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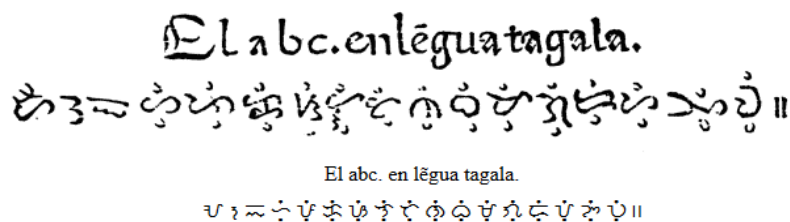
Categorically, if based on factors listed by UNESCO in their schematics regarding the determination of linguistic endangerment, replacing number of speakers with writers instead, the native (non-Latin and non-Arabic) scripts in the Philippines are currently considered as “vulnerable”, with only a couple being “definitely endangered”. Whereas, about two decades ago they were considered “critically endangered” and on the verge of going extinct. The sudden rebound of revitalization is due in part to modern technology; particularly the increased availability of personal computers and access to the Internet. However, even though awareness and usage of Philippine scripts are currently on the rise, it will likely remain vulnerable and endangered if it doesn’t get more support from officially recognized standardization, proper publication & documentation, and practical everyday utility & public exposure. This paper covers a brief history of Philippine writing systems, what has been done to preserve it, what is being done to revive it, and how technology & standardizations can help it survive.

I. Introduction

Manually writing with chisel, stylus, brush, and pen; the art of calligraphy predates the history of typography and the evolution of typefaces many centuries before the movable type system was invented in China around 1040 A.D. And as such, when Johannes Gutenberg invented the printing press around 1450, the handwritten western letterforms of the mid-15th century already embodied more than 3000 years of evolved letter design that were natural models for letterforms in a systematized typography. In a little more than 500 years of printing history since Gutenberg, at least 8,000 to around 10,000 or 11,000 typefaces have been designed. Typefaces since then have been used in all forms of print & signage, and in modern times they were digitized & packaged into modern gadgetry & communication devices. The major global writing systems benefited from these advancements in typography and established their traditions in perpetuity. Other indigenous writing systems, however, did not have this luxury and has yet had the chance to catch up.

Documentation of Native Philippine writing systems (Baybáyin scripts) started in the late 16th century by western linguistic scholars, historians, and anthropologists. Record of Baybáyin script was preserved in religious publications like the *Doctrina Christiana, en lengua española y tagala* (Fig. 1), printed in 1593, and various books such as dictionaries & thesaurus for several regional languages like the *Vocabulario de la Lengua *Filipinas* or *Arte y Reglas de la Lengua *Filipinas* that were printed & reprinted throughout the 17th to 18th century; many of which contains information about and specimen of Baybáyin handwriting and typefaces.

Fig. 1 - Top: Typeface Proofing from the *Doctrina Christiana* (1593); Bottom: Modern Fonts:



However, even though Baybáyin's use was widespread throughout the Philippines in the 1500s, it began to decline in the 1600s despite academic documentation and the Spanish clergy's attempts to use it for evangelization. The main reasons cited for its decline was its inadequacy & impracticality for use in publishing Spanish and the influx of the foreign loan words that the local languages began to absorb. During this gradual cultural & linguistic shift that was steadily adapted by the native population of the colonized and Christianized centers of the islands, Filipinos themselves abandoned their Baybáyin script in favor of the Latin Alphabet for a perceived social expediency. The population were convinced that learning the language and writing system of their colonizers would improve their social standing and get ahead in life under the Spanish reign. Typical of other colonized or conquered civilizations, they systematically bowed down to the economic, religious, cultural, and educational subjugation; by the 18th century, Baybáyin script already fell into disuse.

*Tagala, Pampanga, Bicol, Bisaya, Ilocana, etc.

II. Typography Time-frame

2.1 Precolonial Hindu-Buddhist Past and Native Traditions

Very little historic record or documentation exists about the inhabitants of archipelago, now known as the Philippines, prior to the arrival of the Spanish colonizers; save for brief mentions in Southeast Asian (SEA) and East Asian maritime trade records - excerpts mentioned in William Henry Scott's *Prehispanic Source Materials for the Study of Philippine History*. However, in 1989, the discovery in Laguna of an artifact (Fig. 2 -3), a copperplate with inscriptions in old-Javanese with archaic Tagalog/Bisaya words and place-names, provided valuable clues regarding life in the old archipelago and the writing tradition of the time. Dated around the 10th century and dubbed as the *Laguna Copperplate Inscription* (LCI), the text in it was written in Kavi/Kawi script which was later deciphered by Dutch anthropologist and linguist Antoon Postma; revealing a document regarding a payment of debt. It contains evidence of cultural links between the precolonial Tagalog people and the various contemporary Asian civilizations, most notably the Javanese Medang Kingdom, the Srivijaya Empire, and the Middle kingdoms of India. The LCI provided one of the definitive links between baybáyin script, the Indic/Brahmic script family, and related SEA writing systems.

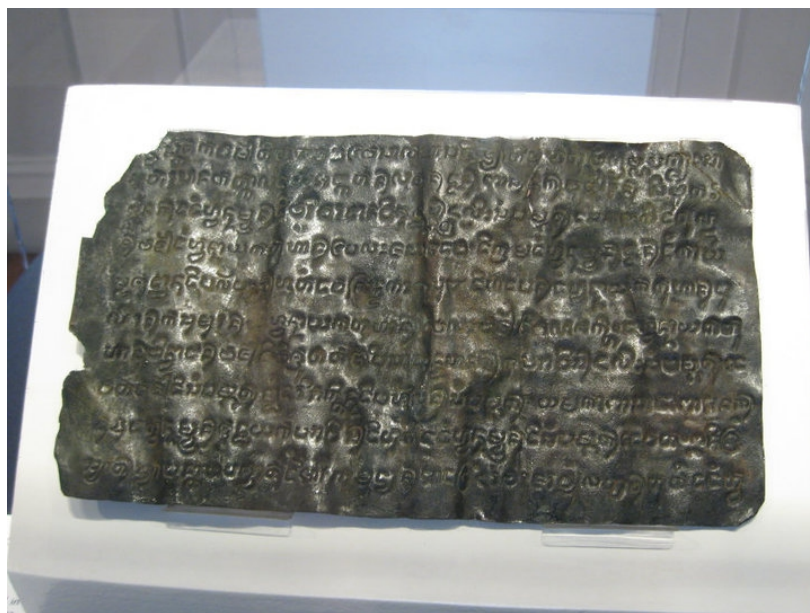


Fig. 2- the Laguna Copperplate Inscription (LCI) dated 900 AD on display at the National Museum of the Philippines.

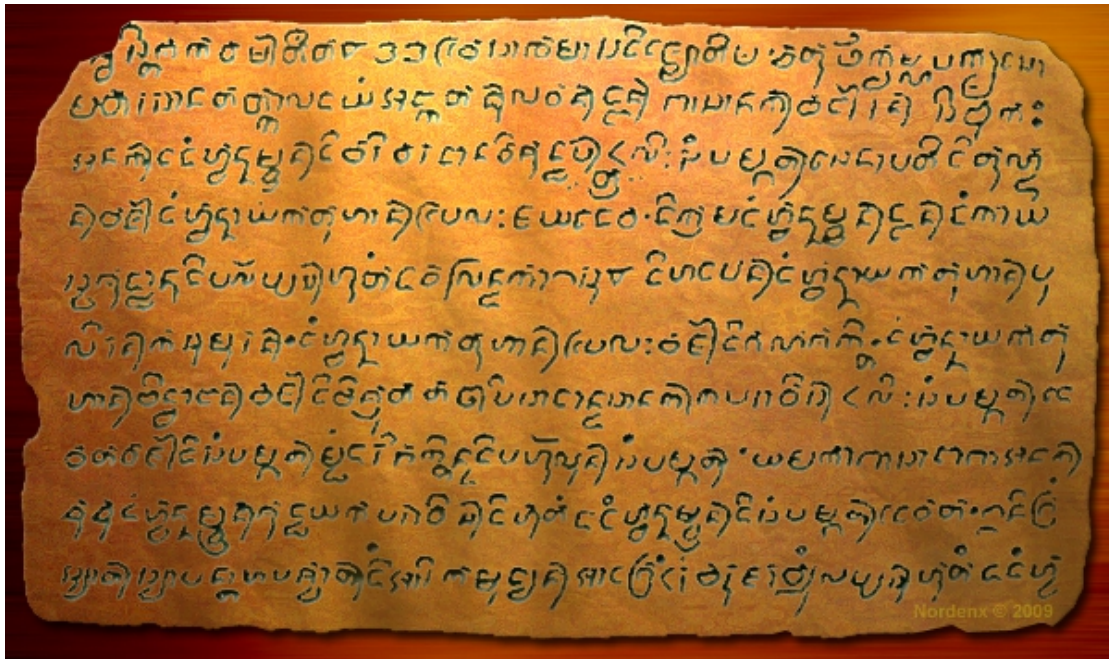


Fig. 3- an illustration of the LCI by Nordenx (2009) based on the original rubbing copy by Postma (1991).

Orthographic and glyph-by-glyph comparative research suggests that Kavi script may have influenced the evolution of Baybáyin scripts and its sister scripts by the Bugis people of Sulawesi, Indonesia (Fig. 4). It is also quite possible that proto-Baybáyin developed as a mixture of Kavi, Bugis, and Indic (Gujarati, Nagari) scripts. (Scott, 1984; Wade, 1993; Miller, 2011)

primary characters:																						
ba	ca	da	dha	ga	ha	ja	ka	kha	la	ma	na	ña	nga	pa	ra	sa	sha	ta	tha	bha	wa	ya
𑄢	𑄣	𑄤	𑄥	𑄦	𑄧	𑄨	𑄩	𑄪	𑄫	𑄬	𑄭	𑄮	𑄯	𑄰	𑄱	𑄲	𑄳	𑄴	𑄵	𑄶	𑄷	𑄸
initial vowels			long "a"		diacritic vowels				virama	anusvāra	visarga	punctuation										
A	I	U	ā	ai	e	i	o	u	+	ng	h	period (.)										
𑄢	𑄣	𑄤	𑄥	𑄦	𑄧	𑄨	𑄩	𑄪	𑄫	𑄬	𑄭	𑄮										
various consonant conjuncts, stacks, and clusters; some showing alternate or modified versions of the primary characters:																						
tra	rla	rja	rsa	rnga	gra	nda	sya	dya	jya	shka	ppa	nna	hwa	dang								
𑄢	𑄣	𑄤	𑄥	𑄦	𑄧	𑄨	𑄩	𑄪	𑄫	𑄬	𑄭	𑄮	𑄯	𑄰								
sti	rthi	kre	ksa	sna	tka	angka	dengan	bukah	hwan	namawaran	ulih	dewata										
𑄢	𑄣	𑄤	𑄥	𑄦	𑄧	𑄨	𑄩	𑄪	𑄫	𑄬	𑄭	𑄮	𑄯	𑄰								
sang	sing	medang	waisākha	bishruta																		
𑄢	𑄣	𑄤	𑄥	𑄦	𑄧	𑄨	𑄩	𑄪	𑄫	𑄬	𑄭	𑄮	𑄯	𑄰								

Laguna Copperplate Script
 Baybayin LCI font - character / glyph study
 NORDENX © 2010

Fig. 4 - LCI font set and glyph study by Nordenx (2010).

