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GRAMMAR NOTES ON SIRAYA, AN EXTINCT FORMOSAN LANGUAGE¹

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This is an attempt to unravel the grammar of a gospel text in Siraya, an extinct West Formosan language. It includes a discussion of the historical setting, the spelling, phonological features, function words, relation markers, morphosyntax of the verb, and the use of deictic verbs as prepositions. Regarding verbal morphology, special attention is given to case marking suffixes, verbal classifiers, compound verbs, and anticipating sequences. Verbal classifiers are lexical elements prefixed to a root (a verb, adverb, or noun) with which they constitute the overall meaning of the resulting verb (*matily-* 'talking, saying' + *vi* 'reciprocating, doing in return' → *matily-vi* 'to answer', *matily-* + *rix* 'mind' → *matily-rix* 'talk to oneself'). Compound verb constructions are constructions in which auxiliaries assume the functions of adverbs in English. These auxiliaries form an open class and are in fact the head of the verb phrase, as they carry most of the marking. An anticipating sequence is an element of a verb that is prefixed to the preceding auxiliary.

1. INTRODUCTION. This article is a report on work in progress on the linguistic analysis of Siraya. Together with Favorlang, another extinct Formosan language, Siraya was used for missionary purposes during the occupation of West Formosa by the Dutch East India Company between 1624 and 1661. Section 2 presents a historical background against which Siraya was used by Calvinist missionaries; section 3, an account of the language materials that the latter collected and that have survived time, as well as an account of previous linguistic work on Siraya; section 4, an outline of the procedure that I am following for their analysis; section 5, a treatment of some of the orthographic and phonemic difficulties involved in their analysis; and section 6, a short outline of Siraya grammar.

2. HISTORICAL BACKGROUND.² In the early seventeenth century, the Dutch East India Company tried to establish trade relations with China. It wanted to monopolize trade between China and Europe. It also hoped to be able to monopolize trade between China and Japan, as the Chinese emperor prohibited direct trade contacts between the Japanese and the Chinese. But the Chinese, who were not particularly interested in opening up their economy to western countries

in the first place, had already granted the Portuguese the rights to establish a small trading colony on the Chinese south coast. The Dutch, not quite realizing whom they were up against, made a display of force to the Chinese and began to attack Portuguese vessels. The Chinese authorities were dismayed by this behavior, and in the end they ordered the Dutch to leave Chinese territorial waters. The Dutch were allowed to stay in Formosa, which at the time was not part of China. They built a stronghold (Fort Zeelandia) on Tayouan, a peninsula that has now become part of the city of Tainan on the west coast of Taiwan. Initially, the sole objective of the Dutch was to wait for another opportunity to establish trade relations with the Chinese empire. But they would eventually establish their authority in large parts of West Formosa. They did so mainly at the instigation of Calvinist ministers they had invited to Fort Zeelandia. These ministers soon acquired a much better knowledge of conditions on the island and had a much better grasp of local inter-tribal politics than did the local representatives of the East India Company, who became very dependent on them. The ministers' first priority was conversion of the local population, and they succeeded in their aims through a program combining religious instruction, a literacy program, and health care. By 1661, they had converted almost 70,000 Formosans.

From the 1640s on, China was embroiled in a dynastic crisis. The rule of the Ming had come to an end. In 1644, a new emperor of Manchu origin was established in Beijing and became the first Qing ruler of China. But the Manchus still had to contend with dissident armies elsewhere in the country. In 1660, Qing troops defeated the Ming loyalist Zheng Chenggong (or Guo Xingye), who had maintained a powerful presence on China's southeast coast. Zheng Chenggong was driven from the Chinese mainland and found a refuge for himself and his fleet on Formosa. In so doing, he came into direct conflict with the Dutch. He did not accept their claims on West Formosa and gave them an ultimatum to leave. When this was refused, he laid siege to Fort Zeelandia and defeated the Dutch in 1661. He chased them from the island and prohibited practice of their religion among the Formosans.

Zheng Chenggong's occupation of Formosa was a decisive factor in the sinicization of the island, which until then had only a tiny minority of Chinese inhabitants. After the defeat of Zheng Chenggong's grandson by the Qing armies in 1683, Formosa was incorporated into the Chinese empire, and the local Austronesian population gradually became a minority after the arrival of immigrants from Southeast China.

3. THE DATA. The seventeenth-century missionaries in West Formosa produced a variety of Siraya and Favorlang written materials in their endeavor to convert the local population and make them literate. Some of these materials were published, and today the following still exist: a translation of the Gospel of St. Matthew into Siraya (174 pages of Siraya and Dutch text, Gravins 1661), a catechism in Siraya

(288 pages of Siraya and Dutch text, Gravins 1662), a Favorlang-Dutch dictionary (Happart 1650), and a copus of 101 pages of text in Favorlang with Dutch translation (Vertrecht 1888). As far as the Siraya data are concerned, Gravins's bilingual gospel text (1661) was published again by Campbell (1888, 1906), who added corresponding verses from the King James bible to it. Gravins's catechism (1661) was reprinted by Asai (1939).

Several other data were collected of Siraya, which became extinct at the end of the nineteenth century (Tsuchida and Yamada 1991:1). They are either texts or wordlists. The texts are Siraya land contracts with a Chinese translation or equivalent text. Most of these were published by Murakami (1933), but several others have been discovered since. Ogawa (1905), Murakami (1930), and recently, Weng (1990), are attempts at translating these land contracts.

The most important wordlist is probably a 35-page list compiled by Van der Vis (1842). It includes lexicon from two earlier sources, the so-called "Utrecht manuscript" and Klapproth (1824). The Utrecht manuscript is interesting because it represents a different dialect from the one in the Siraya gospel and catechism. Among others, it reflects Proto-Austronesian (PAN) *D as 's' and PAN *R as 'g' in all positions. In the dialect of the gospel and catechism, nonfinal *R was lost, and *d is usually reflected as 'd', 'r', 'r', and 'r'. Van der Vis (1842) has become the main source for Siraya in comparative linguistic literature. Its usefulness, however, is impaired by numerous spelling errors. Other—more recent—primary sources for lexical data are Ino (1899, 1908), Ogawa (1917), and Li (1991). Ino and Ogawa's data are analyzed in Tsuchida (1982 and 1991). The latter is particularly important, as it also contains data from Makatao and Taiwan, which are both closely related to Siraya, if not just dialects of it.

The linguistic analysis of Siraya was done almost exclusively for comparative-historical purposes, and it mainly concerned the lexicon and phonology. The first attempt at a grammatical analysis are Adelaar (n.d.) and Tsuchida (1996a and b). Tsuchida (1996a) is a treatment (in Chinese) of Siraya pronouns and irrealis markers. (Tsuchida 1996b) is an English translation.

4. ANALYSIS OF THE DATA. The interpretation of the data is as much a philological exercise as a linguistic one. Although it was impossible to divide the work into clearcut stages, the procedure that I have used thus far is roughly as follows: (a) making a list of all words occurring in the Siraya texts; (b) grouping together words that differ in spelling but are otherwise identical; (c) sorting out spelling variation, defining spelling principles, and collecting, where possible, phonemically relevant information; (d) grouping words together that seem to have the same root; (e) trying to find common roots and derivational patterns; (f) reorganizing the wordlist according to roots, with cross-references for intransparent derivations; (g) making a morphosyntactic analysis of the texts; (h) rewriting the Gospel text in a near-phonemic spelling, using hyphenation to indicate morpheme boundaries—I give this rewritten text together with the text in original spelling.

using it as a basis for interlinear glossing; and (i) eventually, rewriting and reorganizing the wordlist according to this near-phonemic spelling.³

5. THE SPELLING AND ITS PHONEMIC IMPLICATIONS

5.1 SIRAYA ORTHOGRAPHY. The missionaries who made the Siraya translations did not use one letter per phoneme, nor were they aware of the distinction between phoneme and sound. Instead, they often used several ways to spell a sound. These ways often reflect the spelling problems that existed in their own language. Seventeenth-century Dutch spelling was not yet unified. The publication of an authorized bible translation in 1648 (only 13 years before the publication of the Siraya texts) provided a model for the spelling of Dutch. But until then, and even for some time afterward, authors often followed personal spelling preference, influenced by their own Dutch dialect background and by their attitude toward French orthography (which until 1648 had often served as a model for the spelling of Dutch).

Therefore, the translators' prelinguistic approach and the spelling confusion in their own language certainly add to the problem of interpreting Siraya orthography. This orthography inevitably makes more distinctions than are phonemically warranted, often accounting for allegro pronunciations, unsystematic sandhi, and the historical loss of a sound still occurring dialectally. Conversely, it is also possible that it fails to make some phonemic distinctions that may have existed in Siraya.

In this paper, I maintain the original Siraya spelling in the sample sentences. However, in the interlinear glosses I also use a simplified spelling that does not indicate unnecessary spelling variation or sandhi, and that hyphenates consistently on morpheme boundaries.

My spelling is tentative. I am particularly doubtful about the phonemic status of doubled consonants, vowel length, and the difference between mid and high vowels. I maintain these orthographic distinctions, as I feel that I should do some more phonotactic and other research before I can decide with full confidence on these matters. In any event, the inquisitive or skeptical reader will have recourse to the original spelling, which I give in conjunction with my own spelling.

Sample sentences are notated in the original spelling, directly followed by a version in my own spelling. I do not give the original spelling of vocabulary items if it is sufficiently straightforward and uniform throughout the gospel text. However, if the original spelling of a particular vocabulary item is under discussion or if it is orthographically problematic, I give it between single quotation marks. My own spelling is italicized within the text of this article, but not in sample sentences or tables, where it is in roman type.

I indicate sources for all sample sentences and also for quotations and words, except for words that occur frequently (e.g., function words). Sources are indicated in the following way: a word or quotation from the Gospel of Matthew is

labeled with a Latin numeral (indicating gospel chapter) followed by a semicolon and an Arabic numeral (indicating verse). The combination of both numbers is given within parentheses and comes immediately after the word or quotation in question. A word or quotation from the Siraya Catechism is labeled with a capital C followed by the page number of the 1661 print, followed by an 'f' if reference is made to a verso page. A word from the Utrecht manuscript is labeled (UM). Murakami (1933) contains an edited version of this manuscript in which the Siraya lexical material is ordered alphabetically and provided with English glosses.

I will give a full treatment of Siraya spelling elsewhere (Adelaar, to appear). Here I limit myself to an enumeration of the main alterations and a few general remarks that will help the reader to interpret the spelling of the sample sentences. (1) Especially in the gospel text and catechism, 'g', 'gh', and 'ch' are often used interchangeably. They reflect, among others, PAN *R, which was a velar fricative. They also stand for a velar fricative in Dutch spelling. I use x wherever 'g', 'gh', or 'ch' occur in the original text. They also alternate occasionally with 'h' or 'h' in the original orthography. Wherever this happens, I use x for 'h' or 'h' as well.

(2) In many cases, 'h' appears to be an aspirate consonant in its own right, and I maintain it as *h* in my spelling. However, at the end of a syllable, the status and function of 'h' often remains unclear. It occurs particularly often before the voiceless stops *p*, *t*, and *k*. It could be indicating vowel length or (apparently non-phonemic) glottal fricativization, but one is not sure. I will leave this 'h' out of my spelling in cases where it is not indicated consistently and is apparently not phonemic. This is also the case with the 'h' in the irrealis markers '-ah', '-auh', and '-eih', which does not seem to have a reflex in other Formosan languages and is not reflected in the lexicon of the Utrecht manuscript. I will leave it out and write these markers as *-a*, *-aw*, and *-e*, respectively.

