

Phra Abhai Mani: A Musical Adaptation of a Thai Epic for Clarinet Ensemble.

Yos Vaneesorn
Jean-David Caillouët

Abstract:

This paper describes the process leading to a musical adaptation of the iconic Thai Epic: 'Phra Abhai Mani' for clarinet ensemble. The project is conducted by Dr. Yos Vaneesorn, a clarinet performer and composer assisted by Dr. Jean-David Caillouët, a composer and sound artist. Joining their respective skills, they are currently creating a new contemporary musical composition based on the Thai Literature classic and inspired by the study of the northern folk oboe, the "*pī nae*," an instrument drawn from Dr. Yos Vaneesorn's birthplace, Chiang Mai in the north of Thailand. The following is an overview of the process involved in the creation of this work so far.

Introduction & Project Outline:

Two poles of focus dictate the process leading to the creation of this research based composition:

At one end is the study of the "*pī nae*." This provides Yos Vaneesorn with a new set of challenges regarding performance techniques on his own specialist woodwind instrument: the clarinet. Although there are many similarities between the two woodwind instruments, it is the dissimilarities both in sound production and playing style that create real opportunities to re-assess the clarinet's performance techniques.

At the other end is the epic novel 'Phra Abhai Mani' by the famous Thai writer Sunthorn Phu. The text provides a narrative framework from which emotional, lyrical and aspectual content can be extracted to form the basis of a new musical composition. This literary work is extremely popular in Thailand and uses the "*pī*" (Thai Oboe) at the centre of its story line.

The episode chosen for the project depicts the journey of two brothers: 'Phra Abhai Mani and Srisuwan.' Sent away from the palace by their father Sudasna, a ruling King in a prosperous country, they are asked to go and study, 'acquiring the knowledge' which will enable them to acquire their inheritance. Phra Abhai Mani eventually embarks on a musical exploration through his apprenticeship on the Thai oboe while his younger brother decides to study the art of self defense. Both sons become masters of their chosen craft and come back home enriched by their newly acquired self-confidence only to face the complete disapproval of their father.

The story line of the epic novel parallels the outline of the project discussed here; Yos Vaneesorn like Phra Abhai Mani himself embarks on a journey to expand and enrich his musical vocabulary and reconnect with the musical culture of his native land.

It was decided from the outset to involve instruments from the entire clarinet family. Choosing to work solely with clarinets would challenge the performers to develop a sound palette with enough sonic and musical variety to encompass the full scale of the narrative. This focus would allow us to look deep inside the possibilities of the instrument.

All the sounds used in the piece therefore originate from clarinet sources.

Four categories of sounds are employed:

1. Amplified acoustic sounds from four types of clarinets.
2. Real-time clarinet playing with electronic manipulation.
3. Pre-recorded clarinet sounds, unprocessed but magnified through the help of the schizophonic medium and sampling techniques.
4. Pre-recorded clarinet sounds that have been electronically treated to alter their original colour.

The techniques used in the composition will be discussed in a further section.

Considering the aesthetic parameters of the piece, it was decided to create music that would balance classical structures with more 'organic' musical gestures informed by the Lanna musical stylings. Electronic processing is also used to expand the acoustic palette of the ensemble and broaden the scope of the music and also acts as a musical metaphor for the fantasy element inherent to the epic poem.

The depiction of the *pī* in Sunthorn's Phu's epic novel & historical context:

At the end of his seventh months of training, Phra Abhai Mani becomes a virtuoso on the *pī*. However, in the poetic hands of Sunthorn Phu, the *pī* becomes much more than a mere musical instrument. The sound it produces are used as a symbol for the power of breath and the focus of the mind. Phra Abhai Mani uses the *pī* to communicate with characters in the real world but also in his thoughts. The sound of *pī* acts as a magical weapon, which can kill large numbers of opponent or even a giant. Its sound can hypnotise people and animals or can win the heart of the beautiful female character, named Suwannamalee.

Thus, the storytelling style of Sunthorn Phu is very imaginative and verses into the realm of metaphorical fantasy. The interpretation of the text opens up infinite creative possibilities for musical interpretation.

Still, one question remains unanswered:

"What kind of *pī* does Phra Abhai Mani exactly uses?"

