

Spanish As The *Kana* For Taiwan Southern Min

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Abstract

Taiwan Southern Min is the mother language for over 16 million people in Taiwan. However, due to a lack of a proper educational system, the use of Southern Min is drastically decreasing. Orthographic systems such as those based on Latin alphabets designed by the European missionaries, Japanese syllabaries by the Japanese government and then Mandarin Phonetic Symbols by the current Kuomintang government have been proposed to transcribe Taiwan Southern Min, but none has become popular or practical enough for a language promotion purpose. Spanish is among the most popular languages in the world, and had once been used as the phonetic system for Southern Min during the 16th and 17th century. From the incunabula such as *Doctrina christina en letra y lengua china*, Southern Min was expressed in the Spanish way with the diacritical marks such as those for aspiration and nasalization being used sporadically. The author believes that is the result of the similarity between Spanish and Southern Min in terms of pronunciation. Since the pronunciation of Spanish can be precisely determined by its alphabet, Spanish may become a handy platform for romanizing Southern Min. To construct a phonetic system based on Spanish, the author started by simulating the orthographic system of a similar language, the Japanese. By including several minor adaptations such as (1) expressing aspiration and nasalization by *h* and *ñ* (2) introducing the sixth vowel *or* and (3) modifying the usage of *ch*, Spanish was proven to be able to simulate the pronunciation of Taiwan Southern Min as the *Kana* system is to Japanese.

Keywords: Holo, Hokkien, Southern Min, Spanish, Japanese *Kana*.

Introduction

Southern Min (or Hokkien) is the mother tongue for over 70% of Taiwan people (23 million); it was originally spoken by Holo (or Hoklo) people who lived in southern Fujian where it was called Min in ancient Chinese. Many linguists considered the *dialects* of southern China such as Southern Min, Hakka and Cantonese as distinct *languages* since the pronunciations of these dialects are even more diverse than Romance languages. However, up to now, no widely accepted vernacular script has been developed for these languages, and therefore there are more than 16 million people in Taiwan who cannot *write* in their own mother tongue.

Similar to Taiwan, Japanese culture was also substantially influenced by China, and the

Chinese characters (*kanji*¹ in Japanese) had been used solely as the official language before the invention of *Kana*, the syllabic Japanese scripts. Thereafter, Japanese can use *Kana* to depict the *words* that have no *kanji*'s counterparts.

Without a conventional orthographic system, Taiwanese Min speakers can only *spell* those words or particles that share no common cognate with Mandarin using Chinese characters with similar pronunciations. However, since Chinese characters are not designed for this purpose, the flexibility is restricted. Many young people in Taiwan also use *Bopomofo*, a local Mandarin Phonetic Symbols² taught in primary schools, to *write* Southern Min, but the system was developed for spoken Mandarin and cannot cover all the phonemes in Southern Min. During the period of Japanese colonization, *Taiwanese Kana*, an expanded version of Japanese *Kana*, was developed for writing Southern Min, but the usage was later suppressed partly due to political reasons.

Instead of devising a system *de novo*, it is better to accommodate a well-established phonetic system for education and language preservation. Rather than Chinese characters, Mandarin Phonetic Symbols and Japanese *Kana*, the author proposes Spanish as a handy phonetic system for romanizing Southern Min.

POJ: The most representative romanization system for Taiwan Southern Min

Several decades prior to Japanese occupation (1895-1945), education had not been popularized in Taiwan. Therefore, the Presbyterian missionaries mainly from Scotland such as Thomas Barclay (1849-1935) had to translate the Testaments into Southern Min to deliver sermons using the alphabetic orthography devised by Walter Mehurst (1796-1857), another Scottish missionary who sermonized in Malaysia. They even initiated the *Taiwan Church News* (1885-) that is still published monthly in romanized Southern Min (chiefly in the brogue of southern Taiwan). Barclay also supplemented Douglas's dictionary (Douglas, 1873) with about 4,000 additional entries (Barclay, 1923). This orthographic convention is called *Church Romanization* or *Peh-oe-ji*³ (or POJ for short), and has become the most classical script for Taiwan Southern Min (Beaser, 2006).

Unfortunately, POJ was developed but simultaneously suppressed during the transition of the intruded political powers (from the Japanese to the Kuomintang regime), and the use has almost been confined to the Presbyterian churches, especially in southern Taiwan. Recently, Taiwan people started to establish their own local identity (DeBernardi, 1991) with several romanization systems such as Taiwanese Language Phonetic Alphabet (TLPA) and Modern Literal Taiwanese (MLT) proposed (Lin, 1999). However, practically all are restricted in linguistic research areas and can hardly enter the formal educational system of Taiwan.

¹ Written as 漢字, the Chinese characters from the Han Dynasty.

² Containing 37 characters and four tonal diacritics.

³ Written as 白話字.

