

Rongorongo of Easter Island

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Easter Island, over 3600 km west of Chile and 2600 km east of the island of Mangaeva, was first visited by European sailors in 1722. In 1862 Peruvian ships kidnapped over 1400 islanders, speakers of Rapanui (a Polynesian language). By the time European missionaries began to notice the *rongorongo* (lit. 'recitation') boards covered with rows of incised characters, knowledge of how to read and write them had been lost. In addition to classical rongorongo script, Barthel (1971) notes the presence of two other scripts on the island: the *ta'u* and *mama* scripts, which had separate inventories of signs. Fischer (1993B) lists 26 rongorongo texts, 6 *ta'u* texts, and 2 *mama* texts. Only classical script is discussed here.

Progress in decipherment

Florentin Étienne Jaussen, the Catholic bishop in Tahiti in 1866—working with Metoro Taouaouré, an Easter Islander in Tahiti—created a list of several hundred signs grouped according to subject matter, with French and Rapanui translations (Heyerdahl and Ferdon 1965, figs. 83–94). In 1956 a manuscript containing rongorongo signs with Rapanui translations in roman script, belonging to Esteban Atan, was shown to members of the Norwegian expedition (*ibid.*, figs. 97–121). Examination of both of these sources suggests only that the writing was pictographic, giving no evidence of relationships between signs with similar features and words or phrases with similar sounds or meanings.

One of the earliest observations based purely on the structure of the script was published posthumously by Borja Kudrjavev (1949), a young Russian who observed a repeated sequence in the two St. Petersburg tablets (RR 17–18 in Fischer 1993B), later also observed in two additional tablets (Butinov 1990: 268). Butinov and Knorozov (1957) called attention to a sequence of signs which they said was a genealogy. The tablets are read left to right, from bottom to top, in reverse boustrophedon fashion. Barthel (1958) provided scholars with line drawings of the entire corpus arranged in lines reading from left to right. He provides a list of several hundred signs (numbers go to 778, but not all slots are filled). Barthel (1963) lists a sign inventory of 150, and later (Barthel 1971) 120 signs. Twenty years later, Barthel writes (1993: 175) that he considers as much as ninety percent of his earlier work to be correct.



FIGURE 19. Petroglyph motifs with corresponding Rongorongo symbols (marked with '), drawings by Judy Alexander after Lee 1992: (a) Anthropomorphic figure (fig. 3.5:2), (b) Bird man (fig. 3.7:2), (c) Turtle (fig. 3.9:9), (d) Plant (fig. 3.15:2), (e) Two-headed frigate bird (fig. 3.8.4, rotated slightly and flipped on vertical axis), (f) Tern (fig. 3.8:2), (g) Frigate bird (fig. 3.8.4), (h) Fish (fig. 3.9.1), (i) Eye mask (fig. 3.6:4), (j) Vulva (fig. 3.6:8), (k) Lunate (fig. 3.14:10), (l) Rei miro, a crescent-shaped wooden pectoral (fig. 3.11:1, rotated 90°), (m) Fishhook (fig. 3.13:1). (bottom) Partial list of other symbols.

Viktor Krupa identified signs for 'moon', 'lizard', and the god Tane, and produced a frequency chart of human figures with varying head forms (1971, 1972, 1973, 1974). Jacques Guy of the Australian National University has contributed an interesting discussion of fused glyphs (1982) and notes a sequence from the Tahua tablet (RR 1) which occurs on three other tablets (1985).

Sergej Rjabchikov of Krasnodar claimed the script is "typical of other mixed ideographic and phonetic writing systems, relying on ideograms proper, phonograms, and generic determinatives" (1987: 361). He notes allographic variations of several glyphs (1988). Criticizing his work, Guy (1988) cautions that only the Marmari tablet (RR 2), which Barthel showed was a lunar calendar, is understood beyond reasonable doubt. He rejects assigning readings at this stage but characterizes the script as a mixed ideographic and phonetic system.

