Siraya: the revival of a dormant Formosan language

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Abstract

Siraya is a Formosan language once spoken nearby Tainan City in southwestern Taiwan. It was the main language of communication of the Dutch, who colonised parts of Taiwan from 1624 to 1662, trying to Christianise the population and bringing about far-reaching structural change in their communities. After Dutch colonisation, Siraya gradually lost its importance and became extinct at the beginning of last century due to the influx of Chinese in Taiwan. However, the last twenty years have seen a renewed interest in the language: linguists (like myself) began to study it systematically, whereas the descendants of the erstwhile Siraya-speaking community started an energetic programme for its revival.

I would like to give a brief outline about the history of the Siraya people and demonstrate how their language is of great interest, not only for its unique linguistic features, but also for Austronesian prehistory. More importantly, perhaps, the language has also become a symbol of ethnic identity and self-respect for the Siraya community. Their endeavour to revive it is remarkable. Renewed interest in Siraya can also be seen in the light of the Taiwanese nationalist debate in general, in which, somewhat unexpectedly, Formosan identity has become an important factor.

Finally, I would like to discuss some of the difficulties and methodology (or absence of a clear methodology) involved in the reconstitution of a grammar and lexicon on the basis of old texts.

1. General

Siraya used to be spoken in a variety of dialects on the plains of Southwest Taiwan (see map). It became extinct at the beginning of the 20th century (1905). However, in the last fifteen-odd years the descendants of the erstwhile Siraya-speaking community have begun to revive the Siraya language and culture.

I began to take an interest to Siraya during a visit to the Academia Sinica in Taiwan in 1991. In the next twenty years, I worked intermittently on the analysis of the language, which resulted in a study that was published last year. The basis of this study is the Siraya Gospel of St. Matthew (henceforth "Gospel"), which was translated from the Dutch in 1661 by Daniel Gravius.

For the analysis of the Gospel, I used additional data from two other Siraya sources. One is a Dutch-Siraya bilingual shortened version of the (Heidelberg) catechism (henceforth "Catechism"), which was also published by Gravius (1662) and is in the

same dialect as the Gospel. The other is the so-called "Utrecht Manuscript,"[1] an anonymous Dutch-Siraya wordlist representing a different dialect (van der Vlis 1842).

The study has three main parts.

The first part (B) is a grammatical analysis of the Gospel text based on all 28 chapters of the Gospel. The second part (C) is a glossed text consisting of ten chapters (chapters 2 to 11)[2] of St. Matthew. In it, lines in the original Siraya orthography are followed by corresponding lines representing the original Dutch text, a phonemicized spelling, interlinear lexical glossing and an English translation of the line in question. The third part (D) is a lexicon including all roots and relevant derivations occurring in the Siraya Gospel, augmented with as many roots and derivations as I was able to find in the Catechism that are not already in the Gospel.

2. Siraya primary sources and linguistic literature

There are three broad categories of primary sources for Siraya, each of a very different nature.[3]
(1) 17th century Dutch sources. These are the oldest sources and consist of the following items:

- (a) Gravius' translation of the gospel of St. Matthew;
- (b) Gravius' translation of the Heidelberg catechism;
- (c) the Dutch-Siraya wordlist or Utrecht Manuscript;
- (d) four short dialogues between schoolchildren, which appear as an appendix to the Utrecht Manuscript (1842) and have been analyzed in Adelaar (2006).

The original Gospel translation contains 174 pages of Dutch and Siraya parallel text. A later version was edited by Campbell, who added corresponding lines from the King James Bible in footnotes (Campbell 1888). It was reprinted in 1996 (Campbell 1996).

The Catechism has 288 pages of Dutch-Siraya parallel text. The Utrecht Manuscript is 35 pages long and contains lexical items organised according to their semantic domain or wordclass. It dates from the same period as the Gospel and Catechism, but it represents a different dialect and was published two centuries later.

A number of factors complicate research on these sources. One is the clear dialect difference that exists between the gospel and catechism texts on the one hand (representing the "Gospel" dialect), and the dialogues and wordlist in the Utrecht Manuscript on the other (the "Utrecht Manuscript" [or "UM"] dialect, see further below). The Siraya data used in comparative-historical linguistic studies have usually been taken from the wordlist in the Utrecht Manuscript, which also has a Siraya-English version (Murakami 1933). Another factor is that the gospel text is a translation of the *Statenbijbel*, an official Dutch Protestant bible version which had appeared only a few years earlier (in 1648) and would become a major unifying influence on Dutch language and spelling. In comparison to the King James Bible, it is a more literal translation from the Greek and Hebrew originals. This has important implications for the linguistic analysis of the Siraya gospel text: for an adequate linguistic interpretation, it is imperative to match it against the *Statenbijbel* translation, and no other version.

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[1] Referring to the rediscovery of this wordlist as a manuscript in the city of Utrecht some 150 years ago.

[2] Chapter 1 was not included because it largely consists of genealogical information of a rather repetitive nature.

[3] Incidentally, the Dutch missionaries also collected and published materials for another now extinct Formosan language, Favorlang, which was spoken on Taiwan's west coast to the north of the Siraya region. These materials consist of a dictionary (Happart 1650) and religious teachings and sermons (Vertrecht 1888).

(2) Land contracts or "Sinkang manuscripts". After the Dutch had left Taiwan and until the early nineteenth century, the Siraya continued to use their writing and spelling. This is evidenced in the survival of 170 land contracts that had been drawn up between 1663 and 1818 by Siraya locals in their dealings with members of the in-migrating and expanding Chinese community. The language of the land contracts might be considered more authentic than that of the 17th century liturgical texts as they were written by Siraya speakers themselves. However, they are highly formulaic and lack the grammatical and lexical variation of the gospel and catechism texts. The contracts are also very difficult to interpret and show regional variety: most contracts are in Siraya Proper, but 23 are in the Taivuan dialect, and four others in the Makatau dialect (Li 2009; see below for dialect variety). The contracts have been studied by the historian Weng Chia-yin (1989a, 1989b, 1990a, 1990b, 1999c) and by Paul Jenkuei Li, who recently published a comprehensive volume covering all contracts (Li 2010).

