The Generation of Forms and Thai Typeface Design

Pornprapha Phatanateacha
Virginia Commonwealth University

Follow this and additional works at: https://scholarscompass.vcu.edu/etd

Part of the Art and Design Commons

© The Author

Downloaded from
https://scholarscompass.vcu.edu/etd/1032

This Thesis is brought to you for free and open access by the Graduate School at VCU Scholars Compass. It has been accepted for inclusion in Theses and Dissertations by an authorized administrator of VCU Scholars Compass. For more information, please contact libcompass@vcu.edu.
The Generation of Forms and Thai Typeface Design

Pornprapha Phatanateacha

B.F.A.
University Of Utah
1997

A thesis submitted to the faculty of the School of the Arts, Virginia Commonwealth University, in partial fulfillment of the requirements for the degree of Master of Fine Arts in Visual Communication.

Richmond, Virginia
May 2003
Acknowledgment

To my parents, Jimlim and Thanapong Phatanateacha, for their continued encouragement and support. To Akira Ouchi for his valuable guidance. To John Malinoski for his way of teaching - I have learned so much from you. Sarah Meyer and John T. Drew who inspired me to continue in my education.

To Mary McLaughlin, my thesis advisor, for your patience and insights. To my readers, Laura Chessin and Rob Carter, for your knowledge. To John Demao, Bob Kaputof, Steve Hoskins, and Jerry Bates for their support.

I would also like to thank my brothers, Jetsada and Thana, and my friends Darunee, Russell Merrell, Jennifer Gibson, Ellen Yang, Leland Hill, John Dixon, Julie Raban, Mary Beth Henry, Forrest Young, Sally Van Gorder, Peter Martin, Dr. Christine Anne Issa and Krittiya Ritter for their support.
Abstract

Changes in culture, design, fashion and lifestyle are very common for a developing country such as Thailand. Losing the identity and significant quality of Thai culture is the biggest concern in this rapid movement in Thai society. The biggest challenge is to preserve the existing culture within the development in the society. These problems within the rapid change not only affect Thai lifestyle and fashion but also Thai graphic design. There is a trend in poster design, advertising, and packaging to follow Western design. That influence suggests that Thai design follow a Western model in order to be as successful. Thai type designers have adopted the elements of the roman type and applied them to Thai letterforms without considering the impact on the Thai language. As a result, important characteristics of the Thai letterforms have been lost because of this borrowing of Western forms. My creative project is to design Thai letterforms that reflect Thai culture. The development of my letterform design will be translated in systematic ways. The generation of forms will be demonstrated through my design methodology.
Introduction
Thailand is currently experiencing rapid economic, social, and cultural change. These changes are most evident in the Thai lifestyle, architecture, and fashion, which are heavily influenced by Western culture. As a result of this external influence, there is a danger that Thailand will lose its distinctive cultural identity. The challenge is to preserve Thai culture by integrating the aspects of Thai culture into the design process.
Graphic design is still a relatively new field in Thailand. Consequently, knowledge of graphic design within Thailand is limited, especially in the area of typography. This inspired me to undertake this research project to help Thai students and designers to better understand typographical design. Failure to understand the fundamental rules of typography might lead to mere imitation of Western typography.
While passing through the main entrance at Bangkok’s Thammasat University, I was immediately struck by the beautiful traditional Thai letters that were inscribed into the side of the building. I stopped and took photographs of the wall and surrounding environment. These photographs have been the inspiration for my creative project. To me the photographs communicate so powerfully about my culture and my language. The large panel of text is written in the first Thai alphabet that was created in 1283 by King Ramkhamhaeng. It functions as a memorial to remind the Thai people that we have our own language and alphabet. This language and alphabet are a direct reflection of Thai culture and Thai life. The letterforms emphasize the fact that Thailand has a unique culture. Consequently, we need to preserve, cherish, and draw inspiration from them.
# Table of Contents

Abstract 9  
Introduction 10  
Justification 19  
Delimitations 21  
Antecedents/Precedents 22  
Problem Statement 28  
Process and Methodology 30  
Evaluation 63  
Conclusion 64  
Further Directions 66  
Glossary 68  
Bibliography 70  
Credits 73
Justification

"The purpose... to communicate
"Typography was born out of a need to communicate. It is a form that expresses something other than itself... the designer's responsibility is to find new ways to say old things. The intellectual content of the message, though repeated over and over, can remain valid... but the eye can tolerate only so much sameness before it wearies and refuses to see."

"The age old struggle between form and content exists in the schools of the typographic arts. The traditionalist credo is 'type must not be seen.' Their opposite number (call them 'type for type saken') call for expression in typography... regardless of cost to readability. Between these polar positions the designer utilizes the stimulation of expressive typography without sacrificing the idea and thereby ceasing to communicate."

Morton Goldsholl

In designing Thai letterforms that reflect Thailand's cultural heritage, I am seeking to preserve my culture. This project is about sustainability in design.

The process of selecting and developing an appropriate content for my creative project is unique because I have been able to establish a relevant relationship between Thai traditional dance and Thai letterform. In my first semester project I chose to design a new Thai typeface based upon both formal and functional aspects. In designing my letterform, I have considered the economical usage of letterforms through the development of a condensed face that contains thick and thin strokes.

While working on this project, I have discovered that it is very difficult to work outside Thailand in a different cultural environment. For example, it is very difficult to get an objective evaluation from an American audience (my colleagues) because the success of my typeface must be judged in terms of readability and legibility. Nevertheless I am still interested in carrying out research and designing a new Thai typeface because of the absence of the quality of Thai culture in Thai letterforms. For example, Thai versions of Bodoni, Garamond, Helvetica etc. do not incorporate any aspects of Thai culture. As a result, I began to investigate the appropriateness of those forms with reference to the nature of the Thai alphabet and aspects of the Thai language.

