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Siraya Reduplication¹

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The main patterns of reduplication in Siraya (West Formosa) include monosyllabic root reduplication, an inherent lexical property of certain wordbases, and disyllabic reduplication, which adds the notion of diffuseness (including plurality, variety, similarity) to nominal wordbases, and the notion of diffuseness (repetition of action, plurality of actants) or continuity (including state, process) to verbal wordbases. The same meanings are conveyed by rightward reduplication, which applies when the last three or four segments of a root are copied at the end (losing the final consonant if there is one). First-syllable reduplication basically forms cardinal numbers with nonhuman referents. *Ca-* reduplication is part of verbal morphosyntax indicating progressive aspect, generic aspect, or a state, but it also forms deverbal nouns; it is, moreover, used with ordinal numerals, and with cardinal numerals and other count words having a human referent. Contrary to the general pattern found in other Austronesian languages (Blust 1998), the meaning of Siraya nouns derived through *Ca-* reduplication is not restricted to that of instrument but also includes that of agent, abstract noun, undergoer, and (in combination with the suffix *-an*) location. Finally, *pa-* reduplication is a morphosyntactic device forming causative verbs.

1. INTRODUCTION. Siraya, an extinct West-Formosan language, has a large variety of reduplication patterns. It has many of these in common with other Formosan languages (cf. Blust 1998, Chang 1998). The following overall patterns can be distinguished formally alongside some less common patterns: monosyllabic-root reduplication, disyllabic-root reduplication, rightward reduplication, first-syllable reduplication, *Ca-* reduplication, *pa-* reduplication. These patterns are shown in underived as well as derived words. Monosyllabic root reduplication and disyllabic root reduplication can each be divided into subpatterns on the basis of the phonemic structure of the wordbases with which they are found. In the following sections, an overview is given of all apparent patterns and subpatterns as well as of their respective functions and meanings.

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Conventions. Siraya examples in this article are taken from the Siraya Gospel of St. Matthew (Gravius 1661, Campbell 1888) and, occasionally, from the Siraya Catechism (Gravius 1662). For the sake of philological soundness, out-of-context examples of verbs are sometimes given in the derived form in which they occur in the sources, although their meaning may be rendered into English with an infinitive or participle. Furthermore, for practical reasons, the English gloss does not translate the undergoer-orientedness of some of these examples. Source places are given immediately after lexical examples, and after the translation in the case of sample sentences. Source places in the gospel text are given between brackets by a roman numeral (indicating gospel chapter) followed by a semicolon and arabic numeral (indicating verse). Source places in the Catechism are given between brackets with a capital C followed by the page number of the 1662 printing; this page number is followed by a “v” if reference is made to a verso page. Angle brackets will be used for roots that only occur in derivations, as for example <tangi>, which does not occur by itself but is found in *t-m-angi-tangi* (ii:18) ‘to cry’ and *tangi-tangi-ən* (xiii:42) ‘crying’. There is, of course, no way of telling whether these roots were really bound forms in spoken Siraya or whether they just happen not to occur underived in the existing corpus of Siraya data.²

Terms. The reader is referred to Adelaar (1997) for a grammatical description of Siraya. What follows here is a simple listing of special terms used in this publication. (a) The AFFECTIVE prefix *ka-* occurs with undergoer-oriented verbs including those expressing a sensation, feeling or emotion. (b) The AGENT-ORIENTED prefix is *M-* and has two allomorphs: *m-*, which occurs before initial vowels, and *-m-*, which occurs after initial consonants. The allomorph *m-* also replaces initial *p-* in the transitive prefix *pa-* (which then becomes *ma-*). It also replaces *p-* in a number of lexical prefixes, such as *pako-/paku-* (+calling), *paki-* (+find), *pāta-* (+talk), which become respectively *mako-/maku-*, *maki-*, and *māta-* through affixation of *M-*. (c) In Siraya complex-verb constructions, the first verb obtains all the marking; the following verb (or verbs) by default appears in agent-oriented form. The first verb may have a formal element of the following verb prefixed to it, which is called an ANTICIPATING SEQUENCE. Its shape varies from the initial consonant of the following verb to its first syllable or even its first two syllables. Although it may look like a verbal prefix, as in sentences (4), (7), and (33), it really is a formal segment of the following verb. In a few cases, its shape is only iconically related to the mean-

2. The following abbreviations are used in this article: AFF, affective prefix; AG, agent; AGOR, agent-oriented; AS, anticipating sequence; C, consonant; CARED, *Ca-* reduplication; CAUS, causative; COM, comitative; EMPH, emphatic; EXCL, exclusive; IMP, imperative; INCH, inchoative; INCL, inclusive; IO, instrument oriented; LNK, linker; LOC, lexical prefix basically indicating location (in both space and time) but with a more generalized meaning; LP, lexical prefix; MOT, lexical prefix indicating motion; OBL, oblique; P, plural (1P/2P/3P, 1st/2nd/3rd person plural); PAST, past tense; PM, personal marker (a marker preceding nouns with a human referent); POSS, possessive; RED, disyllabic or trisyllabic root reduplication; RM, default relation marker (*ki*), which occurs when *ta* (topic marker) or *tu* (location marker) do not occur; S, singular (1S/2S/3S, 1st/2nd/3rd person singular); SIV, stative intransitive verb; SUBJ, subjunctive; SUBJ+UO, subjunctive and undergoer-oriented portmanteau suffix (*-ey* or *-aw*); TM, topic marker (*ta*); TOP, topic; TR, transitive; UO, undergoer-oriented (three suffixes: *-ən*, *-n*, and *-an*); V, vowel.

ing of the following verb (as in sentence [28]; see further Adelaar 1997:392–394). (d) Many Siraya verbs consist of two semantic parts: a LEXICAL PREFIX that carries a general meaning, and a root. For instance, *s-m-aki-* conveys the meaning of ‘throwing’; it can be prefixed to roots like *vaung* ‘sea’, *-mala* ‘outside’, *-kua* ‘to move’ yielding respectively *s-m-aki-vaung* ‘to cast into the sea’, *s-m-aki-mala* ‘to cast outside’, and *s-m-aki-kua* ‘to cast’ (Adelaar 1997:387–89). (e) A special category among the lexical prefixes are the ORIENTATION PREFIXES. These are a set of frequently occurring lexical prefixes. Although they are more grammaticalized than other lexical prefixes, and in some derivations their meaning seems to have faded, one can basically attribute the following meanings to them: *-i-* occurs in derivations referring to a location in place or time, *-u-* (or *-üw-*) occurs in derivations referring to a motion, and *-a-* (or *-ä-*) occurs in derivations with a comitative meaning. (f) Siraya phrases are introduced by RELATION MARKERS: *ta* is the topic marker, *tu* is the location marker, and *ki* is the default relation marker occurring wherever *ta* and *tu* do not apply. (g) The notion of SUBJUNCTIVE is fairly general and includes future tense; there are three subjunctive suffixes: *-a* (agent-oriented), and *-aw* and *-ey* (both undergoer-oriented). Nominal agent marker: *tama-* + Verb indicates the person who does [Verb] or has [Verb] as a characteristic.

2. MONOSYLLABIC ROOT REDUPLICATION. Monosyllabic root reduplication is exhibited in a large number of word bases that consist of a doubled root syllable with or without a third element (an infix or a linking vowel). There are three varieties: simple monosyllabic root reduplication, monosyllabic root reduplication with *-ar/-al-* infixation, and monosyllabic root reduplication with linking *-i-*.

Monosyllabic root reduplication is apparently always lexicalized; nevertheless, except for *Ca-* reduplication, there are no instances of further (morphological) reduplication on the basis of reduplicated monosyllables. The fact that wordbases with monosyllabic root reduplication do not allow further reduplication except for *Ca-* reduplication also applies to Thao, another Formosan language (Chang 1998:290).

Wordbases with monosyllabic root reduplication often have an inherently iterative meaning (see Comrie 1985:41–44). This is true when they are verbs, but even if they are nouns, they may contain a notion of iterativity (e.g., *kübküb* ‘brood’, which has a plural notion).

