

DIGITAL PUPPETRY OF
WAYANG KULIT KELANTAN:
A STUDY OF ITS VISUAL AESTHETICS

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THESIS SUBMITTED IN FULFILMENT
OF THE REQUIREMENTS
FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

CULTURAL CENTRE
UNIVERSITY OF MALAYA
KUALA LUMPUR

2014

ABSTRACT

Wayang kulit Kelantan, a form of traditional shadow puppet theatre in Malaysia, is threatened with imminent extinction yet no significant attempts were made to preserve this cultural heritage. It is clear that with the current situation in Malaysia and the level of official support, wayang kulit Kelantan is unlikely to last long. Several researchers have suggested that traditional wayang kulit Kelantan to be digitalised into digital media so that it could be watched on the media screen in order to provide greater accessibility and flexibility. The digital puppetry of traditional wayang kulit Kelantan is very helpful in promoting this art form and also indirectly by preserving it via alternative media.

This study aims to examine the possibilities and probe potentials of using Computer Graphics (CG) and modern technology to preserve the visual aesthetics of traditional wayang kulit Kelantan. The coverage of the study consists of three major aspects, namely: (i) the visual aesthetics of traditional wayang kulit Kelantan, (ii) Computer Graphics (CG)/ motion capture and (iii) digital puppetry.

This study provides in-depth information and explanations on two major aspects. The first aspect is the identification and description of the facets of the visual aesthetics of traditional wayang kulit Kelantan; emphasizing its principal puppet designs and shadow images. The second aspect is the use of modern technology and CG to capture these facets into digital media. Three computer experiments have been carried out in this study. Both key-frame animation techniques and motion capture facilities have been employed in these experiments.

This study serves as a contribution to preserve and revitalize traditional wayang kulit Kelantan through the use of digital technology and modern media. It presents and

provides solutions on issues that have to be addressed in the production of digital puppetry of traditional wayang kulit Kelantan.

ABSTRAK
(BAHASA MALAYSIA VERSION OF THE ABSTRACT)

Wayang kulit Kelantan merupakan sejenis wayang kulit tradisional di Malaysia yang kian pupus, namun buat masa terdekat, tiada usaha yang ketara yang diambil untuk memelihara warisan budaya ini. Memandangkan situasi keadaan semasa dan sokongan pihak-pihak tertentu yang diberikan di Malaysia, adalah nyata bahawa wayang kulit Kelantan mengalami kesukaran untuk terus kekal. Beberapa orang penyelidik telah mencadangkan agar wayang kulit Kelantan tradisional didigitasikan ke dalam media digital supaya kesinambungan warisan ini dapat ditonton dalam skrin media demi memberi lebih kemudahan dan fleksibiliti. Wayang kulit Kelantan digital sememangnya membantu dalam usaha mempromosikan bentuk kesenian ini dan secara tidak langsung dapat memelihara dan memantapkannya dalam bentuk media alternatif.

Kajian ini bertujuan untuk menyelidik tentang kemungkinan dan potensi penggunaan Komputer Grafik (*Computer Graphics*, CG) serta teknologi moden dalam memelihara estetika visual wayang kulit Kelantan tradisional. Kajian ini meliputi tiga aspek utama iaitu : (i) Estetika visual wayang kulit Kelantan tradisional, (ii) Komputer Grafik dan *motion capture* (tangkapan gerakan) , (iii) wayang kulit digital.

Kajian ini juga memberi maklumat terperinci dan penjelasan dalam dua aspek utama. Pertamanya, pengenalan kepada dan penerangan lanjut mengenai estetika visual tradisional wayang kulit Kelantan. Penegasan turut diberi kepada reka bentuk dan bayangan imej boneka utama. Keduanya pula meliputi penggunaan teknologi moden dan Komputer Grafik untuk menangkap pelbagai aspek dalam estetika visual wayang kulit Kelantan tradisional untuk dimuatkan ke dalam media digital. Tiga eksperimen komputer telah dijalankan dalam kajian ini. Dua teknik animasi yang dipanggil key-frame dan fasiliti *motion capture* (tangkapan gerakan) telah digunakan dalam eksperimen ini.