This study will enhance my understanding of type as a communication tool and its functionality as a symbol for written language. Involving the study of the formal development of abstract shapes that are based upon concept and content, this study will help me understand the fundamental rules of typeface design. Consequently, I hope to improve my skills in visual communication. My purpose in creating a design that incorporates my educational and my culture background was to gain practical experience. In the future, I intend to practice and teach graphic design in Thailand by utilizing the knowledge I have gained. I hope to pass on my research about type design to Thai designers who will be able to use the study as a guide and reference since there are few available materials on the development of Thai letterform.
Delimitations

This thesis presents a new Thai typeface that demonstrates the development of concept and form. Intended to help designers develop different ways of designing letterform, this prototype set of letters demonstrates how the system works in creating letterforms. Even though the content includes Thai traditional dance and some historical references, no attempt has been made to conduct in-depth research into the history of Thai dance or the historical development of Thai letterforms. The study primarily focuses on the development of content, concept and form. This project does not seek to create a logo for the dance or to trace the development of Thai national identity. Although the typeface design reflects part of the existing Thai culture, it is not a representation or symbol of that culture. The content is based upon my personal interpretation of Thai culture and research within the scope of my studies.
Antecedents/Precedents

The effectiveness of visual communication especially the interpretation of messages by designers is very interesting. Of particular interest are the relationships between shape and form and between form and language. As a designer, it is very important to understand the functionality of these elements and how they have been applied by designers such as Paul Rand. I have been studying the design philosophy and design process of Paul Rand because his style is simple but effective in that uses simple geometric or organic shapes as metaphors to convey the message. By adopting unconventional methods of design problem solving, he has introduced new meanings to ordinary shapes and successfully translated characters into visual forms that convey a message. The effective use of form and typography reflects his desire to communicate. His design is self-explanatory to the audience because it expresses the clarity of the idea and intention. The essence of his design process conveys meaning through form and content. He has taken design to another level by broadening and challenging the audience's perception in design. As a result, he has had a tremendous impact on the way I view design.

Another influential figure in my research project has been Professor Akira Ouchi. In a Systems in Design class, taught by Professor Ouchi, one of the class assigned projects was to design and develop an identity system for Child Development Resources.
(CDR), a nonprofit organization. CDR is an organization that provides services and information to help children between the ages of three months and eight years to develop their abilities. The design of the new identity for CDR illustrates the meaning and purpose of this organization through a logo mark. The logo mark has been carefully designed to communicate the activities of the services CDR provides. The limitation for this project was to keep and use the abbreviation “CDR” in the design. This study challenged me to incorporate content into design of the logotype. The abstract letterforms that carefully merge into each circle allow the audience to discover the name, message and idea behind the logo. Moreover this technique reflects the playful quality of the logo.

German Black Letter
Throughout history type as visual language has played and continues to play an important role in the forging of ethnic and national identities from Gaelic in Ireland to the creation of scripts for indigenous cultures lacking a written language. The importance of letterforms in reinforcing cultural identity is exemplified by the development of German black letterforms based on calligraphy. In that type is a powerful visual language, it is not surprising that these types, specifically Schwabacher and Fraktur, have been the visual embodiment of German national identity since the days of Luther.
Misperception of the message could possibly be caused by an inappropriate form of visual communication. This could lead to the risk of misrepresentation and misreading of the message by the audience, especially if the design was created to communicate cross-culturally. The challenge lies in how well the designer is familiar with the subject and how the designer interprets and understands the content. What is the appropriateness of the solution? The most important part of the design problem-solving process involves the interpretation of the content and its translation into a visual form. A visual communicator's responsibilities primarily involve organizing and presenting the message in a comprehensible manner to the audience.

Pomprapha: Beside your teaching jobs, are you a practicing graphic designer? Do you incorporate your Japanese influences into your teaching?
Akira: Somehow I feel like I'm a teacher here and I'm not a practicing graphic designer. I do a little bit; I do some kind of graphic design supervising, consultation and so on, but not so much in this country. I help students with their work if they do some professional work beside their studies here. If they need to ask for my opinion or some questions about graphic design or what they are doing outside school then I can help them, that's all. I'm not your typical graphic designer, I have been teaching graphic design here for so many years. In answer to your question, I try to bring some content to the students here. Yes, in a way, not directly. One thing I would like to say is that I feel that I have to return something to the States because I received my education long time ago, and after I came back here, somehow I decided that it was my turn to return something. I owe this to the States. Do you know what I mean? I feel some sense of responsibility, not everything except this. Now I have to give this back, that's all. And then it is not specifically because I'm Japanese that I have introduced Japanese designs or something like that. I'm not really very conscious about it but since I'm Japanese and I came originally from Japan that is naturally something to talk about. That's all. It is not intentional.

Pomprapha: Did you have any design experience in Japan?
Akira: No.

Pomprapha: So that means you were introduced to graphic design when you came to the USA to study graphic design?
Akira: Yes.

Pomprapha: Has your perception in art/design changed since you have been in the USA?
Akira: Huh... In a way yes, because all of my formal design education was here not in Japan. In Japan I was doing some sort of graphic design activities in a particular place and making money for a living so the work wasn't really good. The work I was doing there was related to some aspects of graphic design even though I didn't know what graphic design was. That was before I came to the USA for the first time. That was a long time ago. After I came here to the USA, I began to understand what graphic design is through the education and study offered by the school. I was instructing students and faculty way back then. After that I gained work experiences from many places in the USA, and especially in Chicago.

Pomprapha: Do you have any problems or any difficulties while you are working in the USA?
Akira: Yes, there is always a problem. Sometimes the problem is resolved but sometimes it isn't. Because I wasn't born here, I encounter difficulties. The content of the difficulty might change but the abstraction of the difficulty remains all the time but I can deal with it. We are from different countries. We are facing difficulties very directly so we can deal with them in different ways. I have been here for a long time so that is why I am able to solve and to deal with difficulties. I interact with people who are different from me because there is no Japanese community here. The Japanese who live here, do not associate with me because they are not in the same profession. They are different. They are office workers and business people. They have nothing in common with me so that is why normally I don't associate with them. Association for me is only with students and faculty and they are all basically American so that is why I'm to some degree, more Americanized and more comfortable talking in English this way. It doesn't matter if my English isn't perfect, because I feel I'm being natural. I can talk correctly in Japanese because I've been here a long time so that's why I have some difficulty in Japanese. It depends on what kind of thing I'm talking about. In general conversation it is more natural to use my native tongue but when speaking about design, it is easier for me to talk in English.