Upon the arrival of the Spaniards and during the first century of their occupation, written accounts indicated that the majority of the natives in most parts of the archipelago were literate and proficient in reading & writing baybáyin script. In these accounts, the chroniclers noted that the islanders wrote on natural materials; the most common was bamboo. The usual tools or writing implements were the points of daggers or sharpened iron styluses. In Charles R. Boxer's manuscript collection from the 1590, the *Boxer Codex*, there is an account describing this method of writing; how scribes cut the surface and bark of the bamboo to make letters. A method which is still used today by the tribes of Mindoro and Palawan to write their own script (Fig. 5).



Fig. 5- Mangyan Hanunuo Script on live bamboo, Mindoro. Photograph by Nordenx (2013).

Surat Mangyan, having survived and used continuously, shows how other Baybáyin characters' shapes & strokes could have evolved if its usage was not interrupted and was continually honed & adjusted.

2.2 Colonial Spanish and the Era of Classical Print

It is plausible that the Chinese immigrants & other SEA settlers in the archipelago brought with them the latest 15th - 16th century writing implements and technology, a few decades ahead of the Spaniards' arrival. However, methods of documenting property & transactions, recording history, printing various books, writing on nonperishable medium, and storing these materials for posterity - these practices did not become commonplace among the indigenous population until the Spanish era. When the first *Doctrina Christiana* was printed using the woodblock method in 1593, the Chinese typesetter had a difficult time carving Baybáyin characters, resulting to inconsistencies and irregularities in the typeface (Fig. 1 Pg. 2). But by the 1600's, with the arrival of the movable type printing method, the look and styles of the typefaces were sorted out.

During the three centuries of Spanish occupation, the archipelago opened up to curiosity & knowledge seekers from various western nations. The dictionaries, books, and manuscripts written & printed at the time would later become a valuable resource for those interested about Philippine history and also about Baybáyin in particular. Baybáyin typefaces (Fig. 6) and handwritten samples (Fig. 5) of the era provided the basis of the sets of classical letterforms and typeface styles.

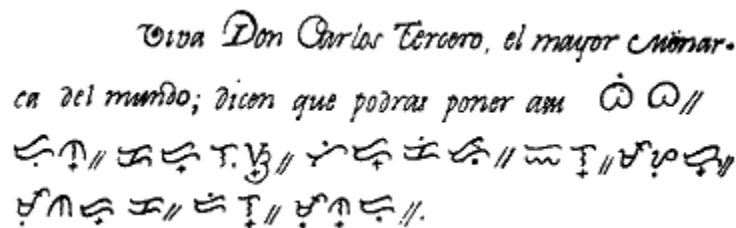


Fig. 5 - A highly stylized Baybáyin Handstyle Print, de Castro (1776)

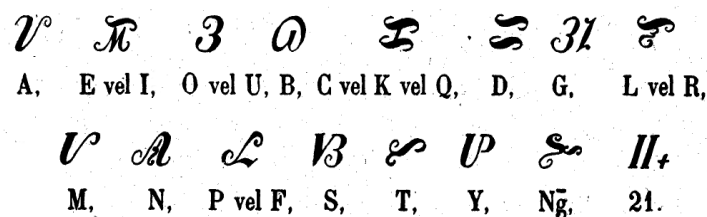


Fig. 6 - A highly stylized Baybáyin Typeface, Carro (1849)

2.3 Modern Era of Rediscovery

Despite being well documented, during the later part of the Spanish regime, not only did Baybáyin usage declined, even the very basic awareness and knowledge about Baybáyin faded from the general population's collective memory. Higher quality academic books were mostly accessible only by well-educated and rich upper-class folks; even as the 19th century rolled in and came to a close. When the Spanish lost control of the Philippines to the United States of America and a commonwealth government was established, it changed the cultural landscape of the islands once again. The English language was introduced as an officiating language and the *Surian ng Wikang Pambansa* (National Language Institute) was established in 1936 and it selected Tagalog (due to its extensive literary tradition) as the basis for a "national language". A resurgence of nationalism at the time prompted renewed interests in Filipiniana among academics and many new books (in both English & Tagalog) about Philippine history & culture were written and published. And as Filipino scholars gained access to international library collections, they rediscover Baybáyin in the old books and archives.

2.3 - a. Alibata

Alibata (Fig. 7) was a misnomer that became the common name for Baybáyin, particularly the Tagalog version. Alibata is a word that was invented the 20th century by a member of the old National Language Institute, Paul Versoza. As he explained in *Pangbansang Titik nang Pilipinas* in 1939:

“In 1921 I returned from the United States to give public lectures on Tagalog philology, calligraphy, and linguistics. I introduced the word alibata, which found its way into news-prints and often mentioned by many authors in their writings. I coined this word in 1914 in the New York Public Library, Manuscript Research Division, basing it on the Maguindanao (Moro) arrangement of letters of the alphabet after the Arabic: alif, ba, ta (alibata), “f” having been eliminated for euphony's sake.”

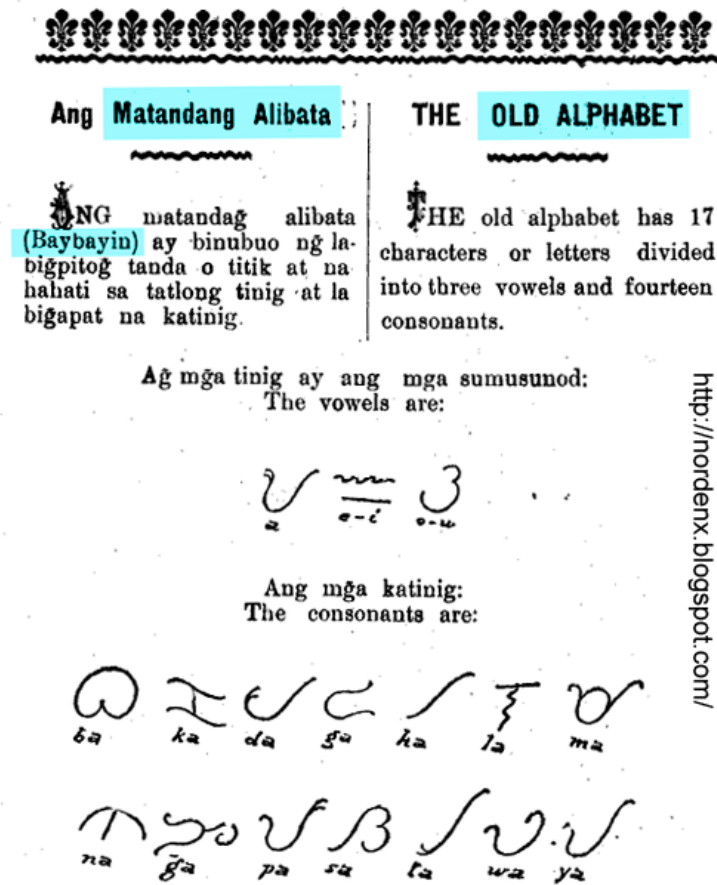


Fig. 7 - a page from *Ag Aklat Ng Tagalog*, Verzosa 1923

However, even though Baybáyin (under the new term Alibata) was being rediscovered by academics, the National Language Institute was more focused on pushing English & Tagalog into the educational curriculum. Only a few typefaces and some simplified handwriting styles showed up in this era, despite the great improvements on printing techniques. Then, any notion of re-introduction of Baybáyin script to the general public was interrupted as World War II (WWII) erupted. After the war, even with a full scale nation building was in progress, neither Baybáyin nor Alibata ever really became a priority. Once again, the old writing system was relegated down to a footnote in Philippine history.

Meanwhile, a small number of books on the use of Baybáyin scripts for specific regional or indigenous languages containing modernized or stylized typefaces were published at the later part of the 20th century.

2.3 - b. Pre-Internet Baybáyin

The last two decades of the 20th century saw a big leap in all manners of technology. Great advancements in computers, publishing, mass communications and even travel lead to an information boom. Ideas are quickly accessible and passed around at a previously an unimaginable rate. However, sometimes without merit and proper control, ideas can be dangerous. Such is the case where global linguistic & cultural hegemony starts to endanger most of the minority. Global languages and their writing systems dominates modern technology, and both views promoting individualism & regionalism predominate the information network. These bias plus the modern day human diaspora and sociopolitical factors also affects the future of sociolinguistics.

Before the internet boom in the mid 1990's, a few books introduced unofficial modified Baybáyin modernizations (Fig. 8). The authors, without as much as a single explanation or justification about every change and addition to the script, expected the public to just accept their new reconstructed script (conscript). Though well-meaning, these works lacked proper research & citations, and without consultation with the community it did not connect with traditionalists. Official recognition of these conscripts did not happen.

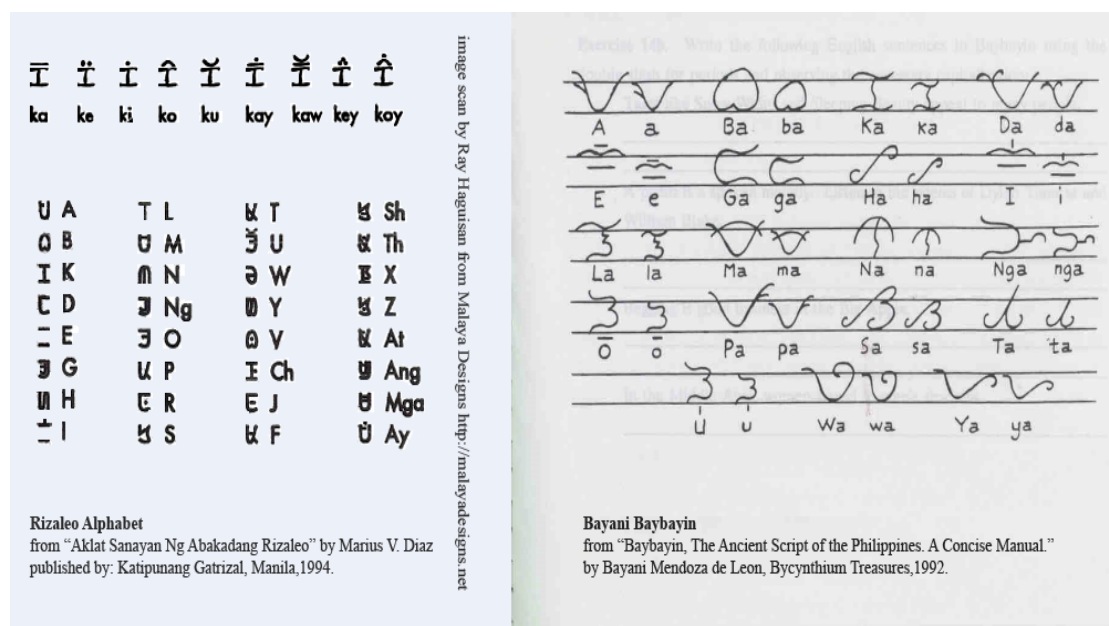


Fig. 8 - Rizaleo Alphabet and Bayani Mendoza de Leon's modern Baybáyin (with uppercase & lowercase).