2.1 SIMPLE MONOSYLLABIC ROOT REDUPLICATION. Examples include: *taptap* (*ta rapul*) (x:14) ‘to shake off (dust)’; *bikbik ki vungo* (xxvii:39) ‘to shake, wag, one’s head (*vungo*)’; *x-m-idxid* (vii:6) ‘to trample on’; *xitxit-aw* (*ki kaäwlung*) (v:13) ‘be trampled on (by people)’; *tübtib* (vii:7), *t-m-übtüb³* (vii:8) ‘to knock’; *toktok* (xxviii:33) ‘skull’; *siksik-aw* (xii:13) ‘stretch out’;⁴ *lawlaw* (viii:20) ‘nest’; *si-lawlaw* (xiii:32) ‘to build a nest’; *ma-kidkid* (xxv:21) ‘faithful’; *tama-ma-*

3. Variation between *ü* and *i* (especially *ÿ*) occurs frequently and suggests that the original vowel was a schwa (Adelaar 1999:§2.4).

kitkit (C2I6) ‘miser’; *d-m-ingding* (vii:1) ‘to judge’; *ka-rəmdəm-an* (iv:16) ‘darkness, obscurity’; *kübüküb ki təpung* (xii:34) ‘generation of vipers’, *ka-kübüküb ki təpung* (iii:7) ‘brood of vipers’ (*ka-kübüküb* consists of monosyllabic root reduplication + *Ca-* reduplication [see 6.2.2]); *tintin* (v:28) ‘heart; mind’; *kurkur* (vii:6) ‘hoof (of a pig)’; *dümdüm* (vii:25) ‘torrential rain, cloudburst’; *m-i-laklak* (xii:10, xiii:6) ‘to wither’; *ni-u-bülbül-ən* (xxiii:38) ‘destroyed, desolated’.

Some roots of a C₁V₁C₁V₁C₂-structure, like *titing* (in *ma-titing* (ix:37) ‘to be few’), *vavaw* (ii:9) ‘the top, above’, *bäwbäwx* (vi:20) ‘moths’ or <Iulux> (in *l-um-ulux* [xv:8] ‘to praise’), are probably the result of monosyllabic root reduplication at an earlier stage. Evidence for this is provided by *bibix* (xv:8) ‘lip’, which has a variant *vixbix* (“vigbig”) in the UM⁵ and is a reflex of PAN *biRbiR. The form *bibix* seems to indicate that reduplicated monosyllabic roots sometimes simplify their intervocalic consonant cluster and develop a C₁V₁C₁V₁C₂-structure.

2.2 MONOSYLLABIC ROOT REDUPLICATION WITH -AR- OR -AL-INFIXATION. Examples: *saramsam* (xxv:30, C205) ‘useless’; *pa-sa-saramsam ki wäi ki päi-hababa-n* (xii:5) ‘to profane the Sabbath (= the day [wäi] of rest [päi-hababa-n])’; *va-varingbing* (viii:32) ‘(of a herd of swine) run violently down, throw themselves into’; *mi-harəfəf* (xxiv:26, ii:3) ‘troubled, confused, moved’; *paka-parupu* (xxi:44) ‘to crush, grind to powder’; *palī(x)pix* (xxvii:59) ‘fine, refined’; (cf. also *pi(x)pix* ‘crumbs’); *palungpung* (xiv:32) ‘to cease (of wind)’.

Note that *va-varingbing* also exhibits *Ca-* reduplication (see section 6). Another case, *ka-kariskäws-ən* (xxiv:15) ‘abomination’ is possibly a combination of monosyllabic root reduplication, insertion of *-ar-*, *Ca-* reduplication, and (although this cannot be demonstrated as a regular feature) vowel alternation in the original root.

2.3 MONOSYLLABIC ROOT REDUPLICATION WITH LINKING I. Examples: <dīl-i-dīl>, *dīl-i-dīl-ən ki tau* (C8v) ‘the trembling of the people (*tau*)’; *pak-ī-pak* (xv:27) ‘crumbs, lumps’; <riṗ-i-riṗ>, *äit ka riṗiriṗ* (x:9) ‘purses’ (*äit* ‘belt’); <täw-i-täw>, *p-äw-täwitäw-ey ta teni* (xxi:44) ‘he (*teni*) will be crushed, broken’.

An instance of monosyllabic root reduplication with both linking *-i-* and *-ar-* infixation is seen in the deverbal noun *ka-varutivut-an* (xxvi:5) ‘uproar’: the root syllable *vut is reduplicated with a linker *-i-* (→ *vut-i-vut); it has an infix *-ar-* (→ *v-ar-ut-i-vut) and a circumfix *ka- -an* (→ *ka-v-ar-ut-i-vut-an*).

3. DISYLLABIC ROOT REDUPLICATION

3.1 FORM. Disyllabic-root reduplication concerns entire disyllabic roots except for the last consonant if there is one: the pattern is CVCV-CVCVC, with four sub-patterns

4. Note also *siki-s’kix* (xii:49) ‘to stretch out’, with vowel reduction (to \emptyset) in the second segment; *siksik* conceivably originated as a short form of *siki-s’kix*.

5. Refers to the Utrecht Manuscript (Van der Vlis 1842), which contains a word list and some texts in a form of Siraya that is different from the “Gospel dialect.”

depending on the canonical shape of the root: (1) root has CVCVC shape (→ CVCV-CVCVC); (2) root has (C)VCV shape (→ CVCV-CVCV and VCV-VCV); (3) root has VCVC shape (→ VC-VCVC); (4) root has CVCe_y shape (→ CVCa-CVCe_y).

3.1.1 CVCVC-roots [→ CVCV-CVCVC]. This pattern applies to disyllabic roots with initial and final C. Examples: *vikur* (vi:5) ‘corner’; *-apa* (vi:5) ‘and’; *darang* (vii:13) ‘road, path’; *tu vikur-apa ki dara-darang* (vi:5) ‘and on street corners’; *ravak* (xxviii:1) ‘grave’, *rava-ravak* (viii:28) ‘graves’; *ma-takut* ‘(x:26) afraid’, *t-m-aku-takut* (ix:30) ‘to urge’, *ni-taku-takut* (C24) ‘to threaten’; *vual* (viii:16) ‘body’, *māix-bua-vual* (xxv:15) ‘each person’; *vuil* (xii:40) ‘stomach’, *ka-vui-vuil-an* (xxiii:36) ‘generation, lineage’;⁶ *ralum* (xiv:28) ‘water’, *ralo-ralum* (viii:32) ‘waters’; *purux* (xiv:35) ‘land, country’, *puru-purux* (iv:13) ‘countries, regions’; <huaw>, *h-m-ua-huaw* (xii:19) ‘to shout, cry out’.

3.1.2 (C)VCV-roots [→ (C)VCV-(C)VCV]. This pattern applies to disyllabic roots without final C. Examples: *āwma* (x:11) ‘village, town’, *āwma-āwma ki Samaritanen* (x:5) ‘the towns of the Samaritans’; *lītu* (ix:33) ‘devil’, *lītu-lītu* (viii:38) ‘devils’; *āsu* (xv:27) ‘dog’, *āsu-āsu-an* (vii:6) ‘dogs (in general)’; <tangi> ‘crying’, *t-m-angi-tangi* (ii:18) ‘to cry’, *tangi-tangi-an* (xiii:42) ‘crying’; *uma* (xx:5) ‘field, land’, *uma-uma* (xix:29) ‘fields’; *vare* (vii:25) ‘wind’, *vare-vare* (xxiv:31) ‘winds’; *tau* (viii:9) ‘person’ (i:21), ‘people’ *aməd* (v:11) ‘all’, *aməd ki tau-tau* (xxiv:9) ‘all peoples, all nations’; *īna* (xiii:33) ‘woman’, *kāwx-īna-īna* (xxv:1) ‘virgin’ (*kāwx-* [+inchoative]); <rapu>, *r-m-apu-rapu* (vii:26) ‘foolish, silly’; *ma-vana* (xx:22) ‘to know’, *si-vana-vana-n* (xxvi:4) ‘cunning, slyness’; <lika>, *pa-ī-lika-lika* (xxiii:4) ‘to touch, move’; *ni-si-uru* (xx:8) ‘those who came first’, *makoilaulau ... ka si-uru-uru* (xxi:9) ‘the multitudes ... that preceded’.