(3) As a rule, 'ou' and 'oe' both seem to represent [u]. They are sometimes used interchangeably in the texts. Their cooccurrence does not reflect a vowel opposition in PAN or in other Austronesian languages. In the gospel text 'oe' always applies in the final diphthong 'oei' (which, however, is written 'oy' in the Utrecht manuscript, e.g., for 'vavoiei' (vii:30) 'pig' a corresponding 'vavoij' is found in the Utrecht manuscript). It also frequently occurs before 'k' and 'kk' in the word for 'sheep', where it however seems to be in free variation with 'ou', as in 'joukko' (xxv:33), 'jouko' (x:6), 'joekko' (vii:15), 'jocko' (vii:15), and 'joeko' (ix:36). It is used in 'Joepan' (i:20), the Siraya name of the Holy Spirit, but other derivations of the same root <sup>are usually written with 'ou' (compare 'mioup' (xxv:8) and 'hi-oup-eh' (24:12) 'to blow out, extinguish'). The combinations 'ou' and 'oe' were a matter of debate among Dutch authors in the seventeenth century. It appears that 'oe' had a more open articulation than 'ou', but the opposition was minimal and often led to spelling confusion. Modern Dutch has lost it completely (Caron 1972:ch.5).

Although it is theoretically possible that Siraya 'oe' also stood for a more open vowel than 'ou' did, little seems to indicate that the opposition was

phonemically relevant. The occurrence of both graphemes could merely be an instance of how the gospel and catechism translators were not always able to take a distance from spelling issues in their own language when they devised a spelling for Siraya. I interpret both graphemes as one identical vowel and will write them as *u*.

Sometimes 'ou' is also in free variation with 'o'. Where this occurs in nonfinal position, I represent the underlying vowel as *u*. In final position, 'o' and 'u' seem to have different origins. As a rule, PAN *-u(q) is reflected as 'o', whereas PAN *-iw is reflected as 'ou': compare 'yahio' 'stone' (vii:6, < PAN *PaCu), 'ano' 'someone' (xii:47, < PAN *anu), rawo in 'karakawoan' 'setting (of sun)' (C56f, < PAN *labug 'to fall') vs. 'ni-vario' 'replace' (ii:22, < PAN *baliw 'change'). However, further investigation is required to determine whether 'o' and 'u' were in phonemic contrast. Sometimes 'ou' is followed by 'w'. The latter must be a nonphonemic glide, which I will not write. For instance, I render 'ouwal' (v:29) 'right-hand' as *wal*, and 'ouwap' (xii:44) 'broom' as *wap*.

(4) In a few cases, 'oe' alternates with 'oui' or 'ouy', as in 'mavoë' (xxiv:19), 'mavoë' (UM) 'conceive, carry' versus its undergoer-oriented form 'ni-kavouë' (i:20), 'ni-kavoui' (C120) 'was conceived'. It is likely that it represents a diphthong here, an allophone of 'oui' or 'ouy' with lowered vowel quality. Note that the 'e' in 'mavoë' has an dieresis in the gospel text. Note also 'moë' 'flower', which has an acute on the 'é' and is probably a Chinese loanword. These diacritics indicate that a diphthong is concerned. I write *ui* for 'oui' and 'ouy'. I also write *ui* wherever 'oe' (or 'oe') alternates with 'oui'/'ouy'.

In one case, 'oe' alternates with 'oua': compare the root 'voul' (v:29) 'body' with the derivation 'malhovoel' (xviii:35) / 'meigbovoel' (xvi:27) 'every one, each person'. I represent 'voul' as well as 'voel' as *vul*.⁴

(5) Siraya spelling also has an 'u', which seems to indicate a short high back vowel. It is difficult to determine what the status of this short 'u' was, but little seems to indicate that vowel length was phonemic in Siraya. Nevertheless, failing a watertight argument for this, I write short 'u' with a breve (ü) in my spelling.

In some cases, 'u' appears to be part of a diphthong, and I spell it as *w*. For instance, 'vavau' (ii:9) 'above, on top of' becomes *vaww*, 'ytrau' (ii:11) 'perfume, scent' becomes *hriw*,⁵ and the irrealis suffix '-au(h)' and its variant '-æu(h)' become *-aw* and *-äw*, respectively.

Sometimes 'æ' is followed by double 'u', which I assume the gospel translators meant to be a syllabic vowel. When it occurs, I render it with a single symbol *u*. For example, I write 'vænuh' (xiii:25) 'enemy' as *væu*.⁶ Finally, I write *w* for '-u' or '-uw' - when it occurs between vowels - for instance, 'matana' (ix:24) 'to laugh' becomes *ma-taw*, 'tauwil' (ii:16) 'year' becomes *lawil*, 'soulat ki sa-ta tauwa tauwag' (v:31) 'letter of divorce' becomes *sulat ki saw-ta-taw-a-tawwax* ('*sulat* letter', *saw-tawwax* 'to leave, divorce').

(6) 'i', 'j', and 'y' are often used interchangeably. In contrast to 'i', 'y' often occurs before double consonants. It must indicate a short vowel, as double

consonants basically indicate shortness of the previous vowel in Dutch orthography. The interchangeability of 'i', 'j', and 'y' is also present in seventeenth-century Dutch orthography.

Vowel length is often indicated by doubling of the following consonant, but this only partly accounts for the occurrence of short 'i'. As stated above, the evidence for phonemic vowel length in Straya is not strong, but, if demonstrable at all, more evidence is needed in order to prove this point. In my spelling, I maintain *i* for a syllabic 'i' in the gospel text, but I will use *y* for a syllabic 'y', and I use *y* for a semi-vowel or the last segment of a diphthong in the gospel text. For instance, *assi* 'no(i)' remains as it is, but 'kytha' (xiii:15) 'to see' is spelled *kitha*, 'ajajam' (vi:26) 'animals' is spelled *ay-ayam*, and 'vavoet' (viii:30) 'swine', 'alaei' (xviii:7) 'woe', and 'mapatei' (xxii:24) 'dead' are spelled *vavuy*, *alady*, and *mapatey* respectively.

(7) In Straya spelling, this (short) 'u' and 'i/y' are sometimes in free variation. Such variation reflects a PAN central high vowel *a* or schwa and suggests that the original authors of the Straya texts had a problem in identifying and writing a schwa. I will write schwa in words where this free variation occurs. It is to be expected that in some words with a *u* or *y*, this vowel actually stands for a schwa, but there is no way of knowing if there is no variant form with the correlate high vowel (*i* and *u* respectively) to disambiguate its nature.⁷

One of the undergoer-oriented suffixes⁸ appears as '-ni', '-eni', '-in', or '-un', according to its phonemic environment (see 6.9.2). This variation favors the interpretation of its underlying vowel as a mid-central vowel. Moreover, the suffix reflects the PAN undergoer suffix *-en, and I will represent it as -en.

(8) 'æ' seems to represent a long palatalized counterpart of 'a' and is often in variation with 'a' in the dialect of the gospel text and the catechism (compare, for instance, the oblique personal pronouns in table 3). That 'æ' must be longer than 'a' is implied in the fact that 'a' frequently occurs before doubled consonants whereas 'æ' hardly ever does. In seventeenth-century Dutch, 'æ' stands for a long fronted palatal 'a'.

In my spelling, I prefer to write 'æ' as *â*. I find this symbol is orthographically more elegant, and it brings out more clearly its close association with 'a', which I write as *a*.

(9) 'e' is a mid-front vowel or a schwa (as in the suffix -en). As a mid-front vowel, it is often in free variation with 'æ' or with 'i'. In other cases, it occurs in 'ei', which stands for the diphthong *ey*. The distribution of this mid-front vowel suggests that it was not phonemic in Straya, especially since 'ei' seems to represent an underlying diphthong *ay* rather than *ey*.⁹

(10) 'q' is largely in free variation with 'k'. This free variation is also often seen in seventeenth-century Dutch spelling. The occurrence and distribution of 'k' and 'q' in Straya orthography does not seem to reflect a phonological opposition in the wider context of Formosan languages. They must stand for a single phoneme that I will write as *k* in my spelling.

(11) 'c' apparently stands either for [k] or for an affricate or fricative. It stands for [k] in 'coh', the 1st person singular topic pronoun that is usually written 'koh' or 'koh'. When it is followed by the letter 'i' or 'y', 'c' seems to stand for an affricate, as in the Hokkien loanword 'kougicia' (x:24)/'kounicia' (xiii:28) 'servant',¹⁰ and, most probably, in 'lyci [ki pahibalei-en]' 'philacteries'. However, in *makazing* (makou-sacyng, xi:25) 'wise', it seems to stand for some sort of fricative, as it alternates with 'z', compare *Ma-kuzazing puliti* (Makou-zazyng pou-illyt, ii:1) 'wise (men)'. Using 'c' for an affricate or sibilant before front vowels would be in conformity with the use of 'c' in Dutch and other West European orthographies, which is based on sound changes involving Latin *k* in Roman languages. I write *koh* instead of 'coh', and I maintain *c* wherever it directly precedes 'i' or 'y'.

(12) The use of double consonant graphemes ('ss', 'pp', 'tt', 'dd', etc.) is more or less consistent throughout the gospel and catechism, although most roots with doubled consonants are also occasionally spelled with a single consonant. There are hardly any minimal pairs of roots with and without doubled consonants, and it is unlikely that the opposition was phonemic. Geminated consonants are not a feature of the Formosan languages in general, nor of PAN. However, this requires some further study. In the meantime, I will maintain them when they occur within a root, as in this position they do seem to indicate shortness of the preceding vowel and hence carry some phonetic information. For instance, I will write 'mavouta' (xv:14) as *ma-wutta* 'blind', and 'ymnid' (xv:37)/'ymnid' (iii:5) as *ymnad* 'all'. If they occur at morpheme boundaries, however, I will write a single consonant. Here double consonants clearly serve no purpose and tend to obscure the morphemic structure of the word in question, e.g. 'ni-ouwap-pan (ki ouwap)' will become *ni-wap-an* (*ki wap*) (xii:44) 'swept (with a broom)'.

Straya doubled consonants are probably another example of the influence of Dutch spelling, where doubled consonants indicate shortness (and some other qualities) of the preceding vowel.

(13) The diacritics in the Straya texts (the apostrophe, dieresis, circumflex, and hyphen) are sometimes difficult to interpret, and none of them occurs consistently. *By* and *large*, however, an apostrophe indicates (1) the deletion of a sound, (2) in the dialect of the gospel and catechism, the historical loss of a sound that is still attested in the dialect of the Utrecht manuscript, or (3) a position that is often taken by the infix -*m*-. An example of (1) sound deletion is, for instance, 'k'atta' 'this', which is a contraction of *ka*, a linker, and *atta*, a demonstrative. Instances of (2) apostrophe indicating the loss of a sound are 'li'igh' (vii:26) 'sand' and 'u'i'i' (xxv:41) 'left-hand' in the gospel text, which have the corresponding forms 'li'igi' and 'ougi' (same meanings) in the Utrecht manuscript. An instance of (3) is 'd'arang' 'road', which often appears as a verbal derivative 'dmarang' 'to go'. My spelling ignores these apostrophes, as it aims to be synchronic and gives full forms where the original text indicates vowel loss. It writes *liix* (/ *liix*) 'sand' and *ni* (*ni*) 'left-hand'. As for (3), there seems to be little point in indicating orthographically where an affix might have occurred.

Dieresis is used on a vowel in order to show that it belongs to a different syllable from a directly preceding or following vowel. Examples *saii* (xxvii:8) 'one' (also written 'saat' (viii:19), 'sât' (ii:3), 'sat' (iii:5) → *saat*); 'irouä' (iii:13) 'to come' (usually 'iroua' → *irua*); 'Galileä' (xxvi:69) 'Galilee'.

A circumflex sometimes indicates vowel contraction, as in 'sâi' (ii:3), but in most cases it is merely indicative of affixation, as in Mous-sâ (iii:15) (*mu-s-a*) 'Let it be'; *matæ-i-riang-â-nei-ni-zen* (v:44) (*matæy-riang-a-neiniin*) 'Bless them!'

In some cases the origin of the circumflexed vowel is not retrievable, as in 'râ' (vi:6) (→ **raa?*) 'but'.