(3) Wordlists. When the Japanese assumed control in Taiwan in 1895, Siraya was almost extinct.[4] Nonetheless, some Japanese (linguists and others) were still able to collect a number of fragmentary wordlists, which show forms that are not found in other sources and suggest a greater dialect variation than that reflected in the 17th century texts.[5] Ogawa (1917) made a comparative study of Formosan languages on the basis of these and other lists, he was the first to distinguish the Siraya Proper, Makatau and Taivuan dialects. Li (2006) is an annotated edition of all Ogawa's lists. Tsuchida and Yamada is an annotated edition of his Siraya data augmented with a few other Siraya worldists collected by Chinese and European scholars (Tsuchida and Yamada 1991).

Linguistic literature dealing specifically with the analysis of the Siraya language consists of an overview of Siraya grammar (Adelaar 1997),[6] two papers by Tsuchida about pronouns (1996) and lexical prefixes (2000), and three papers by Adelaar about spelling and phonology (1999), reduplication (2000) and complex verb morphology (2004). Bien-horn Chen (2001) is a glossed version with Chinese and English translation of the entire Gospel text, together with Siraya-English-Chinese wordlists. Bien-horn (2005) is a similar treatment of the Catechism text.

Finally, a recent sociolinguistic thesis by Huang (2010) details about language revitalization and identity politics involving Siraya.

3. Dialect variation

From the previous section it is clear that the several Siraya sources together represent a considerable dialect variation. The UM dialect and the dialect of the Gospel and Catechism differ predominantly in their reflexes of Proto Austronesian *d, *R and *S, and *-an. However, the change from *R to h and Ø in non-final position in the Gospel dialect also had a strong palatalising effect on the surrounding vowels. Examples:

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[4] According to Tsuchida and Yamada, IN 1895 only a limited number of old people still remembered the *Siraya* language and customs. (Tsuchida and Yamada 1991:1). Li believes that the language already became extinct about two centuries ago. (Li 2000:52).

[5] Gravius and 17th-century Dutch archives also make mention of a much larger dialect variety (cf. Campbell 1888:xiii, Ferrell 1971:217-226).

[6] This is the published version of a paper with the same title presented by the author at the 7th International Conference of Austronesian Linguistics in Noordwijk (Netherlands) in 1994.

Proto Austronesian *d became UM s, Gospel d-/r- (in initial position) or r (elsewhere):

Proto Austronesian	UM	Gospel
*lahud 'towards the sea'	rmaos	raor
*daya 'towards the interior'	seia	reya
*duSa 'two'	so-soa	ru-ruha
*daɬəm 'water'	salom	ralum
*dəmdəm 'dark, obscure'	ma-simdim	ma-rimdim

Proto Austronesian *R > UM x[7], Gospel Ø-, -Ø-, -x (+ palatalisation of adjacent vowels):

Proto Austronesian	UM	Gospel
*Rumaq 'house; lineage'	*xuma* 'village, town'	*äwma* (**æuma** xxi:17) id.
*baqəRu 'new'	*vaxo* ('vacho') 'new'	*vahäw* (ix:17) id.
*waRi	*waxi* 'day; sun'	*wäy* (**wæ'i** iii:1) id.
*baRiuS 'whirlwind'	*vaxiox* 'stormwind'	*bäyux* (**bæ'joug-h** xvi:3) 'thunderstorm'
•DamaR 'resin'	*xamax* 'blood'	*ämax* (xvi:17) id.
•SuRəla 'snow'	*uxla* 'snow'	*äwla* (**æu'la** xxviii:3) id.

Proto Austronesian *-an > UM -ang, Gospel -an :

Proto Austronesian	UM	Gospel
*<um> + *kaʔən 'to eat'	*k<m>ang*	*k<m>an*
duma (+-an) 'other'	*sumang* 'other ; future'	*ruman*
*ka-*Ratus-*an	*saat ka-xatux-ang* 'hundred'	*saat ka-ätux-an*
*ka- ? -an	*i-ra-rong-ang* 'seat, chair'	*i-ra-rung-an*
*ka- ? -an	*ka-va-voel-ang* 'kin-group, lineage'	*ka-va-vuil-an*

The title page of the Gospel states that it is written in the "Formosan" language for the inhabitants of the villages Soulang, Mattau, Sinckan, Bacloan, Tavokan, and Tevorang, and (as the author Daniel Gravius specifies a few pages into the Introduction), "possibly also for some of the people in Dorko and Tilocen". Gravius also explains that he and his co-researcher Anthonius Hambrouck conducted their linguistic fieldwork and Bible translation activities in Sulang. (Introduction to Gravius 1661, see Campbell 1888:xiii). Apparently these eight villages had the same language.[8] The title page of the Catechism

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[7] Most probably a velar fricative.

[8] George Candidius, the first missionary in Taiwan, worked in Sinckan. He mentions "Sinckan, Mattau, Soulang, Backeroan, Tafalan, Tifalukan, Teopang" and "Tefurang" as eight villages sharing the same customs, religion, way of dressing and language, allowing for minor differences. Except for Tefurang (a mountain village), these villages were all close to the coast, and one could easily reach them all on foot "from the fort" (Fort Zeelandia) and be back within two days (Candidius [1628], see also Blussé et al [1999:92, 113]).

explicitly mentions the *Sideis-Formosaansche tale* ("Sideyic-Formosan language"), which, as Gravius indicates again, is spoken in the eight aforementioned villages (Gravius 1662:Introduction).

There are no indications as to where the UM dialect was spoken. The UM wordlist is titled *Woorden-lijst der Formosaansche Taal* ("Word list of the Formosan Language"), without further specifications as to its provenance.