Spanish Romanization of Southern Min in Philippine

Actually, the earliest sources of romanizing Southern Min appeared in the 16th and 17th century (around the Ming dynasty) in Manila. There Spanish friars preached in the community of Chinese merchants known as *Sangleys* (Klötter, 2010; Eugenio, 1998; Van der Loon, 1966), and published several incunabula including a Christian doctrine in Chinese characters along with romanized Holo colloquial text:

*Doctrina christiana: en letra y lengua china, compuesta por los padres ministros de los Sangleyes, de la Orden de sancto Domingo*⁴

The only known copy is preserved in the Vatican Library (see also Appendix II in Van der Loon, 1967). The British museum also possesses an anonymous rebound manuscript of 317 leaves containing five parts:

1. 2a-224b: *Bocabulario de lengua sangleya por las letraz de el A.B.C.*. A Holo-Spanish dictionary.⁵
2. 225a-238a: *Lo que deve saver el ministro para administrar los sacramentos*. A document dealing with the administration of several important sacraments such as baptism and eucharist.
3. 239a-279a: *Principio de la doctrina en sangley*. A document containing the romanized text and Spanish translation of the *Doctrina christiana*.
4. 281a-313a: Without a title but a table of contents. A document similar to Part II but contains another romanized version of the *Doctrina christiana*.
5. 313b-336b: *Arte de la lengua chiochiu*. A grammar book for the dialect in Chiochiu (漳州). Another extant version is kept in the library of the University of Barcelona (Klötter, 2008).

There is another anonymous Holo-Spanish dictionary of 436 leaves, '*Diccionario de la lengua Chincheo que contiene los vocablos tambien simples que compuestos, con los caracteres y peculiares a questo dialecto, segun lorden del alfabeto español y las cinco tonadas chinas*'. Unfortunately, the informative source has been lost since 1894 (Van der Loon, 1967).

As described by the Dutch scholar Piet Van der Loon (1967), these Spanish romanizations were influenced by the missionaries' mother tongue, and therefore differ from the Scottish POJ system especially in the usage of diacritical marks. The Japanese scholar Yoshihide Murakami also speculated that Medhurst and the later missionaries had no chance to consult the Spanish works (Murakami, 1965). Therefore, obviously, the two branches of romanization systems, the Scottish POJ from the 19th century and the earlier

⁴ Licensed by Keng Yong, China with 33 leaves. The authors were considered to be the four Dominican friars: Miguel de Benavides, Juan Cobo, Domingo de Nieva and Juan Maldonado de San Pedro Mártir. (Van der Loon, 1966)

⁵ Here (186a) provide two explanations for the name *Sangley* in Chinese as 常來 or 商來. The former means 'those who come very often' and the latter represents 'those who come to trade'. The Holo pronunciations for both expressions are the same as *siang lay* in Spanish tongue.

Spanish version from the 16th century, had evolved independently, but both are close to extinction.

Consideration of Restoring Spanish Romanization Convention for Taiwan Southern Min

According to Dr. Van der Loon's investigation (Van der Loon, 1967), there are in total 13 diacritics in the Spanish romanized manuscripts to assist the pronunciation. However, in the most of the aforementioned sources, only the diacritical marks for aspiration and nasalization were sporadically used. This was considered to be the errors due to the indifference of the copyists (Van der Loon, 1967). However, the author deemed that Spanish is a language quite similar to Southern Min in terms of pronunciation and can therefore simulate the pronunciation directly almost without using diacritics.

Instead of constructing a new phonetic system from the beginning (like POJ), it is wiser to "stand on the shoulder of giants." The modified Japanese *Kana* (*Taiwanese Kana*) developed before the World War II by Japanese government is an example based on an existing system. However, *Kana* consists of nearly 50 characters and is too complicated for education and globalization. The Mandarin Phonetic Symbols, *Bopomofo*, taught in primary schools of Taiwan contains 37 symbols, another nightmare for pupils. These "shoulders" are somewhat too difficult to climb up.

On the other hand, Spanish uses the same 26 letters as English with additional *ñ* for a nasalized phoneme (similar to French or Italian "gn" and Portugues "nh"); and different from English, the pronunciation of Spanish can be precisely determined by the spelling, much like *Kana* for Japanese. If the phonetic pattern is close enough to Southern Min, Spanish may become a handy platform for romanizing Southern Min. The *Spanish shoulder* is not only tall enough for globalization (there are more than 400 million native speakers; Fig. 1), but also well-organized and much easier to climb.

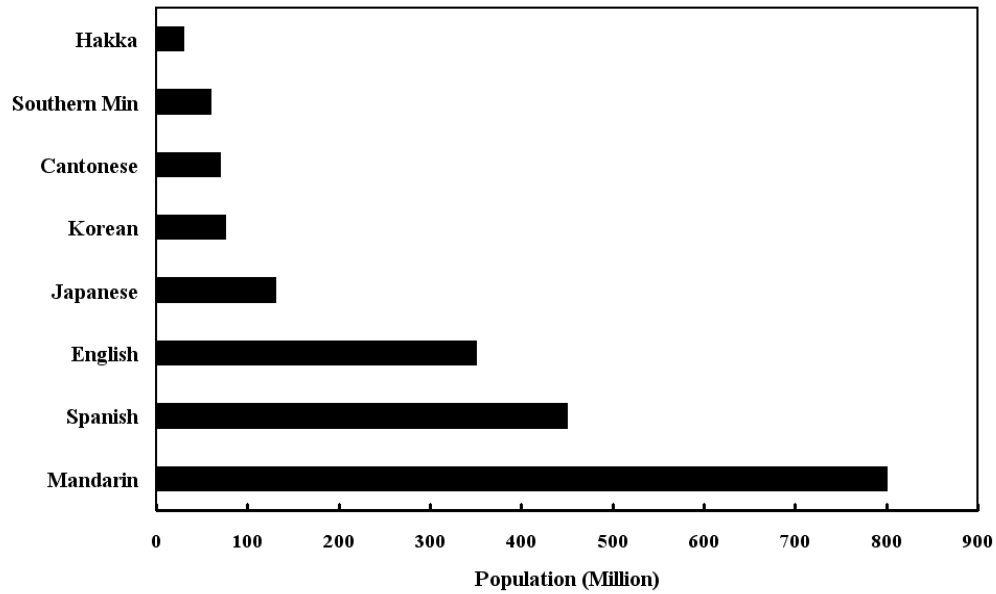


Figure 1: Population of different mother tongues (Wikipedia, 2010)