Sunthorn Phu does not mention the type of *pī* that Phra Abhai Mani plays in the story. However, most Thai people think that the instrument might have been the *pī nai* due to the way Phra Abhai Mani has been depicted in paintings and sculptures since the epic was originally published. These usually show the iconic character playing the *pī nai*. The uncertainty regarding which *pī* was actually used has been a subject of controversy among *pī* specialists and musicians for a long time. Therefore, it is quite possible for people to choose any kind of *pī* when attempting to interpret the music Phra Abhai Mani might have played. Each kind of *pī* offer different timbres and are suitable for different modes of expressions. The *pī nae* is a leading wind instrument used predominantly in Lanna music in the northern part of Thailand. Its double reeds made of sugar palm leaves produce a loud dynamic sound which dominates the whole musical ensemble. In contrast, the *pī nai* which is most commonly used in the *pī phat* ensemble in the central part of Thailand produces a soft and mellow tone much closer to the natural timbre of the clarinet.

As with most Thai folk musical instrument, the *pī nae* does not offer a clear methodology regarding playing techniques when compared to its more aristocratic neighbour, the *pī nai*. The latter's playing techniques were gradually developed by Thai music masters over the course of several centuries in the Thai Royal court. Its repertoire is therefore well documented. Historically, *pī nai* players benefited from Royal support as members of the court community. They were able to develop and perfect the construction of the instrument and establish certain amounts of standardisation. In contrast *pī nae* players relied on extensive amounts of performances in order to earn a living. This obviously led to a more nomadic approach and the *pī nae* playing styles are therefore more varying in nature.

In order to understand the fundamental aspects of *pī nae*'s playing technique properly it is necessary to study a Thai wind musical instrument (*pī nai*) that is already established its playing technique for a long time. Therefore, *pī nai*, is essential and the most reliable source that Thai classical musicians refer to when someone is willing to explore the playing techniques for Thai wind instruments. The knowledge on *pī nai*'s playing technique helps the researcher place *pī nae* in a proper musical setting along with the epic.

Investigating the music culture of the *pī nae*

It is clear that to fully understand a musical tradition such as that surrounding the *pī nae* and Lanna music, one needs to fully immerse oneself in that music and the culture it emerges from. Listening to, playing and experiencing the music of any culture is the essential key to entering the sound world contained within it. Furthermore, exploring the extra musical context greatly contributes to appreciating all the nuances and meanings associated with the musical stylings of any specific musical culture.

At the beginning of the process, the researchers focused on the study of the *pī nae* playing styles and techniques. Interviews and recordings were conducted including sessions with the *pī nae* master, Panutad Apichanatong. Those recordings were then used as source materials through means of musical transcriptions allowing the performers and composers to analyse the techniques employed and look for ways of transferring those musical idioms to the clarinet's musical vocabulary.



Example of a transcription of an improvised melody played on *pī nae* by Panutad Apichanatong, a multi instrumentalist and one of the most prominent exponent on the Folk music scene in the Chiang Mai region.

Transferring *pī nae* techniques to the clarinet

As a result of the research it was decided to focus on three *pī nae* playing techniques which translate very well to the clarinet to achieve successful musical effects.

1. Trills

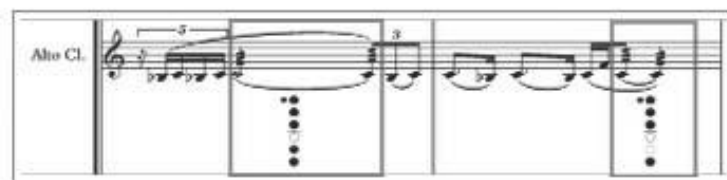
Fast Trill:

Pī nae players usually use a very quick speed of trill as well as various types of timbre trills. Normally the trill speed on the clarinet varies depending on the musical context; the slow trill will be suitable for a slow music while the fast trill will be used in the fast music. Even though it is possible to reach the quick trill speed of *pī nae* on clarinet, this

cannot be achieved on every note due to the position of the fingers in certain positions.

Timbre Trill:

The timbre trill allows *pī naē* players to vary the tone colour of the sound they produce when holding long notes. This technique is quite flexible on the *pī naē* due to the lack of key mechanism so that *pī naē* players can move from one note to another very quickly. Clarinet players find themselves restricted to certain combinations of fingers that can be used for particular timbre trills. The range of timbre trills available on the clarinet is therefore limited but some very musical *pī naē* inspired ornaments can still be created.