Unlike the Alibata, Rizaleo, and Bayani de Leon's versions & concepts that didn't pan-out, a couple of other Baybáyin variants were successfully kept alive by traditionalists and are pushing through with current efforts to keep it surviving in this modern world: these are Surat Mangyan, Kulitan, and other traditionalist & conservative reforms.

2.3 - c. Surat Mangyan

The Mangyans of Southern Mindoro retained their indigenous way of writing Baybáyin (Surat Mangyan) due to the relative isolation of their mountain homes and the delayed influx of non-Mangyan settlers/invaders. Spanish Friars began an expedition and native evangelization effort in 1572, only small pueblos existed until around 1679, and the Spanish authorities did not start the program to establish major settlements and populate Mindoro until 1801. It was after WWII, with the development of medicines that aided in the elimination of the threat of a virulent strain of malaria in Mindoro, that a massive wave of immigrants invaded the lowlands and pushed the Mangyan settlements further up the mountains. This drastic demographic change infringed and disrupted the Mangyan way of life and they struggle to hold fast to their culture. With their isolation dwindling and practice of their native crafts no longer tenable, Mangyan culture and Surat Mangyan has become endangered.



Fig. 9 - Photo of a hundred or more year-old bamboo with Hanunuo Mangyan Script, via Paul Morrow (2012).

Older Surat Mangyan had rounded characters that closely resembles other old Baybáyin Script samples (Fig. 9). Throughout their isolation, they evolved a more distinctly angular style that was easier to carve on the tough bamboo surface and developed a unique strict vowel marker placement and ligatures.

Work on modern Surat Mangyan standardizations started in the 1960s when Antoon Postma began helping the Hanunuo Mangyan group of Southern Mindoro with his research, documentation, and preservation efforts of Mangyan culture. Postma published several books about the Mangyan (Fig. 11) and help establish organizations & foundations, build community centers, museums, schools, and libraries to help the Mangyan people. Working closely with the Mangyan and their elders, Postma helped develop a more uniform typeface and introduced the *pamudpod* (*virama) to ensure that the script survive the demands of modern orthography and literacy.



Fig. 10 - Surat Mangyan computer fonts available on the Internet. Nordenx (2010).

My work on digitizing Mangyan typefaces and creating computer fonts for Surat Mangyan (Fig. 10) is carried out in the spirit of extending Postma's goodwill; so that the Mangyan script would be consigned to posterity.

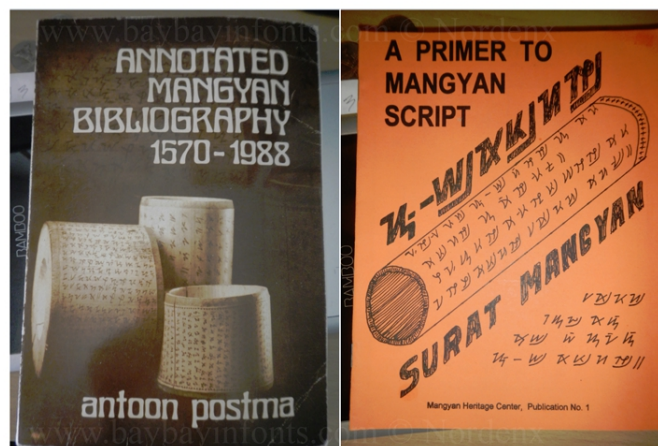


Fig. 11 - photos of a couple of Antoon Postma's books in my collection. Nordenx (2014)

*Virama - is used to suppress the /a/ vowel sound that occurs with every syllable character inherent in baybayin.

2.3 - d. Kulitan

Throughout the history of Pampanga, many books were published about the Kapampangan language but only a few are written about its writing system (Kulitan, Pamagkulis). A hand-style typeface specimen is found in the Pampanga version of the *Vocabulario* authored by Alvaro de Benavente (1699) and reprinted several times, one particularly in *Estudio de los Antiguos Alfabetos Filipinos* by Cipriano Marcilla y Martín (1895) (Fig. 12). While Kapampangan orthography using the Latin Alphabet was revised a couple of times, Kulitan's orthography was not addressed until the 1960's by writer Zoilo Hilario from the *Akademyang Kapampangan* and historian Mariano A. Henson.

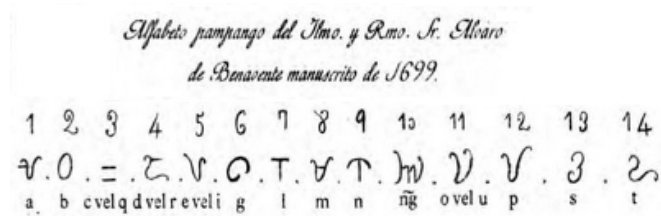


Fig. 12 - Kapampangan script sample in *Estudio de los Antiguos Alfabetos Filipinos*. Benavente (1699), Marcilla (1895)

A new generation of Kapampangan academics picked up on the works of Hilario and Henson and took it upon themselves to bring Kulitan up to date to the current Kapampangan orthography. In the mid-1990s, scholar Michael Pangilinan (as Siualâ ding Meángûbié) published primers and papers on Kulitan through the *Akademyang Kapampangan* and in 2012 he published the very first book solely devoted to the subject of Kulitan - "An introduction to Kulitan, the indigenous Kapampangan script." His work has been the basis of my Kulitan typefaces & fonts. (Fig. 13)



Fig. 13 - Historic typefaces digitized as Kulitan Fonts. Nordenx (2009)

2.3 - e. Traditionalist Concerns & Conservative Reforms

With an encroachment of a pervasive & dominant culture over a non-aggressive native culture, the later usually gets overwhelmed. Same is the nature of the Philippine government's move to propagate English and "Filipino" (based on the Tagalog Dialect of Manila) as a *Lingua Franca* for ALL Filipino citizens. This Filipino National Language has been slowly and systematically eroding the vitality of other indigenous languages & dialects in the Philippines. Once again, in a perceived social expediency, the populous are convinced or manipulated into thinking that learning that the language and writing system used at the center of commerce & governance would improve their social standing and get ahead in life. Not only is the National Language heavily funded and commercialized by the government, it is also aided and supported by law and muddled up in politics. Under this sociopolitical environment, many young Kapampangan, Bicolano, Palawenyo, and other ethnic youths have lost their ability to fluently speak their native tongue, replaced by Tagalog/Filipino and their cultural identity supplanted by a heavily westernized Manila-media-centric pop-culture. The Filipino National Language is even compromising the lexical diversity of Tagalog itself. How can Baybáyin scripts like Surat Mangyan or Kulitan fare well under these pressures?

With the overwhelming amount of technology and information readily available today, young people can't resist the allure of gadgets and the Internet. Unfortunately, this modern techno-culture carries with it a pervasive & dominant national and global culture. The embedded *Lingua Franca* of the Internet and mobile gadgetry are the major national & world languages; English, Mandarin, Cantonese, Japanese, Spanish, French, Russian, etc. and along with them their dominant writing systems. Combine this new technocracy with the current sociopolitical scene happening in the Philippines, or anywhere for that matter, how can indigenous cultures and native writing systems compete in the grand scheme of things? Modernization and official standardizations holds the key and tools for indigenous cultures to remain competitive and survive. This is also where we look into traditionalists concerns to keep reforms conservative and true to their traditional, indigenous, native, and historic forms.

Proper modern reform for indigenous scripts needs to properly represent and stay true with linguistic rules & tradition, stay connected with its paleography, stay honest in its typography, stay current in its calligraphy, and be validated by experts & community.

III. Mindful Standardizations

Before we can discuss any application and tactics on how to help propagate save Baybáyin and other indigenous writing systems in the Philippines and even other SEA scripts, the writing system's orthography and typography must be completely ironed out and its standardizations established. From my work with Baybáyin fonts, I have learned several things:

3.1 - a. Looking Back

Looking back, investigating archives and the past paleographic studies provide for a better understanding of what the current script is supposed to be. It reveals the blueprint of how it should look, how it should be written. Knowing the parent and related scripts also help fill in the blanks and spaces that are missing or forgotten during the interrupted development or the uncompleted inter-generational transfer of knowledge of the script.

Thorough investigations and comparative studies from Holle and Kern (1882) provided evidence that scripts from SEA archipelagos are members of the Indic family and that they descended from or were influenced by old Javanese (Kawi) and/or North Indian Nagari scripts. Based on letter shapes, matching phonemic representation, and orthography, the relationships between SEA scripts & writing systems are apparent.

While the development of Baybáyin is also said to be influenced by Cham script according to Wade (1993), or by South Sulawesi script according to Scott (1984), we have to remember that the LCI provided evidence that Kawi has been present in the Philippine archipelago. This reinforces the old studies by Holle and Kern that Kawi and Nagari are the strong influences to Philippine scripts.

A study by Christopher Miller (2011) in his paper for the Berkeley Linguistics Society, Miller provided evidence for his theory that an early variety of Gujarati script introduced into the archipelago points to the origins of Sumatra, Sulawesi, and Philippine scripts. This places them under the Nagari group. Miller, having better access to materials (from the Internet, his networks, and through his travels) than his contemporaries from previous decades, has cross-referenced, charted, and cataloged a more concise comparative study of SEA glyphs. Miller collected and compared Philippine & SEA script samples from as early as the 16th - 17th century up to the 19th - 20th century and did a glyph-by-glyph examination, letter-by-letter. Going as detailed as examining the stroke-by-stroke structural elements of each character; finding repeating patterns across a large swathe of characters in every script.

The Baybáyin text contained in the 1593 *Doctrina Christiana* (DC) is the oldest and most extensive sample of old Philippine scripts (Fig. 1 pg. 2). Without a doubt it is the closest representation of how Baybáyin script looked prior to the Spanish arrival, albeit somewhat stylized in comparison with the range of variants found in 17th century handwriting samples which included Mangyan script and Tagbanuwa scripts. The DC typeface is has become the main letterforms to which most modern fonts are modeled from. But in the light of recent developments, such as Miller reports in his papers, a better understanding on how all Philippine scripts should actually be standardized has come to light.