3.1.3 VCVC-roots [→ VC-VCVC]. This pattern applies to disyllabic roots with no initial C. Most probably, it developed as follows: *VCV-VCVC > *VC(V)-VCVC > VC-VCVC; cf. <ayam> ‘bird’: *aya-ayam > *ay(a)-ayam > *ay-ayam*. Note that in the examples below, the second root-vowel is identical to the first one or is a schwa. Examples: <ayam> ‘bird’, *ay-ayam* (vi:26) ‘birds’; *alāk* (x:37) ‘child’, *al-alāk ki Alid* (v:9) ‘children of God’; *ma-alam* (xxv:39) ‘to be ill’, *pā-i-al-alam* (xvii:15) ‘to suffer (from)’; *apad* (ix:16) ‘piece of cloth’, *ap-apad* (ix:16) ‘some piece of cloth’; *ha-uzung* (xix:18) ‘to steal’;⁷ *uz-uzung ki ni-maka-kītil* (xv:19) ‘(secret dealings of those who are married =) adultery’; *m-avax* (xiv:20) ‘to forbid’, *mako-av-avax* (xv:4) ‘to curse, damn, revile’ (*mako-*, lexical prefix meaning ‘to call’); *adām* (xiii:7) ‘thorn’, *ad-adām-an* (vii:16) ‘thorns, thorny bush’; *uru ka asi ma-riang* (xiii:26) ‘(grass that is not good=) weed’, *ur-uru ka asi ma-riang tu uma* (xiii:36); ‘weeds of the field’.

6. A parallel semantic configuration is found in Minangkabau (Sumatra), which has *paruik* [paruy?] meaning both ‘stomach’ and ‘lineage’ (Moussay 1995).

7. The root *uzung* actually has the meaning of ‘do secretly’; prefix *ha-* remains unidentified.

Note, however, *pa-ile-ilix* (viii:15) ‘to serve’, which derives from *m-īlix* (vi:24) ‘to obey, follow’: here no contraction of like vowels took place; instead, there was regressive dissimilation. Dissimilation (whether progressive or regressive) as a rule takes place where two *ī*’s are adjacent either within a root or as a result of affixation or reduplication (Adelaar 1999:320).

3.1.4 CVCey roots [→ CVCa-CVCey]. The diphthong [-ey] is the result of vowel coloring. It must be analyzed phonemically as *-ay/*, because *e* is of rather uncertain phonemic status and often demonstrably derives from either *a, *ə, *i, or *ä (Adelaar 1999:319–320). CVCey-roots are therefore phonemically of a */CVCay/ structure, and CVCa-CVCey reduplications are phonemically of a *CVCa-CVCaC structure. The final diphthong is phonotactically a sequence of *a + y*; as the latter is a consonant and is in final position, it is sometimes deleted in the first sequence of a reduplication. Examples: *ringey* (xxvi:10) ‘work’, *ringa-ringey* (xxiii:5) ‘works’; <vuney>, *vuna-vuney* (xvii:15) ‘often’; *patey* (xxii:32) ‘the dead’, *ma-msing ki paka-pa-pata-patey* (xxvi:66) ‘guilty of death’ (lit. ‘deserving to be killed’).

Note, however, *m-ahay-ahay* (vii:13) ‘wide’, and *m-aney-aney* (xxii:46) ‘not dare’, which have retained *-y in their first sequence.

3.2 DISYLLABIC ROOT REDUPLICATION: MEANING

3.2.1 Nouns. With nouns, disyllabic root reduplication denotes plurality with a notion of variety, generality, or indefiniteness. Examples: *tau* (i:21) ‘people’; *īmād* (viii:16) ‘all’, *īmād ki tau-tau* (xxiv:9) ‘all peoples, all nations’; *darang* (vii:13) ‘road’, *tu vikur-apa ki dara-darang* (vi:5) ‘and on street corners, on the corners of streets’; *lītu* (ix:33) ‘devil’, *Si-bavaw ki Lītu-Lītu* (ix:34) ‘Prince of the Devils’; *lbāx* (i:title) ‘part’, *tu lbā-lbāx ki Galilea* (ii:22) ‘into the parts of Galilee’; <ayam> ‘animal’, *subūx* (xiii:4) ‘to move through the air, fly’, *ay-ayam ka subūx* (xiii:4) ‘birds’; *āwma* (x:11) ‘town, village’, *tu āwma-āwma ki Samaritanen* (x:7) ‘in the towns of the Samaritans’.

The reduplicated form of *rawey* ‘child’ is *ra-rawey*, which combines the meanings ‘children’ (ii:16) and ‘domestic servant’ (viii:6). It actually shows *Ca-* reduplication instead of full reduplication, which would normally have yielded **rawa-rawey*. *Ca-* reduplication with nouns usually conveys the notion of similarity with the root, which in this case matches the meaning ‘domestic’, but not that of ‘children’. It is possible that *ra-rawey* is a conflation of an original form with full reduplication and a form with *Ca-* reduplication. Arguments in favor of a contraction of **rawa-rawey* to *ra-rawey* are that, except for initial *r*, *rawey* has only vocoids, and no obstruents; furthermore, whereas full reduplication of nouns conveys the meaning of plurality, and *Ca-* reduplication of nouns conveys the meaning of similarity (see 6.2.2), both these meanings apply to *ra-rawey*.

The notions of variety, generality, and indefiniteness are in fact more central than plurality to the meaning of these forms, as can be seen in *ap-apad*. This is an

explicitly indefinite (and nonplural) form: it is a translation of (Dutch) *eenen lap* ‘a cloth’ or ‘some cloth’, which is an indefinite noun phrase.⁸

ap-*apad* ka ausi-*apa* ki huping
 RED-cloth LNK not-also RM folds
 ‘[and] ... some piece of unfolded cloth’ (ix:16)

3.2.2 Verbs. With verbs, disyllabic root reduplication primarily indicates iterativity, sometimes with the notion of distributive action or habitual action. These three meanings are sometimes difficult to distinguish from one another.

ITERATIVE ACTION

- (1) Ka äya-tukad ki vaung ta avang, ka ni-pa-rako-raku ki rungwal
 LNK be.at-middle RM sea TM ship LNK PAST-TR-RED-TOSS RM waves
 ‘And the ship was in the midst of the sea, tossed by the waves’ (xiii:24)
- (2) ka ni-si-äwx ti Jesus-an mäka-Galilea,
 LNK PAST-LP-follow PM Jesus-OBL from-Galilea,
 aley ka pa-ile-ilix-ey nein tñi-än
 in order to TR-RED-serve-SUBJ+UO 3P.AG 3S.OBL
 ‘who had followed Jesus from Galilee in order to serve him’ (xxvii:55)
- (3) M-u-vaung-a, heyri-ring-an-ey ta heyring,
 AGOR-MOT-sea-SUBJ RED-hook-UO-SUBJ TM hook
 ka ar’-aw thing ka mu-uro m-u-vavaw
 LNK take-SUBJ fish LNK AS-first AGOR-MOT-top
 ‘Go to the sea, cast a hook, and take the first fish that comes up’

DISTRIBUTIVE ACTION

- (4) Ka ru siki-s’kix ki rima tñ ma-ï-vavaw ki
 LNK when RED-stretch RM hand 3S.POSS SIV-LOC-top RM
 Patatäütäüxøn tñ, ni-k’ma, Kït’-ey ta Rarenan-au,
 disciple 3SPOSS PAST-(say).like.this look-SUBJ+UO TM mother-1SPOSS
 ki täiapara-apa-mau.
 RM brother-and-1SPOSS
 ‘And stretching out his hand over his disciples, he said: Behold my mother and my brothers.’ (xii:49)
- (5) ka ru ni-ma-dingi-dingi, ni-lupux ki əməd ki
 LNK when PAST-AGOR-RED-order PAST-kill RM all RM
 ra-rawey ka tu Bethlehem.
 RED-child LNK at Bethlehem
 ‘And he ordered [?to his several men] to kill all children in Bethlehem.’
 (ii:16)

8. Evidence that this *ap-apad* is not a plural is the fact that it is repeated in its underived form (*apad*) further on in Matthew ix:16.