Tsuchida and Yamada (1991:7) agree with Ogawa (1944) that the latter's Siraya wordlists represent three different linguistic varieties. Siraya Proper was spoken in the coastal area of Tainan (on the plains of Tainan and Kaoshiung Prefectures), Taivuan was used inland of Tainan Plain to the north [of Siraya Proper area], and Makatau was the language of Kaohsiung and Pingtung Prefectures to the South (Li 2009:399; see map). Ogawa found the differences between these varieties substantial enough to consider them as languages in their own right, rather than dialects, but Tsuchida and Yamada are more cautious. They show that the varieties in question differ particularly in their reflexes of Proto Austronesian *l and *ł:

Proto-Austronesian	Siraya	Taivuan	Makatau
*l	r	h or ø	r
*ł	l	l	n

However, not all lexical items are predictable in the way they reflect *l and *ł, nor do lists exemplifying the same linguistic variety in Ogawa (1944) always show the same reflex for *l and *ł in each lexical item. The way these reflexes are distributed in Siraya Proper, Makatau and Taivuan (in Tsuchida and Yamada 1991:8-9) is more a matter of degree than a demonstration of clear dialect boundaries. Rather than three distinct dialect areas, one should perhaps think of a variegated dialect continuum throughout the area where Siraya Proper, Makatau and Taivuan were spoken, and consider these varieties as linguistically random reference points within this continuum. Examples of the way *l and *ł are reflected in Siraya, Taivuan and Makatau:

Proto Austronesian	Siraya	Taivuan	Makatau
*dapał 'leg'	*rapal*	*rapan*	*?*
*tapił 'shoe'	*ta-tapil*	*ta-tapin*	*ta-tapin*
*quzał 'rain'	*udal, udan*	*uran*	*uran*
*qałitu 'spirit'	*litu*	*anitu*	*ngitu*
*ma-pułi 'white'	*ma-puli*	*ma-puli*	*ma-puni*
*(qa)-łuang 'big animal'	*luang* 'cow'	*lowan* 'cow'	*noang* 'cow'
*ałak 'offpsring'	*alak*	*alak*	*alak*
*dałum 'water'	*dalum*	*ralum*	*ralum*
*qaSəlu 'pestle'	*haiero*	*hayu*	*hayu*
*Cəlu 'three'	*turu*	*toho*	*toru*
*lima 'five'	*rima*	*hima*	*rima*
*zalan 'road, path'	*daran*	*raan*	*raran*
*bulał 'moon'	*vural, vuran*	*buan*	*buran*

On the basis of 17th-century Dutch sources, Ferrell (1971:217-226) argued that there must have been five separate ethnic groups in the southwestern plain of Taiwan, each with their own dialect: 1. Siraya; 2. Tevorang-Taivuan; 3. Takaraian (Makatau); 4. Pangsoia-Dolatok; 5. Longkiau. This is quite likely but it is also beyond verification.

It is unclear to me whether the Gospel and UM dialects fit in with the dialect divisions proposed by Ogawa, and if so, how exactly.[9]

One thing that seems clear, however, is that the Siraya speech area kept changing as a result of demographic and political changes. While early Dutch sources point out that the Sinkan dialect was ill understood south of Sinkan, the Dutch themselves used it as a medium of instruction in South and West Taiwan. After the Chinese took over the island, some Taivuan speakers moved further eastward into the mountains under the pressure of incoming Chinese in the Tainan area. Some Taivuan speakers even crossed the central mountain ridge and built new villages among the Amis people near Taitung on Taiwan's east coast (Tsuchida and Yamada 1991:2-3).

4. Some observations about authorship and spelling

Daniel Gravius is officially the sole author of the Siraya Gospel and Catechism translations, but his actual role needs further qualification. When he came to Taiwan (where he only stayed from 1647 to 1651), there had already been many attempts at Bible translations, dictionaries and teaching materials in the Sinkan dialect, including an earlier translation of the Gospel of St. Matthew by Joannes Happartus (Ginsel 1931:99). In the Introduction to his own Gospel translation, Gravius mentions that he had circulated the text among fellow-missionaries in order to obtain the necessary feedback for an improved final edition to which he had been commissioned (Campbell 1888:xiv-xv). Especially his assistant Anthonius Hambrouck had been helpful in providing him with such feedback. As to the Catechism, this was based on a large corpus of questions and answers in Siraya prepared previously by his colleagues Joannes Happartius and Simon van Breen. Gravius' contribution was to extract a shorter version and edit it for publication (Ginsel 1931:98). This background information clearly shows that Gravius was not alone in his linguistic endeavours. He received the help of others, and at least to some extent he must have built on the foundations laid by his earlier colleagues.

This is also reflected in the spelling in the Gospel, which shows the hand of several editors.

There are of course several factors contributing to spelling inconsistencies in this text. Among others, they reflect the lack of spelling uniformity in 17th-century Dutch itself, where there were two conflicting spelling traditions as well as a more general confusion about spelling rules. A salient example is the spelling of *-kua*, which means 'to move' or 'to be at', depending on the meaning of the prefix it combines with. In the beginning of the Gospel text, we often find it spelled as 'qua', but at the end of this text it is invariably spelled as 'koua': this variation is little else than a reflection of the different attitudes various editors of the Gospel must have had about the spelling of their own language. Some of these editors were French oriented, and others were in more favour of a spelling based on the inherent properties of Dutch. Another factor is that the spelling in the Gospel is not based on a real phonemic analysis, sometimes trying to express allegro forms and other pronunciation idiosyncracies along with more diagnostic forms.

However, there is also some method to the madness. While at first it seems that the spelling is inconsistent throughout the gospel text, a careful computer count reveals that some of the spelling principles used in the first 21 chapters of this text differ more or less consistently from those used in the seven chapters at the end. Such organized

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[9] Li (2010:Introduction) tries to identify the UM dialect with Siraya Proper, and the Gospel dialect with Taivuan, but more evidence of a critical nature is required to make the case.

inconsistency once again demonstrates that different editors must have interfered in individual sections.

5. Formosan languages: numbers of speakers and vitality

Although most Taiwanese are nowadays of Chinese descent, historically the island belongs to the Austronesian-speaking world. Its indigenous languages are all Austronesian and are linguistically known as the "Formosan" languages. This term is derived from *(Ilha) Formosa* ("beautiful [island]"), originally a Portuguese name for the island, by which it also became known in other European languages. In the seventeenth century there were at least 25 Formosan languages. Today, ten of these have become extinct,[10] and at least five others are on the verge of extinction.[11] Formosan languages that are not under immediate threat of extinction are those spoken by the Amis (177,000), Atayal (81,000), Bunun (50,000), Paiwan (68,000), Truku (24,000), Puyuma (11,000), Rukai (11,600), Saisyiat (5,300), Tsou (6,500) and Yami (3,500).[12]

It is clear that the vitality of these languages cannot be read from the numbers of their speakers alone. For instance, speakers of Truku are all above 20 years of age, and there is no younger generation to continue speaking the language (Tsukida 2005:291). A similar situation exists with regard to Puyuma, which has hardly any speakers under 40 years of age (Cauquelin 2004:322), and with regard to many other Formosan languages with large speech communities. Such a generation gap is more alarming for the chances of survival of a language than are low speaker numbers.