Kajian ini bertujuan untuk menyumbang ke arah pemeliharaan dan penggiatan wayang kulit Kelantan tradisional melalui penggunaan teknologi digital dan media moden. Kajian ini juga membentangkan Inagkah-langkah penyelesaian kepada isu-isu yang perlu ditangani dalam usaha penghasilan digital wayang kulit Kelantan tradisional.

ACKNOWLEDGEMENTS

I am grateful to my beloved Holy Trinity and Rev. Joshua Jung. Where it is impossible for man, it is possible with Them.

The birth of this thesis would have never been possible without the support of many people. First, I would like to express my heartfelt gratitude and special thanks to Dato' Professor Dr. Ghulam-Sarwar Yousof, my supervisor of this study for his unrelenting support and professional guidance. I would also like to thank Emily Wong and Emma Ng, my wife and mother-in-law, who gave me full support through this journey with their unconditional love and prayers.

Last, I thank all the wayang kulit practitioners who shared with me their profound knowledge during interviews: Mr. Che Mohd. Nasir Yussof (Pak Nasir), Pak Majid of Wayang Kulit Seri Asun, Pak Soh of Wayang Kulit Seri Cahaya Kelantan, Pak Dain of Wayang Kulit Melayu Traditional Kelantan and Mr. Mohd. Kamrulbahri Hussin (Kamrul). Thanks also to Professor John A. Lent and Mdm. Duratul Ain Dorothy for providing valuable resources which have been used in the preparation of this thesis.

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CHAPTER ONE

INTRODUCTION

1.1 OVERVIEW

The *wayang kulit Kelantan* in this research refers to the traditional shadow puppet theatre that is also named *wayang Siam* or *wayang kulit Siam* with its distribution and popularity restricted to the states of Kelantan, Terengganu, Kedah, Perak and Pahang in Malaysia as well as Patani in Thailand. However, the name by which one refers to this type of shadow puppet theatre changes from one place to another. For example, the Kelantanese used to call this type of shadow puppet theatre as *wayang kulit Kelantan* or *wayang Siam* but it is referred to as *wayang Kelantan* or *wayang Siam Kelantan* by residents in the southern Thai states (Matusky, 1997: 11-12). Stylistic differences exist in different provinces and one of the most apparent distinguishing features is the identity of the principal clown characters. For example, Pak Dogol and Wak Long are the main clown characters in Kelantan but in Patani, the principal clown characters are Wak Soh and Samad (Sweeney, 1972: 6). The main repertoire of traditional *wayang kulit Kelantan* is *Hikayat Maharaja Wana*. It is a Malay adaptation of the Hindu epic *Ramayana* (Yousof, 1997: 22). A basic *wayang kulit Kelantan* set consists of between 65 and 120 puppets comprising of principal characters. The major categories of puppets include refined princes and princesses, warriors, sages, commoners, clowns, ogres and demigods. There are also scenic puppets such as weapons, the receiving hall of the palace (*balai*) and the banyan tree (*pohon beringin*).

Traditional *wayang kulit Kelantan* is the most prominent shadow puppet theatre in Malaysia. Today, however, this ancient theatre is on rapid decline (Osnes, 1992: 7). It faces the predicament of fading from the public's memory as a result of the introduction of modern media and entertainment alternatives (Lim, 2011: 2). Larry Reed, a contemporary shadow play theatre director and the founder of ShadowLight Production

in the United States, described its situation as “endangered” in Malaysia in a personal interview conducted by Lim Siew Lian (Lim, 2011: 2). Moreover, there have been no significant attempts made at preserving this traditional performing art in Malaysia (Said Nong, 2008: 142). It is therefore obvious that, with the current situation in Malaysia, traditional wayang kulit Kelantan is unlikely to last long without some kind of strong support (Yusof, 2006: 15).