Finally, hyphenation is basically meant to indicate morpheme boundaries. Unfortunately, however, it does not occur at every morpheme boundary. More seriously, it sometimes occurs within a root, such that one of its constituent parts ends up looking like an affix, leaving the reader completely on the wrong foot. For instance, there is an actor-oriented verbal prefix 'mou-' (*mu-*) conveying the meaning of going toward (what is expressed by the root), e.g. 'mou-koua' (viii:32) (*mu-kua*) 'go to', 'mou-tho' (v:20) (*mu-tho*) 'go inside', 'mou-avang' (viii:3) (*mu-avang*) 'go on a ship'. In contrast, forms like 'ni-mou-ptu' (xii:20) 'bruised', 'mou-tous' (xii:34) 'mouth' or 'mou-mha' (xiii:51) 'understand', in spite of their hyphenation, do not have this prefix and should be re-analyzed as *ni-m-uptu*, *matus* and *m-umza*.

5.2 SIRAYA PHONEMICS. One can only speculate about the phonemics of Siraya. It seems to have the phonemes given in table 1. The consonants are represented in the sources by the following symbols, given here in the same order as presented in table 1, with parenthetical remarks as appropriate: 'b' (often alternates with 'v' and 'r', and in final position with 'p', but is not an allophone of 'v', as sometimes 'b' does not alternate with 'v', and conversely, sometimes 'v' does not alternate with 'b'); 'd' (often alternates with 'r', especially intervocally—there are, however, forms with 'd' or 'r' where such alternation never takes place); 'ng' (occurs infrequently—I do not know what this combination stands for);¹¹

TABLE 1. THE PHONEMES OF SIRAYA

CONSONANTS	
b	d
p	t
m	n
v	l, r
z	
c	
[ʃ]	s
w	y
	x
	h
VOWELS	
a, ä	
i (i), e, e	
u (ü), o	
DIPHTHONGS	
ay, ey, uy,	
aw, äw, ow	

'p'; 't'; 'k'; 'm'; 'n'; 'ng' (velar nasal); 'i'; 'r'; 'v' (more frequent than 'b'); 'z' (occurs only sporadically, and usually alternates with 'r' and, in one case, with 'e'—see above); 'r' (occurs before other consonants or word-finally, and is an allophone of 'v'; 's'; 'x' (a velar fricative that was probably voiced and may have been slightly palatal in pronunciation); 'h'; 'w'; 'y'.

The language seems to have had the vowels and diphthongs given in table 1. Palatalization of *a* or *u* is a frequent phenomenon in the gospel text and catchism: *a* becomes *ä*, and *u* or *aw* becomes *üw*. The dialect of the Utrecht manuscript does not exhibit palatal vowels. Palatalization can be predicted in a number of cases. It can be observed in environments where *a* or *u* are in the vicinity of a velar fricative (*x*) or of another *ä*. (See the first part of table 2.)

Palatalization may also affect vowels across morpheme boundaries. Compare the pair *ma-xanix* / *mä-ännix* in table 2, and also the following examples: *mu-* 'go toward' + *pänix* (xx:3) 'open, outward' → *müw-pänix* (ii:6) (also *mu-pänix*, viii:32) 'to appear, come into the open'; *paka-* (CAUSATIVE) + *ränix* (iv:16) 'shine' + *-aw* (IRREALIS) → *paka-ränix-äw* ('paka-ræmæ-æw', v:16) 'let (your light) shine . . .'; *ma-* (STATIVE verbal prefix) + *max* *wäx* [living] → *mä-wäx* (ix:18) 'to live', *paki-wäx* (pa-ka-wægh, iv:4) 'let live'.

TABLE 2. EXAMPLES OF PALATALIZATION

UTRECHT MANUSCRIPT	GOSPEL OF MATTHEW
IN THE VICINITY OF A VELAR FRICATIVE OR ANOTHER Ä	
passanax 'tree'	päränix (iii:10) 'tree'
palax 'barren country, desert'	pälax (xi:7), päwä-pälax (iv:1) 'd.
xilax 'thunder'	läx (''haz', C8f) 'thunder'
ma-xanix 'it's good'	mä-ännix ('mæængñ', xiii:45) 'beautiful'
ENVIRONMENTS THAT HAD A REFLEX OF PAN *R	
xamax ('ramach') 'blood'	amäx (x:32), ämax (xvi:17) 'blood'
xilax 'thunder'	läx (C8f) 'thunder'
xapit 'get up'	äpiti (xi:11) 'get up'
kaxamos 'finger'	kämos (xxiii:4) 'finger'
raxang 'rb'	räng (C3of) 'rb'
nixaha 'sister'	nähä (xii:50) 'sister'
maxanix 'it's good'	mä-ännix (xiii:45) 'beautiful'
mihaxa 'borrow'	m-ihä (v:42) 'borrow'
waxi 'day; sun'	wäy ('wæ'i', iii:1) 'day; sun'
vaxiox 'stormwind'	bäyox ('bæ'joug'h', xvi:3) 'thunderstorm'
vaxo ('vach') 'new'	vähäw (ix:17) 'new'
lataxof 'blanket'	ta-täwfi (x:26) 'to reveal'
taxo 'shoulder'	täw (23:4) 'shoulder'
xuma 'village, town'	äwma ('æuma, xxi:17) 'village, town'
kaxulung ('cagoulung') 'human being'	käwlung ('kæwlung', iv:19) 'human being'
vuxox 'enemy'	wäux ('wæuni', xiii:25) 'enemy'
uxla 'snow'	äwla ('æw'la, xxviii:3) 'snow'
uxing 'candle'	äwing ('æyng', vi:22) 'candle'
muxo ('moucho') 'whale'	mäwäw ('mæwæu, xii:40) 'whale'
muxax ('mougaŋ') 'to live'	m-äwäx ('mæwæh, ix:18) 'to live'

Palatalization generally occurs in environments that historically had a reflex of PAN *R. (See the second part of table 2.) As pointed out earlier, PAN *R became a velar fricative in Siraya. This is still present in all positions in the dialect of the Utrecht manuscript, but it was lost in nonfinal position in the dialect of the gospel and catechism. However, where it was lost, it had a decidedly palatalizing effect on other vowels, whether these were directly adjacent or separated by a consonant. The outcome of this effect is fairly regular, although there are odd cases (as in *amix* and *māwāw*) where the end result is somewhat unpredictable.

Note that *āw* sequences are phonotactically favored. This is manifested in several ways. (1) Where the Utrecht manuscript has a *xu* ('gu') sequence, the corresponding sequence in the gospel and catechism is usually a falling diphthong *āw*, with syllabicity shifted to *ā* (compare *vaxa, taxaxof, taxo, xuma, kaxilong* vs. *vahāw, taxāwof, tāw, āwma, kaxāwlong*). (2) Where the Utrecht manuscript has an *ux* ('ug') sequence, the corresponding sequence in the gospel and catechism texts sometimes exhibits feature metathesis involving vowel quality and maintaining syllabicity on the first segment (hence: **ug* > **uā* > *āw*). Metathesis of vowel quality is seen in *uxta* vs. *āwta, ixing* vs. *āwīng, muxax* vs. *māwāx*, and, somewhat less transparently, in *vuxox* vs. *vāux* and *muxo* vs. *māwāw*.

Palatalization also occurs in less obvious environments, as in the suffix of oblique pronouns. Compare: *īmīta* 'we' / -(*m*)*īta* 'our' against *imīhān* 'us (oblique)'; *īmumi* 'you' / -(*m*)*umi* 'your' against *īmumi-ān, īmumi-an* 'you (oblique)'. In the case of *īmumi-ān*, palatalization may be triggered by the preceding palatal vowel *i*. However, this explanation would not do for *īmīhān*. Vowel contraction and length are also possible factors, but this remains to be tested.

Finally, it should be noted that 'ae' is sometimes also in variation with 'e', as in 'eumā' (ii:23) 'eumā' ix:1 'village, town'; 'kaeuloung' (ix:6) 'Kaeuloung' (iv:19) 'human being'; 'euyng' (v:15) 'æuyng' (vi:22) 'candle'. A **x* was lost in all these cases. I write *ā* wherever this alternation occurs (hence *āwma, kaxāwlong, āwīng*).

6. GRAMMATICAL SYNOPSIS

6.1 DEICTICS

6.1.1 Personal pronouns. Personal pronouns are distinguished for person, number, and case. Within the first person plural, inclusive and exclusive categories are distinguished. The second person plural category is used as a marker of politeness for singular addressees. See table 3. Except for the third person, the initial vowel of the free and oblique series still bears witness of a PAN pronominal marker *Si- (*S became *x* or was lost in Siraya). First and second person Actor/Possessor pronouns have a variant with initial *-m-*. This *-m-* appears on morpheme boundaries when the pronouns in question are suffixed to a word ending in a vowel.

Examples of personal pronouns in context occur in the sentence samples throughout this article. Personal pronouns are furthermore discussed extensively in Tsuchida (1996 a,b). Suffice here a few examples showing that a predicate can take on several personal pronoun suffixes as its core arguments, and that actor pronouns are suffixed closer to the root than topic pronouns. Compare (1) and (2).

- (1) *ka phae'nei-man-kow ta ae'æu-alihib*
ka pixa-n-ey-(m)au-kow ta ä-äw-alihib
 and give-IO-IR-by me-you TM keys
 'and I will give you the keys' (xvi:19)
- (2) *kidi-atou-man ka 'æuloung-ei mhou-koh, ...*
kidi-ato-(m)au ka äw'ux-ey-(m)hu-koh
 necessary-PERF-by me that baptize-IR-by you-I
 'I should be baptized by you, ... (iii:14)

6.1.2 Demonstrative pronouns. The demonstrative pronouns are *atta*, *k(a)-atta* 'this, these' and *anna*, *k(a)-anna* 'that, those'.

6.1.3 Interrogative pronouns. Many interrogative pronouns are derived from a basic interrogative pronoun *mang* 'what?'. (In Siraya orthography, the constituent parts of these pronouns can be written as one word or as several words.) They include *mang* 'what?'; *ti mang* 'who?'; *tu mang* 'where?'; *mama mang*, *mama ki mang*, *mameymang* 'how?'; *kaumang* 'why?'; *piña*, *papiña* ('papyña', xxiv:43), *piñña* ('pyppyna', xvi:19) 'how much/many?'. The following occur sporadically: *makka-kuma* ('makka-koumā', xiii:27) 'wherefrom' and *wanang* ('oua-mang', xxvi:50) 'wherefore'.

Through reduplication of *mang* in some of the interrogatives, indefinite pronouns are formed: *mamang* 'whatever?'; *ti mamang* 'whoever?'; *tu mamang* 'wherever?'. See also (52), (58), (66), (76), and (79).

6.2 ARTICLES

6.2.1 The personal article *tā*. This occurs before proper names and before indefinite, demonstrative, or interrogative pronouns referring to a human. It also

TABLE 3. PERSONAL PRONOUNS

	Free	ACTOR OR POSSESSIVE	TOPIC	OBlique
1s	ŋau	-(m)au	-koh	ŋau-an
2s	imbu	-(m)bu, -(m)oho	-kow	imbu-an
3s	teni	tin	-teni	tin-ān (tin-an)
1p incl	imīta*	-(m)-ita, -eia	-kita	imīta-n
1p excl	imī-an	-(m)ian, -(m)ian	-kame	imīan-ān (imian-an)
2p (2s polite)	imumi	-(m)umi	(-)kamu	imumi-ān (imumi-an)
3p	ta neini	nein	neini	neini-ān (neini-an)

*Cf. 'emyia' (Catechism, p. 99f).

occurs before other words, provided that they are used as proper names. Examples: *ti Jesus* 'Jesus'; *ti ana* (xii:47) 'the one (who)'; *ti ana* 'the one (here) (who...)' ; *ti ana* 'the one (there) (who...)' ; *ti Tatapin* (xiii:19) 'the wicked One'; *ti mang* 'who'; *ti manang* 'whoever' (see 6.1.3). The same form *ti* is maintained in the Actor/Possessive case and in the Oblique case: *ta ti Jesus* (Topic); *ti Jesus* (Actor/Possessive); *ti Jesus-an* (Oblique). Note that the oblique preposition *ki* never introduces these oblique names and pronouns preceded by *ti*.