There are more than 490,000 Aboriginal Taiwanese.[13] They make up slightly more than 2% of the total population of 23,142,460 million,[14] the majority of which consists of Hoklo Chinese (70%); other large groups are Hakka Chinese (12-15%), and Chinese from various parts of the Chinese mainland, who migrated to Taiwan along with the Kuomintang regime in 1949, as well as their offspring (12-15%; Saillard 2004:362fn.3).

6. The linguistic classification of Formosan languages

There are more than 1,200 languages belonging to the Austronesian language family, which has several primary branches. The number of these primary branches remains a matter of debate, with estimates varying between four and ten (see below). However, historical linguists generally agree that the Formosan languages of Taiwan represent several primary branches of Austronesian, whereas Austronesian languages outside Taiwan all belong to one single branch, called 'Malayo-Polynesian'.[15] The latter are the native languages of large parts of insular Southeast Asia and the Pacific as well as of the island of Madagascar.

The fact that Taiwan alone is home to all but one of the primary branches of Austronesian make the Formosan languages of particular interest to historical linguists: because of their genetic diversity, these 25 languages theoretically encode much more information about the ancestral Proto-Austronesian stock language than all other 1200

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10 To wit *Babuza*, *Basay*, *Favorlang*, *Hoanya*, *Ketangalan*, *Kulon*, *Qauqaut*, *Papora*, *Siraya*, and *Taokas* (Zeitoun 2004:41).

11 To wit *Kavalan*, *Kanakanavu*, *Pazih*, *Saaroa*, and *Thao* (Zeitoun 2004:41); numbers of speakers of these languages run from several hundred (*Saaroa*, *Kanakanavu*), to less than fifteen (*Thao*, *Pazih*).

12 Council of Indigenous Peoples 2008 (http://www.apc.gov.tw/main/index_en.jsp). Note that these are population figures and do not indicate how many speakers each ethnic group language has. Note also that Yami is classificatorily a Malayo-Polynesian (extra-Formosan) language (see fn.21).

13 Council of Indigenous Peoples 2008 (http://www.apc.gov.tw/main/index_en.jsp).

14 July 2010 figures, National Statistics, Republic of China (Taiwan).

15 One apparent exception is Yami, which spoken in the Republic of Taiwan but belongs to the Malayo-Polynesian branch; however, this language is actually not spoken on Taiwan itself but on Lanyu (Botel Tobago), a small island off Taiwan's southeast coast.

Austronesian languages together. It correlates with the fact that Taiwan is of great archaeological value as a stepping stone for the spread of Austronesian speakers, who came from the South Chinese mainland and migrated to Southeast Asia and the Pacific some 6,000 years ago.
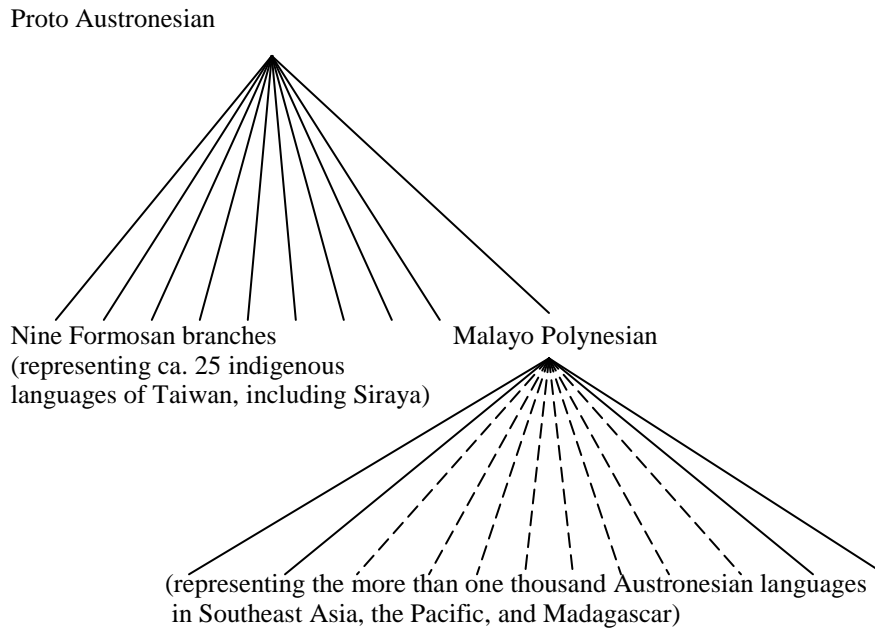
Proto Austronesian

Nine Formosan branches
(representing ca. 25 indigenous
languages of Taiwan, including Siraya)   Malayo Polynesian

(representing the more than one thousand Austronesian languages
in Southeast Asia, the Pacific, and Madagascar)

Fig. 1 :   primary branches of the Austronesian language family tree according to Blust (2009:29-30).

The number of primary branches in the Austronesian language tree has often been set at four, after Ferrell's (1969) distinction of an Atayalic branch (consisting of Atayal and Seediq), a Tsouic branch (Tsou, Kanakanavu and Saaroa), a Paiwanic branch (containing Paiwan and all other Formosan languages), and a Malayo-Polynesian branch. It has, however, become increasingly clear that this classification is not accurate, primarily because of the heterogeneity of the Paiwanic branch. Several other classifications have been proposed. The historical linguist Robert Blust (2009:29-30) distinguishes ten branches. Siraya belongs to Blust's East Formosan branch, together with the Basai-Trobiawan, Kavalan and Amis languages.

7. Aboriginal Taiwan and Austronesian prehistory

As indicated above, the linguistic data show that the genetic variety in Taiwan is much greater than anywhere else in the Austronesian language area. They also show that by and large the Formosan languages are phonologically more conservative and complex than the Malayo-Polynesian languages[16]. Both these factors indicate that Austronesian speakers must have migrated from Taiwan to the various regions where Austronesian languages are spoken today, rather than that they came to Taiwan from any of the other Austronesian regions.

