in Rapa Nui on October 9, 1999, straight from Mangareva in 17 ½ days, was truly gratifying. I went immediately to the Web. Irwin's (1992:138,161) voyaging simulations had suggested 20 to 21 days for Polynesian sailing canoes from Pitcairn to Easter Island during the period of the winter westerlies that both he and Fin-

4. Chapman, whose 1997 article I had consulted for the data from skeletal observation, has since completed his Ph.D. (1999). Two new aspects therein are crucial to his previously published interpretations on which I had relied until then.

(a) Previous studies had suggested to Chapman that one set of skeletal materials from one locality of Rapa Nui were not homogeneous with all the others, and that this just might signal some sort of contact with South America. Gill (1994) and his associates (Gill *et al.* 1997) had been particularly strong on this point. Now, further study by Chapman and as well as Stefan (below) have shown that all Rapanui people represented by skeletal remains were homogeneous through late prehistory and into the protohistoric period. Observer error in some skeletal records is probably the source of previous claims for population differentiation on Easter Island.

Chapman (1998:170) states the current understanding of the available data well: "Finally, contrary to Heyerdahl's (1989, 1997) suggestions and results from previous non-metric studies (Chapman 1993, Chapman and Gill 1997), the results do not support settlement or significant gene flow with South America... Similarities reported in previous studies...are attributed to observer error in data collection and the bias caused by varying sample sizes in the MMD statistic".

(b) Although Chapman's Mangarevan skeletal sample was too small (n = 7) from which to draw firm conclusions, overall

the sample numbers from elsewhere were sufficient to conclude that while the ancestral homeland of the Rapanui people remains uncertain based on the cranial information used in the various comparisons, "either Mangareva or a location in the Tuamotus remains the most likely option" (Chapman 1998:iii).

5. In the summer of 1999 I visited with Vincent Stefan at the University of New Mexico where he was completing a Ph.D. on the Rapanui and other East Polynesian skeletal populations. That is now complete, and some of the conclusions were reported at the Pacific 2000 conference in Hawai'i in August. The statement which is of interest here is as follows: "Analysis of the craniometric data indicate that the prehistoric Rapanui had their strongest affinities with the Gambier [Mangarevan] Islands population, followed closely by the Tuamotu Archipelago population (Stefan 2000:65). Support for these views is now echoed by Gill (2000:58) also: "Their [Rapanui] high, long, large crania and facial characteristics are distinctive, and these traits tie them directly to other East Polynesians (especially of the Gambier Islands)".

Although Pietrusewsky (1996) did not have Mangarevan skeletal data in the East Polynesian study which I used in my 1998 paper, this deficiency has since been overcome by these more recent studies. All lend support to a Mangarevan source as the most probable parental population for the prehistoric people of Easter Island. Moreover, no sign of a South American component (tested for by including South American cranial samples in the comparisons) was encountered. Interestingly, this is entirely consistent with what Shapiro (1940) long ago determined from the anthropometrics of living Rapanui people—that they were most like Mangarevans from the Gambier Islands.

Other recent developments bearing on Rapanui connections to places elsewhere relate to yet different matters covered very briefly in my 1998 article.

6. One is the topic of religious structures, especially those of southeastern Polynesia (Green 2000a). This paper was written for a volume presented to Arne Skjølsvold of the Kon Tiki Museum on the occasion of his 75th birthday. The article, as might be expected, was based on Skjølsvold's investigations at Ahu Nau Nau at Anakena on Easter Island, plus those by Emory and myself on Mangarevan and Temoe *marae*, and in addition an inquiry into the common linguistic terminology employed in describing both these and other Eastern Polynesian religious structures. A strong case is drawn to:

(a) demonstrate that the religious sites of South Marutea (in the eastern Tuamotus), Mangareva and Temoe, Pitcairn and Easter Island are clearly related in respect to many of their architectural features;

(b) that the initial stages in the development of *marae* and *ahu* on Rapa Nui conform quite well to those early structures elsewhere in East Polynesia;

(c) that in linguistic reconstructions of terms for religious structures those that survive as reflexes in the Rapanui language were brought there by the founding population, as all are of Proto Eastern Polynesian or even greater antiquity (Green 2000a:85-88);

(d) and finally, that if influence from South America is to be contemplated in the later Easter Island image *ahu* monu-

ments, as I claim it should, then it occurs in the period 1100-1200 AD, i.e. some 300 to 400 years after Rapa Nui was first settled by Polynesians from the Mangarevan-Pitcairn interaction sphere.