The only practical way to preserve a marginal language is not just to emphasize it as an ethnic legacy, but also to simplify and standardize it for education and documentation. Mediated by the well-organized Spanish, one may find that it is easier to revive the language and prevent it from extinction. Baited with the globalized Spanish, pupils may show a stronger will to learn their disappearing mother tongue.

Comparison of Some Critical Phonetic Patterns

In order to estimate the similarity between different languages, Dr. Tambovtsev (Tambovtsev, 2003) proposed a phonostatistic method based on calculating the Euclidean distances from the following simplified equation.

$$D = \sqrt{\sum_{n=1}^8 \Delta f_n^2}$$

Where D is the Euclidean distance and Δf_n represents the difference in occurring frequency (in percentage) of certain type of consonant. Eight types of consonants were analyzed:

1. Labial: b, f, m, p, v.
2. Forelingual: d, l, n, s, r, t, ts, z.
3. Mediolingual: j.
4. Guttural: g, h, k.
5. Sonorant: j, l, m, n, r.
6. Occlusive non-sonorant: b, d, g, k, p, t, ts.
7. Fricative non-sonorant: f, h, s, v, z.
8. Voiced non-sonorant: b, d, g, v, z.

As revealed by her statistical results (Tambovtsev, 2007; Tambovtsev, 2010), Japanese is quite different from English ($D = 19.83$) and Mandarin ($D = 17.52$); Spanish (Castilian) is relatively away from French ($D = 13.39$) as compared with other Romance languages such as Italian ($D = 8.35$) and Portuguese ($D = 7.91$). The data are reasonable and do not deviate much from our language consensus.

It is hard to conduct a similar statistical survey on Southern Min since it lacks a well-established script; nevertheless we can roughly compare the occurrences of some critical phonetic patterns in the languages we will focus on (Table 1). That will be important for constructing a script.

Table 1: Comparison of several critical phonetic patterns in selected languages

Languages	English	Spanish	Japanese	Southern Min	Mandarin
<i>Retroflex</i>	often	no	no	no	often
<i>Trilled sound</i>	no	often	no	no	no
<i>Voiced non-sonorant</i>	often	often	often	often	no
<i>Glottal stop</i>	often	no	no	often	no
<i>Sokuon</i>	no	no	often	no	no
<i>Nasalized vowel</i>	no	no	no	often	no
<i>Aspirated consonant</i>	often but not clearly discriminated	seldom but not clearly discriminated	not clearly discriminated	clearly discriminated	clearly discriminated

In Table 1, trilled sounds are characteristic of Romance languages, e.g. the double consonant *rr* in *correo* (mail, post in Spanish). The voiced non-sonorants in Japanese are called *dakuon* (or 濁音 in Chinese characters), representing the sounds that are not ‘clear’. There is practically no voiced non-sonorant such *b, d, g, v, z* in Mandarin although some sounds are very similar. *Sokuon* is a Japanese phonetic specialty (written as 促音) similar to glottal stop but only occurs before a syllable to allow a brief stop. Nasalized vowels are characteristic of the dialects in southern Chinese.

From the table, it is not difficult to find the similarity between Japanese and Southern Min, and it partially explains the success of *Taiwanese Kana* devised before the War World II. However, the phonetic spectrum of Spanish is wider for covering some special pronunciation patterns of Southern Min.

Simulating Japanese *Kana* with Spanish

Unlike Southern Min, Japanese is an isolated and well-organized language. Instead of taking a goal kick without dribbling, we can first check if Japanese can be successfully transcribed by Spanish since Spanish possesses only five short vowels (*a, e, i, o, u*). The first four are similar to Japanese (あ, え, い, お), only the fifth ‘u’ slightly differs from Japanese’ う’.

Gojūon⁶: The fifty sounds

There are 46 letters in *Kana*, the Japanese syllabary. Except for the last letter ヲ, every letter of *Kana* represents a combination of consonants with a vowel (the syllabogram of CV or CCV) or solely a vowel (V). It is certainly not an efficient way to express sounds since one has to use more letters for the same phonetic achievement. Below is a table of *katakana*⁷, only 16 symbols are needed to express the 46 sounds using the Spanish alphabet.

Table 2: *Katakana* and the Spanish Romanization

Katakana	Spanish	Katakana	Spanish	Katakana	Spanish
ア	a	チ	chi (chhi)*	ム	mu
イ	i	ツ	chu (chhu)*	メ	me
ウ	u	テ	te (the)*	モ	mo
エ	e	ト	to (tho)*	ヤ	ya
オ	o	ナ	na	ユ	yu
カ	ka (kha)*	ニ	ni	ヨ	yo
キ	ki (khi)*	ヌ	nu	ラ	la
ク	ku (khu)*	ネ	ne	リ	li
ケ	ke (khe)*	ノ	no	ル	lu
コ	ko (kho)*	ハ	ja	レ	le
サ	sa	ヒ	ji	ロ	lo
シ	si	フ	ju	ワ	wa
ス	su	ヘ	je	ヲ	o
セ	se	ホ	jo	ン	n
ソ	so	マ	ma		
タ	ta (tha)*	ミ	mi		

*Inside the parentheses are the expressions for the aspirated sounds.