While the linguistic evidence refutes a 'southern origin' of Formosan speakers, it is not able to trace Austronesian languages back to the Asian mainland[17]. There are

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16 Phonetic probability and a series of unconditioned mergers of various Austronesian phonemes into one single phoneme in Malayo-Polynesian languages strongly suggest that this is the case.

17 Nor is it able to tell whether or not there was a population on Taiwan prior to the Austronesians.

currently no Austronesian languages spoken in China[18]. However, archaeology still provides the necessary evidence where the linguistic trail has gone cold. Bellwood (1997:205–218) demonstrates that there is a geographically and historically continuing trail of neolithic sites beginning in South China and moving via Taiwan[19] into the Philippines[20] and on to Indonesia (Talaud Islands and Halmahera), Sabah and East Timor. These sites contain red-slip ceramics (including decorated and (often) globular vessels), neolithic stone flake tools, and bones of pigs and other animals. The trail also branches off into the Pacific, where it ends in Samoa and is known as the 'Lapita culture' (1,400–800BC).

Although there are no traces of Austronesian languages on the Chinese mainland today, Blust (1999:73) argues that given the sinicisation process that has been going on in Taiwan, "it is difficult to imagine that the cultural and linguistic extinction did not occur in coastal regions of southern China and in the Peng-hu Islands (Pescadores) on a much larger scale, leading to the disappearance of any Austronesian or Austronesian-related languages which may have been spoken there prior to European discovery".

8. The Dutch occupation of West Taiwan: historical setting

The Siraya Gospel of St. Matthew (1661) and the Siraya Catechism (1662) were published at the end of the occupation of West Taiwan by the Dutch, which took place between 1627 and 1661. In the early 17th century, the Dutch East India Company had been highly successful in establishing a trade monopoly in large parts of insular South East Asia. It now directed its attention to China with a view to monopolize trade between China and Europe, which consisted, among other things, of silk and chinaware. It also hoped to be able to monopolize trade between China and Japan, as the Chinese emperor had 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 China's 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 behaviour and in the end they ordered the Dutch to leave Chinese territorial waters. The latter were allowed to stay in Taiwan, which at the time was foreign territory to the Chinese. They built a stronghold (Fort Zeelandia) on Tayouan, a sandbank off Taiwan's west coast. Initially, their sole objective was to wait for another opportunity to establish trade relations with the Chinese empire, and relations with the local population were to be kept to a minimum. But they would eventually establish their authority in large parts of West Taiwan. They did so mainly at the instigation of Calvinist ministers whom they had invited to Fort Zeelandia. These ministers soon acquired a much better knowledge of conditions on the island and had a better grasp of local intertribal 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, alphabetization and health care. By 1661 they had converted many Formosans. (Meanwhile, the East India Company obtained a monopoly in the lucrative trade in Taiwanese deer hides).

However, Dutch occupation did not last long. From the 1640s onward, 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 he still had to contend with dissident armies elsewhere in the country. In 1660

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18 Except for Tsat; however, the speakers of this Chamic language migrated to Hainan after the fall of the Cham city of Indrapura in Vietnam in 982 (Thurgood 1999:225).
19 Represented by the up to 6,300-year-old sites belonging to the Da-Beng-Keng culture.
20 Including the Dimolit site from 2,500 BC in northern Luzon.

Qing troops defeated Zheng Chenggong (also called Guo Xingye or Koxinga), a trade tycoon-cum-warlord who supported the Ming faction and had maintained a powerful presence on China's southeast coast. Zheng Chenggong was driven from the Chinese mainland and took refuge with his fleet in Taiwan. In so doing he came into direct conflict with the Dutch. He did not accept their claims on West Taiwan 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 the practice of their religion among the Formosans.

Zheng Chenggong's occupation of Taiwan was a decisive factor in the Sinicisation of the island, which until then had had only a few Chinese inhabitants. After Zheng Chenggong's defeat by the Qing armies, Taiwan was incorporated into the Chinese empire, and the local Austronesian population gradually became a minority.

9. The Siraya people: some historical and ethnographic data

The heavily sinicised Siraya (Pingbu) people have lost much of their original culture, which includes the ability to speak their ancestral language. However, thanks to the detailed observations of Candidius (1628), Campbell (1903) and other missionaries as well as the meticulous records of the Dutch East India Company published by Blussé et al. (1999, 2000), and the ethnographic studies by Shepherd (1995a and 1995b), we have a fairly accurate picture of who the Siraya people were, how they lived, and what they believed.

When the Dutch established a trading post on Taiwan's west coast in 1627, the Siraya speakers they came in contact with were organised in villages, which were in permanent warfare with each other. In the village communities, the women took care of agriculture and religion, while the men were occupied with hunting, warfare and decision-making. Married couples did not live together until late into their marriage: the wife continued living with their parents, and the husband remained in the men's house; the husband would visit his wife by stealth, and if the wife became pregnant, she would undergo abortion, which was performed by *inib*s, female shamans who were in control of Siraya religious matters. Women underwent these abortions until they were in their late thirties. John Shepherd (1995b) has tried to find the reasons behind this peculiar practice. Not satisfied with earlier explanations based on limitations of food supplies (by Montesquieu) or overpopulation due to sexual promiscuity (by Malthus), he has been able to show that the abortions were based on cosmological beliefs and on the husband's life cycle. The Siraya, like many other traditional Austronesian societies, must have believed that childbirth and childrearing had an adverse influence on success in warfare. This explains why childbirth was postponed until the husband stopped being a warrior and became a community elder. This would happen when the husband was forty; his wife, who usually was several years younger, would still have a few years left to bear children.

The Dutch missionaries were initially not able to impress the Siraya with their religion and their good works (such as healing and improved agricultural techniques).