Pomprapha: If you have to teach Japanese students, will you teach in English or in Japanese?
Akira: That's a good question, I've never done it before so I cannot tell. I had a student from Japan before but we spoke in English.
Pomprapha: What if you have to deal with Japanese clients? How do you communicate, in English or Japanese?

Akira: Oh, in that case, I have some contract with Japanese clients here which I did before, and we speak in Japanese of course, I can explain in Japanese way, but content wise even when using the English format, I can translate English into Japanese, and Japanese into English anyway. I can do that. I can explain, I can communicate but it doesn't depend on difficulty, it depends on the complexity of problems. In design we assume that design is a matter of communication, if this is so—in that case it is based on the language. We have to know both (English and Japanese) by the way. But if we are talking about form, we don't need English or Japanese. Form is form basically—this is it. And basically form is expressed in photographs, illustrations, diagrams or organization, design or whatever—some kind of form is there—so the audience can see this; some kind of examples, so they can see it and understand the content.

Akira: It depends on the subject, the nature of the problem—something that's dealing with an issue that is quite universal in that case. Speaking personally, we don't need any kind of language. Some sort of very universal common form of image talks by itself. It can communicate by itself. If working with words, the typographically form as a language presents some ideas. We have to translate what is said, the meaning, right? American people don't understand Japanese words, so meaning always requires some kind of translation and then you have to put some kind of English translation. Of course, we can do the same thing when we switch from Japanese to English. Otherwise English people would have to be bilingual! This naturally requires a communication strategy in design because we need public signage for example transportation in Japanese/English or English/Japanese all the time. That's one application of graphic design, right? So we hardly have to deal with concept at the same time. In the context of cross-cultural communication what aspect should we consider?

Pomprapha: For example, Thai people hire Australian designers to design Thai Airline symbol mark, but it doesn't communicate to our Thai people but instead it somehow maybe relates to other people (Americans). Do you think this is appropriate?

Akira: The Thai Airline symbol mark was designed by other people not Thai people and the Thai people never understand it because it was designed by somebody else not a native Thai, so that case—the most important part is purpose of design. The purpose of this symbol design should be related to whom the symbol actually communicates. If the Airline is not for the domestic but for the international market, it's appropriate to use a designer from a different country (American, European) instead of using designers from Thailand, so that they can communicate a universal concept. Judgment of the level of the appropriateness like some criteria must be established, right? Normally designers do international business like a design for symbol or logo mark for a company or product that will be used internationally. If it is to be acceptable or appropriate, that kind of thing, they have to build some kind of model or example so that it can be reviewed by various people not only people in only that country but by others in major countries around the world, right? They can review what kind of impressions people have and what kind of associations they make... all kinds of symmetrical quality vs. formal quality. Any aspect of the design criteria can be reviewed in many different kinds of culture, and by many nationalities, so that they can select a suitable design based on a design process which involves reviews by a multi-cultural audience.

After Akira takes a look at the Thai Airline logo mark.

Akira: The Thai Airline logo mark has to come from some kind of reference because it's not an art form. It's some kind of traditional form produced by looking at a significant, iconic visual which some how relates to Buddhism itself. I don't know exactly, but that's what I think because that responds to the graphical analysis when applied to the Airline symbol mark. There appears some significant relationship to Buddhism. So you said it is supposed to be some kind of flower? I think so. My response is that it does look like a flower. The concept originated from a flower and then it was modified graphically and applied in this way so as to still maintain some kind of connection so that's why it works for me.
Akira: It has to be some well-trained person. If your country doesn’t have well trained designers, they must hire someone from outside—that is number 1. Number 2 they must be recognized and well-known designers. Like in Japan we have so many good graphic designers but some companies won’t hire them instead the companies hire someone from the United States or from somewhere else to design their company logo mark so that they can say that my company’s logo mark was designed by such and such (Famous designers). Because they use internationally famous designers for instance, this is more like a marketable kind of market strategy that is related to public relations. It has nothing to do with design itself. It is more like the people who make (commercial) decisions, determine this kind of thing.

Akira: Cross-cultural meaning beyond the boarders of all culture in compose to another culture—some kind of necessity communicates between two different cultures, what the necessity is found through the design activity. It is necessary to be resolved, some kind relates to answer to solve the question. Culture communication between the two different cultures through design activities that is the question, right? What is design by the way? Only this one can share to solve that kind of problem-language problem? Signs, symbols, and some kinds of arts, communicate universal ideas, you know? Talking about universal language, pictographs and those things like the common visual language, can be developed to solve some of fact one of my graduate students: Jen, she is doing her thesis on towards the universal—an investigation of all archetypes from a long time ago until today. That’s what designers are looking for alternative forms of visual communication and ways to reduce to the pictographic symbol to a very reductive form, right? Circle and cross marks mean something—that is more universal so that’s why I’m trying to encourage the use of this one, more like level of cross-cultural communication graphically.

Pornprapha: What about the language?

Akira: Archetypes contain certain meaning so without knowing the language we can understand the meaning. For example: formal arrow, you don’t know the word arrow—this is the language by itself, basically. Instead of communicating anything verbally, speaking anything, we see some pictographs and can relate to them, just by looking at them and responding to them. You don’t have to interact because you see that they can communicate.

Pornprapha: So the designer has to study or do the research about various forms to see how they communicate?

Akira: You see a sign and know what it means, because it is universally accepted. Of course this always has to be learned to some degree. The red octagon shape of red in this country it means stop without saying or have the word STOP. Sometimes STOP happens to be SPOT but you still react to it as a stop sign, because of the shape of the octagon and red color already stand for stopping, right? So that should be learned some kind of coded sign to be learned before the archetype is not necessary to be learned the archetype. Archetype is more likely—very abstract in the sense of meaning a circle. If you see a circle, everybody will respond in a common way, what this means is a circle represents harmony, a circle is eternity, beyond any kind of individual culture. It is meant to be more like an archetype, OK? But the question is what to abstract of course... some ways are based on the language, based on the picture. The relationship with the culture refers to how to use abstractions in different ways. These can still be learned but if you learn and study the language as a language by itself that means basically they can communicate in a very, very basic way. But again our communication is so sophisticated and so refined.