6.2.2 A definite article? The exact meaning and function of *na* needs further investigation. It precedes nominals and usually seems to make them definite. In the Utrecht manuscript, it is glossed "van" ('of, from'), but this is unsatisfactory, although in some cases it seems to suggest a source relation (Genitive), as in the last two of the following examples:

- (3) Jezus Christus, ka na alak ti David
 Jesus Christus ka na alak ti David
 Jesus Christ who the son TM David
 'Jesus Christ, the son of David' (i:1)
- (4) Ka kma-hymna ta na Tatouhko
 ka kumma-himna ta na ta-tuko
 because like-that TM the Law
 'for this is the Law (because the Law is like this)' (vii:12)
- (5) pammami-en ka na jocko
 pa-mammī-en ka na yuko
 clothing which (from the) sheep
 'sheep's clothing' (vii:15)
- (6) kan-rin tyn idahi na houwallan-appa ta anna
 kan-an ün idahi na huallaw-appa ta anna
 food his locust (from the) bee-also TM that
 'his food was locusts and wild honey' (iii:4)

6.3 NEGATION MARKERS. These include *assi* ('acoussi', 'assi') 'no(t)'. Cf. also 6.9.4: *üna* 'don't'; *nimo* 'nothing'; and *mi-kakua*... *assi* ('myhkaqua... *assi*', vii:23) 'never'. See also the verb *imang* ('ynang', v:34) 'refuse to, not want to; don't'.

6.4 EXISTENTIAL MARKER AND POSSESSIVE MARKERS. The existential marker appears either as the prefix *aku-* or as the full word *aku-mea*. It also conveys the meaning of 'to have'. Compare (7-9).

- (7) niakou-kaenlounng ka mi-liaklak-en ki rima
 ni-aku-kaäwlung ka mi-liaklak-en ki rima
 PAST-there is-human who PAST-withered-UO DRM hand
 'there was a man who had his hand withered' (xii:10)

- (8) Ni-akoumea sat ki ta'u
 ni-aku-mea saat ki tau
 PAST-there is/have one DRM human
 ka mei-sasou ki sat katal-laghan
 ka mey-sasu ki saat ka-tallax-an
 who rules DRM one house
 'there was a certain householder' (xxi:33)

- (9) veiagh ka akoumea, temi ta p'heih
 veyax ka aku-mea temi ta pixa-ei
 each who there is/have he TM give-IR
 'everyone who has shall be given' (xxv:29)

Another marker of possession is initial *a/a-*. It introduces (or, in the gospel text, is often prefixed to) a possessor. Examples: *a-izaw* ('âizaw', xx:15) 'mine'; *a-muhū* ('â-muhū', xx:14) 'yours'; *a-mumi* ('âmumi', xxv:9) 'yours (plural)'; *a-neini* ('â-neini', xix:14, 'a-neini', v:3) 'theirs'; *a-Elias* ('â Elias', xvii:5) 'the one/those belonging to Elias'; *a tu Lyitu* ('â tou Lyitou', xxv:41) 'for the devil'. Compare also (10).

- (10) toutouro ki ratta, âmmouhou-a ta sasat
 tu-turu ki ratta a-muhū-a ta sa-saat
 RED-three DRM tabernacle belonging to you-IR TM RED-one
 â Moses-a ta sasat, â Elias-a ta sasat
 a Moses-a ta sa-saat a Elias-a ta sa-saat
 belonging to Moses-IR TM RED-one belonging to Elias-IR TM RED-one
 'three tabernacles, one for you, one for Moses, and one for Elias'
 (xvii:4)

6.5 RELATION MARKERS. *Ta*, *tu*, and *ki* are relation markers. They mark grammatical relations, and they complement case information provided by the verb and by the personal pronoun.

6.5.1 Topic marker. *Ta* is used before any noun phrase that functions as a topic. It precedes the personal article *ti* if there is one. (In unmarked phrases, the topic as a rule follows the predicate.)

- (11) Ka ni-matzei-vhi ta ti Jesus koumma neini-æn
 ka ni-matäy-vhi ta ti Jesus kumma neini-æn
 and PAST-speak-do in return TM Pa Jesus (say) thus them-OBV-Q
 'Jesus answered and said to them' (xi:4)
- (12) temi ta ti atta ka na sasoulat-ato...
 temi ta ti atta ka na sa-sulat-ato
 3S.FREE TM PA this who the (things) RED-write-PERF
 'this is he, of whom it is written...?' (xi:10)

- (13) *Kmyt²-ato ta ni-mavouta*
k-m-itta-ato ta ni-ma-vuita
 AO-see-PERF TM PAST-SIV-blind
 'the blind (those who were blind) can see again' (xi:5)

6.5.2 Locative marker. *Tu* marks locative phrases and can be translated as 'to(ward), in, at, on, by, about'. Location also includes location in time and metaphorical time.

- (14) *Assei-kamou lava ni-kmut kut tou Tatonko...*
Assei-kamou lava ni-k-n-üküt tu ta-tuko
 not-you perhaps PAST-AO-read LM Law
 'Or have ye not read in the Law...?' (xii:5)
- (15) *ni¹-t-koua ta rouma [ki 'æ'æp]*
ni-taw-kua (see 6.9.3) ta ruma ki ääp
 PAST-go down or through-move TM some DRM [seeds]
tu vi-dæh ki darang
tu vidæx ki darang
 LM side DRM road
 'some [seeds] fell by the wayside' (xiii:4)
- (16) *tu wæ'i ki pæ'i-habab'an*
tu wây ki päy-hababa-an
 LM day DRM resting
 'on the Sabbath days' (xii:10)
- (17) *rouar ka irang tou vaoung*
ruar ka irang tu vaung
 storm which vehement LM sea
 'a heavy storm at sea' (viii:24)
- (18) *ni-dma-rang mouqua tou tallagh tyn*
ni-d-m-arang m-u-kua tu tallax ün
 PAST-AO-go away toward LM house his
 'he departed to his house' (ix:7)
- (19) *Tou kakyt'an ti Jesus ki mabatoung ki*
tu ka-kitta-an ti Jesus ki ma-batung ki
 LM REO-see-UO PA Jesus DRM SIV-many DRM
makoi-lalaulau ka tou rioung...
makoy-la-lawlaw ka tu riung
 gather around who LM around
 'now when Jesus saw great multitudes about him...?' (viii:18)
- (20) *makou-Alihid-a ki Raraman-oho ka tou dung*
maku-Alihid-a ki Raraman-oho ka tu düng
 pray to-God-IR DRM Father-your who LM darkness
 'pray to your Father who is in secret' (vi:6)

6.5.3 Default relation marker. *Ki* is a default relation marker introducing noun phrases that are not introduced by *ta* or *tu*. It never occurs before a proper name or a pronoun that has a human as its referent. It introduces any noun phrase other than those acting as a topic or a locative (and other than proper names and personal pronouns). It introduces—among others—phrases expressing an undergoer (in actor-oriented clauses):

- (21) *ka dou ni-illub kow ki alub oho,*
ka du ni-illab¹² kow ki alab-oho
 and when PAST-close you-TOP DRM door your
makou-Alihid-a ki Raraman-oho ka tou dung
maku-Alihid-a ki Raraman-oho ka tu düng
 pray to God-IR DRM father-your who LM secret
 'and when you have shut your door pray to your Father who is in secret' (vi:6)
- (22) *yinnid ki perennah ka assi makka-voua*
immed¹³ ki pärännäh ka assi makka-vua
 all DRM tree which not bring forth
ki voua ka mariang
ki vua ka ma-riang
 DRM fruit which siv-good
 'every tree which does not bring forth good fruits' (iii:10)
- an actor (in undergoer-oriented clauses):
- (23) *Ni-pâm¹-en kanna ki ta'u ka ma-væuugh*
ni-pa-amet-an¹⁴ kanna ki tau¹⁵ ka ma-väux
 PAST-CAUS-happen-UO this DRM person who siv-hostile
 'An enemy has done this.' (xiii:28)
- (24) *tu tounnuk ki vullum... ka assi haouroung-en*
tu tunnun ki vüllüm ka assi haurung-an
 LM Heaven which not steal-UO
ki matalliau
ki matalliw
 DRM thief
 'in Heaven... where thieves do not steal' (vi:20)
- an instrument:
- (25) *ka kalangin ki voua ta perennah*
ka kalang-an ki vua ta pärännäh
 because know-UO DRM fruit TM tree
 'for the tree is known by its fruit' (xii:33)
- (26) *ka rou iroua, paki-valai-en tyn ka ka*
ka ru irua paki-valay-an ün ka ka
 and when come PREF-find-UO 3S.ACTR that

kouhko ki ni-ouwap-pan ki ouwap
 kuko ki ni-nap-an ki nap
 empty DRM PAST-sweep-VO DRM broom
 'and when he came he found that it was empty and swept with a broom' (v:44)

(27) Pihng-*ei*-mounni ki 'eiling-then,
 ilingix-*ey*-[m]uni ki ilingix-an
 hear-IR-2P.ACTR DRM hearing

râ assi-kannou mou-mha-ah
 ra assi-kannu m-unxa-a
 but not-2P.TOP AO-understand-IR
 'By hearing you shall hear, and shall not understand' (xiii:14)

a purpose:

(28) ta mayitou ki katiktikan
 ta ma-itu ki ka-tiktik-an
 TM SIV-thirsty DRM righteousness
 'they who thirst after righteousness' (v:7)

It links the constituents of a possessive construction.

(29) alalak ki Alid
 RED-alak ki Alid
 children DRM God
 'children of God' (v:9)

(30) tou vouyl ki maueu
 tu vuil ki mäwäw
 LM belly DRM whale
 'in the belly of the whale' (xii:40)

In a noun-phrase, it links a quantifier to its head.

(31) ymmid ki maälam (32) rarouha ki tauwil
 ämmad ki ma-alam ra-ruha ki tauwil
 all DRM SIV-sick RED-two DRM year
 'all the sick' (iv:23) 'two years' (ii:16)

It occurs as a coordinator between noun phrases.

(33) Ni-p'haen-koh ymmid ki kailhgen tou
 ni-pixa-an-koh ämmad ki ka-lix-an¹⁶ tu
 PAST-give-VO-IS.TOP all DRM power LM
 tounoun ki vullum ki Naei
 tunnun ki vüllüm ki Näy
 heaven DRM earth
 'I was given all power in heaven and earth' (xxvii:18)

(34) mabatoung ta iron-ah ka makka-reia ki makka-raour
 ma-batung ta iru-a ka makka-reya ki makka-raur
 SIV-many TM come-IR who from-East DRM from-West
 'Many will come from the East and from the West' (vii:11)

(35) Kamoei-en-au ta kabarum-en assi ki pap'hik-an
 ka-muy-an-au ta ka-haram-an¹⁷ assi ki pa-pixik-an
 APF-want-VO-IS.ACTR TM mercy not DRM sacrifice
 'I want mercy, not sacrifice' (xii:7)

Although locative nominal clauses are usually introduced by *tu*, in some cases *ki* links a locative noun phrase to a deictic verb. It seems that this locative noun phrase is syntactically the object of the deictic verb it occurs with.

(36) ni-taungua ta ti Jesus ki na dadiri
 ni-taw-kua ta ti Jesus ki na da-diri
 PAST-go down/through-mover TM pa Jesus DRM the (things) sown
 'Jesus went through the corn' (xii:1)

(37) ka ni-mou-koua ki Si-bavau ka Tama-p'hik
 ka ni-m-u-kua ki Si-bavau ka tama-pixik
 and PAST-AO-go toward-move DRM chief who priest
 '[Judas Iscariot] went unto the chief priest' (xxvii:14)

(38) rou d'marang-al-ato makka-rbo ki ki
 ru d-m-arang-*al*]-ato makka-rbo ki ki
 when AO-leave-IR-PERF come out from-inside DRM
 kaæuloung ta Joep-an ka assi matkanagh
 kaäwlung ta lup-an ka assi ma-tikanax
 person TM spirit who not SIV-clean
 'when the unclean spirit is gone out of a man' (xii:43)

(39) Ka rou ni-ou-rarbo-en ti Jesus ki tallah ti Petrus
 ka ru ni-u-rarbo-en ti Jesus ki tallax ti Petrus
 and when PAST-toward-go in-VO pa Jesus DRM house pa Petrus
 'and when Jesus had gone into the house of Petrus' (viii:14)

6.5.4 Compound prepositions. *Tu* and *ki* also occur as part of compound prepositions such as *tu ämâx ki* 'before', or *tu lam ki* '(together) with'.