A turning point came when the missionaries managed to persuade the reluctant East India Company administration to give military assistance to the Sinkan people in battles against their neighbours. This rather unorthodox missionary strategy had an instant effect on the Sinkan people, who became much more inclined to accept Christianity and to let the Dutch interfere in the organisation of their society. The latter continued their military alliance with Sinkan and managed to pacify and control a large part of West Taiwan. In the Siraya communities they succeeded, among other things, to abolish abortion, ban the inibs, and merge villages into larger units. They also encouraged cohabitation of newlyweds. They combined their missionary activities with a broad program including medical help and education. By the time the Dutch were ousted from Taiwan by Zheng

Chenggong in 1661, they had managed to baptise a large number of the Formosans under their control. However, many converts were only nominal Christians, and after the defeat of the Dutch, Zheng Chenggong succeeded in eradicating the new religion. As has often been pointed out in the literature, literacy outlived religion as far as Dutch heritage in Taiwan was concerned: in the early 19th century some Siraya were still able to write their language in Roman script.

10. The Austronesian ethnic groups in the Taiwanese nationalist debate

For most of last century, the Austronesian ethnic groups played a very subordinate role in the political life of their island, and they were often exposed to severe economic, social and cultural oppression. However, this has begun to change in the last two decades or so. The following account is based on Stainton (1999). Somewhat simultaneously with the political liberalisation of Taiwan and the rise of Taiwanese nationalism in the 1980s, the Austronesian ethnic groups underwent an awareness process and strove for recognition of their cultures and their ethnic rights as the nation's earliest inhabitants. In 1984, they formed the Alliance of Taiwanese Aborigines. The Taiwanese nationalists, seeking to differentiate themselves from the Chinese nationalism of the Kuomintang and, later, the PRC mainland, soon began to capitalise on the unique position of the Austronesian groups. Their historical arguments for an independent Taiwan were based, among other considerations, on the fact that Taiwan originally did not belong to what was traditionally considered the Chinese polity (i.e. during the Ming dynasty and before), and that the annexation of Taiwan to China had been a relatively short one (it had lasted for hardly more than two centuries). The presence of an older non-Chinese population clearly underscored that Taiwan was different. Furthermore, some Austronesian groups had traditional beliefs claiming that their ancestors came from the south (and not from the Asian mainland), which in the view of some nationalists added weight to the original otherness of Taiwan. The most recent evidence adduced in support of the Taiwan nationalist cause is based on gene tests, which show that the Austronesian groups share part of their genes with the Hoklo majority. This line of argument would mean that the majority of pre-Kuomintang Chinese in Taiwan are of Austronesian ancestry, a point in favour of the otherness of Taiwan as a whole vis-à-vis mainland China.

However, supporters of the annexation of Taiwan by the People's Republic of China have also managed to use the case of the Austronesian inhabitants of Taiwan for their own cause. They consider Taiwan a province of China; it came under Chinese administration in the late 17th century – gaining provincial status in the 1880s – and the majority of the population is culturally and linguistically Chinese. They find historical justification for their case in the fact that, in the past, Taiwan was geologically still part of the mainland. Furthermore, according to recent archaeological evidence, the Austronesian inhabitants originally came from the South Chinese mainland. Some supporters of the annexation are keen to point out some cultural similarities between the Austronesians in Taiwan and some of the minority groups in mainland China.

Meanwhile, the Austronesian ethnic rights activists in Taiwan are emphasising the fact that they were the first inhabitants of the island. Some of them take pride in the fact that Taiwan is the prehistoric homeland of the Austronesian languages, which nowadays are spoken almost everywhere Southeast Asia, the Pacific and Madagascar. They also seek some differentiation from Hoklo-dominated Taiwanese nationalism.

There is no need to point out the ad hoc nature of most of the historic arguments used in the above discussion, and their irrelevance to linguistic analysis. As some of these arguments are based on linguistics and archaeology, however, it is pertinent to reiterate briefly the current position of linguists and archaeologists on the prehistory of Taiwan. Their evidence suggests that this island was the homeland of Proto Austronesian or, at least, the place from where its speakers 6,000 years ago began to spread over Southeast Asia, the Pacific and Madagascar. Before they came to Taiwan, these early Austronesians

must have come from the South Chinese mainland, where some 8,000-year-old Austronesian archaeological sites have been found. The linguistic and archaeological evidence clearly refutes a 'southern origin'. From this it may seem as if these disciplines favour the pro-annexation position, but this is not really the case. While Bellwood (1977:205) and Blust (1999:70-73) believe that the ancestors of the Austronesians some 8,000 years ago lived on what is currently the South Chinese mainland, both work on the obvious assumption that at that stage Chinese cultural and political domination had not yet extended that far South.

11. A probable cause of the extinction of Siraya

One may wonder why an apparently important community like the Siraya lost its language, whereas many other, much smaller and politically less prominent groups have been able to maintain theirs. According to Professor Paul Jen-kuei Li, the reason must be the extent to which the Siraya were exposed to Chinese (Hokkien) language and culture. Southwest Taiwan is not mountainous, and it is much more accessible to overseas settlers than most central and eastern parts of Taiwan, where life was no doubt harder, but where Austronesian communities were also much more out of reach of Chinese influence.[21] The fact that the Siraya belong to the southwestern plains, which are much more populated and urbanised than many other parts of Taiwan, and the fact that they interacted more with the Chinese than many other Aboriginal groups did, are the probable causes of their far-going sinicisation and the loss of their language.[22]

12. Attempts at reviving Siraya

The Taiwanese government acknowledges the existence of distinct ethnic groups among the Aboriginal population. Some twelve groups have a separate ethnic status, and various other groups are applying for this. An important condition is to have one's own language. In practice, this is not as straightforward as it sounds, because in some cases the speech of an aspiring group is considered a dialect of the language of another group that has already obtained separate status. In other cases, the language of a group may have lost its importance as a cultural emblem because it has become extinct or is on the verge of extinction (Saillard 2004:362-363).

The Siraya recently applied for separate ethnic status but were unsuccessful. Of course, there is no denial that they are now all speakers of Hokkien Chinese and have not used their original language for more than a century. Nevertheless, *Siraya* still exists as a relatively well documented extinct language.

An organisation called the Tainan Ping-pu Siraya Culture Association has for some time been striving for the maintenance of the *Siraya* cultural heritage, including the revival of the Siraya language. Edgar Macapili, one of the members of the association, has been trying for some years to instil enthusiasm for this language into the Siraya community. In 2002, he wrote a trilingual (Hokkien, English and Siraya) biblical play (Macapili 2002). It was performed in Tainan just before Christmas. The actors were *Siraya* children of all ages. The event obtained much publicity and media coverage. The association was evidently spurred on by the success of another ethnic group, the Kavalan, in obtaining separate ethnic status earlier in the year. (The Kavalan language is on the verge of extinction).