2. Vibrato

The vibrato technique is commonly used in *pī naē* playing, while very few classically trained clarinet players apply it to their playing style.¹ The vibrato speed used by *pī naē* players is much faster than that commonly used by clarinet players which is slower and gentle. The vibrato in *pī naē* music is applied especially when holding long notes, varying the amplitude's envelope in a very dynamic and at times a fairly 'harsh' manner.

Here is a transcription of an improvisation by the *pī naē*'s master Panutad Apichanatong, demonstrating the use of 'harsh' vibrato:



¹ It has however been a trademark expressive technique at the core of the musical vocabulary of many jazz clarinetist virtuoso players from Sidney Bechet to Louis Sclavis and a prominent feature in many other musical traditions such as those found in the Balkans.

An example of harsh vibrato applied to the new composition:



3. Portamento

The most prominent playing technique of *pī nae* is '*portamento*.' This technique allows the *pī nae* players to imitate the human voice. Gliding flexibly and with great accuracy from one note to another, this technique allows the *pī nae* to produce phrases reminiscent to the glottal sound of Thai' singing style.² Basically, clarinetists are more familiar with the '*glissando*' technique than the *portamento*. The iconic opening phrase of Gershwin's *Rhapsody in Blue* features a lush two and a half octave glissando evoking the sensual atmosphere of the swing era it inspired itself from.



This type of glissando is stylistically very different to the *portamento* used in *pī nae* music.

The distinction between both techniques for clarinetists is that:

"the *glissando* is a rapid, usually diatonic, finger movement, like running a finger up and down the key board of a piano; the *portamento* is a continuous sound, such as that produced by sliding up and down the fingerboard of a stringed instrument..."³

² The Thai national artist of Thailand in Performing art (Thai dance), Seri Wangnaidharm said that "Thai '*pī*' can imitate singing voice very well, for example, voice imitation by '*pī*' in Chui-Chai song." จุฬนพิศ อมาตยกุล, *สยามสังคีต*. (กรุงเทพฯ: เรือนแก้วการพิมพ์, 2524) หน้า 27.

³ Phillip Rehfeldt, *New Clarinet Directions for Clarinet*, (Lanham, MD: Scarecrow Press, 2003), 57.

In 1785, the Viennese *critic* and playwright J.F. Schink commented on a remarkable Anton Stadler's clarinet performance he had just witnessed by saying

*"Never should I have thought that a clarinet could be capable of imitating a human voice so deceptively as it was imitated by thee..."*⁴

The clarinet has long been regarded as an instrument capable of nuances and intimate expressivity akin to that of the human voice. Similarly to the *pī nae* imitating singing styles in Lanna music, the clarinet has been used as a leading melodic voice in many musical traditions.

Here is the transcription from the performance of the *pī nae* master Panutad Apichanatong, demonstrating the use of portamento:



The following example demonstrates the portamento technique as used in the new composition:



The range of timbral nuances and techniques available can make the clarinet sing almost as if one was hearing the human voice. As Anton Stadler mentioned two centuries ago : "no one with a heart can resist it!"⁵

The techniques described here gradually found their way into the new composition work infusing the musical ideas with stylings and ornamental colours reminiscent of the Lanna tradition it used as an inspiration.

⁴ Alan Hacker, "Mozart and the Bassett Clarinet," *The Musical Times*, 110 (April, 1969): p. 359.

⁵ Ibid



An example of the early score written for the project applying some of the techniques discussed.

At the beginning of the project Yos Vaneesorn had hoped to transfer the *pī nae*'s playing style to the clarinet in the most authentic way possible. However, it soon became evident that the mechanical key system of the clarinet imposed limitation on the degree of flexibility available. This sophisticated control mechanism allows for a more homogenous sound throughout the entire range of the clarinet but makes it impossible to achieve certain ornaments in certain positions. A certain level of compromise had to be met.

In addition, the Western notation system quickly showed its shortcomings when transcribing such expressive and complex playing styles as those displayed by the *pī nae*. Despite being a very valuable analytical and structural tool in this project, it became apparent that notation by itself wasn't sufficient. The real core of the music went beyond what could successfully be transcribed on the page. Like Phra Abhai Mani himself, the clarinet performer found himself on a quest to find his own voice through sound, using his skills as a sound maker on the clarinet to explore new avenues to bridge the gap between his classical upbringing and the spirit of his own culture.