(40) Paka-ræmæ'-æu k'ma-hymna ta ræmæh-oumi tou
 paka-rämâx-aw kuma-hîna ta rämâx-umi tu
 CAUS-light/shine-IR in such a way TM light/shine-your LM
 æmægh ki ka'-euloung, ka kmÿt'¹⁸-ah
 ämâx ki kaäwlung ka k-m-ÿta-a
 appear DRM human that AO-see-IR
 ki na ring-*ei*-oumi ka mariang
 ki na ringey-umi ka ma-riang
 DRM the works-your which SIV-good
 'Let your light so shine before men, that they may see your good works' (v:16)

- (41) *Ehpi-ta* *ta* *pæpæreħ* *ka* *makka* *Nimive* *tu*
äpi-ta *ta* *pä-päräx* *ka* *makka*-*Nimive* *tu*
 get up-IR TM RED-man who from-Nimive LM
pæpæmæh-en *tu* *lam* *ki* *kavouy-i-an* *k'atta*
pä-pä-mämäx-en *tu* *lam* *ki* *ka-va-vu-i-an* *ka-atta*
 judgment LM be with DRM generation which-this
 'The men of Nineveh shall rise in judgment with this generation.'
 (xii:41)
- (42) *tu* *arough* *ki* *Jordaan*
tu *arux* *ki* *Jordaan*
 LM across DRM Jordan River
 'beyond Jordan' (v:15)

Tu and *ki* also perform locative prepositional functions in combination with deictic verbs. See 6.9.5.

6.6 THE LINKER *ka*. *Ka* links verbal clauses to other parts of a sentence (in contradistinction to the relation marker *ki*, which links nominal clauses to other parts of a sentence). It functions as a coordinating conjunction.

- (43) *Ka* *assi* *ti-l'an* *ta* *euyng*,
ka *assi* *ti-la-an* *ta* *ävwiŋg*
 and not light-UO TM candle
ka *pa-iou-fbo-ei-ato* *ki* *sato*
ka *pa-iu-fbo-ey[li]-ato* *ki* *sato*
 and CAUS-location-inside-IR-PERF DRM bushel
 'Neither do men light a candle, and put it under a bushel.' (v:15)

It also functions as a complementizer.

- (44) *Ni*-*millingigħ-kamou* *ka* *ni*-*pa-ou-pæmæħ* *ta* *sou*,
ni-*m-illingigħ-kamou* *ka* *ni*-*pa-u-pänäx* *ta* *su*
 PAST-hear-you that PAST-UO-toward-appear TM word
Kavæango-au'mhou *ta* *rarouma-hou* *râ*
ka-vâango-aw-[m]hu *ta* *ra-rinna-hu* *ra*
 AFF-love-IR-by you TM RED-others-your but (?)¹⁸
 'You have heard that it has been said: you shall love your neighbor.'
 (v:43)

It introduces a causal clause.

- (45) *Tama-tæ'i-riang* *ta* *ma-kouptigħ* *ki* *ryh*:
tama-tæy-riang *ta* *ma-kuptix* *ki* *riħ*
 happy person TM STV-pure DRM mind
ka *mararau-ah* *ki* *Alid* *ta* *neni*
ka *m-araraw-a* *ki* *Alid* *ta* *neni*
 because AO-see-IR DRM God TM they
 'Blessed are the pure in heart: for they shall see God.' (v:8)

It introduces a relative clause.

- (46) *matta* *oho* *ka* *tu* *ouwal*
matta-oho *ka* *tu* *nal*
 eye-your which LM right
 'your right eye' (v:29)
- (47) *ni*-*m*-*ad* *tyni-æn* *ki* *dimmni-dimmni-en*
ni-*m*-*ad* *üni-än* *ki* *dimmni-dimmni-en*
 PAST-AO-bring 3S OBJ Q DRM (someone) sick of the palsy
ka *malaliko* *tu* 'æpag-hin
ka *ma-laliko* *tu* *äpax-en*
 who siv-lying down LM bed
 'They brought to him a man sick of the palsy, lying on a bed.' (ix:1)
- (48) *ta*-*u*-*ta*'*u* *ka* *miroung* *tu* *karumdum-an*
tau-tau *ka* *m-irung* *tu* *ka-ramdam-an*¹⁹
 people who AO-sit LM darkness
ni-*knyüta* *ki* *ræmæħ* *ka* *irang*
ni-*k*-*m-üta* *ki* *rämäx* *ka* *irang*
 PAST-AO-see DRM light which great
 'The people who sat in darkness saw a great light.' (vi:16)

6.7 QUANTIFIERS

6.7.1 Indefinite quantifiers. The following indefinite quantifiers have been noted: *ra-rinna* ('arouna', xxvii:47) 'some'; *ma-tiŋg* ('ma-tiŋg', xxii:14) '(be) few'; *ma-baiung* ('mabatoung', xxii:14) '(be) many';²⁰ *pümd/pi-püna* 'how much/many' (see Interrogative pronouns, 6.1.3).

6.7.2 Numerals. Siraya has a decimal system. The numbers one to seven of-ten have a reduplicated first syllable. See table 4.

Cardinal numbers are spelled in various ways in the gospel text and catechism:
 (1) 'sät' (v:3), 'saat' (viii:19), 'säi' (ix:3), 'saät' (i:17), 'säasät' (v:18), 'sasät' (v:36);
 (2) 'rouhä' (ix:20), 'douhä' (v:41), 'dorouhä' (ix:27), 'rarouhä' (viii:28),
 'rourouhä' (ix:17); (3) 'tourou' (xxvi:15), 'touro' (xv:32), 'toutou' (xvii:4),
 'toutou' (xxvi:61); (4) 'pat' (xi:17), 'hpat' (xv:38), 'pahpat' (xiv:1), 'pagpat'
 (xxiv:31); (5) 'rima' (iii:12), 'ryrymma' (xiv:17); (6) 'numu' (xvi:title), 'numum'
 (xvii:1), 'annim' (vi:title), 'nimmim' (xiii:8); (7) 'pyto', 'pytoun', 'pipito'; (8)
 'kouhpa' (viii:title), 'koyghpa' (xxviii:title), 'kauihpa' (xviii:title); (9)
 'matoudda' (xviii:12), 'ma-toudda' (xx:5); (10) 'sät kyüttæn' (xxv:28).

Ordinal numbers can be found in the chapter headings of the gospel text. In addition to those given in table 4, there are: *turu-l* ('touroul', xxvi:34) 'three times', and *pütu-l* ('pytoul', xviii:21, xviii:22) 'seven times'. In numbers from ten to twenty, *äb ki* ('äb' *ki*' or 'äb *ki*') links a digit to the following ten. Note also the ordinal *ka-sa-saat kitiün äb ki kuzpa* (ka sasat kyüttæn 'äb *ki* kauihpa, xviii:title) '18th'.

6.8 NOUNS. Nouns are tentatively defined as a word-class that can be introduced by a preposition. In addition to nominal roots, there are also nouns that can be derived from verbs. Here are some examples of noun roots: *lix* ('I'igh', vii:26) 'sand'; *rix* ('ryh', v:12) 'neck, mind'; *ngale* ('ngale', iii:7) 'anger'; *sakti* ('sahki', C127f) 'ardor'; *hymko* ('hymko', viii:29) 'worry, trouble'; *pawla-pawla* ('pawlepawlaegh', iii:3) 'wilderness, desert'.

Nouns can be derived from verbs with a circumfix *ka-*-*an* or *ka-*-*an* or with the suffixes *-an* or *-an*. *Ka-*-*an/ka-*-*an* is often circumfixed to roots, forming verbs with the prefix *ma-*. Examples: *ma-vejung* ('naveionug', xxi:31) 'secretly'; *ka-vejung-an* (xix:9) 'prostitution'; *ma-lix* (iii:11) 'strong'; *ka-lix-an*²¹ ('ka lihg-en', xiv:2) 'mighty works, forces'; *m-dyam* (xiii:30) 'to reap'; *ka-dyam-an* ('Kajjanin', x:37) 'harvest'; *ma-surul* ('massorol', xxvi:41) 'willing, prepared'; *ka-surul-an* ('kasouroul-an', C141) 'readiness, willingness'.

Examples of deverbal nouns with the suffixes *-an* or *-an*: *repung* ('rihpung', xvii:1) 'test, try, taste'; *repung-an* (vi:13) 'temptation'; *mansing* (xxiv:23) 'believe'; *mansing-an* (ix:22) 'Faith, belief'; *t-m-angi-tangi* (ii:18) 'weep'; *tangi-tangi-an* ('tangi-tangi-en', xxiv:51) 'wailing'; *m-ivarix* ('mouvarigh', C70f) 'earn'; *mvavari/x-an* ('ouvararg-han', v:12) 'pay, reward'; *m-dwlix* ('mreulough', iii:11) 'baptize'; *dwlix-an* ('euloug-han', iii:7) 'baptism'.

When suffixed to a noun, *-an* can form locative nouns: *vato* ('vato', vii:6) 'stone'; *vato-to-an* ('vatoh-toh-an', xiii:5) 'stony places'.

TABLE 4. NUMERALS

NUMBERS FROM ONE TO TEN	
CARDINAL	ORDINAL
1 saat, sa-saat	nawanan
2 ruha, ru-roha	ka-ra-ruha
3 turu, tu-turu	ka-ta-turu
4 xpat, pa-xpat	ka-axpat
5 rima, ri-rima	ka-ti-rima
6 nam, na-nam	ka-anam
7 pihu, pi-pihu	ka-pa-pihu
8 kuxpa	ka-kuxpa ('kak'oyhpa', C15f)
9 matuda	ka-matuda, ka-na-matuda
10 saat kitian	ka-sasaat kitian

SOME OF THE HIGHER NUMBERS FOUND IN THE GOSPEL TEXT

12 saat kitian ab ki ruha (sat kyti'en 'ab ki rouha, xi:1)
14 saat kitian ab ki pat (saat kyti'en 'ab ki pat, i:17)
30 turu kitian ('touro kyti-an', xii:23)
60 namam kitian ('nanim kyti-an', xii:8)
70 pihu kitian
99 matuda kitian ab ki matuda
100 saat ka-atur-an ('sat ka'atouh-han', xiii:8; 'sat ka'atoug-han', xix:29)
4,000 xpat ka-tumun-an
5,000 rima ka-tumun-an
10,000 saat kitian ka-tumun-an ki Talentan '10,000 talens'

6.9 VERBS. A verb denotes an action, process, or state. As the head of a verbal clause, it can govern several arguments (actor and/or undergoer).

6.9.1 Verbal affixes. A tentative survey of the most frequent verbal affixes includes the following.

ni-. Marker of past tense.

ma-1/m-1-m-. Markers of actor-orientedness: *-m-* is infixed in verbs with initial *t, k, d, x, r, l*, or *s*; *m-* is prefixed to verbs with initial vowel; the distribution of *ma-* remains unclear, except that it is not restricted to verbs with particular initial consonants; absence of *ma-1/m-1-m-* indicates undergoer-orientedness.

mey-~pey-. Actor- and undergoer-oriented prefixes with verbs that describe an activity requiring a high degree of physical involvement (see 6.9.3).

mu-~(p)u-. Actor- and undergoer-oriented prefixes with verbs describing a 'movement toward something' (see 6.9.3).

ma₂-. Stative intransitive verb prefix to nouns and to roots with no apparent word class affiliation (precategories).

paka-. Causative prefix to stative verbs (*ma₂*-verbs).

pa₁-. Undergoer-oriented counterpart of *ma₁-*.

pa₂-. Transitive prefix (often with causative result).

ka-. Verbal classifier prefixed to verbs expressing a sensation, feeling, or emotion. It only occurs with undergoer-oriented verbs and deverbal nouns. (For other verbal classifiers, see 6.9.3.)

-an, -an. Markers of undergoer-orientedness (see 6.9.2).