Some who attended the event expressed their doubts at the possibility of reviving a dead language, especially one that has been almost forgotten for such a long time. Similar

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21 This incidentally demonstrates a claim often made in language endangerment studies. A language is not only endangered by the small size of its speech community, but also (and possibly even more so) by the regular and intensive exposure of its speech community to another more prestigious language.
22 Prof. PAUL JEN-KUEI LI, personal communication.

doubts were shared by some linguists and other scholars. The author of the play had constructed Siraya sentences from individual words and fairly transparent grammatical elements in the gospel text. The result does not always follow the actual grammatical rules of the Gospel, which is to be expected given the lack of descriptive data available to the author. However, in terms of language revival the project was remarkably successful. Macapili and his Association are currently preparing a trilingual Siraya textbook with CDs (Macapili in press).

   Another outstanding attempt to give the Siraya community some of its linguistic heritage back were studies mentioned above by Bien-horn Chen, a native-born Siraya.

13. Reconstituting a language from texts: Methodology?

What methodology should be applied in resurrecting a language from written data? It is hard to give a clear answer to this question. There is no ready-made methodology, and the only guidelines I can think of right away are as follows:

• keep staring at the material;
• re-read everything a thousand times: every time you think of something new, you will have to go through the data to check if it holds water;
• keep an eye on variation and try to interpret it: the exercise is just as much philological (old-fashioned text interpretation) as it is linguistic.

While I worked on the Siraya material, I realised that there were a number of important complications involved. First, the data represent several dialects. Furthermore, there is a considerable variation in spelling: this is partly due to the uncertainty about how to spell Siraya words, and partly to the fact that two spelling traditions are reflected in the data. Another factor is that the spelling rules are not based on clear phonemic insights, as they were designed halfway the 17th century; some of the spelling rules are Dutch rules and are more appropriate to the structure of Dutch than to that of Siraya. This partly unstructured spelling variation is made worse by the fact that the Siraya data were written down by non-native speakers. These data are therefore based on the insights of these non-native speakers, and they are not necessarily an accurate reflection of the structure of Siraya itself. As a result of all this, there are some misleading errors in the data.

It may sound banal but it has to be spelled out: one does not know these things at the beginning of one's analysis of the data. And since there is no methodology telling you how to analyse the unexpected, maybe the only methodological advice here is to expect such complicating factors. (Note that bilingualism is not a rare occurrence in old texts and inscriptions).

One clear methodological difference between working with a corpus and doing fieldwork with native speakers is that there is no need to go beyond the data in front of you: that gives a certain clarity and reassurance to your work. However, there is also no way to check anything beyond these data, so that you may end up with many loose ends no matter how comprehensive and thorough you make your analysis.

Among the strategies to get a better grip on the data are reading grammars from closely related languages, and reading about more general linguistic topics involving the language family to which the language in question belongs. This of course includes comparative-historical linguistics about the language in question. In the case of Siraya, many of its features also occur in other Formosan languages, and reading into the Formosan literature was the best way to get prepared for the strange features one comes across of Siraya. A problem was that when I began to study Siraya, the state of the art of Formosan studies was much less sophisticated than it is today.

Another strategy is to concentrate on phonotactics. In order to do that efficiently, all textual material should be typed into a computer file.
 (Note however that while phonotactics has to do with phonemes, what one has in front of oneself are letters, which is in fact an extra distorting interface that must be taken into account). Phonotactic questions are: What sounds and sound combinations do occur? What positions do consonants and consonant combinations take (do they occur word-initially, between vowels, in consonant clusters, word-finally)? What positions and syllables do vowels take (immediately at the beginning of a word, at the end of a word, in last, penultimate or antepenultimate syllables)? If vowel length is distinctive, how are long and short vowels distributed? To study phonotactics properly, one is often tempted to go by impressions, and these lead to premature conclusions. In order to avoid that you will have to count what you find: use the search button or another device on your computer to make sure you do not miss anything, and then compare the figures to see if they are significant. Important is that while certain features may be more frequent than others, they may occur in a few words only and not in the bulk of vocabulary: in other words, make sure to distinguish between types (different words/constructions exhibiting a certain feature) and tokens (the sheer number of occurrences of that feature in whatever word/construction).

One should also check if consonants are morphologically conditioned. For instance, in Siraya, both *b* and *v* occur, but most *b*'s alternate with *v* in general or occur instead of *v* after certain prefixes or in the prefixed copied first syllable in case of reduplication. For example, *vana-vana* 'to tell, report' alternates with *bana-vana*; when undergoing reduplication, *vare* 'wind' becomes *ba-vare* 'to blow (of a storm)'; compare *ma-vulas* 'to be sad' and *käwx-bulas* 'to become sad'. (Note however that while almost all *b*'s alternate with *v*, most *v*'s do not alternate with *b*.)

One should be alert that there may be hidden phonemes; at the same time, one should also eliminate letters/letter combinations indicating distinctions that are non-phonemic.

A good example of a phoneme that is not indicated but nevertheless exists is Siraya schwa. Its presence can be deduced from a combination of unusual consonants clusters, e.g.:

tbung 'spouse'	-->	*t[ə]bung*	cf. PAn *Cəbung 'to meet'
matmoei 'full'	-->	*ma-t[ə]muy*	cf. PAn *təmuy 'many; full'
pchag 'pounded rice'	-->	*p[ə]xax*	cf. PAn *bəRas id.
rbo 'inside'	-->	*r[ə]bo*	cf. PAN *ləbu id.

It can also be gleaned from the variation between short **i** and short **u** in certain words, e.g.

voukugh, **voukig** 'hair of head'	-->	*vukəx*	cf. PAn *bukəS/buSək id.
ninim, **nnum** 'six'	-->	*nəm, nə-nəm*	cf. PAn *ənəm, *nəm id.
t<m>alum, **talim** 'to plant'	-->	*taləm*	cf. PAn *taNəm (*tałəm) id.
'tdarim, **'td-darum** 'to go down'	-->	*taw-darem*	cf. PAn *daləm id.