Chinese languages are characteristic of clearly discriminated aspirated consonants (see also Table 1), which is expressed by the International Phonetic Alphabet (IPA) with a

⁶ Written as 五十音.

⁷ Two versions of *kana* are used in Japanese; *hiragana* (平仮名) is the default syllabary, and *katakana* (片仮名) is for the loan words. Since I am dealing with foreign borrowings, *katakana* is used throughout the study.

superscript *h* (the aspiration symbol). The diacritical mark is definitely the most important for Southern Min and is represented in modern POJ by simply appending an *h* after the consonants. This work takes the same strategy.

Rule 1: Express aspirated consonants by the suffix *h*

For example, *family* in Japanese should be pronounced as *khathei*⁸ but not *katei*, which cannot be discriminated based on Japanese *Kana*. On the other hand, all the Spanish *k* and *t* sounds are unaspirated ‘hard k sound’ and ‘hard t sound’ such as those in the *k* and *t* in the English words *sky*, *ski*, *stupid*, *student* and *stop*. The *ch* in Spanish is also unaspirated such as *chino* (Chinese) and *chuleta* (cutlet).

One of the major inconveniences of modern POJ is the use of *h* both as the diacritic for aspiration and the consonant of *h* sound. Fortunately, *h* in modern Spanish is not pronounced, and *j* is velarized to replace the original *h* sound. This will reduce the ambiguity in handling aspirated consonants. Therefore, ハ, ヒ, フ, ヘ, ホ are written as *ja*, *ji*, *ju*, *je*, *jo* instead of *ha*, *hi*, *hu*, *he*, *ho* in conventional *Rōmaji*⁹ (Japanese romanization).

There are no retroflex in Japanese, so the English ways of speaking the *Rōmaji* of ラ (ra), リ (ri), ル (ru), レ (re), ロ (ro) are quite different from their Japanese sounds. In fact, Spanish *r* will be closer to Japanese than English *r* in this case, but a better solution is to use *l* instead of *r* to prevent ambiguity.

For ワ, it is also possible to use the Spanish diphthong *ua* instead of *wa* (Table 2). Since *w* is only used for foreign borrowings such as *whisky*, *wa* will be more suitable and clear-cut for the monosyllabic sound.

A similar situation is encountered in using consonant *k* for カ (ka), キ (ki), ク (ku), ケ (ke), コ (ko). In Spanish, the pronunciation of *k* is normally expressed with *c* in front of the vowels *a*, *o*, and *u* such as *casa*, *como* and *cuatro*. The *k* sound in front of the vowels *e* and *i* are expressed with *q* and a silent *u* such as *que* and *quién*. This should be replaced by *k* which is used only in the case of foreign terms.

Dakuon: The g, z, d and b sounds

The most common diacritic in Japanese is the voicing mark *dakuten*¹⁰, and the sounds modified are called *dakuon*¹¹. There are five kinds of sibilants in *Gojūon* that will be modified as the following:

1. The *k* sounds will become *g* sounds.
2. The *s* sounds will become *z* sounds.

⁸ Written as 家庭 in both Japanese and Chinese.

⁹ ローマ字 in Japanese.

¹⁰ Written as 濁点.

¹¹ Written as 濁音.

3. The *t* sounds will become *d* sounds.
4. The *ch* sounds will become *z* sounds.
5. The *h* sounds (Spanish *j* sounds) will become *b* sounds.

The Spanish way of speaking *dakuon* is tabulated as follows.

Table 3: *Dakuon* and the Spanish Romanization

Katakana	Spanish	Katakana	Spanish
ガ	ga	ダ	da
ギ	gui (gi)* ¹	ヂ	zi* ²
グ	gu	ヅ	zu* ²
ゲ	gue (ge)* ¹	デ	de
ゴ	go	ド	do
ザ	za* ²	バ	ba
ジ	zi* ²	ビ	bi
ズ	zu* ²	ブ	bu
ゼ	ze* ²	ベ	be
ゾ	zo* ²	ボ	bo

*1. Inside the parentheses is the suggested romanization to prevent ambiguity. They will be different from the original Spanish pronunciations.

*2. Borrowing the pronunciation of *z* from English.

Similar to *c* (*k*) sounds, the Spanish *g* sounds should append an additional silent *u* in front of the vowels *i* and *e*; otherwise, the Spanish *gi* and *ge* should be pronounced as *hi* and *he* (or Spanish *ji* and *je*). I suggest simplifying the pronunciation convention using *g* universally.

Rule 2: Unify the function of the consonant *g*

Several old Castilian sibilants have been devoiced after the 16th century, and some Spanish letters therefore lost their original phonetic function (Martinet, 1952). In the case of *z* sounds, the function of *z* should be recovered to simulate the *dakuons* in Table 3.

Rule 3: Recover the usage of *z*

Handakuon¹²: The *p* sounds

The second common diacritic, *handakuten*¹³ converts *h* sounds (Spanish *j* sounds) to *p* sounds, and the *p* sounds can have their aspirated and unaspirated formats.