-a, -ey, -aw. The irrealis suffixes: *-a* ('a', 'ah') is suffixed to actor-oriented verbs, and *-ey* ('ei', 'eh') and *-aw* ('au', 'auh') to undergoer-oriented verbs.

The exact difference between *-aw* or *-ey* remains unclear. After the locative suffix *-an*, only *-ey* occurs. However, a correlating conclusion, that *-ey* only appears after *-an*, cannot be drawn, because of sentences such as (74).

-(74) *ata*. Perfective marker? (Exact meaning remains unclear; *-lato* occurs after final vowels, and *-ato* after final consonants.)

6.9.2 The undergoer-oriented suffixes -an and -an. Undergoer-oriented verbs often have *-an*, *-en*, *-in*, *-un*, or *-n* suffixed directly to the root. These endings are interpreted as allomorphs of two suffixes, *-an* and *-an*. The former appears as *-an* or (if the preceding root ends in 'a') as *-n*. The latter appears as *-en*, *-in*, *-un* or *-n* and must represent a suffix *-an*, the vowel of which adapts to its phonetic environment.

The suffix *-an* applies when the location of an act is mentioned in the sentence, or when this location is in any way relevant to the act. Note that it is the undergoer, and not the location, that is the topic. (This distinguishes Siraya *-an* from *-an* in Philippine languages or in Paitan, which indicates locative-oriented case).

(49) tou kidi k'anna ni-addan	<i>paouqua</i> <i>tyi-an</i>
tu kidi ka-anna ni-ad-an	pa-u-kua <i>ti-ni-an</i>
in time that	PAST-bring-VO toward him-OBLQ

- ta saät ka ni-ou-lyttou
ta saat ka ni-u-lyttu
TM one who PAST-[go toward + UO]-by Devil
'(then) they brought to him someone possessed by the Devil' (xii:22)
- (50) mou-houl-an-ey-kow *tau kalau-hau-an*
muhl-an-ey-kow tu ka-läwhäw-an
cast-UO-IR-you in hell
'you will be cast down unto hell' (xi:23)
- (51) anna ta ni-padipaghan *nein tau vhang tyn*
anna ta ni-pa-dipax-an *nein tu vhang tyn*
then TM PAST-TRANS-spit-UO (by) them in face his
'then they spat him in the face' (xxvi:67)
- (52) Râ timamang ta rmau-ah *jan-an tou aemah ki*
ra ti-ma-nang ta r-m-äh-a *iaü-an tu ämäx ki*
but whoever TM AO-deny-IR me-OBLQ in front DRM
ka'äuloung, *teni ta r'au-an-ey-man*
kaäwüng *teni ta räü-an-ey-[m]äü*
people he TM deny-UO-IR-by me
tau aemah ki Raraman-au
tu ämäx ki Raraman-äh
in front of Father-my
'But whoever denies me in front of the people, him I will deny in front of my Father.' (x:33)
- (53) alei ka ni'erag-han *ki vaho-ra*
aley ka ni-ärag-an *ki vato-ra*
because PAST-found-UO by rock-?
'because it (=the house) was founded upon a rock' (vii:25)

The locative is not an argument. The following sentence seemingly contradicts this, but here the undergoer is also the location of the act.

- (54) ka rou *irova paki-valei-en tyn ta kouhko ka ni-ouwap-pan*
ka ru *irua paki-valey-an ün ta kuko ka ni-nap-an*
and/when came PREF-find-UO by-him TM empty and PAST-sweep-UO
ki *ou-wap tmoura paka-tabung ta anna*
ki *näp t-m-ura paka-tabüng ta anna*
with broom and also CAUS-beautiful TM that
'and when he came he found it [=the house] empty, swept with a broom and decorated' (xii:44)

When there is no location reference in the sentence, we find the suffixes 'en', 'in', 'n', or 'un', which are allomorphs of -an. Although there is often a correlation between these allomorphs and their phonetic environment, it is not always clear what conditions their distribution. Usually, the suffix is written 'en' or 'in' when the root ends in a consonant. These are sometimes in free variation; see (56) and (57).

- (55) Assi-manu *kalang-en ta ta'u*
assi-[m]aw *kalang-an ta lau*
not-by-me know-UO TM person
'I do not know the man.' (xxvi:72)
- (56) alei ka *ni-sasoulat-in* . . .
aley ka *ni-sa-sulat-en*
because PAST-RED-write-UO
'For it is written . . . ' (xxvi:31)
- (57) *ni-soulat-en-da* . . .
ni-sulat-en-da
PAST-write-UO-?
'it has been written . . . ' (iv:4)
- (58) Alei ka *klym-en ta mamang k'atta ki Heidang*
aley ka *klim-an ta mamang ka-atta by Heathen*
because seek-UO TM what(ever) which-this by Heathen
'For after all these things do the Gentiles seek' (vi:32)
- (59) . . . *kanoei-nounni ka pämnt-tin*
ka-amuy-en-nuni ka pa-amüt-an
AFF-wish UO-by you what/which TRANS-happen-UO
ymounni-en ki taou
imuni-än ki lau
to you DRM people
' . . . whatsoever ye would that men should do to you' (vii:12)

The suffix '-en' is also attached to roots ending in *u* ('ou').

- (60) ka *ni-havoulou-en nein ta anna tou daran*
ka *ni-havulu-en nein ta anna tu daran*
and PAST-to straw-UO by them TM that LM road
' . . . and they strawed them on the road.' (xxi:8)

When the root ends in 'a' or 'i', the suffix is often reduced to 'n'.

- (61) Irou ka *aran ti Josef ta vouel*
iru ka *ara-an ti Josef ta vual*
when that take [ara]-UO PA Josef TM body
'when Joseph took the body' (xxvii:59)
- (62) *ni-patym-hgan tyn ta vare vaoung-appa*
ni-patimxa-an ün ta vare vaung-appa
PAST-punish -UO (by) him TM wind sea-also
'he rebuked the winds and the sea' (viii:26)
- (63) *ni-k'yit-an tyn ta I-oep-an ki Ahld* . . .
ni-k'ita-an ün ta Iup-an ki Ahld
PAST-see [kyit]-UO (by) him TM Spirit of God
'he saw the Spirit of God . . . ' (iii:16)

(See [59] for an example of *-an* suffixation to a root ending in 'i'). However, this reduction is not without exception. Sometimes a root ending in 'a' or 'i' occurs with 'en' or even alternatively with 'en' or 'n'. Compare also (64–67).

- (64) *alei ka ni-pasi-bain ta neni*
 alley ka ni-pa-siba-en ta neni
 because PAST-CAUS-tired-VO TM they
 because they fainted' (ix:36)
- (65) *ka kaumang ka k'ita-en-hou ta houka*
 ka kaumang ka k'ita-en-hu ta hukka
 and why (is it) that see-VO-by you TM mote
 'And why beholdest thou the mote...?' (vii:3) [cf. ni-k'yt'-an (61)]
- (66) *timanang lava ka kamoeci-in nein-da*
 ti-ma-mang lava ka ka-muy-en nein-da
 whoever [+uncertainty] who AFF-want-VO by them-?
 '(a prisoner) whom they would like' (xxviii:15) [cf. with *kamuy-nuni*
 in sentence (59)]
- (67) *kavana-en-au ka kmi-yin-kamou ti Jesus-an...*
 ka-vana-en-au ka k-m-ilm-kamou ti Jesus-an
 AFF-know-VO-by me that seek-you PA Jesus-OBL Q
 'I know that you are looking for Jesus...?' (xxviii:5)

The suffix 'un' rarely occurs. In (68) it is suffixed to a root ending with 'oun', providing a phonetic environment that explains the vowel coloring. (The same applies for 'un' in the deverbal noun 'æu-tatåum-mun' in [68].) But this explanation will not do for 'un' in 'pa-kan-nun-appa' in (69).

- (68) *Ka ni-paka-soun-mun pa-ka kouptigh*
 ka ni-paka-sun-en paka-kupitx
 and PAST-AS-immediate-VO CAUS-clean, pure
- ta 'æu-tatåum-mun tyn*
ta äw-ta-tåm-en tñ
 TM leprosy his
 'And immediately his leprosy was cleansed.' (viii:3)
- (69) *Rå pa-kan-nun-appa ta anna ki*
 ra pa-kan-en-appa ta anna ki
 but CAUS-eat-VO-also TM that DRM
 Raraman-ounni ka tou tounoun ki vullum
 Raraman-ounni ka tu tunnun ki vüllüm
 Father-your who in Heaven
 'Yet your Heavenly Father feedeth them.' (vii:26)

From the above discussion of *-an* and *-en*, it appears that Siraya verbal morphology is not of the "focus" type as found in most Formosan and Philippine languages. The locative suffix *-an* does occur, but it does not have a syntactic role.

It may be of some relevance to mention that the PAN instrument-focus marker *Si- seems to have a Siraya reflex *i-* or *hi-*, which is a nominal prefix. Some (but not all) of the nouns with this prefix have a recognizably instrumental meaning: *lating* 'excitement' (UM), *i-ta-taing-ang* ('itaa ingang', UM) 'toilet'; *m-adung* (viii:16) 'evening', *hi-adung-an* (hiadung-an, C84D) 'supper'; *vingo* (vi:17) 'head', *i-va-vingo-ang* ('va'ongang', UM) 'pillow'; *xinawa* ('hinau', C10F), *hi-xinawa-n* (hyegymau-an, 'mind, conscience, spirit', C29F) 'breath'. Another derivation, *i-ra-rung-ang* ('rarongang', UM) 'seat, bench', is problematic. While it is related to *mitung* ('mitroung', iv:16) 'to sit' and clearly has an instrumental meaning, it is not entirely clear whether its root is *ring* or *rung*, and hence, whether the initial *i-* is an instrumental prefix or just part of the root.

6.9.3 Verbal classifiers. Many Siraya verbs consist of two semantic parts, a root and some prefixed semantic element. Compare the following cases.

matåy- and its undergoer-oriented counterpart *patåy-* add the notion of 'talking' or 'saying' to the root: *råx* ('ryh', v:12) 'mind', *matåy-ra-råx* (x:20) 'talk within oneself'; *tan* [preparing], *matåy-tan* (vii:22) 'to prophesy'; *mama* (x:16) 'like, as', *matåy-mama* (vii:4) 'tell how'; *nawmanu* (ix:4) 'first', *matåy-nawmanu* (xxvi:22) 'begin to speak'; *vi* [reciprocating], *matåy-vi* (iii:15) 'answer', *ni-patåy-vi-en* (xvi:16) 'be answered'; *tu dumna* ('tu donna', v:24) 'in front of, opposite', *matåy-dumna-dumna* (matte' i-dounna-down[al], xii:32) 'talk against'; *kama hinna* ('k' ma hynna', iii:15) 'like this', *matåy-kiujma-hinna* (matte' i-k' ma hynna, xiii:54) 'say as follows'; *kåvåx* [private], *ta-tavax* (xxi:33) 'fence', *matåy-kåvåx* (xvii:3) 'talk among themselves'.

smaki- (undergoer-oriented counterpart *saki-*) implies 'throwing, casting': *vayang* (xxiii:15) 'sea', *smaki-vayang* (iv:18) 'cast into the sea'; *ih-mala* (xii:6) 'be outside', *smaki-mala* (v:13) 'throw outside'; *ih-tavax* (xxii:13) 'be far', *smaki-tavax* (xli:39) 'throw far away'; *ih-ka* (xxv:34) 'be located', *smaki-kouia* (xv:30) 'to cast'; *nawang* (xxvi:3) 'name', *smaki-nawang* (i:25) 'call, give a name'.

sau- ('sau', 'sau') implies 'swearing, making an oath': *sauikat* ('saoulikit', xxiii:16; 'sauilkut', xxiii:20; 'sauilkut', xiv:7) 'swear', *sau-lalkat* ('saoullalkut', v:33) 'oath'; *vüllim* (xxvi:64) 'sky', *sau-büllim* (v:34) 'swear by Heaven'; *nåy* (Næi, vi:10) 'earth', *sau-nåy* (v:35) 'swear by the earth'; *vingo* 'head', *sau-vingo* ('sauu-bongo', v:36) 'swear by one's head'; *nåmo* (xxiii:18) 'nothing', *i-m-amiid* (xiv:33) 'worship', *sauki-na-nåmo i-m-amiid* (xv:9) 'worship in vain'.