The Aural vs Written Paradigm:

The German musicologist Theodor W. Adorno stated that "Interpreting language means:

understanding language; interpreting music means: making music.”⁶

This illustrates another discourse running at the root of this project based on the dichotomy between the oral tradition of the *pī nae* and the written tradition through which classical clarinet players learn their craft.

Any apprentice of the *pī nae* -like Pra Abhai Mani himself- learns from a master through listening. The craft of *pī nae* music is entirely based on melodic playing. The player learns melodies and gradually turns the instrument into an extension of his own voice, adding more ornamentations and nuances as his skill grows. Listening is the key. The sense of hearing is developed along the technical skills in equal measures. The learning starts with sound and the outcome is sound.

In contrast, the Western classical tradition emphasises the written score, the music starts on the page and provides the apprentice musician with a set of technical challenges that eventually lead to the performance of a piece of music, from sight to sound. Of course, tone production and considerations over timbral qualities are integral to the training but the fact that the process of learning new music always start from notation inevitably leads to a prioritising of the parameters of pitch, rhythm and dynamics.

“Many composers and theorists will disagree with the almost hierarchical prominence I attribute to the notation's effect on composition ... Notation can have an aspect of 'role playing', and I feel it has a very strong voice, if not onstage, then off.”⁷

This statement by Morton Feldman Express the composer's frustration with the way the Western notation system often dictates how music is produced and perceived. Feldman gives us clues about an essential perceptual dichotomy between written music and oral music.

Similarly, the performer composers involved in the Phra Abhai Mani project felt that the notation first approach was leading the composition work in the wrong direction. In response to this problem, it was decided to engage with sound in a more 'tactile' way throughout the project, emphasising the hearing sense and embracing an intuitive process. Not merely copying the source but rather finding the source within their own hidden vocabulary, the performers engaged in a series of improvisations to develop and explore the possibilities of their instruments.

Connecting improvisation to composition

In his book 'The Improvisation of Musical Dialogue: A Phenomenology of Music',

⁶ Theodor Adorno, *Quasi una Fantasia, Essays on Modern Music*, translated by Rodney Livingstone, (London, New York: Verso, 1956)

⁷ Morton Feldman, *Give my regards to Eighth Street: Collected Writings of Morton Feldman*. B.H. Friedman, editor. (Cambridge, MA: Exact Change, 2000) 133.

Bruce Ellis Benson suggests 'an improvisational model of music, one that depicts composers, performers, and listeners as partners in dialogue'.⁸

This model describes very well the working process adopted by Yos Vaneesorn and Jean-David Caillouët. Involving a group of clarinet students to collectively develop musical materials for the project as well as constructing an appropriate sound world.

The Italian composer Ferruccio Busoni identified 3 phases in a process using improvisation as a tool for generating compositional ideas:

1. Musician improvises
2. improvisation captured in notation
3. improvisation reborn through appropriate responses to notated signs⁹

Adding to this template, the process adopted by the researchers involved a fourth phase which is the one involving the recording medium.

Technology as a musical mirror

In the context of the recording studio, the microphone becomes to the musician what the camera is to a method actor.¹⁰ Directing and suggesting situations to a musician can help a musician to improvise and generate spontaneous musical ideas, sounds and textures in front of a microphone.

Listening back, the recording becomes a mirror, allowing the performer to become better acquainted with the subconscious vocabulary that emanates from his or her instrument, welcoming the unexpected and the making use of accidental discoveries along the way. Musical ideas and sounds can then be archived and organised to be developed at a later date within the framework of a structured composition.

⁸ Benson, Bruce E. *The Improvisation of Music Dialogue: A Phenomenology of Music*. (Cambridge: Cambridge University Press, 2003)

⁹ Ferruccio Busoni, *Entwurf einer neuen Ästhetik der Tonkunst*. (Leipzig : Insel-Verlag, 1916)

¹⁰ Lee Strasberg, *What is Method Acting*. accessed December 6, 2013, available from <http://www.methodactingstrasberg.com/methodacting>. "If one listens to either its critics or supporters Method Acting is described as a form of acting where the actor mystically 'becomes' the character or tries to somehow literally live the character in life. Like all clichés, both explanations are false. When Lee Strasberg defined what is popularly known as *Method Acting* he used a simple declarative sentence: "Method acting is what all actors have always done whenever they acted well."