3.1 - b. Looking Around

Looking around neighboring nations, Baybáyin related or sister SEA scripts that remain in use, like the Lontara script of the Bugis, Makarese, and Mandar languages, paints a typographic picture of how Baybáyin scripts could have evolved and simplified had its development have not been interrupted. But we also don't have to look that far. The living scripts of Palawan & Mindoro can also bridge the gaps between modern day Philippine scripts and the old prehispanic-Baybáyin. Only through looking back and looking around can we move forward with mindful standards.

3.1 - c. Looking Forward

Synchronizing with the modern spoken language and westernized orthography should actually only be a secondary concern when trying to revive and preserve endangered indigenous scripts. Keeping it honest, true, and connected with traditions will keep it in touch with its culture and native tongue. Adapting extremely radical changes in modernizations in order for indigenous scripts to “catch-up” might actually be detrimental to the native culture and their traditional heritage. This is why looking back and looking around to learn lessons from related writing systems is important, and the studies made by scholars like Paul Morrow, Christopher Miller, Jean-Paul Potet, Mike Pangilinan, Antoon Postma, and many others are vital to the revival of Philippine and SEA scripts.

While the pervasiveness of modern technology can bring the full force of global languages further into the remote outposts of indigenous cultures, there is still hope and time to intervene and turn these innovations into more beneficial tools to promote awareness, push education, and inject vitality into endangered scripts. We can localize communication devices, keep scripts available for word processing, make it accessible online and more attractive & hip for the younger generation. But before we can use fonts for practical use, it needs to comply with certain design standards and to be viable aesthetically and technologically. Western alphabets have 3000 years of evolved letter design that was used to standardize its type in the last 500 years, insular SEA scripts do not have that luxury. Luckily, we do not completely have to start from scratch (pun).

3.2 Deconstruction & Reconstruction

In one of Miller's presentations (Fig. 14) from 2011, he showed how defining & identifying “graphomes” and figuring out the stereotypical structural elements which provide the defining features from each script to help simplify the task of learning the characters.

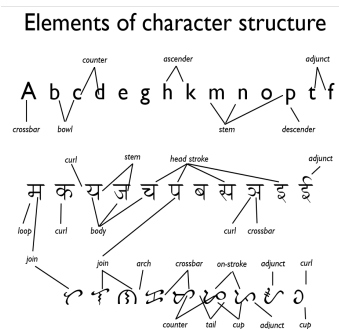


Fig. 14– Miller (2011)

Similarly, in an article I wrote in my Baybáyin Fonts site earlier in 2010, (<http://nordenx.blogspot.com/search/label/Typography>) I also began work on defining & identifying both unique & uniform graphomes and figuring out stereotypical elements and stroke styles. In the article I lamented how behind Philippine scripts are when it comes to modern typography.

Breaking it Down. Nordenx, 2010.

Over the centuries, the western alphabet has been studied, measured, standardized, and its letter shapes broken down to its core components (Fig. 15). Modern print even analyzed every stroke and flourish and given them names and terminology as well as cataloged them by style, form, and function.

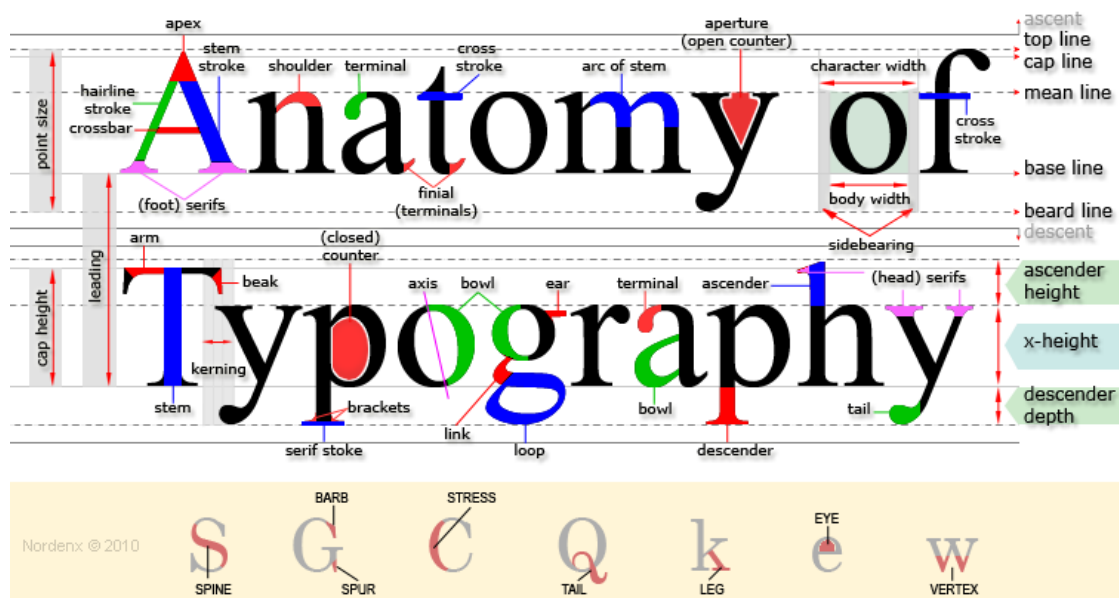






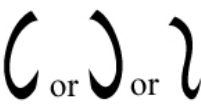



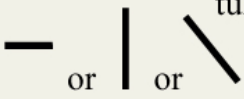

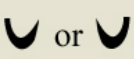
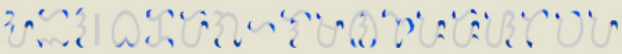


Fig. 15- Anatomy of Typography, Nordenx (2010)

When it comes to typography, Baybáyin is still uncharted territory. Standardization is needed for modern Baybáyin. We need precise & careful comparative consideration to tangential scripts; (Indic) origin, (Bugis/Kavi) related, (Mangyan/Tagbanua) living, and (published) historic typefaces. I find that breaking down each Baybáyin character or glyph to its most basic strokes and forms helps in understanding these origins and relationships.

I have broken down character elements and divided/grouped them by their consistent forms of strokes. Since there are currently no official terminology specific for Baybáyin typography, I went ahead and labeled them using a naming convention that would be familiar to almost every Filipino. (Table. 1) See table/graphic below:

Baybayin Character Strokes		typography study
<p>Note: depending on the style the writer or artist chose, in certain characters, the stroke can be terminated with a decorative flourish or "splash" at the end of the stroke (see <i>talsik</i> below). Some characters can also use a different stroke "form" depending on style (blue strokes).</p>		
MAIN FORMS:		
	<p>agos / flow</p>	 <p>A flowing horizontal stroke similar to a ~ wave dash, the stroke starts from left to right and can end with a downward terminal or a splash.</p>
	<p>ilog / river</p>	 <p>Two curved vertical strokes similar to the number 3, the top stroke is the starting stroke (river entry) and the bottom (end falls) stroke can end with either an inward terminal or outward splash.</p>
	<p>ulap / cloud</p>	 <p>Two curved horizontal strokes similar to a ~ wavy dash, the stroke starts from left to right, rising then falling then rising and falling again. It usually ends with a downward terminal or splash.</p>
	<p>talon / falls</p>	 <p>An arc of stem or shoulder and sometimes a bowl (depending on style). Semi-curved flowing vertical strokes similar to a bracket () or parentheses, it is usually a downward stroke that can be terminated with either an inward or outward splash, or it can link or to an upward "wave" stroke (see below).</p>
	<p>alon / wave</p>	 <p>A wavy angled rising stroke similar to a check mark ✓, the stroke starts from the mid-bottom left slightly dipping then rising to end usually with an outward splash. The "wa" character being the only exception, its wave ends in an inward terminal or splash.</p>
*STRUCTURAL:		
	<p>tulay / bridge</p>	 <p>A straight cross bar, stem, or arm which can be horizontal, vertical or at an angle. This is the support structure that connects or crosses other main strokes and the lines that the main forms follow. Depending on style, it could be slightly curved.</p>
*DECORATIVE:		
	<p>talsik / splash</p>	 <p>A flourish or serif. These are the decorative tail-like curved serifs or semi-structural details on the ends of most strokes. Styles can vary.</p>

Nordenx © 2010

Table. 1- Elements of Baybáyin, Nordenx (2010)

There are 5 main forms, each form is an individually stylized stroke or series of simple strokes. These forms are supported by one or two structural & decorative elements. The structural element determines the direction of the main form (horizontal, vertical, or angled).

These 5 forms and 2 support (structural & decorative) components are the most basic & consistent strokes of Baybáyin characters. These are based on all the samples (handwriting & print) found in books & manuscripts from 1600s up to the early 1900s and also compared with Brahmic/Indic, Malay, and our living scripts. I have been studying each individual Baybáyin & related script's characters and found every shape & form correlations. I will publish my findings for each and every letter/glyph and share a few of them with you here soon. The more precise info will be included in my book.

Breaking it Down. Nordenx, 2010.

Each of the elements or stroke forms from the Table 1 on pg. 18 can be simplified up to their basic structural representations, or stylized further with various decorative flourish (serifs) already available to other typefaces; these forms can be seen from examples of signatures and handwriting styles in 17th century certificates and deeds that are archived in the University of Santo Tomas in the Philippines (Miller, 2011).

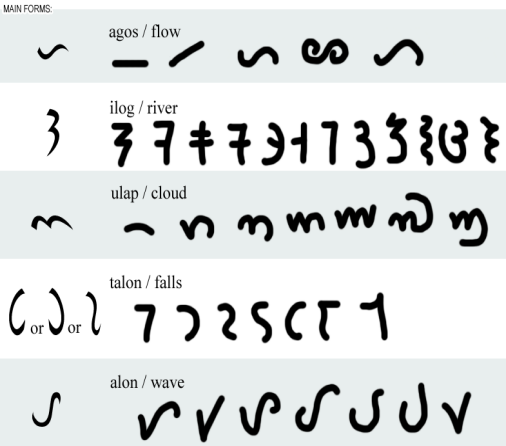


Fig. 16 – Strokes, simplified & exaggerated, Nordenx (2013)

These elementary forms are not limited to Tagalog Baybáyin, they can be applied to typographic elements of Kapampangan Kulitan and Surat Mangyan fonts too. It is quite possible to build a whole font set that contains all major Baybáyin (Kulitan, Mangyan, Tagbanwa, Tagalog) using a singular typeface style. However, as font development is time consuming, I have only done separate fonts for each Baybáyin (Kulitan, Mangyan, Tagalog) at this juncture.

SAVING ENDANGERED PHILIPPINE NATIVE SCRIPTS IN A MODERN DIGITAL WORLD THROUGH TYPOGRAPHY, TECHNOLOGY, AND STANDARDIZATION.