In order to survive in the era of globalisation, several researchers have suggested that traditional wayang kulit Kelantan needs a new alternative media output, to be digitalised, watched as well as promoted onto the computer screen or in the cyber world. Tan, Abdullah and Osman (2008: 212) pointed out that there is a need for Malaysians to promote and provide greater accessibility to the dying wayang kulit using present technologies such as digital media. Today, the only institution in Malaysia which still offers several subjects related to the art of wayang kulit Kelantan is the National Arts Academy (Akademi Seni Budaya & Warisan Kebangsaan, ASWARA). Che Mohd. Nasir Yusof, commonly known as Pak Nasir, who helms the wayang kulit Kelantan groups in ASWARA, agreed that the digitalisation of wayang kulit Kelantan will be very helpful in delivering information and promotions for this art form through the Internet or digital media (Lugiman, 2006: 57-61). Another Malaysian puppeteer, Pak Majid of the Wayang Kulit Asun troupe, points out that modern media is not being used to promote Malaysian wayang kulit and this is the main reason why most people are not aware of it, leading to its nearly extinction situation today (Lim, 2011: 2). According to Mrazek (2005: 437-446), the Indonesian wayang kulit has been shown regularly on its local TV channels such as Televisi Republik Indonesia (TVRI) and Kompas TV to introduce and promote this traditional theatre to the public; but currently, there is no regular Malaysian wayang kulit performance or similar TV programme on any Malaysian TV channel yet.

According to Kaplin (1994: 37-39), the digital forms of puppetry will not mean the “death” of the traditional form of puppetry but will probably lead to its preservation for its historical, spiritual or folkloric values, like an endangered species on a game preserve. Kaplin further elaborates that digital puppetry is a revolutionary idea, for it expands the realm of puppetry beyond all definitions that centre upon the materiality of puppets. With advances in modern technology, we can simulate and preserve our cultural arts and heritage in a more interactive manner compared to only plain recording (Chee & Talib, 2006: 6).

In Indonesia, apart from the traditional performances of shadow puppet theatre, there are also other types of shadow puppetry which were created and performed digitally such as *e-wayang* and *wayang animasi*. E-wayang is a type of shadow puppetry in which puppets are digitally created and staged and performed in digital environments¹. A group of Indonesians have formed and created websites to promote e-wayang. According to Murtiyoso, Indonesians need to adapt and triumph over the influence of modern technology towards their local cultural identity. He urged that local talents intertwine their local cultural with foreign technology in order to generate a “truly new” culture². One of the efforts that Murtiyoso agreed and praised on is the creation of e-wayang, which is a digital puppetry of the Indonesian *wayang kulit purwa* created by a group of Indonesian artists³.

For decades, animation and film directors around the world have created numerous films and animations using the art of shadow puppetry. In fact, shadow play

¹ See KRIYA. (2011, July 11). *Netra Suci Ambabab Jagad Maya*. Retrieved January 27, 2013, from e-wayang.org: <http://www.e-wayang.org/indonesia/archives/category/kriya>

² See Murtiyoso, B. (2011, July 16). *Prospek Seni Budaya Indonesia dalam Menghadapi Era Persaingan Iptek & Era Global*. Retrieved January 11, 2013, from e-wayang.org: <http://www.e-wayang.org/?s=Prospek+Seni+Budaya+Indonesia+dalam+Menghadapi+Era+Persaingan+Iptek+%26+Era+Global>

³ See Murtiyoso, B. (2009). *e-wayang*. Retrieved October 25, 2010, from [www.e-wayang.org](http://www.e-wayang.org/index.php/en/article/49-artikel/66-prospek-seni-budaya-indonesia-dalam-menghadapi-era-persaingan-ipitek-a-era-global.html): <http://www.e-wayang.org/index.php/en/article/49-artikel/66-prospek-seni-budaya-indonesia-dalam-menghadapi-era-persaingan-ipitek-a-era-global.html>

theatre can be considered as the origin of animation: even Walt Disney learnt from shadow play before he made animations⁴. According to Mahamood (2001: 132), the earliest example of Malaysian animation can be attributed to the traditional shadow puppet theatre from a formalistic perspective. He mentions that if the animated cartoon is the modern vehicle for satire and entertainment, the shadow puppet theatre is its counterpart in traditional culture. He also agrees that traditional culture plays a very significant part in shaping the themes, plots, forms and contents of local animated cartoons in the process of lending it a Malaysian identity.