¹² Written as 半濁音.

¹³ Written as 半濁点.

Table 4: *Handakuon* and the Spanish Romanization

Katakana	Spanish
パ [◦]	pa (pha)*
ピ [◦]	pi (phi)*
プ	pu (phu)*
ペ [◦]	pe (phe)*
ポ [◦]	po (pho)*

*Inside the parentheses are the aspirated sounds.

Yōon¹⁴: The palatalized digraphs

The only Spanish letter indicating palatalization is ñ, which is conventionally expressed as the digraph *ny* (actually, used in Catalan) by English-speaking people to ease the typewriting. Not only starting by *n*, Japanese and Southern Min are rich in palatalized consonant cluster. The Japanese palatalized digraphs (*yōon*) are converted from the diphthongs *ia*, *iu* and *io*, namely those leading by the vowel *i* and following by *a*, *u* or *o*. It is better to replace the weak vowel *i* with *y* for clarity (Table 5).

Table 5: Palatalized digraphs and the Spanish Romanization

Katakana	Spanish	Katakana	Spanish	Katakana	Spanish
キヤ	kya (khya)* ¹	ジヨ	zyo* ²	ピユ	pyu (phyu)* ¹
キユ	kyu (khyu)* ¹	チャ	cha* ³ (chha)* ¹	ピョ	pyo (phyo)* ¹
キョ	kyo (khyo)* ¹	チュ	chyu* ³ (chhyu)* ¹	ビヤ	bya
ギヤ	gya	チヨ	cho* ³ (chho)* ¹	ビユ	byu
ギユ	gyu	ニヤ	nya	ビョ	byo
ギョ	gyo	ニユ	nyu	ミヤ	mya
シヤ	sya	ニョ	nyo	ミュ	myu
シユ	syu	ヒヤ	jya	ミョ	myo
しよ	syo	ヒユ	jyu	リヤ	lya
ジャ	zya* ²	ヒョ	jyo	リュ	lyu
じゅ	zyu* ²	ピヤ	pya (phya)* ¹	リョ	lyo

*1. Inside the parentheses are the aspirated sounds.

*2. Borrowing the pronunciation of *z* from English.

*3. The *cha* and *cho* sounds contain hidden palatalization, but not for *chu*. Therefore, *chu* should be corrected as *chyu*.

¹⁴ Written as 拗音.

Here is the fourth rule for romanizing Japanese on the basis of the Spanish tongue.

Rule 4: Insert *y* to form palatalized digraphs

Sokuon: The glottal stop before a syllable

Although similar to a glottal stop, *sokuon* carries out a brief stop only before the next syllable. Both in the conventional Japanese romanization (*Rōmaji*) and the International Phonetic Alphabet, *sokuon* is conventionally expressed as a repeated consonant (or geminate consonant) before the next syllable such as the *pp* in *Nippon* (Japan). This work follows the widely accepted consensus.

Rule 5: Express *sokuon* by inserting a geminate consonant

Chōon¹⁵: The prolonged sounds

Since all the Japanese and Spanish five vowels are short, there should be some ways for expressing prolonged sounds. For Spanish, the consonants such as *l*, *r*, *m* and *n* may be sometimes helpful in extending the sounds, but the romanized Japanese uses a diacritical mark (e.g. the upper bar on the vowel *o* in *chōon*) or simply append an *h* after an ending vowel. The latter is a brilliant idea for the proposed Spanish version of romanization since *h* is silent before a vowel and used only as the notation for aspiration after a consonant. There is no ambiguity even when it is used after a vowel preceding a syllable. In fact, a common Spanish verbal expression “eh?” is conventionally transcribed in the same manner, so the strategy can be easily accepted by Spaniards.

Rule 6: Express prolonged vowels by the suffix *h*

For example, the formal romanization for ラーメン (Chinese noodle) should be *rāmen*, but it is frequently expressed as *ramen* due to the inconvenience in typing the diacritical mark. By the present version of romanization, it can be written as *lahmen* in a more precise, convenient *Spanish way*. As a consequence, the *Spanish* spelling for *rōmaji*, *gojūon*, *yōon* and *chōon* should be *lohmasi*, *gozyuhon*, *yohon* and *chhohon*¹⁶, respectively.

Spanish Romanization of Taiwan Southern Min

Deconvoluting the palatalized sounds associated with *ch*

As shown in Table 5, the double consonant *ch* implies a palatalized sound when encountering the vowel *a*, *e* and *o*. Therefore, the Spanish sounds of *cha*, *che* and *cho* become *chya*, *chye* and *chyo*, respectively. This is why some romanization systems have to introduce *ts* to express the original *cha*, *che* and *cho* sounds as *tsa*, *tse* and *tso*. However, the double consonant *ts* will be ambiguous when placed between syllables. The present approach (Table 6) is to recover the original *ch* sounds and insert a *y* for palatalization.

¹⁵ Written as 長音.

¹⁶ Although not discriminated by *rōmaji* and *kana*, the *ch* is aspirated here.