7. On the last point of evidence for a South American connection circa 1100 AD or before, I had employed not only the information and formulations of Yen (1974) regarding the sweet potato, but also some lesser known ones pertaining to the white flower bottle gourd (Green 1998:98-100). These latter have now been amplified by Burtenshaw (1999) for the Maori bottle gourd, its ethnobotany and its probable South American origin, but also more widely in the Pacific by myself (Green 2000b). This last commentary outlines a dual origin in Oceania for the bottle gourd in that region, the western source being Asian and just post-Lapita. In contrast, its prehistoric occurrence in East Polynesia is somewhat later and also linked by both Burtenshaw and myself to the prehistoric occurrence of the sweet potato in that region. I date these events to the interval between the 10th and 12th centuries AD. While both plants are seen as having been transported to East Polynesia from South America in one or more of the varied views expressed by Yen (1974), Whistler (1990,1991), Ross (1996), Green (1998, 2000b), and Burtenshaw (1999), I have gone further to suggest the linkage of the two plants may stem from Polynesians sailing at that time from Easter Island to South America, and thence back to central East Polynesia, drawing on the detailed voyaging analyses presented by both Irwin (1992) and Finney (1994).

Thus contra Heyerdahl, in this interpretation of the plant and voyaging evidence it was the Polynesians, who made contact with South America and then made the rather easier circa 40 day sail home (Figure 1 - Route E), which many adventurers in a variety of craft from the time of Heyerdahl on have demonstrated is quite a feasible proposition. This return voyage allowed the sweet potato and the bottle gourd to be transferred to central East Polynesia and then dispersed north to Hawai'i, east to Rapa Nui, and south to Aotearoa (Yen 1974: Fig.87). In my view, these events happened in the few centuries before New Zealand was settled by Maori (1100-1200 AD), and some centuries after Hawai'i and Rapa Nui had been settled from the Marquesas and Mangareva respectively.

Let me end with some additional observations on other matters canvassed in the 1998 paper.

8. Interaction spheres have become the name of the game in tracking early Polynesian dispersals and subsequent contacts between island groups (Weisler 1997, 1998b). Easter Island was not settled just the once and thereafter remained isolated from further contact as has been maintained by a variety of scholars (Green 1998:88,90,97-100). Rather, the level of its interaction, both to the west, and perhaps on occasion to the east, was simply less repetitive or continuous than elsewhere in Eastern Polynesia (Stevenson and Haoa 1999:5). A listing of post-settlement contact items (without regard to direction or place) would include the sweet potato and the bottle gourd. However, they would also involve elements of the later *ahu* complex such as cut and dressed stone, humanoid statuary in stone, stone one-piece fishhooks, stone *poi* pounders, and rafts, just to name a few possible Polynesian candidates for consideration. Moreover,

as Irwin (personal communication) has pointed out to me, once the first round trip to South America was accomplished, it may well have been repeated as navigational knowledge needed was now in place, a condition that would also apply to the southeast Polynesian zone.

9. Linguistically, Mangareva remains implicated when seeking which among the Marquesic languages is closest to Rapanui (Green 1998:91; Fischer 2000a:110 and footnote 4). The case is now enhanced in that Rapa too is seen as a Marquesic language (along with Hawaiian and Marquesan), but one sharing its closest affinities with Mangarevan (Fischer 2000a:106-108). Moreover, drawing on doublets in Mangarevan, Fischer (2000b, personal communication) has found additional data that strengthens an already postulated connection with Rapanui.

10. *Hatu Matu'a* constitutes a founding ancestor for both Mangareva and Rapanui. Oral traditions about these ancestral figures relate quite different accounts of their activities, however, and it seems unlikely the Easter Island account was borrowed from Mangarevan missionaries resident in Rapa Nui in the 19th century. The details of the linguistic sound shifts (*Hotu matu'a* versus *'atu metua*) also inveigh against that view (Green 1998:90-91). **Fatu* now proves to be a Proto Polynesian term, which in Eastern Polynesian carries the meaning of 'lord, master, overseer', but also in Mangarevan, Rapanui, and Maori, that of a 'founding ancestor or first parent'. However, only in Mangareva and Rapanui do we have the compound of *Hatu matu'a* with the Rapanui reflex retaining the Proto Polynesian glottal stop indicative of an old and inherited form. [The assimilation of "a" to "o" in *Hatu* seems to have occurred during the early period of European contact when both forms are in evidence, but it is now complete].

A genealogically slightly later and important ancestor of the formative period was *Tu'u-Ko-Iho* (Fischer 1994). He is an ancestor often associated with activities such as statuary. On current evidence, statues are not certainly mounted on Easter Island *ahu* until the 13th or 14th century and the image *ahu* stage (Green 2000a:92-93). It is my conjecture that *Tu'u-Ko-Iho* is far more likely to be the Polynesian voyager who introduced the ideas of cut and dressed stones and statuary to Rapanui. This implies that the concerns of advocates of a South American origin regarding *Hotu matu'a* are in fact misplaced. As his name shows, he was a shared Polynesian voyaging figure from the west.

11. When the editor of the *Rapa Nui Journal* first saw a preprint of my 1998 articles, she noted that to her knowledge the chicken had not been recorded as present in Mangareva according to its ethnography (Buck 1938:8), although it was reported as present in early deposits in Rapa Nui. I assured her that was not really a problem for my argument as chicken bone had in fact been found in the 12th century mid-sequence archaeological deposits of Mangareva, and recently had been securely identified by Steadman and Justice (1998) as once having been present also in that island group, as well as in early contexts in Rapa Nui. This, of course, also applies to the Pacific rat (Green 1998:100-101).