HABITUAL ACTION

- (6) ni-ma-patey ta neni ka ni-kiĩ-kiĩm nein ta
 PAST-SIV-dead TM 3P.TOP LNK PAST-RED-seek 3P.AG TM
 vati ki Rawey
 souls of children
 ‘Those who looked for the souls of children have died’ (ii:20)
- (7) paniniøn ki rix ki su, ka ma-muy maku-toku-ko maku-Ali-lid
 hypocrites LNK SIV-want AS-RED-stand LP-RED-pray
 tu Pāwisasaalan tu vikur-apa ki dara-darang-ra,
 LOC synagogues at corner-and RM RED-road-but
 aley ka māmāx-ä ki kaäwlung
 in order to public, openly-SUBJ RM people
 ‘the hypocrites, who love to pray standing in the Synagogues and at street corners in order to be seen by men [to appear to men]’ (vi:5)
- (8) Ti mamang ka aku-tangira ki ä-ilingi-lingix, h-m-ilingix-a-ato.
 who ever LNK have-ears RM IO-RED-hear AGOR-hear-SUBJ-EMPH
 ‘He who has ears to hear, let him hear.’ (xi:15)

Some stative verbs referring to characteristics exhibit disyllabic root reduplication: <rapu>, *r-m-apu-rapu* (vii:26) ‘foolish’; <arĩng>, *m-arĩng-arĩng* (v:22) ‘empty-headed, good-for-nothing’, *m-arĩng-arĩng* (UM) ‘crazy’.

In some other cases, verbs with disyllabic root reduplication have a lexicalized meaning. Compare the following pairs: *rbo* (vi:6) ‘the inside’, *rbu-rbo* (v:28) ‘to commit adultery’; *ma-takut* (x:26) ‘afraid’, *ni-taku-takut* (C24) ‘to threaten’, *t-m-aku-takut* (ix:30) ‘to do in an urgent or strict manner’; *tau* (viii:9) ‘person’, *əməd ki tau-tau* (xxiv:9) ‘all peoples, all nations’; *su* (vi:2) ‘word; order’, *ma-su-su* (v:44) ‘to say’.

3.2.3 Adverbs. A few adverbs exhibit this reduplication; they convey a notion of continuity, repetition, or graduality. Examples: *limu* (xxiv:13) ‘limit, end’, *ma-limo-limo* (UM) ‘continually’; <vuney>, *vuna-vuney* (xvii:15) ‘often’; *mila* (xxvi:43) ‘again’, *mila-mila* (UM) ‘gradually’.

4. RIGHTWARD REDUPLICATION. Rightward reduplication applies when the last three or four segments of a root are copied at the end, skipping the final C if there is one. The term is taken from Chang, who describes this reduplication in Thao, a Formosan language from central Taiwan (Chang 1998:283–84). Rightward reduplication also occurs in Siraya. In Siraya as well as in Thao, it does not seem to differ semantically from disyllabic root reduplication. It also involves deletion of the final consonant (if there is one), and it occurs in the following cases.⁹

Some disyllabic roots that characteristically have an initial vowel (in one case, initial *h*), a final vowel, or both, reduplicate by copying the final -CV(C) sequence and by deleting the last consonant in the first sequence of the reduplication

9. The phonotactic conditions for this phenomenon are less complicated in Siraya than they are in Thao (cf. Chang 1998:283–284).

[(C)1VC2V → (C)1VC2V-C2V; VC1VC2 → VC1V-VC1VC2]. Examples: *vato* (xviii:6) ‘stone’, *vato-to-an* (xiii:5) ‘stony place’; *m-avok* (ix:14) ‘to eat’, (*ta*) *avovok* (xv:20) ‘(the act of) eating’; *usīng* (xiv:31) ‘little’, *usī-sīng* (xxv:40) ‘least’; *arux* (iv:15) ‘across’, *saat ka-tunun-an ki na ka-arurux ki rapal* (v:41) (one thousand of steps across of the feet =) ‘one mile’; *heyrīng* (17:27) ‘hook’, *pa-heyrī-rīng-an* (xvii:27) ‘to throw out a hook’; *r-amu* (23-30) ‘ancestor’, *M-amu-mu* (16-21) ‘Elders’;¹⁰ *Alid* (xv:31) ‘God’, *maku-Ali-lid* (iv:9) ‘to pray to God’ (*maku-* ‘talk to’); *mi-tuko* (xx:3) ‘to stand’, *maku-toku-ko maku-Ali-lid* (vi:5) ‘to pray standing’.¹¹

Trisyllabic roots reduplicate by doubling the last two syllables and by deleting the last consonant in the first sequence of the reduplication [C1VC2VC3VC4 → C1VC2VC3V-C2VC3VC4]. Examples: *pārānāx* ‘tree’, *pārānā-rānāx* ‘trees’; <horiu>, *ha-horuu-riiu* (ii:11) ‘presents’; *karivil* (UM) ‘bank shore’, *karivī-rivil* (2-16) ‘borders, boundary posts’; *m-īlingix* (ii:9) ‘to listen’, *ā-īlingi-lingix* (xi:15) ‘to listen (with)’ (instrument-oriented form).

5. FIRST SYLLABLE REDUPLICATION. This reduplication applies in a systematic way to count words with nonhuman referents. Examples (note that the underived digits in the left column below only occur as part of a larger [composite] number; that is, *ruha* and *turo* do not occur by themselves but are found in *ruha ka-tunun-an* [ix:20] ‘2,000’, *turo kīti-ān* ‘13’, etc.): *saat* (xvii:14) ‘one’, *sa-saat ki yuko* (xii:11) ‘one sheep’; *ruha* (ix:20) ‘two’, *ru-ruha ki rapal* (xviii:8) ‘two feet’; *turu* (vi:xv), *turo* (xiii:6) ‘three’, *tu-turu ki wāi* (xxvii:64) ‘three days’; *xpat* (xvi:10) ‘four’, *pa-xpat ki ni-paka-kua-n ki vare-vare* (xxiv:31) ‘the four directions of the winds’;¹² *rīma* (xiv:21) ‘five’, *rī-rīma ki paul* (xiv:17) ‘five loaves of bread’; *pītu* (xv:37), *pīto* (xxvii:title) ‘seven’, *pī-pītu ki paul* (xv:36) ‘seven loaves of bread’; <pīna> ‘how much’, *pī-pīna ki lbāx ...?* (C6v) ‘how many parts?’

Other numerals with first-syllable reduplication are not found in the data. Note that the numeral *nā-nām* ‘six’ represents a special case. It occurs along with *nām* (of which it is a reduplication) and with *ānām*. The reduplication in *nā-nām* probably has to do with a preference for disyllabicity, as it also often occurs in positions where other numerals (none of which are monosyllabic) do not undergo reduplication (e.g., in composite numbers). The form *nām* in turn must be a short form of *ānām*, which is a more faithful reflection of the original Proto-Austronesian **ānām* ‘six’. Examples: *ānām* (xxvi:title) ‘six’, *nā-nām ki wāi* (xvii:1) ‘six days’; but also *nā-nām kīti-ān [ki vīturu]* (13:8) ‘sixty[-fold]’. See 6.2.3 for count words with human referents. In two cases, *Ca*-reduplication derives a verb from a noun: *vare* (vii:25) ‘wind’, *ba-vare* (vii:25) ‘to blow’; *rumang* (xxiv:21) ‘the future’, *ru-rumang* (iii:7) ‘to impend’. Note that fortition of *v* to *b* and of *r* to *d* may occur in the reduplicated consonant (see Adelaar 1999:347–348); compare *ba-vare* (above) and *du-ruha* (ix:27) ‘two’.

10. Lit. ‘those who give orders’, as the verb *m-amu-mu* means ‘to give orders’.

11. Lit. ‘to do the praying in a standing way’; the prefix in *maku-toku-ko* is an anticipating sequence.

12. As discussed in 6.2.3 below, *Ca*-reduplication and first-syllable reduplication produce the same derivation if a root has *a* in the first syllable. See also note 20.

6. *Ca*-REDUPLICATION

6.1 FORM. *Ca*-reduplication consists of prefixation to a root of its initial consonant followed by *a*. The term was coined by Blust, who has found *Ca*-reduplication in three unrelated functions assignable to Proto-Austronesian: the formation of a derivative set of numerals used in counting humans, the formation of certain verb forms, and the formation of instrumental nouns (Blust 1998:30).

In Siraya, *Ca*-reduplication occurs on the bases of verbs, of nouns in general, and of count words.¹³ Examples: *k-m-ita* (vi:4) ‘to see’, *ka-kīta-n* ‘to see, watch’ (viii:18); *ruha* (xiv:20) ‘two’, *ra-ruha ki vual* (xxiv:40) ‘two people’; *d-m-ingding* (vii:1) ‘to judge’, *da-dingding-ən* (vii:2) ‘judgment’; <tapil>, *ta-tapil* (x:10) ‘shoe(s)’.