Table 6: The expanded usage of *ch* for romanizing Taiwan Southern Min

Spanish	Katakana	Taiwan Southern Min in Chinese characters
cha* ¹	ツア	詐(cheating)* ³ of 詐騙
chha	no	差(mistake) of 差錯
chya	チャ* ²	吃(eating) of 吃飯
chhya	チャ* ²	赤(bare) of 赤脚
chi	チ* ²	子(seed) of 瓜子
chhi	チ* ²	試(test) of 試驗
chu	ツウ	注(appoint) of 注死
chhu	no	厝(house) of 厝邊
chyu	チュ* ²	蛀(rusty) of 蛀齒
chhyu	チュ* ²	秋(autumn) of 秋天
che* ¹	ツエ	坐(sit) of 坐車
chhe	no	脆(crispy) of 脆瓜
chye	チェ* ²	no
chhye	チェ* ²	no
cho* ¹	ツオ	祖(ancestor) of 佛祖
chho	no	粗(rough) of 粗俗
chyo	チヨ* ²	借(borrow) of 借錢
chhyo	チヨ* ²	呎(foot) of 吋呎

*1. Different from the Spanish pronunciation.

*2. Aspiration is not discriminated.

*3. Inside the parentheses in this column are the meanings.

In this way, the function of *ch* can be standardized and expanded to cover the usage of *ts*. As also revealed by Table 6, Japanese Kana is vague in respect of aspiration and the usage is limited.

Rule 7: Expand the usage of *ch*

Since the pronunciations of Chinese characters are monosyllabic and depend on the phrases, Table 6 and the following Southern Min examples are given in phrases as possible.

The sixth vowel

Southern Min possesses an additional vowel, the half-open front vowel that has no Japanese and Spanish counterpart. Modern POJs deal with the vowel as *o* and uses *o'* to replace the original Spanish vowel *o*. This convention is misleading to a Spanish speaker. The sixth vowel is actually somewhat similar to the Spanish short vowel *o* or Japanese *オ* but with the resonance occurring in the upper position. This work modifies *o* with *r* to simulate the sixth vowel (Table 7).

Table 7: The usage of the sixth vowel

Spanish	Taiwan Southern Min in Chinese characters*
o	芋(taro)
or	蚶(oyster)
ko	故(old) of 故鄉(hometown)
kor	果(fruit) of 效果(effect)
kho	庫(stock) of 在庫(in stock)
khor	可(can) of 可能(possibility)
to	渡(cross) of 渡船(ferry)
tor	刀(knife)
tho	土(soil)
thor	討(subjugate) of 討海(go fishing)

* Inside the parentheses are the meanings.

Since Southern Min does not have retroflex sounds, the modification will not result in confusion.

Rule 8: Express the sixth vowel by the digraph *or*

Nasalized vowels

Vowel nasalization is a unique character of Southern Min, which is noted as a superscript *n* after the vowel by POJ. In IPA, the diacritical mark tilde (~) is used, which originates from the Spanish letter *ñ* and is incidentally used in Portuguese to show nasalization. Although *ñ* actually acts as a double consonant *ny*, it is adopted in this work to nasalize vowels (Table 8).

Table 8: Spanish romanization of nasalized vowels

Spanish	Taiwan Southern Min in Chinese characters* ¹
pia	壁(wall)* ²
piañ	餅(cake)
in	因(reason) of 因素(factor)
iñ	院(institute) of 院長(chairman)
un	運(luck)
uñm	不(no)
yu (or iu)	油(oil)
yuñ (or iuñ)	樣(type) of 樣品(sample)
tiu	躊 of 躊躇(hesitate)
tiuñ	長(chief) of 院長(chairman)
e	箇* ³ (of)
eñ	嬰(new born baby)
go	五('five' in vernacular sound* ⁴)
goñ	五('five' in literal sound* ⁴)
gon	憨(dummy, stupid)
or	蚵(oyster)
orñ	黃(yellow)
norñ	卵(egg)

*1. Those without nasalization are for comparison.

*2. Inside the parentheses are the meanings.

*3. 箇 is the adapted character for the Southern Min particle *ge* used in the *Doctrina* (see also Appendix I of Van der Loon, 1967). The pronunciation is different from modern Taiwan Southern Min.

*4. In Southern Min, each Chinese character may have its vernacular pronunciation (話音) and literal pronunciation (字音).

It is very simple to type *ñ* under Spanish input mode of the OS, so nasalized vowels can be handled very easily.

Rule 9: Nasalize vowels by the suffix *ñ*

Glottal stops

Chinese characters and Japanese *Kana* are actually moraic instead of syllabic in terms of their phonetic structures. Therefore, the glottal stops in Southern Min can only be expressed by languages equipped with separated consonants such as European languages. Although vagueness exists, the glottal stops can be simulated as follows.

Table 9: Spanish romanization of glottal stops

Spanish	Taiwan Southern Min in Chinese characters* ¹
sit	室(room) of 教室
zit	日(sun) of 日頭
sip	湿(humid) of 湿氣
zip	入(in) of 收入
khig	刻(carve) or 曲(melody) of 刻盤 or 曲盤* ²
sig	適(adaptation) of 心適* ³

*1. Inside the parentheses are the meanings of the characters in English.

*2. 刻盤 or 曲盤 is the Taiwan Southern Min for ‘standard-playing record.’
The first Chinese character is uncertain.

*3. 心適 is the Southern Min for ‘interest.’

Rule 10: Express glottal stops by suitable consonants

In the incunabula such as that showing in Appendix A, the romanization for these glottal stops (or alveolar implosives) is frequently expressed by *r*, which is obviously not a romanization convention in modern Spanish.