Today the problem is designers base their designs on the language instead of using different forms, art forms—but you have to understand. You have to study otherwise you cannot communicate.

Is cross-cultural communication more important than design or design is more important? — (See? You can shift this- it is the value — you know! Your interpretation is shifting to me I can achieve it.)
...The relationship with the culture refers to how to use abstractions in different ways. These can still be learned but if you learn and study the language as a language by itself that means basically they can communicate in a very, very basic way. But again our communication is so sophisticated and so refined.

**Akira:** What is cross-cultural communication? What is the most important factor influencing? But you talk about design that is applied to cross-cultural communication—meaning what is the problem of cross-cultural communication is and how far can design solve the problem?

1. **What is cross-cultural communication? What is the problem?**
2. **We must define this clearly because our definition will determine our approach to design.**
3. **With regard to the subject matter— is the purpose to communicate cross culturally or is the purpose to focus on the subject of a design in a cross-cultural context.**

Language does not relate to design problems - Design is not the language. If Thai designs use the Thai language (Thai letterforms) to try to communicate to others who don’t know the Thai language, I think that you cannot be successful because design isn’t the language. Design is a not verbal language to me. You will partially succeed but I don’t think design is just the out come of language itself. Design is to me is a thought an idea. It’s not a reference to the language itself. Everything relates to the language. Language is just a vehicle to communicate your thoughts without thoughts, you have a language you can speak but no topic so I say design is thoughts and ideas. Thai people try to communicate content to other people because they have a content, right? And can you actually communicate to other people using the Thai language? I don’t think so. You might manage to some degree but I don’t think so. You have to use other way than conventional language itself so that have to have something else, so that’s why I’m talking about image, some kind of icon, some kind of abstraction, some kind of archetype, right? For example, silent movies assume that there are no sub-titles, there is only gesture, right? Gestures or behavioral language—does not refer to verbal, conventional forms of language, color, gesture—they use it some way to communicate visually other than language.

Assuming that you cannot speak, you have to do sketching or taking photographs to communicate your thoughts. I had handicapped student in my class before, I could hardly understand what he was trying to say but when he brought his sketches, I could relate his thoughts and ideas to them and I could talk about them too. Communication is so heavily dependent on the rhythm and verbal form of the language too much emphasize is not necessary, I don’t think so I must understand the language otherwise how can I respond to that. When you listen to music you respond to it, right? Without having to see beautiful images but you can respond to that, you can get some idea behind that, there is no description but you can respond to that.

Sometimes graphic designers create such a strong visual image based not on the subjective nature of the content but on its objective nature. By including some kind of formal characteristic you can communicate your intent without using words. However we always require some kind of words if they are required. But what happens if the audience doesn’t understand the language. How will they respond to that? Basically they look at it as a visually dynamic form. They respond to this but not precisely because they don’t understand the language. So cross-cultural communication is based on what kind of the criteria you pursue and what aspect of communication you want to emphasize?
Problem Statement

Contemporary Thai letterform designs have changed gradually because of Western influences as Thai type designers have adopted elements of roman type and applied them to Thai letterforms without considering the impact on the Thai language. As a result, significant characteristics of Thai letterforms have been lost because of this borrowing of Western forms.

My intention is to design Thai letterforms that express, reflect and maintain important characteristics of traditional Thai culture. My Thai typeface design is based upon the traditional Thai dance called "Ma Bod" (Principal Thai dance). This dance introduces all of the hand gestures that are used in the traditional dance of central Thailand. I chose to work on the content of traditional Thai dance because the dance represents the major distinct characteristics of Thai culture that differ from Western culture. In addition to analyzing the abstraction of hand gestures in Ma Bod, I have examined existing Thai letterforms to define the coherent relationship with reference to systematic, semantic, and syntactic aspects between the dance and the letterform. The system of developing letterform involves the interchangeable combination of each part of the letterform and how they form each character. This system also employs the same combination of the hand gestures as used in the dance. The combination and position of these gestures serve to translate the meaning of the lyric. Therefore it can be observed that there is a coherent relationship between the dance and the letterform design.
Process/Methodology

Thai language

The Thai language is liberally sprinkled with words from classical Bali and Sanskrit (the classical languages, respectively, of Theravada Buddhism and Indian Hinduism). Naturally, there have been many stylistic changes since then.

Written Thai employs an alphabet of 44 consonants and 32 vowels that combine to form syllabic sounds. King Ramkhamhaeng the Great who ruled the Sukhothai Kingdom from 1279-1298 originated the Thai inscription in 1292. The inscription is considered to be a seminal source of Sukhothai history as well as a masterpiece of Thai literature.

Thai is a tonal monosyllabic language. The same word can be said in five different ways using normal or middle tone, high, low, rising and falling. Like English, it is read from left to right, but that is where the similarities end. Some English sounds like "th", "v" and "z" do not appear at all, while some Thai sounds are not commonly used in English either. Furthermore, it should be noted that in transcribing Thai sounds into English phonetics some consonants (e.g., b, p, l, n, d, and t) can be used interchangeably.

Although groups of sentences or phrases can be separated by spaces, words in Thai are not separated. There are no plurals in Thai, nor are there tenses as such. A word or two is usually added to determine the past, present or future tense.