If the root begins with a vowel, only this vowel is duplicated. Note that reduplication of initial *i*- often entails progressive dissimilation to *e*-, a regular phenomenon wherever two *i*'s become adjacent (see 3.1.3). Examples: *m-äwflux* (iii:11) ‘to baptize’, *na ä-äwflux* (xxi:25) ‘baptism’; *irua* (xvii:11) ‘to arrive’, *du i-erua tu pu-ra-rarey ki vüllim* (xxiv-30) ‘when He is coming on clouds’ (also *i-irua* [xviii:21]); *ma-irip* (ix:24) ‘to sleep’, *tu i-er’p-an-ian* (xxviii:13) ‘while we were sleeping’.

As in the case of first-syllable reduplication (section 5), if a root has initial *v*- or *r*-, fortition to respectively *b*- and *d*- is often observed in the reduplicated-syllable consonant. Examples: *varəx* ‘wind’, *ba-varəx* (xxvi:65) ‘blasphemy’; *ruha* (ix:20) ‘two’, *da-ruha* (xxi:28), also *ra-ruha* (iv:18) ‘two’.

6.2 MEANING

6.2.1 Meaning of verbs with *Ca*-reduplication. With verbs, *Ca*-reduplication usually expresses progressive aspect, generic aspect, or a state (these three semantic categories are not necessarily exclusive). Examples:

PROGRESSIVE ASPECT

- (9) Mairang, kading-u-kame, ka ma-pa-patey-kīta
 Lord herd, save-IMP¹⁴-IP.EXCL.TOP LNK SIV-CARED-die-IP.INCL.TOP
 ‘O Lord, save us, we perish’ (viii:25)
- (10) ka du m-i-irung, ni-k-m-ading tu hīna tīni-än
 LNK when AGOR-CARED-sit PAST-AGOR-look.after at there him-OBL
 ‘And while sitting down they watched him there (xxvii:36)
- (11) Ra imhu, tu i-ra-rik’d-ən-hu, ti-bulu-a ki vungo-ho
 but you during LOC-CARED-fast-UO-2S.POSS LP-anoint-SUBJ RM head-2S.POSS
 ‘But you, when you fast, anoint your head’ (vi:17)

13. Numerals do not exhibit initial-vowel doubling. Of the numerals, only the word for six occurs with initial vowel, and it does so only occasionally (cf. *nəm* and *ənəm*). However, in the source texts, only *nəm* can be the root of a reduplication.

14. The suffix *-u-* must be an imperative marker: each of the five times it occurs in the gospel text, it corresponds to the use of an imperative mood in the original (Dutch) bible text.

- (12) Pulilit-aw ta seyluf ka tu puläx,
observe, study-SUBJ TM lily LNK at field
mama-imang ta ta-tatul nein
like-how TM CARED -grow 3P.POSS
'Observe the lilies in the field, how they grow' (vi:28)
- (13) Ka tu da-diri-ən t̃n, ni-t-kua
LNK during CARED-SOW-UO 3S.POSS PAST-LP(go.downwards)-move
ta ruma [ki ääp] tu vidäx kiarang
TM other RM seed at side RM road
'And when he was sowing, some seeds fell by the wayside' (xiii:4)
- (14) Aley ka ni-ma-ta-täutäux neini-än, mama ki
because PAST-AGOR-CARED-teach 3P-OBL like RM
aku-kairangon ki kidi, asi mama ki Maku-sa-sulat.
have-greatness RM authority not like RM LP-CARED-write
'Because he taught them as one having authority, not as the scribes'
(vii:29)
- (15) Iru ka-kita-n t̃n ta vare ka ma-lix-da, ma-takut-ato
when CARED-see-UO 3S.AG TM wind LNK SIV-strong-but, SIV-afraid-EMPH
'But when he saw the strong wind, he became afraid' (xiv:30)
- (16) Du ka-kita-n ki kuncia ka lalam t̃n ki
when CARED-see-UO RM servant LNK together 3S.POSS RM
ni-p'-am't-ən, uhang ni-mi-vulas ta neni
PAST-TR-do-UO great PAST-INCH-sad TM 3P.TOP
'When his fellow servants saw what was done [all that had been done],
they became very sad (sorry)' (xviii:31)
- (17) ma-lingüd ta darang ka pa-u-ka-kua-n tu käwaxan
SIV-narrow TM road LNK TR-MOT-CARED-go-UO into life
'narrow is the road that leads to life' (vii:14)
- (18) Tama-täi-riang-kamu du ba-varüx-a k-m-u-diflux
person.who-LP-blessed-2P.TOP if CARED-revile-SUBJ AGOR-MOT-follow
imumi-än [ta kaäwlung],
2P-OBL TM people
'Blessed are you when people revile you and persecute you,....' (v:11)

GENERIC ASPECT

- (19) [timamang] ta k-m-a-kiim maki-valey ta teni
whoever TM AGOR-CARED-look.for LP-find TM 3S.TOP
'He that seeketh findeth'
- (20) əməd ki päränäx k-asi mäka-vua ki vua ka
all RM tree LNK-not produce-fruit LNK fruit LNK
ma-riang tä-tätäx-ən-ato ka aring-ato tu apuy-
SIV-good CARED-hew-UO-EMPH LNK throw-EMPH into fire-but
'Each tree that does not bring forth good fruit is hewn down and
thrown into the fire' (vii:19)

- (21) ka ni-k'ma t̄ni-än, "Mä-äw-äwX-a ɣau-an,"
 LNK PAST-say 3S-OBL AGOR-CARED-follow-SUBJ 1S-OBL
 ka ru ni-äpit ni-ma-aux t̄ni-än
 LNK when PAST-rise PAST-AGOR-follow 3S-OBL
 'and he said to him: "follow me (become my disciple)," and when he
 rose he followed him' (ix:9)
- (22) ka tu sa-ka-kua-numi mäta-sa-su-a, kun: ...
 LNK during LP-CARED-go-2P.POSS preach-CARED-say-SUBJ say
 'and as you go, preach, saying...' (x:7)
- (23) Tama-matäütäux, ä-äu-äux-aw-mau-kow
 person.who-teach COM-RED-follow-SUBJ+UO-1S.AG-2S.TOP
 tu ma-mang ta sa-ka-kua-ey-mhu
 to RED-what TM LP-CARED-move-SUBJ+UO-2S.POSS
 'Master, I will follow you wherever you go' (viii:19)
- (24) Heyru ma-da-d̄ilux ta ma-vuta ki ma-vuta...
 if AGOR-CARED-lead TM SIV-blind RM SIV-blind
 'If the blind lead the blind...' (xv:14)
- (25) Iru ka Alak-kow ki Alid, pa-susu-ey,
 if LNK child-2S.TOP RM God TR-order-SUBJ+UO
 ka paha-pa-paul-aw ta vato k-ata.
 LNK transform-CARED-bread-SUBJ+UO TM stone LNK-this
 'If you are the Son of God, order that these stones are made into bread.'
 (iv:3)
- (26) Iru ka i-irua-to tu ɣtukuan, ka
 when LNK CARED-come-EMPH at place LNK
 pa-nanang-ən Golgotha ..., ni-pa-ɣt̄ t̄ni-än
 TR-name-UO Golgotha Past-TR-drink 3S-OBL
 'When they arrived at the place called Golgotha ... , they gave him to
 drink' (xxvii:33)

STATE

- (27) ni-k-m-ɣta ki Rarenan ki käyän t̄n ka
 PAST-AGOR-see RM Mother RM wife 3S.POSS LNK
 ma-la-liko, ka āngɣt̄-ing
 SIV-CARED-lie.down LNK fever-suffer.from
 'He saw his [Petrus'] wife's mother who was lying down with a fever'
 (viii:14)
- (28) Na ää-la-likux s-m-ulat,
 from,among AS-CARED-again AGOR-write
 Asi-kow r'pung-a ki Mairang ka Alid-oho
 not-2S.TOP tempt-SUBJ RM Lord LNK God-2S.POSS
 'It is written again, You shall not tempt the Lord your God' (iv:7)