This method of working allows for a real interplay between performers and composers. More importantly, it means that the process of creating the music starts with sound making.¹¹

Electro acoustic composers, more generally than not, work like folk musicians. Following an intuitive process, they discover juxtapositions of sounds through the editing. This approach differs greatly from the notation composers who often work directly on the page, planning and hearing 'internally' rather than 'physically'. Of course, collaborations.

Melodies and themes for all the characters in the novel were developed through this method of conducted improvisation. Other families of sounds were also explored as we followed Phra Abhai Mani's through the landscapes and psychological scapes revealed in the narrative.

The clarinet improvisations recordings were organised using the following typology:

1. imitations from creatures in the wilderness : animal sounds, birds etc.
2. inanimate objects: Rocks, trees and vegetations
3. Elemental sounds (wind, air, sea etc.)
4. Evolving textures around pre-defined tonal and modal centres. (ostinatos, motifs, flowing patterns)
5. Percussive Sounds / Tactile and high transient sounds (Keyclicks, scratches etc.)
6. Static and complex timbres (Multiphonics etc.)

The library produced becomes the sound palette from which the composition can be built, some musical ideas finding their way into the score or into the pre-organised 'tape' parts.¹²

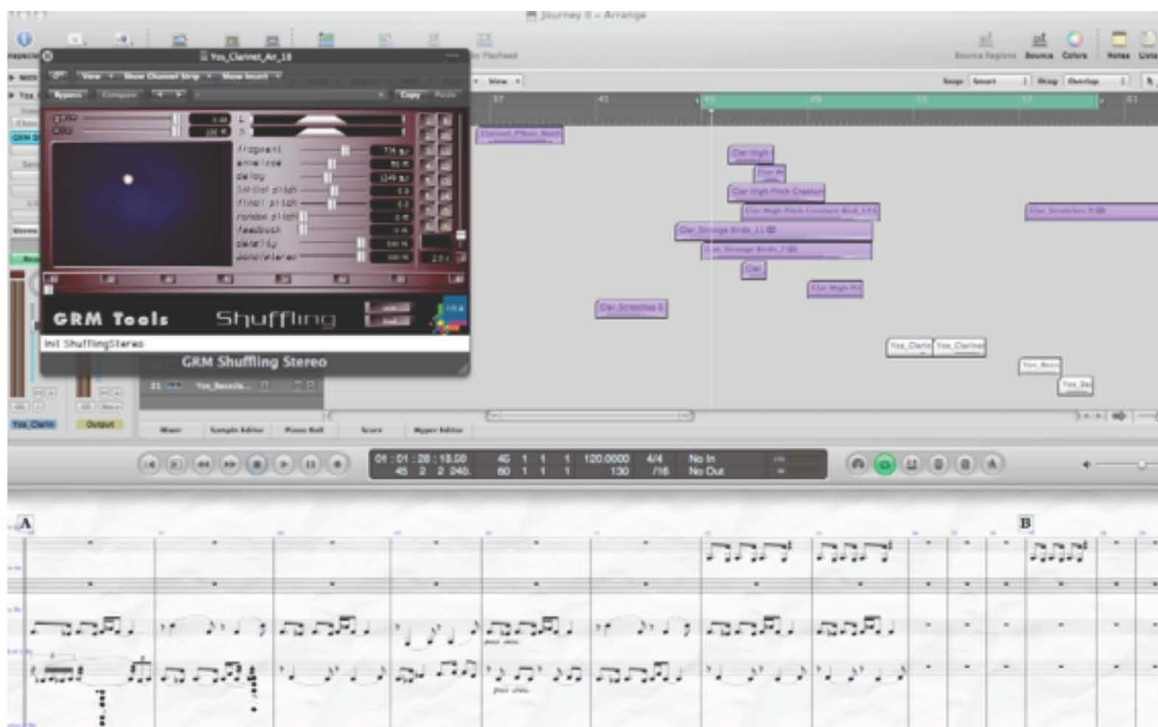
The ethnomusicologist, Bruno Nettl states "Performance practice is always in some respects an improvisatory process, and the musical thinking that goes into composition

¹¹ The French composer Luc Ferrari employed similar techniques in his series of work entitled 'Tautologos' in which he worked with musicians in the studio. Using no pre-composed notation, Ferrari asked musicians to improvise to his system of rules composed for the work. The sounds obtain were subsequently sculpted into a sound composition.