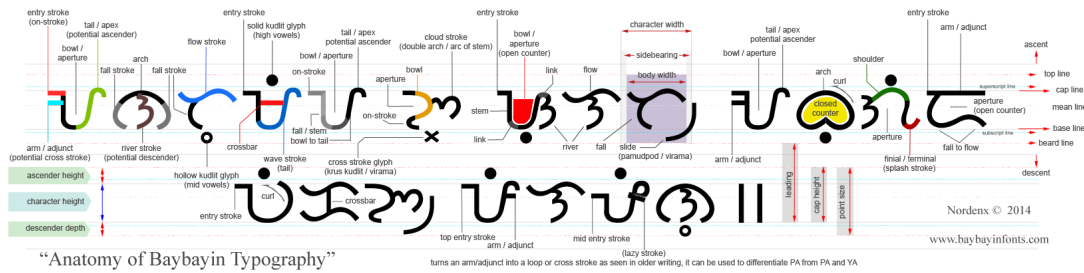


Fig. 17 – Baybáyin typographic study, Nordenx (2014)

Besides establishing uniformity, the Baybáyin basic elementary strokes (Table. 1 pg. 18) can also help identify particular graphomes that originate or were inspired from related SEA scripts. And it can point out the similarities or evolutionary changes of Surat Mangyan, Palawan script, and Kulitan from the theorized proto-Baybáyin mentioned by Miller in his papers.

BASIC STROKE ELEMENTS		flow / agos	river / log	cloud / ulap	falls / talon	wave / alon	bridge / tulay
SYLLABIC CHARACTER "A"		Typically, this character starts with a complex river stroke element on the left and then links to and finishing off with a rising wave stroke on the right.					
Modern:							
(Archived Typefaces) Classic:							
(Living script) Old & New Mangyan:							
(Revived script) Old & New Kulitan:							
(Related SEA scripts) Batak, Lontara:							
(Ancient script) Old & New Kawi:							
(Parent scripts) Old & New Indic:							
BASIC STROKE ELEMENTS		flow / agos	river / log	cloud / ulap	falls / talon	wave / alon	bridge / tulay
SYLLABIC CHARACTER "GA"		Typically, this character starts with a complex river stroke element on the left and then links to an arc finishing off with a downward "fall" stroke on the right.					
Modern:							
(Archived Typefaces) Classic:							
(Living script) Old & New Mangyan:							
(Revived script) Old & New Kulitan:							
(Related SEA scripts) Batak, Lontara:							
(Ancient script) Old & New Kawi:							
(Parent scripts) Old & New Indic:							

Table. 2 – A couple of tables from my Baybáyin typographic study manuscript, Nordenx (2013)

Defining typographic elements and stroke uniformity will help future font/typeface designers streamline their productivity, leaving more room for stylistic visions. Guesswork is eliminated when the basic letterforms are ironed out; giving more focus on line weights, serifs/embellishments, and general artistry. Figure 17 and images like those on table 2 will be a part of a book that I am writing; having the same topic from which this paper is based upon: "Modern Baybáyin: saving the native Philippine scripts through typography, technology, and standardizations."

3.3 Unconventional styles, Freedom, Increased Interests

Standards for fonts, though more measured and precise, also applies to calligraphy even though the later tends to be more free and unbound from the technical limits & restrictions of fonts & typefaces. Past handwritten samples such as old signatures have been digitized as fonts, particularly by Canadian linguistic scholar Paul Morrow (www.mts.net/~pmorrow), while a lot of new Baybáyin signatures (Fig. 19) and handwriting styles I've seen tend to copy the old typefaces like the ones used in the *Doctrina Christiana*. I also have digitized a few historical typefaces and handwriting samples into fonts (Fig. 18).



Fig. 18 – Modern font based on Don Dionisio Kapolong's signature and Christopher Miller's studies of the letter shapes in Don D.'s signatures, in the University of Santo Tomas archive, Nordenx (2013)



Fig. 19 – My Baybáyin signature, Nordenx (2013)

As the popularity of modern Baybáyin fonts and artwork grew, they exposed other artists to some of the unconventional styles and methods that are possible. While the popularity of Baybáyin (as mentioned in publication) slowly climbed up (Fig. 19 pg. 22) starting in the 1990's (based on data from Google's Ngram Viewer <https://books.google.com/ngrams>) correlating to when Paul Morrow started his Baybáyin website that offered free historic typeface based Baybáyin fonts, there was very little Internet presence regarding Baybáyin prior to the early 2000's until the spike of modern Baybáyin fonts, artwork images, and video become available and easily searched online. That was when informative Baybáyin websites started to show up and new books were published.

SAVING ENDANGERED PHILIPPINE NATIVE SCRIPTS IN A MODERN DIGITAL WORLD THROUGH TYPOGRAPHY, TECHNOLOGY, AND STANDARDIZATION.



Fig. 19 – Ngram for Baybáyin & Alibata, Google (2014)

Collectively, downloads of my modern Baybáyin fonts passed the 1 million count earlier last year. Views of my Baybáyin info blog (*BaybayinFonts.com*) also steadily increases as curiosity and popularity rises. A group gallery for Baybáyin enthusiasts in a popular art upload site (*baybayin-enthusiasts.deviantart.com*) also displays new artists supporting Philippine scripts in both traditional and unconventional forms (Fig. 20). Unhindered by strict traditional rules, Baybáyin became attractive to a new generation of practitioners.

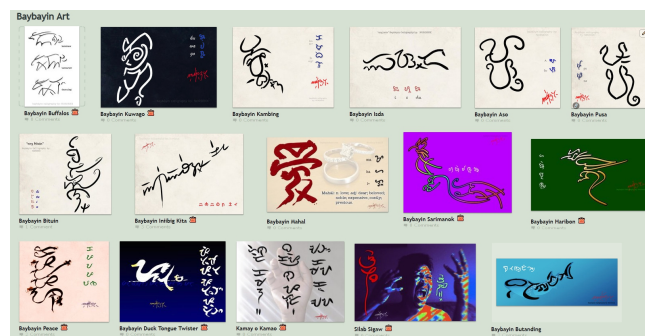


Fig. 20 – unconventional Baybáyin Calligraphic Art by Nordenx, DeviantArt (2014)

Visitor traffic (Fig. 21) to my blog/website (*BaybayinFonts.com*) and sites similar to it like Kristian Kabuay's (*Baybayin.com*) have slowly risen since 2006. This fact, and with more books being published on the subject, plus we have seen more news media coverage and even TV shows that mentioned Baybáyin were produced this last decade, attests to the revival of Philippine scripts.

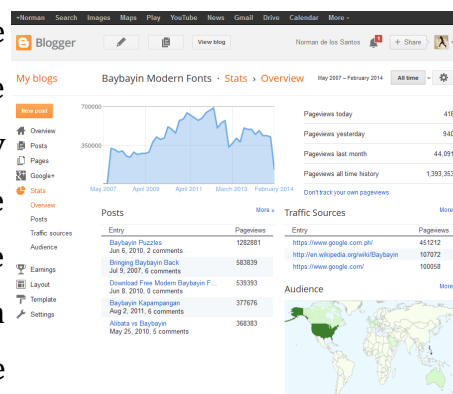


Fig. 21 – BaybayinFonts.com stats, Blogger (2014)

3.4 Rules of Orthography

Once we established proper typographic standards and opened up the endless possibilities of both conventional and unconventional designs. It becomes paramount that the rules of orthography be set (Fig. 22).

3.4 - a. Traditional & Classical Rules

Artist, craftsmen, and calligraphers who are practitioners of native Philippine scripts tend to be more of a traditionalist lot. The Mangyan's *Ambahan are written without a virama, Kulitan practitioners frown upon writing foreign words, and most Filipino artists practice the older methods of writing Tagalog Baybáyin (with or without the “Krus Kudlit” virama). When I pioneered modern styled Baybáyin fonts and calligraphy, and introduced them to online communities, I met a lot of resistance from traditionalists and purists. But, throughout the years many of them slowly accepted most of my ideas and proposals, a few of them actually become close friends and colleagues.

Traditional Baybayin Syllable Characters:

These consonant characters are treated as SYLLABLES; they each have a default /a/ vowel sound.

𑀀	𑀁	𑀂	𑀃	𑀄	𑀅	𑀆	𑀇	𑀈	𑀉	𑀊	𑀋	𑀌	
BA	KA	DA	GA	HA	LA	MA	NA	NGA	PA	SA	TA	WA	YA

𑀍 𑀎 𑀏 ← These stand-alone vowel characters are also treated as SYLLABLES.

𑀍	𑀎	𑀏
A	E/I	O/U

Add a kudlit mark on TOP of a consonant character to change the default /a/ into an /i/ or /e/ sound.

𑀀̇	𑀁̇	𑀂̇	𑀃̇	𑀄̇	𑀅̇	𑀆̇	𑀇̇	𑀈̇	𑀉̇	𑀊̇	𑀋̇	𑀌̇	
BI	KI	DI	GI	HI	LI	MI	NI	NGI	PI	SI	TI	WI	YI

Add a kudlit mark BELOW a consonant character to change the default /a/ into an /o/ or /u/ sound.

𑀀̈	𑀁̈	𑀂̈	𑀃̈	𑀄̈	𑀅̈	𑀆̈	𑀇̈	𑀈̈	𑀉̈	𑀊̈	𑀋̈	𑀌̈	
BU	KU	DU	GU	HU	LU	MU	NU	NGU	PU	SU	TU	WU	YU

𑀆̇	𑀇̇	𑀍	← Traditionally, the trailing, leading, dead, and/or stand-alone consonants are not written; making it hard to read certain words.
KLIK	NANG	AT	

𑀂̇	𑀅̇	= RA	← Traditionally, 'DA' or 'LA' was used in place of 'RA' depending on its location within a word or if it is a borrowed foreign word.
DA	LA		

		← Traditionally, a “pause” mark ‘ ’ (<i>tandang panigil</i>) is used in place of a ‘,’ (comma, <i>kuwit</i>), and a “stop” mark ‘ ’ (<i>tandang panapus</i>) is used in place of a ‘.’ (period, <i>tuldok</i>).
Pause	Stop	

Fig. 22- Traditional Baybáyin's basic rules, Nordenx (2012)

*Ambahan - a native Mangyan poetry with strict syllabic measures of 7.

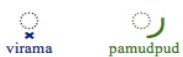
3.4 - b. Modern Phonemes

As a compromise to traditionalists, instead of creating new letters or characters, I opt to reusing or reviving older letterforms or handstyles. Minor stylistic differences can be used to differentiate a native syllable characters from their homophonic equivalent (Fig. 23). Other logical changes are addressed by reintroducing minor glyphs or stroke styles from related scripts. Minimal distracting changes and keeping true to traditional rules & forms is what conservative reform aims to achieve for Baybáyin and other Philippine scripts.