- (29) ka-vana-n ki Raraman-umi ka itu-tunun ki vülüm
 AFF-know-UO RM Father-2P.POSS LNK be.at-multitude RM cloud,sky
 ka mā-i-ä-äpoo-kamu ki ma-mang k-äta
 LNK AGOR-LOC-CARED-need-2P.TOP RM RED-what LNK-that
 ‘Your Father who is in Heaven knows that you need all these things’
 (vi:32)
- (30) p-u-kua-n ta hala ki karäwmatäx ka vahäw
 TR-MOT-move-UO TM grape LNK new
 tu vanak ka vahäw, ka ru-ruha k-äna
 in bag LNK new LNK RED-two LNK-this
 ka-saal-än h-m-a pa-i-da-rie
 together AGOR-keep TR-LOC-CARED-old
 ‘New wine is put into new bags, and both are preserved’ (ix:17)
- (31) aley ka asi-kow mä-xa-xawey-a [ki kaäwlung]
 in order to not-2S.TOP AGOR-CARED-look.like-SUBJ RM human being
 mama ki m-i-ra-rküð
 like RM AGOR-LOC-CARED-fast
 ‘so that you do not appear [to people] like those who are fasting’ (vi:18)

Compare also the verb in (32), which combines root-reduplication with *Ca*-reduplication (apparently denoting generic action):

- (32) Äna ta, ti mamang ta p-u-ta-turu-turux-a p-u-pänäx
 therefore whosoever TM TR-MOT-CARED-RED-kneel-SUBJ TR-MOT-come.out
 äau-an tu ämäx ki kaäwlung, ...
 IS-OBL at in.front RM people
 ‘whosoever therefore shall confess me before men, ...’ (x:32)

Some forms in the gospel material do not exhibit the expected *Ca*-reduplication. We speculate that the sometimes random use of *Ca*-reduplication (and other verbal reduplication) reveals a lack of familiarity with Siraya verbal aspect on the part of the gospel translators. (Verbal aspect is, after all, one of the most difficult parts of foreign language learning.) Compare the following instances, where the meaning of ‘*ni-sa-sulat-än*’ (in sentence 33) does not seem to differ from ‘*ni-sulat-än*’ (in sentences 34 and 35):

- (33) Paka-äm’d-aw-kamu paka-varaw ki äwvan k-äta: Aley ka
 AS-all-SUBJ+UO-2P.TOP CAUS-angry RM night LNK-this because LNK
 ni-sa-sulat-än, Äpid-aw-mau ta Su-ayam,....
 PAST-CARED-write-UO beat-SUBJ+UO-1S.AG TM shepherd
 ‘You will all be offended because of me tonight, for it is written: I will smite the shepherd,...’ (xxvi:31)
- (34) Nda, teni ta mätai-vli ni-k’ma, Ni-sulat-än-da,
 contrast 3S TM LP-return PAST-(say).like.this PAST-write-UO-contrast
 asi dīk na paul ta pakä-wäx ki kaäwlung, ...
 not only from bread TM CAUS-live RM human.being

'But he answered, saying: It is written, man shall not live by bread alone (=it is not just bread that keeps humans alive),...' (iv:4)

- (35) D-m-arang-a Tama-Maku-duma: ka ni-sulat-ən-ra,
 AGOR-go.away-SUBJ person.who -LP- confront LNK PAST-write-UO-contrast
 Mairang ka Alid-oho ta paku-xaküb-aw-mhu, ka
 Lord LNK God-2S.POSS TM LP-prosternate-SUBJ+UO-2S.POSS LNK
 ðĩk tĩni-än ta ta-tam'd-ey-mhu-ra
 only 3S.OBL TM CARED-serve-SUBJ+UO-2S.POSS-however
 'Go away, Satan: for it is written, You shall worship the Lord your
 God, and only Him you shall serve' (iv:10)

6.2.1.1 Lexicalization of *Ca*-reduplication in verbs. The meaning of a verb exhibiting *Ca*-reduplication can sometimes not be deduced from the meaning of the simple verb or the root. Furthermore, some verbs showing *Ca*-reduplication have no counterpart without *Ca*-reduplication or even an unbound root form (as with *t-m-ä/tääm* or *p-u-ta-turu-turux*; see below).¹⁵

Examples of verbs with lexicalized *Ca*-reduplication: *pänäx* (20-3) 'public place, market-place', *t-pä-pänäx* 17x (3-5) 'to go out'; *su* (18-16) 'word, saying', *ma-i-sa-su* 32x (2-2) 'to have authority'; *tälax* (xv:24) 'house', *m-ř-ta-talax* (xviii5) 'to put up, lodge'; *ripüŋ* (19-3), *r'püŋ* (4-7) 'to test, tempt', *r-m-a-r'pung* (7-2) 'to measure'; *m-äw-i-saal* (26-3) 'to come together',¹⁶ *p-äw-i-sa-saal-an* (6-2) 'synagogue'; *rbo* (vi:6) 'the inside', *sa-ra-rbo* (xxi:10) 'to go into a confined space'; <*tääm> (+calling), *t-m-a/tääm* (22x) 'to call, shout'; <turux>, *p-u-ta-turu-turux* 'to confess'; <mala> (+outside), *sa-ma-mala* (9-31) 'to go out, depart'; <kua> (to be at; to move); *itu-kua* (xxv:34) 'to be at', *m-u-kua* (ii:1) 'to go to', *sa-ka-kua* (9x) 'to go through something, to go, on a (difficult) journey', *pa-i-ka-kua* (xxvi:44) 'to leave behind', *m-ř-ka-kua ... asi* (xxi:42) 'never'.

An interesting case clearly showing that lexicalized *Ca*-reduplication must be distinguished from morphological *Ca*-reduplication is *ta/tääm* 'to call, shout' in its various derivations. As mentioned above, *Ca*-reduplication is lexicalized in *ta/tääm*, and there is no unreduplicated counterpart <tääm>. In (36), *ni-ta/tääm* does not convey any of the notions of progressive aspect, generic aspect, or state. That the *Ca*-reduplication in *ta/tääm* is fossilized and has become part of the root also appears from the fact that it is in itself capable of undergoing *Ca*-reduplication. Compare *t-m-a-ta/tääm* in sentence (37), which shows progressive aspect ('they were shouting').

15. As already pointed out in the introduction, whether these root forms were really absent in Siraya remains unverifiable, due to lack of data. I use a slash (instead of a hyphen) in *tä/tääm* to indicate that the morpheme boundary is only historical and that *Ca*-reduplication has become part of the root. The form *tä/tääm* occurs rather frequently, but has no corresponding root without *Ca*-reduplication. It can moreover serve as a base for *Ca*-reduplication a second time around (see the third paragraph of this section).

16. This form combines two orientation prefixes: *-u/-äw-* denoting motion, and *-i-* denoting location; cf. also *m-i-saal* (9-10) 'to do together', which has the location prefix only.

- (36) Tu kidi k-āna ni-ta/tāām ta teni pa-u-kua tñi-ān Mairang tñ,
 at time LNK-that PAST-call TM 3S.TOP TR-MOT-move him-OBL Lord 3S.POSS
 ka ni-k'ma tñi-ān, kunciaka ma-te,...
 LNK PAST-say 3S-OBL servant LNK SIV-wicked
 'Then his lord called him, and said to him: "You wicked servant,..."
 xviii:32
- (37) Iru ka mali-daāwa hīna ta ti Jesus, ni-m-āw-āux
 when LNK LP-leave there TM PM Jesus PAST-AGOR-RED-follow
 tñi-ān du-ruha¹⁷ ka ma-vuta t-m-a-ta/tāām
 3S-OBL RED-TWO LNK SIV-blind AGOR-CARED-call, shout
 maku-k'ma-hīna, Na Alak ti David,....
 LP-(say).like-this one of/from¹⁸ child PM David
 'When Jesus left from there, two blind men followed him, shouting
 and saying: "You Son of David,..."' ix:27

6.2.2 Nouns with *Ca-* reduplication. Verbs can become nouns through *Ca-* reduplication, sometimes in conjunction with other affixation. The meanings of the resulting nouns cannot be predicted. They seem to correspond to the categories of agent, instrument, undergoer, abstract noun, or (if suffixed with *-an/-ən*) location.