Every man's life is full of changes. There are always journeys during the course of our existence from the top, our imagination is boundless. Travel experience expands our knowledge. Yet, it be the necessity. It is sometimes difficult to digest our experiences. Some people are deeply obsessed expose them in every subject of discussion. Those inexperienced are flat. While those who don't no different to those who know nothing.

comparison sentence in English and Thai

ในช่วงชีวิตของคนทุกคน เลื้อนไปด้วยการเปลี่ยนแปลงมีการเดินทางหลากหลายตามการต่างอยู่ บางครั้งข้อมูลเดิม ยังสามารถสร้างขึ้นมาได้โดยการก้าวไป ประสบการณ์ของการเดินทาง ช่วยทำให้คุณคิดได้จริงได้ไม่ทันท่วงทีบางครั้งก็อาจทำให้เรายินดีประสบการณ์ บางคนที่มีประสบการณ์ บางที่ที่เราเคยไม่เคยคิดถึง และการที่ดำเนินไปตามเส้นทางที่เรารอไว้ ในการที่ก้าวผ่านไปไม่จารจ์อาจเริ่มต้นรู้อะไรใหม่ได้โดยการเรียนรู้ดีเท่ากับไม่รู้อะไรเลยขึ้นกัน
When we climb up a mountain and look down as cluttering adornments when it exceeds with their experiences that they lend to how to make use their experiences are

The basic structure or anatomy of Thai letterform consists of vertical strokes, which are used in every character.
Thai Type Specimen

Unlike Latin typefaces in which every character is printed on a single line, Thai characters comprising consonants, vowels, tone marks and diacritics are printed on four levels to form each printed line. The rules can be summarized as follows

• Every consonant must be exactly on the baseline just like each Latin character.
• The highest point of any consonant above tone marks must not extend above the ascendant line.
• The lowest point of any vowel must not extend below the descendant line.

Type Size Measurement
Just like Latin font, regardless of the character height and design, the distance between the descendant and the ascendant lines is the point size of the character.

Character Alignment
Since all vowel and tone marks as well as the diacritics must align properly above and below the baseline, vowels must also align properly below every consonant character. All the above and below vowels must be offset to the right of the character width boundary.

Offsetting
To guarantee that the proper optical spacing is obtained for some leading vowels, the left-most offshoot should offset a little bit to the left (minus values) of the original point.

Pair Kerning
Just like all English fonts, some kerning information has to be added to some problematic pairs of characters of each typeface to have better control over spacing problems. Fortunately, Thai fonts need less kerning than their English counterparts.
A special kerning checker has been designed to test the pair kerning adjustment of each font until a satisfactory result is obtained.
Anatomy of Thai letterform

Word in English and Thai

รามไทย thai dance
ผู้หญิง woman
หนังสือ book
ท้องฟ้า sky
ดนตรี music
กับขั้นตอนการเขียนแบบผูก
ที่มีนัยสำคัญต่อผลผลิต
และรายละเอียดพื้นฐาน
.

เราไม่ใช่

ฯลฯ (, "?)

ตัวอย่าง

Thai specimen book design
a design project component for my graduate workshop project
<table>
<thead>
<tr>
<th>24 points (8.4666 mm.)</th>
<th>ก</th>
<th>๒</th>
<th>๐</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 points (7.4083 mm.)</td>
<td>ก</td>
<td>๒</td>
<td>๐</td>
</tr>
<tr>
<td>18 points (6.3500 mm.)</td>
<td>ก</td>
<td>๒</td>
<td>๐</td>
</tr>
<tr>
<td>14 points (4.9388 mm.)</td>
<td>ก</td>
<td>๒</td>
<td>๐</td>
</tr>
<tr>
<td>12 points (4.2333 mm.)</td>
<td>ก</td>
<td>๒</td>
<td>๐</td>
</tr>
</tbody>
</table>

กขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคคกขคคคคค
The content used for this study has to represent Thai culture. The subject has to be tangible and visual. In order to achieve my purpose, the typeface needs to be self-explanatory because some of my audience are not from Thailand. Information on Thai culture has been gathered in order to decide what type of content will be appropriate for my Thai letterform design. The content or the subject should be able to translate into visual images and sound that will help my audience to understand Thai culture. Thai traditional dance was chosen because the dance has very distinct characteristics and it is a good representation of Thai culture. Not only can the dance be demonstrated, but the Thai spoken language, written language and music can also be introduced to the audience.

My interest in the subject of Thai dance resulted from interviews conducted with several Thai people who had come to study in America. My first interview was with my Thai roommate, Kritaya who is very knowledgeable about this art form and practices the dance. During a brainstorming session, I asked her questions related to Thai culture in order to come up with the most appropriate subject for my creative project. Our subsequent discussion of Thai dance influenced my decision to embark on this research.

Although there are many traditional Thai dances and songs, she suggested that I should study the song that accompanies the dance called "Ma Bod" (Principal Thai Dance) because this dance introduces the principal hand gestures used in most of the traditional dances from central Thailand. This dance is often the first work learnt by dancers. The lyrics of the song, which does not tell a story, includes the name of each pose. These names are translated into physical poses and hand gestures, which have specific cultural connotations. After the dancers have learned and memorized the meaning of each position, they are able to use each pose in different songs.

Thai dance has its origins in India, but it has been adapted to suit the Thai culture. As a result, proponents of the dance have developed their own style, which is very different from the original Indian dance. The rhythm of Thai dance is much more gentle and slower. Dance is used along with music and lyrics to convey messages through hand gestures, poetry, and costumes.
Hand Gestures

Hand gestures are symbolic expressions of wisdom and thoughts in Buddhism. Each statue of the Buddha represents specific meanings that can be identified by the poses of the Buddha's hands. As about 95 percent of the Thai population is Buddhist, Buddhism is considered to be the national religion. As a result, Thais have learned to understand the meaning of each pose through the reading of the Buddhist bible. Knowledge of the significance the poses is also learnt in schools or passed from one generation to another.

Buddha statue
Hand gestures of the Buddha connote different meanings.