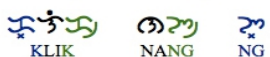
Modern Reform
 (As suggested by Baybayin Typface & Font specialist Nordenx and included in his Fonts)

These are necessary reforms to bring the traditional script up to date with modern orthography.

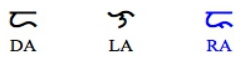
Pamudpod & Virama (or Krus Kudlit) are used for canceling the initial /a/ vowel sound of a character.

 ← The **Krus Kudlit** (Cross-shaped virama) was introduced by the Spanish and is used in the publication of the Doctrina Christiana. Modern uses X.
 The **Pamudpod** (Crescent-shaped virama) was introduced by Antoon Postma and is adapted in Surat Mangyan and used in several publications.


The x-shaped virama is a stylistic choice by Nordenx, replacing the + shaped Spanish Krus Kudlit.

 ← The **X-VIRAMA** is used for leading or stand-alone consonants.
 The **PAMUDPOD** is used for trailing consonants.

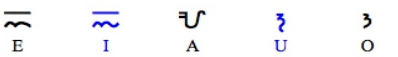
A modified 'DA' based on other Indic & SEA scripts and a Bicol sample is used for 'RA'.

 ← A **FLOURISHED 'DA'** is created to represent 'RA'.
 Traditionally, 'DA' or 'LA' was used in place of 'RA'.


Solid & Hollow (or Looped) Kudlit marks are introduced to differentiate the high & mid vowels.

 ← a **SOLID kudlit mark** for high vowels /i/ and /u/
 a **HOLLOW kudlit mark** for mid vowels /e/ and /o/


Simplified & Flourished vowel characters are suggested to differentiate the high & mid vowels.

 ← **SIMPLIFIED** characters for mid vowels /E/ and /O/
FLOURISHED characters for high vowels /I/ and /U/


Open & Closed (or Looped) end-strokes assignment to differentiate the 'FA', 'PA', and 'YA'.

 ← The **closed or looped 'PA'** is from old handwriting samples, same as the **open or loose ended 'YA'**. Each form corresponds with their letter-shape counterpart.

Round & Bean (or upside-down Heart) shapes assigned to differentiate the 'BA' and 'VA'.

 ← The **Round 'BA'** from old handwriting samples is assigned to 'VA' since other Indic and SEA scripts similarly use this form to represent a /bha/ sound.

Simplified & complex (flourished) strokes assigned to differentiate the 'SA' and 'ZA'.

 ← **SIMPLIFIED** character for 'SA'
FLOURISHED character for 'ZA'

The addition of the Sudden Stop & Inquisitive Stop marks fills the need for modern punctuation marks.

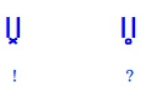
 ← **SUDDEN STOP** mark (*tandang panamdam*), a stop character '||' with an x-virama under it; use as an exclamation point '!'.
INQUISITIVE STOP mark (*tandang pananong*), a stop character '||' with a small 'BA' under it; use as a question mark '?'.

Fig. 23- A Conservative Modern Reform for Baybáyin proposal, Nordenx (2012)

Traditional Baybayin Characters:																					
Syllable Name/ Pronunciation	A	I	U	BA	KA	DA	GA	HA	LA	MA	NA	NGA	PA	RA	SA	TA	WA	YA			
Character/Glyph	ᜆ	ᜇ	ᜈ	ᜉ	ᜊ	ᜋ	ᜌ	ᜍ	ᜎ	ᜏ	ᜐ	ᜑ	ᜒ	ᜓ	᜔	᜕	᜖	᜗			
Type/Keystroke	A	I	U	b	k	d	g	h	l	m	n	N	f	d	s	t	w	y			
Mark Name (<i>kudlit</i>)	i	u	stop	pause																	
Character/Glyph	◌̇	◌̈																			
Type/Keystroke	i	u	.	,																	
www.baybayinfonts.com																					
Modern Reform:																					
Combination/ Pronunciation	K'WA	KUWA	N'YA	D'YA	DIYA	K'SA	T'SA										Mark Name (<i>kudlit</i>)	e	o	virama	pamudpud
Characters/Glyphs	ᜆᜇᜈ	ᜆᜇᜈ	ᜆᜇᜈ	ᜆᜇᜈ	ᜆᜇᜈ	ᜆᜇᜈ	ᜆᜇᜈ										Character/Glyph	◌̇	◌̈	◌̘	◌̙
Type/Keystrokes	Q	q	~	J	j	x	C										Type/Keystroke	e	o	=	/
Suggested Alternate Characters (in red) for Modern Syllable Sounds (in blue):																					
Syllable Name/ Pronunciation	E	I	O	U	ZA	SA	LA	DA	RA	FA	PA	YA	WA	VA	BA						
Character/Glyph	ᜆ	ᜇ	ᜈ	ᜉ	ᜊ	ᜋ	ᜌ	ᜍ	ᜎ	ᜏ	ᜐ	ᜑ	ᜒ	ᜓ	᜔	᜕	᜖				
Type/Keystroke	E	I	O	U	z	s	l	d	r	f	p	y	w	v	b						
© NORDENX 2012																					

Fig. 24- A Conservative Modern Reform chart, Nordenx (2012)

Over the years, I received numerous emails and private messages regarding my fonts and my efforts in standardizing the script for typography, uniformity of stokes, ease of legibility, ease of access, and synchronization with modern Filipino orthography. A lot of these correspondences are positive and very encouraging. However there a a few that are not. It seems that I have not made my intentions clear. People sometimes see the adjective "modern" in the name of my fonts and they immediately think "modified" which some view with the same disdain they feel when they think that something is a product of "colonial mentality".

Modern ≠ Modified: (Fig. 24) The only glyph I consider slightly "modified" in my fonts is my (ᜓ) Ra character. But even (ᜓ) Ra as an alternative character is basically still an embellished "traditional" (ᜓ) Ra. Maybe that's why folks accept it; I'm just pleasantly pleased that it has been well received by many and has become the *de facto* RA used by many *netizens on the online Baybáyin community.

* The term **Netizen** is a portmanteau of the English words Internet and citizen. It is defined as an entity or person actively involved in online communities and a user of the Internet.

My other "alternative" characters are designed in the same fashion as my RA; an embellished (𑀓) Sa for Za, an embellished (𑀘) I for E, and an embellished (𑀕) U for O.

My other characters are actually NOT embellished versions of the the character but are actually true but older representations of the same character; the round (O) Ba is the same but older (𑀕) Ba. I assigned the round (O) Ba to the 'V' key because it more resembles the phoneme matching characters in related family of Indic & South East Asian scripts.

	script/font name (language) source	a	i/e	u/o	ba	va
BRANMIC ORIGIN	Sharda (Sanskrit) Northern India 8th century AD	𑀓	𑀘	𑀕	𑀕𑀓	𑀕𑀘
	Devanāgarī (Sanskrit) South Eastern India 11th century AD	अ	इ	उ	ब	व
MALAY	Surat Batak (Austronesian) North Sumatra, Indonesia	𑀓	𑀘	𑀕	𑀕𑀓	𑀕𑀘
	Baybayin Modern Sulat Font (Filipino) Nordenx, Internet Website 2009	𑀓	𑀘	𑀕	𑀕𑀓	𑀕𑀘
MODERN STYLED	Baybayin Modern Mono Font (Filipino) Nordenx, Internet Website 2007	𑀓	𑀘	𑀕	𑀕𑀓	𑀕𑀘
		a	i/e	u/o	ba	va

Fig. 24- Alternative character origins, Nordenx (2011)

The traditional F-shaped (𑀓) Pa is still the same as the old Kapampangan closed-loop P-shaped Pa so I assigned the F-shaped one to the 'F' key and the P-shaped one to the 'P' key [shape-wise it makes sense to me] - however, the old closed-loop Ya is very much similar to the old closed-loop Pa, so I chose to include & assign a current but still traditional loop-less (𑀕) Ya to the 'Y' key.

These alternatives, they are available to people if they wish to use them. My font can be used to write in the old traditional way as well as the modern way. I included the hollow (◌◊) kudlit mark for mid vowels e and o and the solid (◌•) kudlit mark which is assigned to represent the high vowels i and u. The x-virama and *pamudpod* (vowel cancellation marks) are valid methods of vowel cancellation used by Philippine script's parent Indic & relative SEA scripts. The *pamudpod* mark was introduced several decades ago by Antoon Postma and was adopted by the Mangyan and used in writing regular everyday communications and signages, but not on traditional Ambahan poetry and crafts. The x-virama replaced the *krus kudlit* among many Baybáyin practitioners and artists for aesthetic reasons (technically still a cross, but on its side).

3.4 - c. Repeating Homophonic Syllables

Vowel sign doubling: Tagalog script historically shares with Buginese a spelling convention that can be called “vowel sign doubling”. This consists in marking a consonant letter with two vowel signs, either the same or two different ones, to represent two succeeding syllables beginning with the same consonant. ~ Miller (2011)

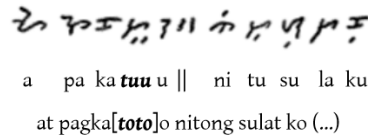


Fig. 25 - One sample of a couple of occurrences of vowel sign doubling in old Tagalog script.

(Excerpted from a 1635 land deed, University of Santo Tomas Archives, reproduced in Villamor 1922) ~ Miller (2011)

Since /a/ is not marked but is supplied by default, I introduced the • colon as a “*padalaw-a*” mark. It borrows the same concept and style/position as the the Lontara/Bugis “*pallawa*” mark which is used to separate rhythmico-intonational groups and also used to denote the doubling of a word or its root. The *padalaw-a* mark also doubles the vowel characters in the same manner prescribed in *Ang Wika at ang Baybaying Tagalog* by Tolentino (1937) but it is on the right side instead of being on top or bottom of the (◌) I and (◌) U characters. Another extended possibility for this type of *Kudlit* mark is what I call a “*pahantig*” mark which is a single solid (◌) mark on the right side of the a consonantal syllable character which repeats the consonant sound.

<i>Glyphs & Syllables</i>	<i>Description</i>
◌◌ = sisi ◌◌ = tutu	Traditional: Double Kudlit Repeating Syllables - As seen in old published samples, placing two same kudlit marks side by side on a character creates a double same-vowel syllable.
◌◌ = nene ◌◌ = lolo	Modern: Double Kudlit Repeating Syllables - Similar to the traditional Double Kudlit except that it doubles up the mid vowel (e or o) hollow kudlit marks.
◌◌ = bibe ◌◌ = nuno	Modern: Mixed High-Mid Vowel Syllables - By placing the kudlit combinations of i+e, e+i, o+u, or u+o on a character, it creates two same-consonant syllables with either mid & high or high & mid vowels.
◌• = mama	Modern: Padalaw-a Mark - Repeats the default consonantal syllable.
◌◌ = iisa ◌◌ = uulan	Modern: Padalaw-a Mark - Repeats the default vowel syllable.
◌• = bib ◌• = bab ◌• = bob	Modern: Pahantig Mark - Repeats the consonant after the syllable.