¹² The development of those materials and the way they are used to illustrate the epic novel will be the subject of another paper based on an analysis of the composition piece itself. The present text aims at describing the initial phase of the project and the process of creation and the description of techniques, notations and the technology involved would occupy far more space than is allowed here.

surely must always have at least a bit of the kind of thinking that goes into improvisation.”¹³

The Interplay between improvisation, recording, electronic manipulation and restructuring gradually leads to the organic formation of a score informed by the spontaneous delivery of the performers involved.



The recorded experiments from live electronics (in this case the shuffling algorithm from GRM) running in a sequencer (Logic 9) synchronised to the notation software. The recorded sounds can inspire modification to the score and any changes to the notated structure can in exchange inspire new recorded lines.

¹³Bruno Nettl, "New Perspectives on Improvisation," *The world of music* 33, 3 "n.d." 1991. 3-5.

Conclusion:

At the end of the episode of the Thai epic, King Sudasna is furious to learn how Phra Abhai Mani spent his time doing He exclaims *"I do not wish to hear any more! Music! Music is fit only for hired minstrels and entertainers. Why, even the women in my palace can learn to play music."*¹⁴ Sunthorn Phu is commenting on the general dismissive attitude of the society of the time towards the performing arts. The disregard towards the rewarding creative discipline his son cultivated is expressed by the writer as a way to question the values of the time.

Phra Abhai Mani's response is an ode to the value of self realisation through music:

*"Music has many uses, and is like a gem that is worth a city's ransom. Now, for instance, if I play on this instrument, men and beasts, and even angels, who hear the melodious notes will forget their anger, will become soothed and eventually lulled to sleep. Yes, music certainly has great charms."*¹⁵

The poetic metaphors Sunthorn Phu employs suggest a wealth of properties lying within music taking its function well beyond that of pure entertainment.

The excerpt of the epic can be seen as an early example of interdisciplinary thinking. The scholar, Dr. Umawitchanee remarks: "the story emphasizes the procedure and result of studying like the process used by scientists."¹⁶ In Phra Abhai Mani, Sunthorn Phu is using metaphors to suggest that self driven creative and inquisitive endeavours can lead to greater and deeper knowledge than the liberal arts of the time.

Two Centuries later it seems absolutely essential that the humanities as an academic discipline start welcoming "new artistic creations in order to be able to identify their innovative character and to propose how innovations in contemporary Thai music could

¹⁴ SunThorn Phu, **Phra Abhai Mani**. translated by Sakchai Phanawat, accessed January 8, 2014, available from http://sakchaip.tripod.com/bookworm/sunthorn/abhai_1.html

¹⁵ อันดนตรีมีค่าทุกอย่างไป ย่อมใช้ได้ดีดังจินดาบุรินทร์
ถึงมนุษย์ครุฑาเทวราช จัดบาทกลางป่าพนาลิน
แม่นเป่าเราเป่าให้ได้ยิน ก็สิ้นสุดโทโสที่โกรธา
ให้ให้อ่อนนอนหลับสับสนดี อันลัทธิดนตรีดีนักหนา
ซึ่งสงไสยไม่สิ้นในวิญญา จงนิทราเถิดจะเป่าให้เจ้าฟัง

¹⁶ มนตรี อุมะวิชณี, "ทัศนคติของสุนทรภู่ต่อเทคโนโลยีในเรื่องพระอภัยมณี." **เทคโนโลยี กับ ภาวะทางสังคมของประเทศไทย**, เอกสารประกอบการประชุมทางวิชาการ สาขาสังคมศาสตร์ ครั้งที่ 24, 85-93. (กรุงเทพฯ : มหาวิทยาลัยเกษตรศาสตร์, 2529) หน้า 87-89. "...แต่ในเรื่องของสุนทรภู่ซึ่งเสนอความคิดที่ไม่ไปอีก ไม่เพียงแต่พระอภัยมณีและศรีสุวรรณเท่านั้นที่เรียนรู้ในเชิงปฏิบัติ ทั้งสองไปพบกับพราหมณ์สี่คนที่มีความสามารถพิเศษต่างกัน อาทิ คนหนึ่งสามารถผูกหุ่นยนต์ได้...สุนทรภู่เน้นกระบวนการศึกษาและผลของการศึกษานอกจากความสามารถโดยธรรมชาติ โลกของสุนทรภู่จินตนาการขึ้นมาในรูปแบบของวิทยาศาสตร์และเทคโนโลยี..."