The Buddha praying for rain
Abhayamudra
Buddha as protector and preserver from suffering, subjugating Mara

Bhumisparsamudra
The Buddha calling the earth goddess as witness to his enlightenment and his victory over Mara

Vitarkamudra
The Buddha setting in motion the “wheel of the Law”

Abhayamudra
The Buddha as protector and preserver from suffering

Travel Guidbook
advertisement for Thai culture attractions; one of which is Thai traditional dance show.
The lyric in "Ma Bod" is based upon the Buddhist epic 'Ramayana'. "Brahma Throwing" represents Brahma's fight with the devil. He is depicted throwing wheel-shaped weapons or "Jak".
Hand gestures of Ma Bod (the principal of Thai dance)

- Kinnari return to roost
  "Kinnari Preak Tum"

- Deer fawn in the wilderness
  "Gang Dean Dong"

- Eternity (side by side)
  "Pra La"

- Mekkara's crystal tease
  "Mekkara Lon Keaw"

- Shining bright, radiant
  "Am Pai"

- Swan in flight
  "Hong Bin"
Red-brested parakeet (name of bird)
"Nok Kae Toa"

Fawning
"Pra Mon"

Kinnari in flight
"Kinnari" transition pose

Kinnari in flight
"Kinnari" transition pose

Traveling
"Aek Kang"

Side by Side
"Prang Lai" transition pose

The fundamental structure of Thai dance is determined by the balance of the dancer's body. The body of the dancer should remain stable and the upper body should remain erect during the dance. A well balanced body movement enhances the quality of the dance.
The development of my letterform design is based upon the analysis of the traditional Thai dance "Ma Bod". There are two versions of "Ma Bod". The more elaborate version contains about 68 poses whereas the other version consists of only 39 poses and it is widely practiced by novices who are learning the rudiments of Thai dance. Having decided to work with the simpler version of "Ma Bod", I investigated the main characteristics of the dance in order to comprehend the system and understand each pose. My observation of the dance led me to note that what makes Thai dance different from other dance forms is the use of expressive hand gestures. The dancer conveys the meaning of the lyric of the song by using hand gestures. Even though other parts of the body move and change position along with the lyric and rhythm of the song, these movements are relatively minor and not obvious enough to make the dance unique. The different poses are synchronized with the lyric and rhythm of the music. Each pose represents a different meaning. These poses differ from sign language in that the hand gestures are used to accompany the lyric. They are not a direct translation of the language itself.

Thai music scale

1 2 3 4 5 6 7 8

Thai music rhythm
even sound
The rhythm of music used does not have a high distinction in hierarchy. It is pretty much in a singular tone. The dance flows effortlessly with only minor transitions from each pose to the next. It is very harmonious and seamless. This is very similar to a sentence in the Thai language in that each sentence is quite long. In the structure of a sentence there is an absence of letter spacing. Consequently, people require skill and knowledge in order to learn how to read and write the language.
While watching the dance, I observed the functionality of the hand gestures in relationship to the lyric of the song “Ma Bod”. As mentioned before the lyric of Ma Bod is atypical in that it is not a narrative and is not about any specific story. Usually the songs that accompany traditional Thai dance involve story telling. Most of these songs are based upon part of the Buddhist epic called “Ramayana” or other stories based upon each period of Thai culture. The lyric of “Ma Bod” is in essence a vocabulary for the dancer to learn and apply to other dances. Each pose in “Ma Bod” is an abstract representation of the meaning of each word, phrase, or sentence. In order to appreciate the dance, viewers have to understand the basic meaning of each pose or to understand that there are different ways of viewing the poses. The hand gestures in traditional Thai dance are symbols which represent terms used in conversation (order, deny, command etc.), emotions (happy, sad, angry etc.), and objects (flowers, birds, weapons etc.). It might appear complicated but once the audience understands these functions, they can understand the dance poses and appreciate the accompanying music.

Structural grids were superimposed onto the photograph of each pose to identify the placement and position of the transitions and movements of the hands. The photographs were taken from
Having decided to generate the letterform or the elements of the letterform based upon the translation of these hand gestures in the song "Ma Bod," several techniques and methods of translating the hand gestures into simple graphic forms were explored. In order to assess the relative advantages of these techniques, I drew on my previous studies in the graduate workshop and in particular a project that involved the study of graphic translation. Using the same method employed in this project, many ways of generating the elements such as sketching, building a three-dimensional model of the grid structure and the movements of the dance, and creating an animation of how the hands move by morphing them into a graphic form were explored. Consequently, it was decided to hand draw each hand gesture and translate them into simple graphic elements. Several permutations of each drawing were generated in order to see which one captured the connotation of the dance form. The final form expressed the essential quality of the dance. It reflects the elegant shape of the dancer's hands. The relationship of the stroke weight that consists of both thick and thin stokes also serves to express the fluidity of movement in the dance.
one angle, the angle at which the viewers observe the movement of the dancer. The grids were used to establish the proportion of the dancer. Their height is equal to the dancer's upper body and includes arm length over the head and below the waist. The width is equal to the length of the dancer's arms (figure 1). There are three divisions of the main horizontal grid: top, middle and bottom. The grids are divided into three equal sections. The vertical grids are also divided into three parts but in this case the middle section is smaller than the other two sections. Abstract shapes that represent the hand gestures were drawn onto each grid to create the system and to reflect how both hands are used in unison (figure 2).
Direct translation of the hand gestures was drawn into abstract forms. The stroke modulation of the forms are the same as the proportion of the hands. The stroke contains thick and thin and they are more organic than the stroke in Bodoni typeface.
While working on the elements of letterform, I applied these elements to each letterform. This method allowed me to examine how the elements are applied and evaluate whether or not they create a harmonious relationship when they are combined. The decision was made to work with the shoulder part of the letter in that this constitutes the main structure of the letterform. The shoulder elements were applied to the letterforms to establish the main structure of Thai letterform anatomy (figure 1a and 1b). After the main element had been applied to the letterform, work began on the rest of the form. During this stage several adjustments and modifications were made to the elements and letterform. As a result, the decision was taken to work with the first three letterforms (s, ch, and n). Several modifications of the rendering were undertaken before the final selection of a letterform that appears harmonious in all three letters.
This particular letterform "Nor" was chosen for further development because it demonstrates the combination of the two elements of the hand gestures in Thai dance and how they can be applied to form the letter. The lower curve is detached from the circle. Although in the written character these two forms are connected, the letter is still readable and recognizable. The character still reflects the combination of hand gestures.
This demonstrates how each letterform works together when a word is formed. By investigating the tone of the form and relationship between form and counterform, and comparing the dance figures to the word, it is possible to demonstrate the transition of each form.
Elements of Thai letterform were generated by analyzing the hand gestures of "Ma Bod".
The terminal angle was slightly adjusted to create a harmonious relationship with the circle. Optical adjustment was necessary in the process of finalizing the letterform.
นิว่า

นิวานา

นิวส์
Exhibition design
The first Thai alphabet

The large panel of text is crafted with the first Thai alphabet that was created in 1283 by King Ramkhamhaeng.