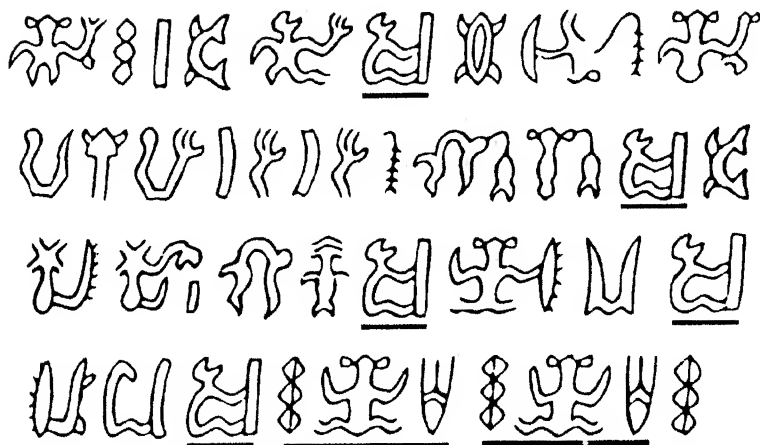


FIGURE 20. One line of text from the Keiti tablet (RR 6) (after Barthel 1958: Ev3).

Two repeated sequences are underlined.

In spite of impressive contributions by international scholars, Vignes (1990) observes correctly that the script remains undeciphered, and that we are still at the beginning of rongorongo studies. In fact, many of these scholars have suggested, in otherwise useful publications, all manner of fanciful interpretations.

A linguistic approach to decipherment

I propose a sign analysis which is both rigorous and systematic (Macri *IN PREPARATION*). It begins with an examination of the art of the island (Lee 1992), observing similarities between the written symbols and those found carved on stone or wood. FIGURE 19a–m' is not an exhaustive list, but does establish beyond any doubt that the script belongs to Easter Island. Even a cursory examination shows that most of the signs are composed of fairly simple forms which appear in a number of combinations (FIGURE 19n, FIGURE 20). However, signs which some researchers have considered basic are, in fact, products of doubling (FIGURE 21), concatenation (FIGURE 22a)—sometimes in boustrophedon fashion, reduction of size (FIGURE 22b), rotation (FIGURE 22a, e), and finally, of complex conflation of two or more signs (FIGURE 22b–e). Four symbols (FIGURE 19a', b', e', and fg'), and perhaps more, have the quality of undergoing loss of many of their elements when combined with other symbols.

Invoking these principles, the texts can be accounted for with fewer than 70 symbols—a number consistent only with a syllabary. Rapanui has 10 consonants [p t k ʔ m n ŋ h r v] and 5 vowels [i e a o u], so only 55 signs are required to represent all syllables composed of a single vowel or of a consonant + vowel. In addition to the 55 signs required by a syllabary, some signs, such as the lunar crescent and the lizard, were probably used logographically.



FIGURE 21. Doubled symbols (drawing by Judy Alexander).

This analysis is consistent with the assertion of islanders that each graphic unit (composed of one to four or five syllabic elements) represents a single word, and with the correlation between the number of symbols and the number of possible syllables in the Rapanui language. Complete decipherment can only be accomplished through the cooperative efforts of Rapanui speakers, art historians, archeologists, and linguists. Texts need to be assembled and redrawn (Dederen and Fischer 1993), individ-

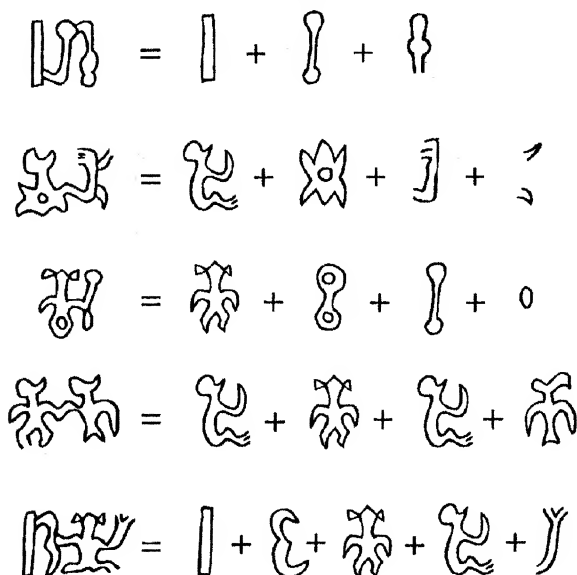


FIGURE 22. Composite signs showing full forms of constituent symbols (drawing by Judy Alexander).

ual symbols identified, and syllabic and/or logographic values demonstrated. Vignes's (1990) suggestion of a computer database will be an essential part of such an analysis.