Table. 3 – Repeaters, old & new. Nordenx (2012)

3.4 - d. Other Rules, Names, Acronyms & Initialism

Orthographic rules still need a lot of work. Root words and stresses need to be considered for Baybáyin. Those subjects are beyond the scope of this paper but will be covered in my book. But I can briefly touch on the rules of thumb regarding names and acronyms.

A Common Mistake is not translating to a Filipino language or forcing foreign pronunciation & spelling. Ideally, Baybáyin should be used primarily for Philippine languages. However, Baybáyin has been known to be used by natives to write some Spanish and English (in "Pilipinized" spelling) words.

General Rules of thumb for Baybáyin:

Use borrowed words sparingly and only if there are no available equivalent words for them in any Philippine language or even Spanish. If you have to use the word as it is, you should follow the official rules on how to Pilipinize the spelling & pronunciation of foreign or borrowed words and how to break-it-down into syllables as laid out by the Philippine National Language Commission in the *Balarila* (Rules of Orthography).

If the word is an important scientific or technical term and you do not have a direct and official translation to any Philippine language or Spanish - don't Pilipinize the spelling and don't write it in Baybáyin Script, use the Latin Alphabet instead.

Other people's names: If the word is a name of person (or organization) - don't Pilipinize the spelling and don't write it in Baybáyin Script, use the Latin Alphabet instead - unless that person (or group) made known to you or the public how they write his/her name in Baybáyin (or they personally requested you to do so); how one prefers their name spelled & pronounced is a personal issue.

Your own name: Again, "How one prefers their name spelled & pronounced is a personal issue." No person (or translator tool) should dictate to you how you want to spell & pronounce your name. People can suggest alternative spellings, in the end it's up to you to figure out how the rules of orthography (spelling) fits how you want others to read or pronounce your name as.

Place names with no commonly known official direct translation to Filipino should not be translated to Filipino, it should be written the way it is known internationally in the Latin Alphabet. If you should insist on transcribing it in Baybáyin, even if there is a Filipino translation for certain words in the name - don't translate it - just Pilipinize the pronunciation before transliterating it to the script.

Baybayin Acronyms & Initials:

An "Acronym" is the term widely used to describe any abbreviation formed from initial letters and in some cases initial syllables. Most dictionaries define acronym to mean "a word" in its original sense, while other dictionaries attributes other senses that make an acronym to have the same meaning as that of initialism.

According to the first definition found in most dictionaries, examples of acronyms are NATO (/ˈneɪtəʊ/), scuba (/ˈskuːbə/), and radar (/ˈreɪdər/), while examples of initialisms are FBI (/ˌɛfˌbiːˈaɪ/) and HTML (/ˌeɪtʃˌtiːɛmˈɛl/). - source wiki

Initialisms are pronounced letter by letter using the alphabet character's names. Acronyms are read and treated as words.

Since Baybáyin is an Abugida and each of its characters are phonetic syllables, Filipino acronyms and initialisms should be written in Baybáyin script as they are pronounced in Filipino.

Since "acronyms are read and treated as words" and a lot of acronyms are "names" of organizations and technical terminology, we then go back to the "rules of thumb" which are:

If the word is an important scientific or technical term and you do not have a direct and official translation to any Philippine language or Spanish - don't Pilipinize the spelling and don't write it in Baybáyin Script, use the Latin Alphabet instead.

If the word is a name of person (or organization) - don't Pilipinize the spelling and don't write it in Baybáyin Script, use the Latin Alphabet instead - unless if that person (or group) made known to you or the public how they write his/her name in Baybáyin (or they personally requested you to do so); how one prefers their name spelled & pronounced is a personal issue.

3.5 Kulitan & Mangyan Standardizations

Tagalog Baybáyin, unlike Kapampangan Kulitan and Surat Mangyan has no defined authority. Kulitan has the Kapampangan Academy and Center for Kapampangan Studies. Surat Mangyan has the Mangyan Heritage Center, Mangyan Mission, and the Mangyan elders looking after their cultural heritage. I do not presume to impose any change or idea without asking these organizations and their community first. Any fonts I create have to receive their stamp of approval when I disseminate them.

Both Kulitan and Surat Mangyan have their own set of technical dilemmas when it comes to font development and modernization. For one, both have strict rules and traditions. Kulitan having adopted a vertical writing direction and character stacking/ligature method that is proving difficult to develop for in a horizontally biased computer display setup. Surat Mangyan has strict kudlit marker positioning that has not been provided space for in the Unicode range, preventing it to be used in current popular online communications.

IV. Applications

The answer to how to promulgate Baybáyin and indigenous Philippine scripts in this modern day is to look at what piques the curiosity of today's youth. Culture and language is fast changing, how can we show the next generation to honor and value native traditions?

4.1 Arts & Crafts

Fig. 26 – My Baybayin Kufic Font inked, Catfish (2014)

There has been a reemergence of a tattoo culture among young Filipinos world-wide. What was once a taboo that held a negative image for the mostly Catholic nation, tattooing has gained social acceptance over the last decade. Incorporating Baybáyin and Kulitan into modern or tribal tattoos has become a new phenomenon popular with the Filipino diaspora who were looking to get in touch with their cultures (Fig. 26). Several local & international Filipino celebrities and athletes have been seen sporting Baybáyin tattoos.



Traditional arts & crafts (Fig. 27) and modern art (Fig. 20 pg. 22) has a mixed-bag of patronage, often a niche market. However interests and demand for arts & crafts does span a wide range of age & demographics. If anything else, they are very good conversation starters to open up a dialogue about Baybáyin.



Fig. 27 – Malaya Designs custom Baybayin pyrography pendants. Haguisan (2012)

4.2 Branding & Commercialization

Fashion apparels (Fig. 28) and brand name logos are eye catching and draws in the younger crowds. If and when Baybáyin and other Philippine scripts are incorporated into commercial products, it can capture the attention of the youth. If Baybáyin logos and designs are aesthetically done and marketed right, fads and followers can propagate more interest about the scripts.



Fig. 28 – Branded Merchandise by Bayani Art. (2014)

International brand-name products have used other native scripts on their logos, but not Philippine scripts just yet. For these companies to acknowledge a writing system, it must be justifiably profitable to warrant redesign and retooling. If local scripts are heavily popularized in their respective ethnic regions, these big companies will notice. Why should we care? Because it is a big cultural morale boost, and as desperate it may sound, we need all the help we can get so that people will take notice and care about advocating for the preservation of our writing system. If global companies like Coca-cola or Pepsi (Fig. 29) includes a custom Baybáyin or Surat Mangyan or Kulitan label on their products, it can instil local pride; it is an officiating nod that the culture is alive.



Fig. 29 – Coke & Pepsi in Baybáyin. Nordenx (2007)

4.3 Communication Technology

Thanks to ASCII & Unicode compliant fonts, we are now able to embed and use Baybáyin script for online communications. A lot of Filipinos in online forums and social media can now chat using Baybáyin fonts in our posts and instant messaging. And while it is still difficult to do the same in mobile tablet computers and cellphones due to technical limitations of the devices, Windows 8 powered tablets, laptops, and macbooks can now use Baybáyin fonts and custom Keyboard layouts (Fig. 30). It is possible that in the future, more software and app developers could incorporate all the Philippine scripts into more devices.

Cellphones, personal computers, and Internet connection are slowly working their way into remote tribal areas. Hopefully, when they arrive, that the writing systems of the indigenous people are already prepackaged into these technologies. Otherwise, they have to contend with the default global language of technology (in the Philippines it is English & Tagalog using the Latin Alphabet.



Fig. 30 - Windows 8 on-screen keyboard showing a Baybáyin layout. Nordenx (2013)

4.4 Signage

The Mangyan Heritage Center (MHC) and the township of Mansalay have public signage erected in public buildings (hospitals & clinics, public markets, community centers, etc.) and street signs (Fig. 31). Public visibility of the local writing system helps promote and inspire both locals and visiting tourists.



Fig. 31 – Signages at the MHC. Nordenx (2011)

4.5 Publication & Documentation

More books are needed; to be printed using the native writing systems. But not just boring academic textbooks; today's young readers are more interested in story books, graphic novels, comics & manga, magazines, and with modern gadgetry abound – ebooks (Fig. 32). I created the fonts and help established a publishing company to print & distribute those types of books. Hopefully, we would be able to do more in the future.

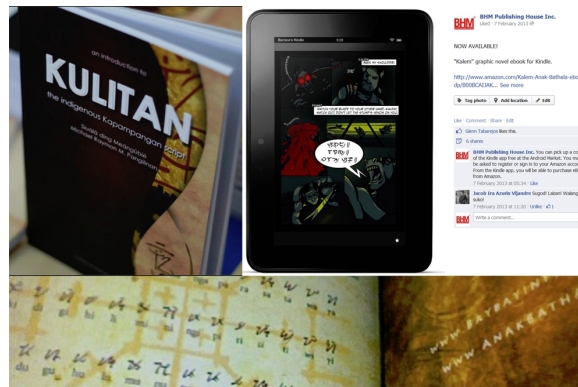


Fig. 32– A collage of books, ebooks, graphic novels with native Philippine scripts. Nordenx (2013)

4.7 Entertainment

Nothing is more attractive to the younger generations than video games or games in general. Competitive games, particularly multiplayer games or puzzles have been proven as effective learning tools for millennials. Incorporating native scripts or building an entire game around it is a very effective means to get your writing system noticed. However, development of such games are very intensive.

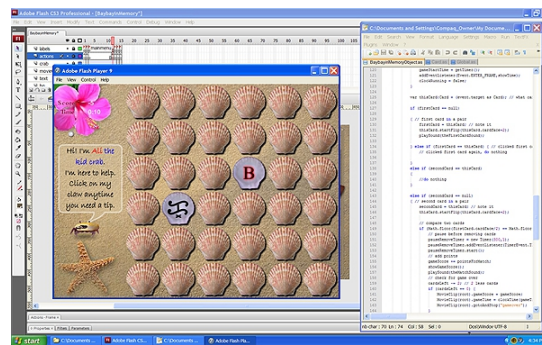


Fig. 33– A Baybáyin video game in development. Nordenx (2011)



Fig. 34– A Baybáyin card game in development. Nordenx (2011)

My font work actually started out back in 2006 when I developed video games. I dream of creating games that use Philippine scripts.

Native scripts used in subtitles for movies and music videos have been popping up in the Internet. Most of them are created by Baybáyin enthusiasts and music video fans. Having modern fonts helped a lot in the creation of those videos. It is another fun way to teach and propagate native script literacy.