påd- ('pæ'æ', 'pæ') implies 'giving, passing on': *vi* [reciprocating], *påd-vi* ('pæ'æ-vi', xvi:27) 'to reward'; *nåmo* 'nothing', *påd-nåmo* (x:8) 'give for free'; *rinma* 'five', *påd-rinma* (*ki talenten*) (xxv:15) 'give five (talents)'; *lapang* [many], in *pakåw-tapang* (xxiv:12) 'to abound', *påd-tapang* (xxviii:2) 'give abundantly'; *ka-nikal-an* (vii:21) 'iniquity', *påd-nikal* ('pæ'æ-loukouk, xx:13) 'do wrong to'; *taråmukah*, in *pis-taråmukah* ('pis-larymoukah', viii:32) 'die', *påd-taråmukah* ('pæ'æ-larymouk-ah', v:26) 'pay off'.

nu- ('nou', 'nu') undergoer-oriented counterpart *pu-* ('pu', 'pu') implies movement into a certain direction: *våing* (xxiii:15) 'sea', *pu-våing-en* (xiii:14) 'be cast into

the sea'; (*tu*) *rbo* (xxiii:25) 'inside', *mu-rbo* (xi:12) 'go inside'; *-kua* [movement, position], *mu-kua* (xvi:24) 'go to'; *wakkin* (xvii:1) 'mountain', *mu-wakkin* (xiv:23) 'go to the mountain'; *panāx* ('panah', vi:5) 'in the open, public', *mu-panāx* ('mou-pənəh', i:20) 'appear before'; *putu* ('pouhtou', xv:14) 'pit, ditch', *mu-putu* ('mou-pouhtu', xii:11) 'fall into a pit'.

mev- ('mei-', undergoer-oriented counterpart is *pev-* 'pei'-) seems to imply a state or action requiring a high degree of physical involvement: *-kua, mev-kua* (mei-quā, 3:11) 'to wear'; *alak* 'child', *mey-alak* (i:21) 'give birth to'; *paringid* ('paringit', UVA) 'flute', *mey-paringid* (ix:23) 'play flute'; *ma-pingit* (xiii:33) 'to leaven', *ni-pev-qpingit* ('ni-pej-apɣingit', xiii:33) 'leaven' ('what was made to ferment'); *mey-itil tu rima* (ix:25) 'take by the hand'.

sa- often seems to denote a movement through a narrow place (in order to reach the other side): *rbo* 'inside', *mutus* 'mouth', *ngataf* 'narrow', *ma-lingid* 'gate', *sa-ra-rbo ki mutus* (xv:11) 'enter the mouth', *sa-ra-rbo tu ngataf ka ma-lingid* ('sararbo tou ngataf ka malyngyd', vii:13) 'go through the narrow gate'; *panāx* 'in the open', *maka-tinin* 'from heart', *sa-pa-panāx makka-tinin* ('səhpə-pənəh makka tɪnɪn', xv:18) 'come from the heart'; *kui, darang, pati, si-dada-an* ('si-dada n') 'destruction', *darang ka pa-sa-ka-kua-an tu si-dada-an* ('darang ka pa-sakka-quan tou si-dada n', vii:13) 'the road leading to destruction'.

taw- (written as 'tau'- or its reduced form 't'- in the original texts) denotes a downward movement or a movement within a confined space including 'go or fall down onto something', 'go or fall through something, move within (the boundaries of) something': *awang* (iv:21) 'ship', *taw-awang* (xiv:31) 'be on a ship'; *riung* (vii:18) 'around', *taw-riung* (xxiii:15) 'go around, travel (within a place, etc.)'; *-kua* [movement, position], *taw-kua* ('tauquā, ii:12, 'tkouā, xiii:5) 'go, move on, also 'fall down', *purux* (xi:24) 'country', *taw-purux* (xiv:13) 'go through the country'; *raram* (xxvii:51) 'under', *wakkin* 'mountain', *taw-daram tu wakkin* ('darrɪn tou voukkɪn', xviii:9) 'come down from the mountain'; *nāy* ('nəi') 'ground, earth', *taw-nāy* (''nəi', x:29) 'fall on the ground'; *xalap* (xxvi:18) 'surface' *taw-xalap* (''hgalap', iii:16) 'come down, descend'; see also (70) and (71).

- (70) *darang katla ka tauqua-en-au*
darang ka ata ka law-kua-an-au
 road which this which go down or through-move-UO-by me
 'this road on which I travel' (C141f)

- (71) *ni-pa-tkoua ki rima ti Jesus-an*
ni-pa-law-kua ki rima ti Jesus-an
 PAST-CAUS-go down or through-move DRM hand PA Jesus-OBLQ
 'they laid hands on Jesus' (xxvi:50)

In at least one case, the origin of a verbal classifier seems to be a cliché of free root morpheme: 'pə:ə' - (used in verbs that convey the meaning of giving or passing on, see above) must be related to the verb *pixa* 'to give', which is spelled 'piba' (ix:18), 'phae' (x:1), 'ph'' (vi:11), 'phae' (14:9), 'pyhg'' (C81f), 'pə: - (vii:7),

'pə:pə' (xxiii:18), 'pə:ə' (vii:9), 'pə:p-əp-ə' (vii:11), and so forth. Other verbal classifiers may also have had a noncliché counterpart, but this is not clear from the texts. In case they had, this would be a clear indication that the verb forms in question consist of verb bases followed by a complement, and hence, a form of complement incorporation.

6.9.4 Complex verb constructions. Like English, Siraya has verb phrases with an auxiliary marked for person, tense, and mood. For instance, in sentence (72), English and Siraya use the auxiliaries *can* and *paka-ɬpux* in much the same way (although written here as a separate word, *-kow* is marking *paka-ɬpux*).

- (72) *paka-ɬpouh kow paka-kouptih iau-an-da*
paka-ɬpux -kow paka-kuptix iau-an-da
 AS-can you CAUS-purify me-OBLQ-da(?)
 'you are able to purify me' (viii:2)

(See 6.9.6 for the "anticipating sequence" (as) *paka-* prefixed to the auxiliary.) Unlike English, Siraya auxiliaries are also marked for voice, as in (73).

- (73) *Kou-ɬpouh-en-au kutha ta Kouva ki tatamd-den*
ku-ɬpux-an-au kutaz ta kuva ki ta-tamūd-an
 AS-able-UO-by me destroy TM Temple
 ki Alid ka mei-ɬkough mei-ryngei
 ki Alid ka mey-ɬikux mey-tingey
 of God and AS-do back AO-build
 ki anna tou tourou ki wə:i
 ki anna tu turu ki wāy
 draw that in three DRM day
 'I am able to destroy God's Temple, and to rebuild it in three days.'
 (xxvi:61) (or: 'God's Temple can be destroyed by me, and I can rebuild it in three days.')

Siraya has many more auxiliaries than English, and they convey all sorts of information that in English would be put in adjuncts and other words. They seem to constitute an open class. For instance, a sentence like 'he invited them back' in Siraya is something like 'he reciprocated the inviting', 'he shot again' becomes 'he repeated the shooting', and 'I'm eating in a hurry' becomes 'I'm hurrying the eating', and so forth. Considering the fact that auxiliaries also carry the markers for person, tense, mood, and (sometimes) voice, this label is somewhat awkward. "Main verb" would be at least as appropriate, as they seem to be most central to the verb phrase (cf. Starosta 1988:555). Compare the following sentences:

- (74) *pə:ə-ynd-ɛi-mau kow pou-dəwɪn*
pāā-ɪnmed-ey-[m]au kow pu-dəwɪx
 AS-all-IR-by me you pay
 'I'll pay you everything' (xviii:26)

- (75) *makkamado* *makka-vahiehyr* *neimi-æn*
maka-mado *ma-ka-vahi-hir* *neimi-æn*
AS-self/each other *AO-AFF-RED-hate* *them-OBLQ*
 'They hate each other.' (XXIV:10)

(For *-ka-* prefixed to verbs of sensation, feeling, or emotion, see 6.9.1.)

- (76) *siouro-ah irova ta ti Elias, ka pæ-likoug-ah*
siuro-a irova ta ti Elias ka pæ-likux-a
 do first-IR come TM PA Elias and AS-do back-IR
pæ-æhpit ki mamang
pæ-æpiti ki mamang
 CAUS-arise everything
 'Elias will come first, and he will restore everything.' (XVII:11)

The use of auxiliaries is sometimes extended widely, as in the next two sentences, where the root of one auxiliary is an onomatopoeia, and the root of the other is *tan-* 'go on/down/through/within (the [lateral] boundaries of)' + *avang* 'ship':

- (77) *ni-mau-ak-ak-ak mattava tyri-æn*
ni-maw-ak-ak-ak ma-tawa tmi-æn
 PAST-(?)-ak-ak-ak AO-laugh him-OBLQ
 'they laughed at him' (IX:24)

- (78) *ni-tau-avang* *d'marang* *hyrna*
ni-taw-avang *d-m-arang* *hina*
 PAST-go down/be on-ship AOT go there/thence
 'he went away from there on ship' (XIV:13)

The above complex verb constructions are instances of verb serialization, as they contain two or more predicates and share a common core argument. They are formed by nuclear junctures: they combine several predicates into a single complex nucleus that takes a single set of actor and undergoer arguments (Foley and Van Valin 1984:189-191).

Note that *assi*, the negator, also becomes head of the verb clause in which it occurs. But in contradistinction to auxiliaries in complex verb constructions, it can only be marked for person, whereas voice, mood, and aspect are marked on the following verb. Compare sentence (55) and the following two examples.

- (79) *Mamamang ka assi-mouni oumha-n,*
ma-ma-mang ka assi-(m)umi umxa-en
 RED-how that not-by you understand-UO
ka assi-mau-kamou ni-passousou-en ki paouh?
ka assi-(m)au-kamou ni-pa-susu-en ki paul
 that not-by me-you PAST-talk-UO DRM bread
 'How would you not understand that I had not spoken to you about bread?' (XVI:11)

- (80) *hejrou assi-kamou si-lala maenyh-kaulaula*
heyru assi-kamou silala ma-mi-kaulaula
 if not-you change sIV-?-INCHOATIVE- like²³
ki rarauwei, madaena assi-kamou mou-rbo-ah
ki ra-raway ma-daäwa assi-kamou mu-rbo-a
 DRM RED-child be complete not-you go toward-inside-IR
rou Pei-sasou-an ki tounnoun ki vulluvullum
tu Pey-sasu-an ki tunnun ki vilit-villim
 in Kingdom DRM Heavens
 'If you do not convert and become as little children, you will not enter [at all] into the Kingdom of Heaven.' (XVIII:3)

6.9.5 Deictic verbs also function as prepositions. Deictic verbs constitute a particular instance of verb serialization. In Siraya, they often perform as prepositions (in conjunction with relation markers or not), yielding a high level of deictic specificity.

- (81) *ka ni-ad nein paouqua tyri-æn*
ka ni-ad nein pa-u-kua tmi-æn
 andPAST-bring by-them [CAUS-go toward-move] → to him-OBLQ
ta ymnid ka maälam
ta imnad ka ma-alam
 TM all who sIV-ill
 'and they brought to him all that were diseased' (XIV:35)

- (82) *Meirang, heirou ymhou k'atta,*
Meirang (< ma-irang) heyru imhu ka-atta
 Lord sIV-great if you (which) this
douniaka pa-ou-qua-i-koh ymhou-an
duniaka pa-u-kua-i-koh imhu-an
 thus, like that CAUS-go toward-move-IMPERATIVE-me you-OBLQ
pa-ou-halap ki raloun
pa-u-xalap ki ralum

[CAUS-go toward-surface] → on, over DRM water
 'Lord, if it is you, let me come to you on the water.' (XIV:28)

- (83) *ka nid'marang sah-kaqua tou Egyptian*
ka ni-d-m-arang sa-ka-kua tu Egyptian
 and PAST-AO-travel[go through/each-RED-move] → to 1M Egypt
 'and he went away to Egypt' (II:14)

- (84) *ka myhkakoua akou-mea'h kamou ki ma-lymmouk*
ka milkakua akumea-a-kamou ki ma-lymmuk
 because eternally have-IR-you DRM sIV-poor
æiakoua ymouni-æn
äya-kua imnmi-æn
 [be with, reside with-move/be] → with you-OBLQ
 'for you have the poor always with you' (XXVI:11)

In sentences (81), (82), and (83), each argument is shared by the main verb as well as the deictic verb. This seems to fit the description of nuclear junctures given in 6.9.4. It does not, however, apply to sentence (84), which seems to be of a type not anticipated in Foley and Van Valin (1984). In (84), *kamu* 'you' is the topic of the main verb and therefore a core argument, whereas *ma-limnik* is a peripheral argument. On the other hand, *ma-limnik* is apparently the topic (= core argument) for *dyu-kau*, whereas the second person pronoun, *imuni-an*, is now in the oblique case (= peripheral argument).