Visually displaying the creative project in this context was challenging because of the nature of the project. Certain aspects of Thai culture had to be introduced so that the largely American audience was able to gain an aesthetic appreciation of the importance of the project. In order to make a strong connection between the letterforms and the dance "Ma Bod", the audience was required to understand the content of my creative project. Thus the concept for my exhibition design was to introduce significant aspects of Thai culture and the letterforms' design to the audience. The exhibition was designed so that the viewer could gain insight into the process of my Thai letterform design through the organization of visual elements. Every piece was arranged to choreograph the viewing sequence of the project.

Due to the fact that the space at the Anderson gallery was divided into four sections to house four concurrent exhibitions, the available space was relatively limited. The exhibition space, which measured 21 x 16 x 16 feet, was located in the first section next to the entrance of the second gallery. Given the limitations of space, the elements of the exhibit had to be cohesive to engage the viewers and to encourage them to spend enough time to study the show. Thus the space needed to be utilized effectively as part of a design component. In order to achieve this, the space was divided into three sections. In the first section, primary information was displayed on the wall at eye level. Secondary information was hung from the ceiling above eye level. Even though all of the pieces displayed in this section were large printed posters, the viewing hierarchy was in the secondary. The third section was used for the display of supporting visual information that was hung from the wall above eye level. This created a background layer behind the secondary visual element, which appeared in the foreground.

An orientation spot was created by displaying the photograph of the carving of the first Thai alphabet in the middle of the back wall. The photograph and a brief description of how the photograph had been the inspiration for my creative project was intended to be the first exhibit the audience viewed before making their
by through the rest of the exhibit space. After the audience had finished reading and looking at the photograph, they turned to the left side of the space to read the brief artist’s statement which was placed at eye level along with the three photographs of the “Ma Bod” hand gestures. Side the statement I exhibited print outs of the sketches of the process to demonstrate how the elements and the letterforms were generated. At the same time the audience could step back to view the final letterforms that were hanging above eye level. On the opposite side of the wall was a projection of the Ma Bod dance accompanied by the soundtrack. These supporting elements helped to introduce the concept of Thai culture. The video of the dance helped to create an experience of the Thai language through the music, rhythm of the dance and system of hand gestures that accompany the lyrics. The color palette with its emphasis on yellow, red, and black, was carefully selected to unify the elements of the exhibit around the central theme of Thai culture. These colors are often seen in traditional Thai dress and architecture including Thai temples and palaces. The combined effect of the visual and audio elements was to highlight the connection between Thai dance and the letterform.
la conscience,
mon bon seigneur,
mais "Où cela se trouve-t-il ?
Si c'est une engelure
aux pieds,
que l'on m'apporte
mes pantoufles.

rudy van derland
emigre spread
Evaluations

This study has helped me to understand the nature of the Thai and Latin alphabets beyond their function as phonetic languages. The project is concerned with the study of the formal development of abstract shapes that are based upon concept and content. As visual communicators most of the time we use typefaces as a means to convey messages. To gain the skill in selecting the appropriate fonts for each message is very challenging for any graphic designer. Designers should be sensitive to the semantic and syntactic aspects of typography, aspects that graphic designers can learn through time and experience. It is not, however, enough to be sensitive to the form because there is also the important issue of legibility.

As a type designer I feel there is a tension between legibility on the one hand and creativity on the other. While I recognize the importance of legibility, I feel that it limits my ability to explore and see type as pure graphic elements beyond its function as a symbol for language. In order to resolve this issue, I not only carried out research into the design of letterforms but also into the "Law of Legibility".

In one of the graduate seminar classes taught by Steve Hoskins, I completed a research paper called "There is No Bad Type" based on research into the functional aspects of experimental letterforms. During my research I learned that this topic was discussed in a book on typography entitled "Stop Stealing Sheep and Find Out How Type Works" by Erik Spiekermann and E.M. Ginger. I was immediately drawn to the topic and based my research on the thought provoking statement that we cannot claim or assure that any type is bad. The chapter on "There is no bad type" the evolution of communication and how it affects typography design and its function as a means of communication. The project involved research on the functional aspects of experimental letterforms as I am particularly interested in the influences and evolution of these forms and their formal and functional characteristics vis a vis the traditional evaluation of what makes a "good" letterform. The tradition of "good" type dictates type can be read easily (in the traditional way) and that it has the right form and proportion. What about experimental typefaces that contain unfamiliar forms and are difficult to read? Are they to be considered "bad type"? Typefaces are controversial. Those who have never used them question their legibility.

Legibility is not usually discussed as merely a functional matter but rather as an article of faith. We should not let our preconceptions and typographic ideology cause us to overlook the fact that experimental type is a means of communication. Typography must communicate. The impact of an effective typographic message consists of many elements, the most important of which is the usage of the typeface that serves to express the content.

In typography, function is the purposeful communication of information to a specific audience. Although the range of possible typographic design solutions is infinite, the appropriateness of a solution always depends upon the purpose for which it is intended. The communication method describes how experimental typefaces are applied to graphic design problems. Experimental typefaces function as a symbol of expression which can be "verbal, visual, and vocal". They symbolize a visual concept that connotes the meaning of the message. For example words are pictures and pictures are words.