Finally, it also appears from the many suffixes with a -Vn pattern. Of the latter, most -**an** suffixes reflect the PAn suffix *-an; however, -**in**, -**un**, and -**'n** have unstable vowels and alternate with one another, whereas the derivations in which they occur often agree are often patient-oriented and thus corresponding to PAn patient suffix *-ən. Compare the following two derivations:

kannin 'to be eaten'	-->	*kan-ən*,	versus:
pa-kan-nun 'to be fed'	-->	*pa-kan-ən*	

Compare also :

æillingigh-'noumi 'heard by you' --> *ä-illingix-[ə]n-umi*
(Reduplication-<u>hear</u>-Patient.Suffix-2pl.AG

An example of many letters and letter combinations referring to only a few phonemes are **hg/g/gh**, **h**, Ø (occurring in the Gospel) and **g/ch** (occurring in the UM). I interpret **hg/g/gh** and **ch** as one unitary phoneme *x*; I also interpret **h** and ø as velar fricatives wherever they occur in free variation with **hg/g/gh/ch**. Examples:

hæuugh (xxiii:26), **hæuuh** (xxvi:42) 'mug'	*häux*
sivægh (xiii:29), **sivæh** (xiii:30) 'wheat'	*siväx*
rÿgh (xxiii:13), **rÿh** (xi:29) 'neck; mind'	*rĭx*
papæmæmæh-en (xi:22), **papæmæmæ-en** (v:21),	*pa-pä-mämäx-ən,*
papæ-mæmæghan (xxvii:27) 'court of justice'	*pa-pä-mämäx-an*
tallag, **tallah**, **tallagh**, **tallach** 'house'	*tălax*
pihgik (v:23) 'altar',	*pixik*
Tama-p'hik, **Tama-phik**, **Tama-p'higik**, **Tama P'hgik** 'priest'	*Tama-p'xik, Tama-pixik*

Many words in the Gospel dialect have clusters consisting of **h** followed by another consonant. These clusters occur in underived words as well as in derivations. However, at close inspection it appears that this **h** is much more often present before intervocalic voiceless stops than before any other consonant. The consonants preceded by **h** are **k** (240 instances), **p** (103), **t** (216), **q** (6), **b** (4), **d** (4), **f** (1), **l** (1), **s** (1). It also appears that there are hardly any cases of intervocalic voiceless stops that are not preceded by **h**, and that the few cases where **h** appears before a

consonant other than a voiceless stop, it can be explained morphologically or historically. I conclude that **h** before intervocalic voiceless stops indicated a sort of non-phonemic glottal friction, which could be heard before intervocalic voiceless stops in the gospel dialect of Siraya (but not in the UM dialect). It is therefore orthographically not relevant, and I leave it out in my spelling. Examples:

vahto (25x) 'stone'	*vato*
rahpal (11x) 'foot'	*rapal*
tahkout (xvii:6) 'fear'	*takut*
pouliliht-au (vi:28) (pay.attention+SJ.UO) 'observe!'	*pulilit-aw*
myhkakoua (7x), **myhkaqua** (2x) (AO-LOC-RDP-be.at) 'eternal'	*m-i-ka-kua*

Finally, I consider all remaining instances of **h** as representing a phonemic *h*, that is, all instances that stand for neither x, nor for non-phonemic glottal friction before intervocalic voiceless stops or at the end of subjunctive markers and pronouns (where they are also non-phonemic). These remaining instances occur word-initially, intervocalically and in clusters after a voiceless occlusive. They do not occur word-finally. Examples:

houka (vii:3) 'mote, splinter'	*huka*
kahouvaran (xiii:12) 'abundance'	*ka-huvar-an*
mavahier (v:44) 'to hate'	*ma-vahier*
pa'-phud-den, in **vahto ki pa'-phud-den** (xviii:6) 'millstone'	*vato ki pa-phŭd-ən*
than (xxvi:9) 'profit'	*than*
thabul (ii:20) 'to travel'	*thabŭl*
khyt (ix:16) 'rent'	*khĭt*

Once all the letter are checked for the positions they take, the combinations in which they occur, and the various sounds that they represent, one can try to derive a phonemic system. Whereas some phonemic relations will be easy to demonstrate, some other ones may remain unclear. This is because not all hidden phonemes will necessarily become apparent. In the case of schwa, it appears that the original recorders did not diagnose it as a separate phoneme but their unstable notation of it is still a give-away that there was one. In some other cases, however, a phoneme distinction may simply have been lost: given the many uvular and velar distinctions usually made in Formosan languages, it is quite conceivable that some of these dictinctions were never noticed for Siraya. In other cases again, a certain letter combination stands for a phoneme (or phoneme combination) the nature of which cannot be established. This is the case of **nḡ**, which occurs in root-initial position in words such as *ma-nḡala* 'to be ashamed'; *nḡale* 'anger, wrath'; *m-u-nḡara* (ii:7) to hear out, get information from out'; *nḡara* 'bush'; nḡataf' gate, door'. I diagnose it as a phonemic element *nḡ* but have no way to find out how it was realised and whether it was one phoneme or two.

In making a grammatical analysis, the result will always be limited by the written nature of the data. Certain modal distinctions such as subjunctive or imperative mood are normally not expressed, except in occasional quotations. The

same applies to vocatives and terms of address. Stress and certain sandhi phenomena will also not always surface in written texts.

In the case of Siraya, the fact that it is essentially translationese is another important factor preventing us from getting to know the natural language Siraya once was. On the basis of evidence found in the material alone, one gets the impression that the prefix *ni-* was a past tense marker, as it is used in the Gospel text in the same place where 17th century Biblical Dutch expresses past tense. However, that may be due to the Dutch background of the translators, and the likelihood that they did not have a good grasp of the distinction between past tense and perfective aspect. The chance that Siraya *ni-* was actually a marker of perfective aspect (rather than a past tense marker) is real in light of the meanings its cognate prefixes have in other Formosan languages. The same goes for the anaforic and cataforic use of the demonstrative pronouns *ăta* 'this' and *ăna* 'that'. They do frequently express anaforic and cataforic reference in the Gospel, but they tend to do so in the same places as where Dutch demonstrative pronouns express anaforic and cataforic reference. In summary, while formally the grammatical elements may be extant, there is little doubt that their semantic values will often be compromised.

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