Examples of deverbal nouns through *Ca-* reduplication only: *m-i-tuko* (xx:3) 'to stand', *Ta-tuko* (v:17) 'the Law'; *ni-d-m-iri* (xiii:25) 'to sow', *na da-diri* (xii:1) 'what has been sown'; *ba-varax* (v:11) 'to revile', *ba-varax* (xxvi:65) 'blasphemy'; *dīlux* (xvii:1) 'to lead', *da-dīlo* (<*da-dīlux) (xxvi:51) 'priest'; *piha* (ix:8), *ni-phā-n* (x:1) 'to give', *pā-pāpā* (v:23) 'gifts'; <tapil>, *ta-tapil* (x:10) 'shoes'; *mātāi-tāvāx* (xvii:3) 'to talk in private', *ta-tavax* (xxi:33) 'fence'; <parīl>, *pa-parīl* (xxiii:37) 'wings'; *pāx-dāmdām* (xvii:25) 'to think', *da-rāmdām*, *na da-rāmdām* (xv:19, C6v) 'thoughts'.

Examples of deverbal nouns with *Ca-* reduplication combined with other affixation: *k-m-an* (xi:18) 'to eat', *ka-kan-ən* (x:10) 'food'; *d-m-ingding* (vii:1) 'to judge', *da-dingding-ən* (vii:2) 'judgment'; *r-m-a-r'pung* (vii:2) 'to measure', *ra-r'pūng-an* (vii:2) 'a measure (tool)'; <tulu> '(burning)', *ta-tulu-an* (xiii:42) 'oven, furnace', *t-m-a-tulu ki rangi* (xxvii:10) 'potter'; *ītu-kua* (xxv:34) 'be at', *ka-ka-kua-n* (v:35) 'footstool'; *pixik* (v:24) 'sacrifice; to sacrifice', *pa-p'xik-an* (xii:7) 'sacrifice'; *piha* (ix:8), *ni-phā-n* (x:1) 'to give', *pā-phā-n* (viii:4) 'gift'; *k-m-ading* (ii:6) 'to watch', *k-m-a-kading* (xxvii:65) 'a watch'; *s-m-ulat* (ii:5) 'to write', *maku-sa-sulat* (vii:29) 'scribe'; *saw-lkəd* (xxiii:20) 'to swear, vow', *saw-la-lkət* (v:33) 'oath'; *ma-reya* (v:24) 'to reconcile', *tama-pa-pa-reya* (v:9) 'peacemaker'; *rbu-rbo* (v:28) 'adultery, to commit adultery', *tama-ra-rbu-rbo* (v:32) 'adulterer'; *ma-takut* (x:26) 'afraid', *ta-taku-takut* (C7) 'threat'; *lpux* (xxiii:37) 'to kill', *la-lpu-lpux* (xv:19) 'murders';¹⁹

17. *Du-ruha* ('drouha') is an exception to the rule that numerals undergo *Ca-*reduplication if they have a human referent.

18. This word is translated as 'a' or as 'from', or it is not translated at all. It is apparently a participative marker meaning 'one of', 'one among', 'a (Son) belonging to'.

19. The original Dutch *doodtslaghen* is plural.

<rungo>, *ra-rungo-rungo* (ii:18) ‘lamentation’; *päx-dəmdəm* (xvii:25) ‘to think’, *na päx-da-rəmdəm* (ix:4) ‘thoughts’; *si-kidi* (xvii:9) ‘to charge, order’, *si-ka-kidi* (xv:9) ‘commandment’; *m-i-rkəd* (vi:16), *m-i-ra-rkəd* (vi:16) ‘to fast’, *i-ra-rik’d-ən* (vi:17) ‘fasting’; *saw-tawax* (v:31) ‘to leave, divorce’, *sulat ki saw-ta-tawa-tawax* (v:31) ‘letter of divorcement, divorce document’; *pa-darang* (vii:22) ‘to put away, cast out’, *sulat ki pa-da-dara-darang* (xix:7) ‘letter, of divorcement, divorce document’; *ma-täutäux* (xxviii:19) ‘to teach’, *pa-ta-täutäux-ən* (viii:23), *pa-ta-täutäux-an* (xiv:26) ‘disciple’; *k-m-an* (xi:18) ‘to eat’, *k-m-[a]-ka-kan yuko* (vii:15) ‘ravening wolves’;²⁰ *ma-samək* (xxiv:48) ‘bad, evil’, *s-m-amək* (xxii:6) ‘to use spitefully’, *sa-sam’k-ən ki rix* (xxii:18) ‘wickedness’.

The following case of reduplication remains unexplained; it seems to affect a lexical prefix (*tai-*), which is unusual in the Siraya data: *talix-(aw)* (xxi:24) ‘to ask’, *t-m-ai-talix* (x:11) ‘to check out’, *ta-tai-talix* (C1) ‘question’. The meaning of *tai-* is unclear. A possible explanation of *t-m-ai-talix* and *ta-tai-talix* is that they originally developed from a fully reduplicated form **tali-talix* (with subsequent loss of *l) rather than through prefixation of a lexical prefix **tai-*.

Nouns with *Ca-* reduplication may also be derived from other nouns. It is possible that some of the resulting nouns are actually derived from secondary verbal bases, but this remains uncertain. The resulting nouns often refer to something that is similar to, but not identical with, the root. Note, in this category, the occurrence of kinship terms: these do not seem to bear a different meaning from their underived counterparts. Examples: *xalap* (xvi:18) ‘surface’, *ä-ä-xa-xalap ka patax* (xxii:20) ‘inscription’ (*ä-ä-* is a lexical prefix to roots referring to the notion of writing); *tälax* (ii:11) ‘house’, *ta-tälax-ən* (xxvi:69) ‘hall’; *rawey* (ii:11) ‘child’, *ra-rawey* (ii:16) ‘children’; (viii:6) ‘domestic’ (but see discussion in 3.2.1); *äwīng* (5:15) ‘candle’, *p-äw-ä-äwīng-ən* (5:15) ‘candlestick’; *timi* (ix:22) ‘daughter’, *ta-timi-ən* (xiv:6) ‘daughter’; *rama* (vii:21) ‘father’, *Ra-rama-n* (xxiii:9) ‘Father’; *rena* (xii:46) ‘mother’, *Ra-rena-n* (viii:14) ‘Mother’.

6.2.3 Count words with *Ca-* reduplication. Cardinal numbers and other count words exhibit *Ca-* reduplication, provided they have a human referent: *sa-saat neini-än ka tu-lam ki Jesus-an* (xxvi:51) ‘one of those who were with (*tu-lam*) Jesus’, *ra-ruha ki X-m-ail* (xxvi:61) ‘two witnesses’, *ta-turu ki vual* (xviii:20) ‘three people’, *pa-xpat ki Ma-i-sasu* (xiv:1) ‘four kings’;²¹ *ra-rīma ta neni ka ma-tälaxkaw* (25-2) ‘five of them [of the virgins] were wise’, *pa-pūtu ki ma-tāi-a-pa-pa-para* (xxii:25) ‘seven brothers’.

20. The form literally means ‘eater of sheep’; the absence of a relation marker between *k-m-[a]-ka-kan* and *yuko* remains unexplained.

21. *pa-xpat* is irregular, the expected reduplication being **xa-xpat*. Although a full explanation is lacking, the following factors may have contributed to this outcome. Siraya has *pat* as well as *xpat* for ‘four’ (*x* < PAN *S). In the Gospel dialect, intervocalic stops are often preceded by some nonphonemic friction (usually indicated by “h.” but sometimes also by “g” or “gh” (see Adelaar 1999:336), hence *pa- + pat* → [paxpat] or [pahpat].

- (38) pa-pĩna-pĩna ki vual ka kabaley-aw-mumi
 CARED-RED-how.many RM body LNK come.across-SUBJ+UO-2P.AG
 ‘as many people as you can find’ (xxii:9)

Ordinal numbers exhibit *Ca-* reduplication and also have *ka-* prefixed: *ta ka-ra-ruha* (xxv:15) ‘the second [servant]’, *ka-ta-turu ki wäi* (xvi:21) ‘the third day’, *ka-pa-pĩtu ki lbäx ki sulat* (vii:title) ‘the seventh chapter’, *ka-ma-matuda ki täley* (xx:5) ‘the ninth hour’.