Conclusions

As the last example in Table 9, the Southern Min for *interest* is 心適 which literally means *heart adaptation*. When your heart is adapted to something, you feel interest in it. That is the beauty of Southern Min, which cannot go without using Chinese characters. So what I am aiming is not to totally replace Chinese characters for expressing Southern Min like Korean, but to use Spanish as the supporting elements for its pronunciation, much like *Kana* did to Japanese language.

Chinese characters are the *written* lingua franca of some Asian people including Japanese, and the function of these characters is not merely a common language but also a tradition and has become a kind of art (as the *shodō* in Japan¹⁷). That partially explains why Chinese characters are preserved as an important element of the Japanese culture. However, these complicated characters are surely a heavy traditional burden for the educational system (Loucky, 2005). Nowadays, the burden has been substantially released along with the progress of computer technology. The Japanese romanization, *rōmaji*, has become the chief computer input protocol for Japanese.

People in mainland China use the *Hanyu Pinyin*¹⁸ system for romanizing Mandarin and computer inputting. I believe that will continue to serve as the major romanization protocol for Mandarin for the coming decades (although sometimes not reasonable for

¹⁷ Written as 書道.

¹⁸ Written as 漢語拼音.

certain pronunciations). The Mandarin Phonetic Symbols or *Bopomofo* has been used solely in Taiwan to represent the pronunciation of Mandarin. *Taiwanese Mandarin* has therefore deviated from *Chinese Mandarin* especially in the way of pronunciation after the War. Actually, most of the Chinese characters in this paper were inputted by Japanese romanization which is more efficient than the input method based on *Bopomofo*. The *Bopomofo* system is certainly a nightmare for Taiwanese pupils and also the innocent keyboard. More importantly, it was not designed for speaking Southern Min.

Although developed specially for Southern Min, POJ and other orthographic systems over-emphasize the phonetic precision and thus extensively rely on the use of diacritics. This tends to lose the convenience and competition as a computerized system. Languages are not *de novo* creations but have evolved along with the progress of human societies. Instead of taking the Scottish route, I believe the Spanish way of evolution will be more suitable for modernizing and digitalizing Southern Min. The principles devised in this work are summarized in Table 10.

Table 10: Ten rules for romanizing Southern Min based on Spanish tongue

1. Express aspirated consonants by the suffix *h*
2. Unify the function of the consonant *g*
3. Recover the usage of *z*
4. Insert *y* to form palatalized digraphs
5. Express sokuon by inserting a geminate consonant
6. Express prolonged vowels by the suffix *h*
7. Expand the usage of *ch*
8. Express the sixth vowel by the digraph *or*
9. Nasalize vowels by the suffix *ñ*
10. Express glottal stops by suitable consonants

Appendix A shows paragraphs selected from *Doctrina christina en letra y lengua china* and were romanized following the above rules. The romanized versions from the manuscript in the British Museum are also shown for comparison (Image from Appendix II of Van der Loon, 1967).

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Appendix A
Comparison of the Spanish romanization for
Doctrina christina en letra y lengua china

THE MANILA INCUNABULA AND EARLY HOKKIEN STUDIES

151

- 1 無了。因爲是逆僚氏法度。啞民西士。
bo liau yn ui si geg Diosi huar tou Amen Jesus
bo liau in ui m̄ tan Diosi huar tou Amen Jesus
- 2 僚氏律法。總有十件。先三件。是尊敬僚
Diosi lur huar chong u chap kia seng sa kia si chun keng Dio-
Diosi lur huar chon u chap kia si chun queng Dio-
- 3 氏。後七件。是和順衆人。第一件。惜僚氏
si au chit kia si ho sùn chiong lang tei it kia sio Diosi
si au chit quia si ho sun chiong lang te it kia sio Diosi
- 4 勝過各衆物。第二件。不可亂咀誓。第三
seng que cog chiong bur tei xi kia m̄ t'ang loan chiu chua¹ tei sa
seng cue cog chiong mi tei xi quia um̄ tang luan chiu chua tei sa
- 5 件。尊敬禮拜好日。不可作工夫。第四件。
kia chun keng ley pai ho xit m̄ tang cho cang hu tei si kia
quia chun queng le pay ho xit m̄ tang cho cang hu tei si quia
- 6 孝順父母。第五件。不可害死人。第六件。
hãu sùn pé bo tei gou kia m̄ t'an hay si lang tei lag kia
hau sun pe bo tei gou quia um tang hai si lang tey lag quia
- 7 不可姦淫等事。第七件。不可偷提。第八
m̄ t'an can ym teng su tei chit kia m̄ t'an tau tẽ tei pé
m̄ tang can im teng su tei chit kia m̄ tang tau te tei pe
- 8 件。不可生事害人。亦不可說白賊。第九
kia m̄ t'an seng su hay lãng ya m̄ t'an sue pe char tei cau
quia um tang seng su hay lang ya m̄ tang sue pe char tei cau
- 9 件。不可思想別人妻。第十件。不可貪圖
kia m̄ t'an su sio par lang che tei chap kia m̄ tan tám tou
kia um tang siau sio pat lang chei tei chap kia m̄ tang bau

¹ 呪咀

Source: Image from Appendix II of Van der Loon (1967: p151).