take off from this point.”¹⁷

Commenting on the project, the well informed ethnomusicologist Anant Narkong expresses enthusiasm about an initiative that “ brings together the world of western classical music and Thai folk music. Sunthorn Phu had spent almost 30 years to write the epic and left a message to his people in the same way as Phra Abhai Mani had passed on his knowledge and wisdom through the sound of *pī* to his son and all the beings he met on his travels.”¹⁸

He later asserts that the sort of initiative the clarinet ensemble is carrying out can contribute to passing on the tradition and moving it forward by creating parallel musical and artistic currents, re-generating interest in local culture in the process. He also sees this sort of re-invention as a “transformation that will probably help bring the music of the *pī* to another dimension. Using the *pī* as an inspiration to inform new work in the interdisciplinary fields sonic arts, theatrical and multimedia performances and make encourage continuous creative work in Thailand.”

Bibliography

พูนพิศ อมาตยกุล. *สยามสังคีต*. กรุงเทพฯ: เรือนแก้วการพิมพ์, 2524.

มนตรี อุมะวชิณี. “ทัศนคติของสุนทรภู่ต่อเทคโนโลยีในเรื่องพระอภัยมณี.” เทคโนโลยี กับ ภาวะทางสังคมของประเทศไทย, เอกสารประกอบการประชุมทางวิชาการ สาขาสังคมศาสตร์, ครั้งที่ 24, 85-93. กรุงเทพฯ : มหาวิทยาลัยเกษตรศาสตร์, 2529.

Adorno, Theodor. ***Quasi una Fantasia, Essays on Modern Music***. trans. Rodney Livingstone, London, New York: Verso, 1956.

Apichanatong, Panutad. *pī nae* specialist, Chiang Mai, Thailand. Interview, November 18, 2013.

Benson, Bruce E. ***The Improvisation of Music Dialogue: A Phenomenology of Music***. Cambridge: Cambridge University Press, 2003.

Busoni, Ferruccio. ***Entwurf einer neuen Ästhetik der Tonkunst: mit Anmerkungen von Arnold Schönberg und einem Nachwort von H.H. Stuckenschmid***. Frankfurt am Main: Suhrkamp, 1916.

¹⁷ Chetana Nagavajara, “Inseparable bond between Fine Arts and Humanities : a Thai case study.” **Silpakorn University International Journal** 3, 1-2 (January-December 2003): 146.

¹⁸ Interview with Anant Narkong, Ethnomusicologist, Faculty of Music, Silpakorn University, January 25, 2014.

Feldman, Morton. **Give my regards to Eighth Street: Collected Writings of Morton Feldman**. B.H. Friedman, ed. Cambridge, MA: Exact Change, 2000.

Hacker, Alan. "Mozart and the Basset Clarinet." **The Musical Times**, 110 (April, 1969): 359-362.

Hall, Tom. Notational Image, "Transformation and the Grid in the Late Music of Morton Feldman." **Current Issues in Music**, 1, 200 "n.d."

Nagavajara, Chetana. "Inseparable bond between Fine Arts and Humanities : a Thai case study." **Silpakorn University International Journal** 3, 1-2 (January-December 2003): 134-147.

Narkkong, Anant. Ethnomusicologist, Faculty of Music, Silpakorn University. Interview, January 25, 2014.

Nettl, Bruno. "New Perspectives on Improvisation." **The world of music** 33, 3 "n.d." 1991.

Phu, SunThorn. **Phra Abhai Mani**. trans. Sakchai Phanawat, accessed January 8, 2014, available from http://sakchaip.tripod.com/bookworm/sunthorn/abhai_a.html

Rehfeldt, Phillip. **New Clarinet Directions for Clarinet**, Rev. ed. Lanham, MD: Scarecrow Press, 2003.

Saengarun, Somnuk. *pī nai* specialist, Bangkok, Thailand. Interview, October 24, 2013.

Solis, Gabriel, and Bruno Nettl. **Musical Improvisation: Art, Education, and Society**. Urbana: University of Illinois Press, 2009.

Strasberg, Lee. **What is Method Acting**. accessed December 6, 2013, available from <http://www.methodactingstrasberg.com/methodacting>