4.8 Education



Fig. 35– A Hanunuo Mangyan student learning Surat Mangyan. Nordenx (2011)

Early 2013, I did some volunteer work to help the Mangyan Heritage Center (MHC) to document (Film & Photograph) Mangyan teachers & students utilizing the Mangyan Script & propagating the Mangyan culture. The Mangyan teachers are a part of the cultural education & preservation project run by the MHC. I was amazed at how many and how well the Hanunuo students are faring well with learning their own writing systems. Education is key and the most important tool in this modern world for preserving an endangered culture. But it is quite difficult when we teachers have to compete with the onslaught of modernization and an influx of pervasive dominant culture. This is why we have to use these modernizations and turn them around into beneficial tools instead of them disrupting our goal of educating our youths.

For all of these tools to be effective, there is one more daunting task to finish so we can get full support and get everyone in the nation on board with a plan: to legislate a law to protect our indigenous cultures.

V. Into Law

Although well-meaning, the House Bill – National Script Act of 2011, also known as the “Baybayin Bill”, was considered by many Baybáyin practitioners, scholars, and enthusiasts as potentially detrimental instead of helpful to the Baybáyin revival and indigenous scripts advocacy. There was no provision in the bill for the actual indigenous living scripts. It does not provide the indigenous script and its native writers protection from exploitation. The bill in its current form was rough, open to interpretation, corruption, and biased; having focused heavily on the archaic Tagalog script. Neither the online community of Baybáyin enthusiasts & advocates nor other concerned international groups & scholars were consulted on the initial drafting of this bill. Concerns about the private group Baybayin Buhayin Inc. (Soul Venture Rizal Ministries) and the congressional representative sponsor, Leopoldo Bataoil, behind the proposed Bill was ripe among the Baybáyin enthusiast in online community forums, on whether or not they have hidden agendas.

The original wordage to the bill is as follows:

<p style="text-align: center;">AN ACT PROVIDING FOR THE PROTECTION AND CONSERVATION OF BAYBAYIN, AND DECLARING BAYBAYIN AS THE NATIONAL SCRIPT OF THE PHILIPPINES</p> <p>SECTION 1. This Act shall be known as the “National Script Act”.</p> <p>SECTION 2. It is a declared policy of the state to inculcate, propagate and preserve our cultural heritage and treasures for the evolution and development of patriotism among our citizenry. The state shall give utmost priority to the conservation and promotion of arts, letters and culture of our nation as a tool for cultural and economic development.</p> <p>SECTION 3. Baybayin also known as Alibata is hereby declared the national script of the Philippines. The official adoption of Baybayin as the national script shall be promulgated by inscribing Baybayin in all products locally produced or processed in the Philippines. Manufacturers of processed or food products shall include on the label a translation in Baybayin. The Department of Trade and Industries shall promulgate the necessary rules and regulations to carry out the provisions of this Act.</p> <p>SECTION 4. Baybayin shall also include in the curriculum of the elementary and secondary schools. The Department of Education shall likewise promulgate rules and regulations to carry out the provisions of this Act.</p> <p>SECTION 5. Any provision of law, decree, executive order, rule or regulation in conflict or inconsistent with the provisions and/or purposes of this Act is hereby repealed, amended or modified accordingly.</p> <p>SECTION 6. This Act shall take effect fifteen (15) days after its complete publication in the Official Gazette or in at least two (2) newspapers of general circulation.</p>
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The “Baybayin Bill” has been presented every year since 2011 and has yet to pass into law (even as this paper is being written). At this same time, earlier in February 3, 2014, Baybayin Buhayin Inc.'s CEO Pastor Jay Enage, privately approached several Baybáyin scholars and artists (myself included) and invited them/us to share our input, opinions, and revisions (if any) for the Bill before they once again put it on the table for reconsideration. And after consulting with our colleagues and peers, this first draft of amendments and edits was quickly put into consideration:

AN ACT PROVIDING FOR THE PROTECTION AND CONSERVATION OF ALL INDIGENOUS PHILIPPINE WRITING SYSTEMS, AND DECLARING ALL NATIVE ABUGIDA SCRIPTS COLLECTIVELY AS THE NATIONAL SCRIPTS OF THE PHILIPPINES

SECTION 1. This Act shall be known as the "National Writing Systems Act of 2014".

SECTION 2. It is a declared policy of the state to inculcate, propagate and preserve our cultural heritage and treasures for the evolution and development of patriotism among our citizenry. The state shall give utmost priority to the conservation and promotion of calligraphic & typographic arts, orthography, and linguistic integrity so as to aid in cultural and economic enrichment & development.

SECTION 3. The (Non Latin Alphabet, Non Arabic Abjad) Abugida (alpha-syllabary) "Native Philippine Scripts" previously collectively categorized under the academic umbrella term "Baybáyin Scripts", which was also previously mislabeled as "Alibata", is hereby declared collectively as the "National Writing Systems of the Philippines" and henceforth categorized under the new umbrella term "National Scripts" (plural).

SECTION 4. Official adoption of ALL indigenous Philippine scripts and historic typefaces under the official status as National Writing Systems shall be promulgated by inscribing the appropriate local indigenous script in all products produced locally by the particular indigenous group. Manufacturers of processed or food products shall include a description or name of the product in both English using the Latin-Alphabet and the local language & indigenous script of the region or area where their manufacturing plant is operating. The Department of Trade and Industries shall promulgate the necessary rules, regulations, and incentives to carry out the provisions of this Act.

SECTION 5. Elementary and secondary schools shall include an all inclusive program about the National Writing Systems, with each region focusing on the appropriate script developed particularly for the local language/s of their region. The Department of Education shall likewise promulgate rules, regulations, and incentives to carry out the provisions of this Act. The Department of Education (DepEd) shall consult and work with the of the local indigenous peoples (IP) representatives: ethnic leaders, elders, scholars, and community organizations & foundations who are in charge of their cultural heritage regarding the promulgation of traditions & standards of their indigenous script.

Philippine Abugida or Native Alpha-syllabic scripts under the collective National Writing Systems include but not limited to the following scripts: 2 Surat Mangyan (Hanunuo, Buhid), 1 Sulat Kapampangan (Kulitan, Pamagkulit), 1 Sulat Katagalogan (Tagalog Baybáyin, Katitikan), 1 Surat Palawan (Inaborlan, Tagbanwa, Apurahuano), 1 Suwat Bisaya (Baybáyin Bisaya, Badlit), 1 Surat Ilocano (Kur-itan, Kurditan), 1 Surat Bicol (Guhit, Basahan), 1 Kesultanan Sulu (Luntarsug)

SECTION 6. Local government units (LGU) shall promulgate the inclusion of both Latin Alphabet and the appropriate local script into their signage for street names, public facilities, public buildings, and other necessary signage for other public service establishments such as hospitals, fire & police stations, community centers and government halls. All government departmental agencies shall assist the local governments in promulgating rules, regulations, and incentives to carry out the provisions of this Act.

Enage responds two days later acknowledging the revision I sent and sends their amended revisions. Their new wordage for the Bill is drafted, adding changes as follows:

SECTION 1. This Act shall be known as the "National Writing Systems Act of 2014".

SECTION 2. It is a declared policy of the state to inculcate, propagate and preserve our cultural heritage and treasures for the evolution and development of patriotism among our citizenry. The state shall give utmost priority to the conservation and promotion of arts, letters and culture of our nation as a tool for cultural and economic development. Furthermore, the State must give priority to education, science and technology, arts and culture, and sports to foster patriotism and nationalism, accelerate social progress, and promote total human liberation and development. In recognition of the need to create among the people a consciousness, respect, and pride for the legacies of Filipino cultural history, heritage and our authentic identity."

Section 3. Baybayin is hereby declared the indigenous national writing system of the Philippines. To generate greater awareness on its plight and foster wider appreciation of its importance and beauty. The emergence of a indigenous national writing system that could unite the whole country. The official adoption of Baybayin as the national writing script shall be promulgated by inscribing Baybayin in all products locally produced and processed in the Philippines. Manufacturers of processed or food products and shall include on the label a translation in Baybayin. The Tagalog-based national written script shall also use in mass media and in official communication. The national writing script of the Philippines will represent Philippine traditions and ideals and convey the principles of sovereignty and national identity. Local government units (LGU) shall promulgate the inclusion of both Latin alphabet and the appropriate local script into their signage for street names, public facilities, public buildings, and other necessary signage for other public service establishments such as hospitals, fire & police stations, community centers and government halls. The department of Trade and Industries shall promulgate the necessary rules and regulations to carry out the provisions of this act. All government departmental agencies shall assist the local governments in promulgating rules, regulations, and incentives to carry out the provisions of this Act.

Section 4. Baybayin as the indigenous national writing script which will be Tagalog-based national language on one of the existing native written languages. It is a recognition of our intangible national cultural heritage — our traditional writing systems and objects of national importance. Baybayin, which was also previously mislabeled as "Alibata", is hereby declared collectively as the "National Writing Systems of the Philippines". Of the more than a hundred languages being spoken and written by the different ethnolinguistic groups of dwellers in the more than seven thousand and one hundred islands comprising the Philippines, eight of them are considered major written languages. These major written languages are Sulat Katagalogan (Tagalog Baybáyin, Katitikan), Surat Mangyan (Hanunuo, Buhid), Surat Palawan (Inaborlan, Tagbanwa, Apurahuano) Surat Ilocano (Kur-itan, Kurditan), Suwat Bisaya (Baybáyin Bisaya, Badlit), Sulat Kapampangan (Kulitan, Pamagkulit), Surat Bicol (Guhit, Basahan) and Kesultanan Sulu (Luntarsug). As it evolves, it shall be further developed and enriched on the basis of existing Philippine and other written languages

Section 5. Baybayin will give us a glimpse of the legacies of the past and how it remains to shape the present and the future. Baybayin shall also include in the curriculum in the teacher education courses and in the elementary and secondary schools throughout the country. The Government shall take steps to initiate and sustain the use of Baybayin as a medium of official writing system and as written language in the educational system. The Department of Education, The Commission on Higher Education and the National Commission for Culture and the Arts shall likewise promulgate rules and regulations to carry out the provision of this act.

Section 6. Any provision of law, decree, executive order, rule and regulation in conflict or inconsistent with the provisions and/or purposes of this Act is hereby repealed, amended or modified accordingly.

Section 7. This act shall take effect fifteen (15) days after its complete publication in the Official Gazette or in at least two (2) newspapers in general circulation.

Approved.

Hopefully, better wordage and provisions would come to pass.

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To be presented at the “International Workshop on Endangered Scripts of Island Southeast Asia”.

Host: LingDy2 Project, Institute for Languages and Cultures of Asia and Africa,
Tokyo University of Foreign Studies (ILCAA, TUFS).

Tokyo, Japan.

Feb. 27 - Mar. 2, 2014