The above image is a selected page from Appendix II of Van der Loon's paper (1967) with two versions of romanization (the upper and lower version hereafter) transcribed in the manuscript in British Museum. The following is the author's romanization (line by line, principally based on the brogue of South Formosa) and the explanations as shown in the footnotes, which is tabulated in the following sequence.

Line number:

The documented Mandarin with phrases separated by a single space.
The romanization by the author with the words in a phrase without spacing.
The rewritten text showing the necessary romanization that omits the uncertain or difficult Chinese characters.

Line 1:

無了。因爲 是 逆 僚氏 法度。啞民 西士。
bolyáu¹⁹. Inwi si gig²⁰ Dios²¹ juatto. Amen Jesus²².
無了。因爲 是 逆 Dios 法度。Amen Jesus。

Line 2:

僚氏 律法。總 有 十 件。先 三 件。是 尊 敬 僚 氏。
Dios lutjuat. Chonkyon²³ u chap kiañ²⁴. chiñ²⁵ sañ kiañ. Si chunkin Dios.
Dios 律法。總 共 有 十 件。前 三 件。是 尊 敬 Dios。

Line 3:

後 七 件。是 和 順 眾 人。第 一 件。惜 僚 氏
Au chhit²⁶ kiañ. Si josun chiónlan. Te it kiañ. Syó Dios
後 七 件。是 和 順 眾 人。第 一 件。惜 Dios

¹⁹ Although I did not suggest using tone marks, the Spanish accent mark is simply helpful.

²⁰ The upper version uses *si geg* from the literal sounds of 是逆 (conflict) while the lower version *m tan* is clearly a vernacular but mistaken one. However, the swung dash on the *m* is hard to type under the OS of the computer. The upper version should be the revised version written by an author who knew more about Chinese characters.

²¹ 僚氏 was adapted from Dios (the God in Spanish). Since it is very unfamiliar to Taiwanese and Chinese people, the original Spanish term is retained.

²² The term *Amen Jesus* was preserved in all of the three versions for the same reason as in Footnote 21.

²³ In this case, *chonkyon* (總共: in total) is better than *chon* (總) for fluency.

²⁴ Nasalization is lacking in both the upper and lower version.

²⁵ In modern Taiwan Southern Min, *chiñ* (前) is preferred in this case.

²⁶ Aspiration is lost in both the upper and lower version.

Line 4:

勝過 各 眾物。第 二 件。不可²⁷ 亂 詛誓。第 三
sĩnkue kig chionbut. Te zi kiañ. Uñmthan luan chíuchua²⁸. Te sañ
勝過 各 眾物。第 二 件。Uñm-通²⁹ 亂 chíuchua。第 三

Line 5:

件。尊敬 禮拜 好日。不可 作 工夫。第 四 件。
kiañ. Chunkin lepai jozit. Uñmthan chóu kanjuh. Te síh kiañ.
件。尊敬 禮拜 好日。Uñm-通 作 工夫。第 四 件。

Line 6:

孝順 父母。第 五 件。不可 害死 人。第 六 件。
Jáusun pebóu. Te go kiañ. Uñmthan jaisí lan. Te lag kiañ.
孝順 父母。第 五 件。Uñm-通 害死 人。第 六 件。

Line 7:

不可 姦淫 等 事。第 七 件。不可 偷提。第 八
Uñmthan kanin tin su. Te chhit kiañ. Uñmthan thauthe. Te pé
Uñm-通 姦淫 等 事。第 七 件。Uñm-通 偷提。第 八

Line 8:

件。不可³⁰ 生事 害人。亦 不可 說 白賊。第 九
kiañ. Uñmthan siñsu jailan. Ya uñmthan kon pechhat³¹. Te káu
件。Uñm-通 生事 害人。也³² Uñm-通 講³³ 白賊。第 九

Line 9:

件。不可 思想 別人 妻。第 十 件。不可 貪圖
kiañ. Uñmthan syáusyuiñ patlan chhe. Te chap kiañ. Uñmthan thamtoh
件。Uñm-通 肖想³⁴ 別人 妻。第 十 件。Uñm-通 貪圖

²⁷ In modern Taiwan Southern Min, the particle 不可 is often spoken with its literal sounds, *putkhor*.

²⁸ Curse or swear, the Chinese characters are uncertain.

²⁹ Here uses a hyphen to connect a phrase. In modern Taiwan Southern Min, the particle *uñmthan* is sometimes adapted as 聯通.

³⁰ The romanization for 不 in the lower version (Line 4~9) is not consistent even in the same line (Line 8 and 9). The indifference of the copyist is significant.

³¹ Aspiration is lost in both the upper and the lower version.

³² 亦 should be pronounced as *ig*, it is for literal writing.

³³ 說(sue) should be replaced with 講(kon) for modern Southern Min.

³⁴ Although the author of the upper version knew Chinese characters better, the use of 思想 is a mistake. The romanization of the lower version *siau sio* is closer to my speculation (肖想 as in modern Taiwan Southern Min). If Juan Cobo is the only friar knowing Chinese characters in those ages, he must be the author of the upper version. The version is more precise and consistent but too dependent on the characters, which is sometimes misleading.

About the author

A native speaker of Southern Min, Richie L. C. Chen obtained his Ph.D. degree from Kyushu University, Japan in 1996 and has worked in National Taiwan University as a professor in scientific disciplines for over 10 years. Besides scientific works, he also teaches scientific writing (English) and scientific Japanese in the same institute.