During my Master of Fine Arts (MFA) thesis exhibition at the Anderson Gallery in Richmond, Virginia, I had the chance to discuss my project with my audience. One of the conclusions I drew from these discussions was that audience could relate to and understand the purpose and process of my project. The audience evaluated the formal aspects of my letterform and could see the relationship between the letterforms and the dance. To me as a visual communicator, it was an achievement not only to exhibit the work but to have the Thai and Western audience understand my purpose.
Conclusion

The process of designing a new Thai typeface has been a personal voyage of discovery in which I have explored aspects of my cultural heritage and identity within the context of graphic design. This journey began during my first semester in graduate school when I made an appointment to meet with Associate Professor John Malinoski and Roger Remington, a visiting graphic design professor from the Rochester Institute of Technology (RIT), to discuss my graduate workshop project for the design of a new Thai typeface. After introducing my idea to design a condensed Thai typeface incorporating thick and thin strokes, Professor Remington asked why I had chosen to design a new Thai typeface. I explained that I wanted to design a condensed typeface that would benefit publishers in that they could save space in printing and as a result reduce their costs. He then asked me if my typeface design would be based on formal or functional aspects. At this point I realized that I could not articulate my intention other than to reiterate that the functional aspects of my letterform would be related to the economical use of the design in publishing while its formal aspects would demonstrate a new style of Thai letterform. The fact that Malinoski was not convinced by my answer was evident in his follow up question: “Why is this study important to you?” I was silent. After we finished our one hour long conversation, I walked home with a feeling of a failure. “What was the significance of this study to me? Why did I choose to design a new Thai typeface?” Since then, these thought provoking questions have been part of my design process. Every project has become personal. Consequently, I have always tried to incorporate my cultural background and my knowledge into my work. This project has enabled me to develop my skills as a designer, by exploring my culture identity in relation to design. My confidence grew as I realized that I am able to communicate directly to an audience. Through the special insights I have gained, I also feel confident that I can inspire other type designers to creatively explore their cultural identity to produce relevant typeface.
Further Directions

Although analyzing the movement of the dance is part of my process in the development of letterform elements, it would be helpful to experiment with the animation of my letterform by applying the physical movement to the form. Nowadays the applications for communication media have expanded into various forms that allow the audience to interact with the information and message. The Internet has become the main resource for this generation, and the nature of the media itself allows more creativity in typographical design. With the development of technology, messages no longer need to be presented in a static and linear way. Presentation can now involve interaction, motion, and animation. Since I was able to translate the movement of the dance into the system in which elements were placed to create each letterform, I believe that it would be possible to use animation technique. In that each element is interchangeable, it should be possible to apply animation methods to show how each element moves and is connected to the letterform, word, and sentence.

I also would like to apply this method of creating Thai letterform to Latin letterform to observe how it would affect any changes in the characteristic. It would be interesting to observe whether or not mimicking Thai letterform would result in Western form losing important characteristics.

I am currently teaching Typographics III class at Virginia Commonwealth University in Qatar. One of the assignments is to design a new non-Latin typeface. I am now able to pass on my knowledge to my students and encourage them to experiment in either conventional or unconventional methods of designing letterform. Most of the students have chosen to design Arabic typefaces. I am now confident that I can offer advice and evaluate their typeface even though I am not familiar with the language. Indeed the language has not been a barrier to communication. This project has been a rewarding experience because both I and the students have been able to learn from each other.
Glossary

**Alphabet**
a series of elemental visual signs in a fixed sequence, representing spoken sounds

** Appropriation**
using an existing structure in a new way, creating something new

** Concept**
the structuring of a relationship among forms and messages to achieve a specific expression within a given context

** Culture**
the totality of socially transmitted behavior patterns, arts, beliefs, institutions, and all other products of human work and thought

** Code**
the coherent transposition of one sign system into another sign system (Maldonado)

** Content**
the environment, cultural or physical, in which a message or form is perceived and by which it is conditioned

** Display type**
usually type larger than 17 points due to the fact that this size or heavier face is especially well suited to headlines, feature copies and titles used in advertising and publishing.

** Form**
the shape, size, color, textures and other characteristics that distinguish one visual element from another

** Language**
the manner or means of communication between living creatures; a system of words, signs, symbols, or gestures formed by such combinations and patterns, used by a group of people who share a common nationality, history, or set of traditions

** Legibility**
that quality in type and its spacing and composition that affects the speed of perception: the faster, easier, and more accurate the perception, the more legible the type

** Linear**
unilateral direction, towards a predetermined message

** Metaphor**
object or idea, in place of verbal content, visual equivalent; substitution, non-linear (one thing conceived as representing another; a symbol)

** Roman type**
the letterform in the type you are now reading

** System**
the arrangement of units that function together

** Semantic**
a relationship of images through their meaning

** Syntax**
a set of rules governing the form and arrangement of elements to one another.

** Ideographic**
the relationship between units of writing and units of speech or language, that provide no description of the nature of the written forms used for each mode.

** Experimental Typography**
unconventional way of designing typeface which the propose involve only to communicate idea and message.

** Expressive Typography**
a typographic message that is verbal, visual, and vocal. For example: the typeface selected should express the content.

** Conceptual Typography**
words are pictures and pictures are words. For example: the type selected takes on a connotative meaning.

** Objective Typography**
type that presents information and data. For example: the type chosen should be easy to read.
Bibliography

History and practical application of European and American typefaces.

Review of typographical principles through the use of visuals.

Showcase and analysis of innovative typefaces.

Study of the nature of signs and how people communicate.

Discussion of the history and evolution of letters and the craft of typography.

Discussion of typeface selection to reinforce visual messages in design.

Opinions regarding the aesthetics of letters and typefaces through the ages.

Retrospective evaluating the influence of Mac-generated graphics.

History, origins and impact of Bauhaus as a universal “language”.

Critical study of graphic design and typography.

History of man’s use of letters and visual symbols to communicate.

Exploration of the logic governing three-dimensional type.

Introduction to fundamentals of type and the breaking of conventional rules.

Introduction to basic design techniques and elements of typography.

Discussion of aspects of type design.
Credits

For their helpful resource in Thai typography design.

Dear Book Co., Ltd.
R.nont, Prinya, Design Director

Graphic Design Department, Chulalongkron University, Bangkok, Thailand
Araya Srikanlayanabuth, Associate Dean for Academic Affairs

Graphic Design Department, Sillapakorn University, Bangkok, Thailand