6.9.6 Anticipating sequences

- (85) ni-paka-yimd-en tyn paka-dartkægh neini-æn
 ni-paka-ïmməd-en tïn paka-dartkæx neini-än
 PAST-AS-all-UO by him CAUS-healthy them-oblique
 'he cured them all' (xii:15)

In sentences (72-76) and (85), we see that the first one or two syllables of the dependent verb are also attached to the auxiliaries. In this way, it looks as if the prefix of the dependent verb is repeated (or rather anticipated) in the auxiliary. The following examples, however, demonstrate that it is actually *the first one or two syllables of the dependent verb* rather than *a prefix* that is attached to the auxiliary.

- (86) alei ka assi kow mäi-hga-hauwei-ah ka²⁴ kaenlung
 aley ka assi kow mey-ha-hawey-a ki kaäwlung
 so that not you AO-RED-appear-IR DRM person
 mama ki mi-rarkud, râ ki Raraman-appa 'mhou
 mama ki m-ira-ikud ra ki Raraman-appa-mhu
 like DRM AO-RED-fast but DRM Father-also-your
 ka itou-dung: ka Raraman-oho ka kmi-dung
 ka iñu-ding ka Raraman-uhu ka kmi-dung
 who be in secret and Father-your who AS-do in secret
 kmyita, pæ'æ-vi-ah ymhou-an tou ramæh
 k-am-ita päi-vi-a imhu-an tu rämæx
 AO + look/watch give-do in return-IR you-OBLQ at light
 'so that you do not appear to be fasting to people but to your Father
 Who is in secret: and your Father Who sees in secret will reward you
 openly' (vi:18)

The *k* in *kmi-dung* is not part of a prefix. However, the constellation /*kmi-* in which it occurs reflects the initial consonants of *k-m-ita*, which derives from *kitta* + infix *-m-*. Compare also the following sentence, where only the first consonant of the dependent verb /*k-m-ani*/ is attached to the auxiliary:

- (87) ni-k-yymnid kman ka mi-banglau ta neni
 ni-k-ïmməd k-m-an ka mi-banglaw ta neni
 PAST-AS-all AO-eat and inchoative-satiated TM they
 'they did all eat and were filled' (xiii:20)

Other complex verb constructions with anticipating sequences prefixed to the auxiliary are given below. Note that in sentence (89) the anticipating sequence occurs twice.

- (88) pæh-mang-nounni pæhdindim?
 pä-mang-an-uni pä-damdam?
 AS-what-UO-by you TRANS-think
 'what do you think? (what do you reckon?)' (xxix:28)

- (89) ka ni-si-yymnid si-kaha si-tan
 ka ni-si-ïmməd si-kaha si-tan
 and PAST-AS-all AS-done, PAST PREF-prepare
 'and all the things are ready' (xxii:4)

- (90) Ka ni-tmou-minmia tyri-æn ka smou-dyk-ah
 ka ni-t-m-u-minmia tiri-än ka smu-dik-a
 and PAST-beseech him-OBLQ that AS-only-IR
 smoukla ki na papytyt ki koulamough tyn
 s-m-u-kla ki na pa-pÿpÿt ki kulannux tïn
 PREF-AO-touch DRM the hem DRM garment his
 'And they besought him that they might only touch the hem of his
 garment' (xiii:36)

- (91) mou-yymnid-kamou kawa mou-mha ki atta?
 mu-ïmməd-kannu kawa m-umxa ki atta
 AS-all-you [+uncertainty] AO-understand DRM this
 'Do you understand all this?' (xiii:51)

Anticipating sequences do not always represent a formal aspect of the following dependent verb. In sentence (74) and in the following two sentences with complex verb constructions, the auxiliary has a verbal classifier prefixed that is not also prefixed to the dependent verb, and that conveys a meaning aspect, rather than a formal aspect, of the latter. (Remember that *saki-* has the notion of 'throwing, casting', and that *päi-* has the notion of 'giving, passing on'.)

- (92) mariang-ah ymhou-an ka 'ou-pag-in ta
 ma-riang-a imhu-an ka upax-an ta
 sIV-good-IR you-OBLQ that destroy-UO TM
 sää-sat ka pouk oho, ka assi saki-tmouk-an-eh
 saa-saat ka puk-oho ka assi saki-tmuk-an-ey
 RED-one which member-your and not AS-whole-UO-IR
 maryng ta voual oho tou kalæu-æu-an
 m-aring ta vual-oho tu ka-läwhäw-an
 AO-throw TM body-your in hell
 'It is better for you that one of your members should perish, and not
 that your whole body should be cast into hell.' (v:29)

- (93) pə'ɛ: ym-d-ei-man kow pou-da-əuħ
 pää-ɪmməd -ey-(m)au kow pu-daəwħ
 AS-all-IR-by me you pay
 'I will pay you everything.' (XVIII:26)

To sum up, it seems that, where the auxiliary is marked for tense, mood, person, and (sometimes) voice, the basic meaning of the verbal construction is still with the dependent verb, although this meaning is often predicted by a formal element prefixed to the auxiliary (= an anticipating sequence) or by a semantic element prefixed to the auxiliary (= a verbal classifier).

NOTES

1. I began to work on the Siraya gospel of St. Matthew text after a brief visit to Taipei in October 1991 with a joint travel grant from the Taiwan Research Council and the Netherlands Organization for Scientific Research (NWO). I wrote this article with financial support from the Australian Research Council and from the Pacific Cultural Foundation in Taiwan. I am grateful to Professor Jen-kuei Li. He was my host at the Academia Sinica in October 1991 and again in the beginning of December 1996, and he kindly made his Siraya data available to me. I am also grateful to Professor E. M. Uhlenbeck (Netherlands), Elizabeth Zeitoun (Academia Sinica, Taipei), John Hajek (University of Melbourne), John Bowden (University of Melbourne), and an anonymous reviewer for their insightful comments on earlier versions of this article. Shortcomings and errors in it are my own responsibility alone.

The following abbreviations are used: AFR prefix (*ka-*) to verbs expressing a sensation, feeling, or emotion; AO, actor-oriented verbal affix (see note 8); AS, anticipating sequence (see 6.9.5); CAUS, causative prefix (either *pa-* or *paka-*); DEM, the default relation marker *ki*; IR, irrealis, including imperative, future tense, subjunctive (there are three irrealis suffixes: actor-oriented *-a* and undergoer-oriented *-ɛy* [-'ei', -'ein'] and *-aw* [-'au', -'auh'] [see 6.9.1]); LM, the locative relation marker *tu*; OBJ, oblique; PA, the personal article *hi*; PERP, perfective; PREF, (any unidentified) prefix; RED, reduplication; SV, stative intransitive verb marker; TM, the topic relation marker *tu*; TOP, topic; TRANS, transitive prefix; UO, undergoer-oriented verbal affix.

- Based on the Introduction to Coyett (1991) by G. C. Molewijk.
- This will yield a shorter and more user-friendly list. The reader interested in a certain form in the original gospel text only has to take the root of the equivalent form in my new spelling in order to look up this form in the wordlist.
- Nevertheless, the matter may be more complicated: *wad* 'body' may be related to *ka-wul-an* or *ka-wul-wul-an* 'house, generation, pedigree' (i:17). If it is, it puts the interpretation of 'oe' in a new light, as it would seem to alternate with *wa* and *wa* within the same root.
- This must be a variant form with palatalized vowel (see 5.2) of 'thru' 'devil' < PAN *qaniCu 'spirit'. A semantic development from 'ghost' or 'spirit' to 'scout' or 'inquirer spirits' is not uncommon (at least not in various European languages).
- Cf. the Utrecht manuscript, which has *wixax* ('voogog') 'enemy'.
- In some cases, PAN or other Austronesian languages may provide evidence for a schwa in Siraya.
- I use Foley and Van Valin's concepts of Actor and Undergoer to indicate the arguments of Siraya verbs (Foley and Van Valin 1984:28ff)

- Cf. *paka-pa-pata-patey* 'death penalty', a form with a reduplicated root following a CVCV-CVCVCVC pattern. The last *a* in *-pata-* has not undergone fronting, as it is not followed by *y*.
- The Hokkien origin of this word was pointed out to me by Weng Chia-yin (pers. comm.).

11. 'ng' occurs in the following words: 'ngataf' 'gate', 'paka-ngala' 'put to shame', 'si-ngala' 'first', 'nou-ngara' 'get to know, enquire', 'ngale' 'wrath', 'ngara' 'small tree', and 'pa'-ou-ŋi-touaŋh' 'to break'.

In seventeenth-century Dutch, a macron is sometimes found on the nasal in the word *en* 'and'. Historically *en* is an allegro-form of *ende* (occurring along with *en* in the Siraya gospel). Likewise, a macron is sometimes found on the vowel of *de* 'the' where the latter has lost a final nasal. For example, in *dē naem* occurs along with *iden naem* 'in the name (of)'. In seventeenth-century Dutch, the macron apparently indicated contraction or phonemic loss in allegro-forms. Siraya 'ng' may tentatively be interpreted as a [ŋ] (or, less likely, a prenasalized [ɲ]) rather than as a velar nasal. The combination of 'n' + 'g' with superscript macron may have been an attempt to indicate a voiced velar stop in contradistinction to a velar fricative on the one hand and a velar nasal on the other. One notices that Dutch (and hence also Siraya) orthography has no way to distinguish between [x] and [χ].

12. The schwa in this form is based on the different vowel quality in derivations such as *ihlib* (v16) 'to close', *əwħ-ey-kame* (XXVII) 'open [the door] to us', and *ə-dw-dihlib* (XVII9) 'keys'.

13. The gospel text has (among others) 'ymnid', 'ymnnd', 'ym'd-ə'.

14. The schwa here is based on the vowel quality in related forms such as 'pamur' (v12), 'pamur' (x12), 'amy' (C39), 'ni-pām'i-en' (x12:8) 'to do, make happen'.

15. Spelled 'tau', 'ta u', 'taou', and 'ta ou' in the Gospel text.

16. Siraya sometimes shows metathesis in derivations on the basis of monosyllabic roots, as for example *ma-lix* 'strong, powerful' → *ka-lix-an* 'power'; *piā* 'crossroads to a highway, entry to a highway' → *pa-apt-an* 'borders, coasts'; *pawu* 'come about, happen; be fulfilled' → *pa-ift-aw-ato* 'that it might be fulfilled'; *ahub* 'door' → *ihub-ey-kame* 'open [the door] to us!'

17. Both 'hartim' and 'hartum' are found in the gospel text.

18. The meaning of 'rā' is usually 'but', but remains unclear when occurring in clause-final position.

19. The gospel text has 'karimdiman', 'karumdiman', and 'karindum-man'.

20. *mabantung* is also written 'mabatonung', which suggests a root *zabantung* with infix *-m*. However, another form, 'kabaloungan' (*ka-batung-an*), would contradict this.

21. See note 16.

22. Spelled 'koutia' or 'kuha' in the gospel text.

23. The combination of verbal prefixes in this form is odd.

24. 'Ka' is ungrammatical and must be a typo for 'ki'. Compare also the following 'ki Raraman-appā', which does have the expected relation marker 'ki'.

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