The following observations can also be made: (1) In other derivations and in complex cardinal or ordinal numbers, numerals do not show *Ca-* reduplication. (2) Unreduplicated *saat* can also have a human referent, as in *saat ki vual* (xvii:14) ‘a person’. (3) *Kuixpa* ‘eight’ always remains unaffixed, even when it is used as an ordinal number. (4) Count words with nonhuman referents exhibit first-syllable reduplication (see section 5). (5) Note that a distinction between *Ca-* reduplication and first syllable reduplication is neutralized in numerals with *a* in the first syllable, as both forms of reduplication would yield the same derivation in such numerals. This is the case with *pa-xpat* and with *sa-saat* (see also section 5). (6) The use of *Ca-* reduplication for human referents is not limited strictly to count words. Compare, for instance, *ra-ruma* (v:43) ‘other, some’, which always has a human referent, with *ruma*, which usually has a nonhuman referent (as in xiii:4, although it occasionally does qualify a human referent, as in xvi:14).

7. PA-REDUPLICATION. A prefix *pa-pa-* derives causative verbs from verbs that otherwise have *ma-* prefixed. This is the only case of a prefix with the structure of a reduplication in Siraya. Note that the causative counterparts of verbs with *ma-* are not always formed with *pa-pa-* (many have *maka-* prefixed instead). Furthermore, in at least one case (*rbu-rbo*, see below), *pa-pa-* is also prefixed to an intransitive verb that does not normally have *ma-*. Examples: *ma-kulamux* (xxii:11) ‘wear a garment’, *pa-pa-kulamux* (xxv:36) ‘give a garment to wear’; *m-äw-i-saal* (xviii:20) ‘to gather, get together’, *pa-pa-äw-i-saal* (ii:4) ‘to gather, bring together’; *ma-darikäx* (viii:8) ‘to recover’, *pa-pä-darikax* (iv:24) ‘to heal, cure’; *m-ämia* (xi:18) ‘to wear’, *pa-p-ämia* (vi:3) ‘to clothe’; *ma-kaula* (xx:1) ‘to be like’, *pa-pa-kaula-ula* (xxi:36) ‘to do the same to’; *ma-ki-valey* (iv:2) ‘to find, get’, *pa-pa-ki-valey* (vi:7) ‘to cause to be found or got’; *rbu-rbo* (xix:9) ‘to commit adultery’, *pa-pa-rbu-rbo* (v:32) ‘to cause to commit adultery’; (*ta*) *ma-ka-la-lam* (xx:8) ‘the workers, those who work’, *pa-pa-ka-la-lam* (xx:9) ‘to hire, to put to work’; *ta ma-ko-ĩ-la-lau-lau* (vii:28) ‘the crowd (those who gather)’, *pa-pa-ko-ĩ-la-lau* (xxiv:31) ‘to gather, bring together’; *ma-i-sa-su* (xxi:33) ‘to have authority over’, *pa-pa-i-sa-su* (viii:9) ‘to delegate authority’; *ma-reya* (v:24) ‘to reconcile’, *ta pa-pa-reya* (v:9) ‘those who bring (cause) peace’; *ma-saw-vulas* (vi:16) ‘to look sad’, *pa-pa-saw-vavaw ki mäta* (xvii:8) ‘(to cause the eyes) to look up’.

It actually seems that *pa-pa-* is not an instance of prefix reduplication, but merely a combination of causative *pa-* + transitive *ma-*; the latter prefix becomes *pa-* in undergoer-oriented verbs and in combination with certain prefixes.

8. IRREGULAR AND UNSTABLE REDUPLICATION PATTERNS. First-syllable reduplication basically applies to certain numerals referring to a nonhuman referent (section 5). However, some verbal and nominal derivations also show first-syllable reduplication, sometimes in combinations with disyllabic root reduplication or with *Ca-* reduplication. Some cases can tentatively be explained as the result of the reduction of disyllabic root reduplication, especially if their root has a vowel cluster, a semivowel, or even a *v* or *l*: <vulu>, *ka-vu-vulu-an* ‘pigs’; *vual* (xviii:20) ‘person’, (viii:16) ‘body’, *maix-bu-vual* (vii:21), *maix-bua-vual* (xxv:15) ‘each person’; *lulux* (vi:2) ‘to honor’, *la-lu-lulux* (xv:36) ‘praise’; *irua* (iii:1) ‘to come’, *i-ra-ru-rua* (xxi:5) ‘to come (progressive)’; *rawey*, *ra-rawey* (11:16) ‘children’, (viii:6) ‘domestic’ (see discussion in 3.2.1).

However, in the following cases such explanation does not hold: <vukbuk>, *va-vu-vukbuk* (xxvi:47) ‘sticks, canes’; <huaw>, *h-m-u-hua-huaw* (xiv:26) ‘to cry, shout’. In some cases of disyllabic root reduplication where high vowels become adjacent on morpheme-boundaries, deletion of one of the high vowels optionally occurs: *usi-üsin* (v:19) and *usi-sing* (vi:30) ‘least’; *si-uru-uru* (xxi:9) and *si-ur-uru* (xxvii:7) ‘to precede’.

9. REDUPLICATION AS PART OF A MORE OVERALL DERIVATIONAL PROCESS. Suffixation of *-an* to a reduplicated nominal root forms a generic plural, that is, a plural referring to the root as a species, class, group, or kind. They are treated here because reduplication is an integrated part of their derivation. Examples: *äsu* (xv:27) ‘dog’, *äsu-äsu-an* (vii:6) ‘dogs (in general)’; *adäm* (xxvii:29) ‘thorn’, *ad-adäm-an* (vii:16) ‘thorny bush’; *M-amu-mu* (xvi:21) ‘Elders’, *M-amu-mu-an* (v:21) ‘the Elders (as a category)’; *vato* (v:16) ‘stone’, *vato-to-an* (xiii:5) ‘stony place(s), rocky place(s)’.

10. CONCLUDING REMARKS. As in many other Formosan languages, reduplication operates on the lexical level as well as on the morphosyntactic level. On the lexical level, monosyllabic root reduplication is an inherent property of certain wordbases; when verbal, these wordbases often have an atelic meaning.

Other forms of reduplication are morphosyntactic. Disyllabic and trisyllabic reduplication add the notion of diffuseness (including plurality, variety, similarity) to nominal wordbases, and the notion of diffuseness (repetition of action, plurality of actants) or continuity (including state, process) to verbal wordbases. First-syllable reduplication is basically a derivation process forming cardinal numbers used for counting nonhuman referents. *Ca-* reduplication is part of verbal morphosyntax indicating progressive aspect, generic aspect, or a state, but it also forms deverbal nouns; it is moreover used with ordinal numerals, and with cardinal numerals and other count words having a human referent. Finally, *pa-* reduplication is a morphosyntactic device forming causative verbs. It is probably not a genuine case of reduplication, as it is a combination of causative *pa-* + transitive *ma-*.

While formally seven overall patterns can be distinguished, semantically there seems to be no difference between disyllabic-root reduplication and rightward reduplication. Considering that *pa-* reduplication is probably not a case of reduplication, semantically the number of reduplication categories can be reduced to four: (1) monosyllabic root reduplication, (2) disyllabic—or trisyllabic—root reduplication, (3) first syllable reduplication, and (4) *Ca-* reduplication.

The semantic difference between verbs exhibiting *Ca-* reduplication and verbs exhibiting disyllabic—or trisyllabic—root reduplication is not especially contrastive. However, a sharper semantic definition of these derivational patterns seems beyond retrieval because of the limited data and the likelihood that the texts represent a form of “translationese” rather than native speaker speech.

Blust finds that one of the main functions of *Ca-* reduplication in Thao is to form instrumental nouns (Blust 1998). After comparing the Thao evidence with parallel constructions in several other Austronesian languages within as well as outside of Taiwan, he concludes that “the primary means of deriving instrumental nouns in PAN was through *Ca-* reduplication” (Blust 1998:53). This is in contrast to the view that instrumental nouns were basically formed by PAN **Si-*, which was analyzed as a nominalizing prefix rather than a verbal one (see Starosta, Pawley, and Reid 1982).

Siraya differs from the general pattern that emerges from Blust’s comparison in that *Ca-* reduplication forms nouns whose meanings are by no means limited to that of instrument. The resulting nouns can also be agent, abstract noun, undergoer, and (in combination with the suffix *-an*) location. As far as the Siraya evidence is concerned, it seems that *Ca-* reduplication forms nouns in general, and that the way the meanings are narrowed down to that of instrument, abstract noun, agent, and so forth, seems to be dependent on the particular semantics of the base and on the context in which it usually occurs.

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