12. The parallels among the portable artifacts of circa 1200 AD from Mangareva and Easter Island argue strongly for

a close cultural affinity and mutual common origin. Four hundred years after their settlement, the two cultural assemblages have not yet diverged very much (Green 1998:102-108). Moreover, they easily fall within a well defined early East Polynesian pattern (Walter 1996), attesting to the ultimate origin of their makers.

13. Archaeologically established settlement dates for the Easter Island/Mangarevan region of southeast Polynesia fall in the period around 800 AD (Green 1998:102; Green and Weisler ms). For Easter Island in particular, Martinsson-Wallin and Wallin (1998:183) suggest a date of AD 800-1000 to be used when referring to its initial settlement. Seeking other kinds of data bearing on this point, I wrote to John Flenley for new information about his current views on the evidence from Rapa Nui pollen core records. While core KAO1 had signaled the start of local forest clearance on Rapa Nui at circa 1200 BP (i.e. 750 AD) (Flenley 1996:135,140), core KAO2 from well out into the middle of the swamp away from local events was thought to provide a better indicator of regional vegetation history for the island. Its analysis was first published in 1996 in a little known venue, yet may prove important in assisting to identify the time of initial humanly induced environmental disturbance for the whole island. This event in the KAO2 core is associated with zone 2 beginning at 14.5 m (Flenley 1996:139 and personal communication), when a marked decline in trees and shrubs also sees a parallel increase in herbs, with Gramineae pollen grains starting to become fairly prominent. There is no ¹⁴C date for this particular point in the deposition sequence, but interpolating between dated levels above at 11.35 to 11.45 m and those below at 14.85 to 14.95 m (Flenley 1996:137 and Table 1) yields on my calculations something in the range between the mid 6th century AD and the mid 8th century AD, slightly earlier than the previous KAO1 estimate. Thus the potential is there to perhaps add a century or two to the 800-1000 AD date obtained by archaeology at Anakena and on Henderson Island for established settlement of the southeast Polynesian region. More than that, however, seems unlikely to me at present.

14. A final and rather provocative suggestion was that the appearance of the sea-going sailing raft in the New World may be due to the postulated Polynesian contact (Green 1998:96-97 and Figures 9 and 10). That rafts are far earlier (4500-3500 years ago) in the Asian portion of their Pacific-wide distribution, now finds support in linguistic and archaeological evidence for exchange of goods inferred to have been by bamboo sailing rafts in the South China/Taiwan region (Blust 1999:74-75; Rolett *et al.* 2000:60).

CONCLUSION

In this overview I hope to have shown that the data assembled in a paper given on Rapa Nui in 1996 and published in 1998 which argued that the initial origins of its earliest inhabitants was from the southeast Polynesian interaction sphere has since garnered further substance through new information and interpretations. Moreover, after initial settlement, contacts to the west, and probably to the east as well as far as South America, continued with some important consequences for East Poly-

nesian prehistory.

Proof, paraphrasing the mathematician Mark Kac, is that which convinces a reasonable person, a rigorous proof is that which convinces an unreasonable one. This, however, really applies only to closed and highly deterministic models and systems. In open ones where the contingencies of history play a profound role, consilience constitutes a more viable measure of proof (Wilson 1998), and one has to exploit as fully as possible the horizontal independence that obtains between distinct lines of evidence pointing to the most probable conclusion (Wylie 2000:232-233). In my view, the body of data for southeast Polynesia is now sufficient to convince reasonable scholars of Polynesian prehistory with respect to the highly probable origins of the linguistic, cultural and biological make up of Rapanui's founding and enduring population.

While for some analysts and many fringe archaeologists, Easter Island will always constitute a mystery, thereby engendering origin narratives of rather dubious merit, it is now possible to identify and discard a great number of these as being to various degrees incompatible with a currently converging suite of data sets from a whole range of disciplines. Discarding those postulates with little prior plausibility will allow us to focus on well founded propositions wherein even more sophisticated answers may in fact lie. At least 12 of the 14 points enumerated above, emanating from a range of investigators employing detailed analyses, would appear to meet that test, making them worth the close scrutiny which leads to their further revision, expansion or replacement.

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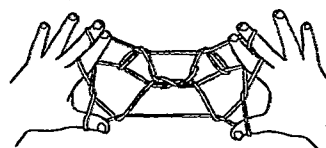
This paper was presented to a seminar in the Department of Anthropology at the University of Auckland in May 2000 accompanied by many overheads from various of the sources cited bearing on a particular point. Helpful commentary on that presentation by Thegn Ladefoged, Geoffrey Irwin and Judith Huntsman served in the development or clarification of a number of points it raised, for which I am grateful. Valerie Green and Dorothy Brown improved the final presentation and format, and Joan Lawrence drew the illustration. They are thanked for their efforts. The views expressed, of course, are my own responsibility.

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