Back in 1926, Lotte Reiniger, a German animator, created the first feature animation entitled *Die Abenteuer des Prinzen Achmed* (*The Adventures of Prince Achmed*) using visual aesthetics of shadow puppet theatre. The press was full of praise for the film after its premiere in Berlin. Later, the film ran for three months at a legitimate theatre in Paris and was then transferred to another theatre where it ran for six months. It was shown in almost every country in the world with great success. It was very encouraging that *The Adventure of Prince Achmed* was praised by Bela Balazs, a Hungarian poet and film critic, as being an absolute film (Deneroff, 2004: 26-27).

In 2008, American artist, Nina Paley wrote, directed, produced and animated an animated feature film entitled *Sita Sings the Blues* based on events from an episode of the *Ramayana*. This animation feature film contains illustrated conversation scenes between shadow play puppets, musical interludes and scenes from Paley's own life⁵. The film uses several different animation styles to separate and identify parallel narratives. The aesthetics of shadow play were used in retellings of the *Ramayana* which link episodes of the *Ramayana* with other parallel stories.

⁴ See Prakosa, G. (2003, 12 8). *Animasi Indonesia di Tengah Kemegahan Animasi Dunia*. Retrieved February 11, 2009, from majalah.tempointeraktif.com:

⁵ See Paley, N. (2008) *Sinta Sings The Blues- FAQ page*. Retrieved April 7, 2010 from <http://www.sitasingstheblues.com/faq.html>

In Indonesia, famous film director Djadug Djajakusuma (1918-1987), generally credited as D. Djajakusuma, has delved into and learnt the art of shadow puppet theatre in order to apply them into filmmaking⁶. Djajakusuma was an Indonesian film director and promoter of traditional art forms who attempted to modernise traditional forms so that they could be better received in a modern world. He had received numerous awards for his filmmaking, including two Best Director awards from the Indonesian Film Festival. Two of his famous films that explore the themes of Indonesian shadow puppet theatre are *Lahirnya Gatutkaca (The Birth of Gatotkaca, 1960)* and *Bimo Kroda (The Anger of Bima, 1967)*.

A group of Hungarian artists, Gabor Papp, Szalai Andras and Agoston Nagy, have developed an interactive digital puppetry theatre entitled *Reverse Shadow Theatre* in Kitchen Budapest between 2007 and 2008. In this digital puppetry theatre, the role of the elaborate puppets is emphasised while the visitor is merely an invisible puppeteer controlling the virtual puppets by his or her movements. The body limbs and parts of the virtual puppets are controlled and manipulated by actual movements of the visitors in front of the digital screen.

Widjajanto, Lund and Schelhowe from Bremen University proposed a new approach to design story authoring using visual elements from traditional Indonesian shadow play to enhance children's imagination and self-expression in 2008. In Widjajanto, Lund, Schelhowe, Subramani and Friedrich's paper entitled *Wayang Authoring- a Tool to Enhance Children's Creativity and Self-expression* (2008: 464-467), they believe that the traditional art form of shadow play is full of visual characters and symbolic images. During a performance, the imagination of the audience is required

⁶ Lubish, I. F. (2011, February 2). *D. Djajakusuma*. Retrieved December 21, 2012, from indoensiancinematheque.blogspot.com:
<http://indonesiancinematheque.blogspot.com/2011/02/d-djakusuma.html>

to interpret a story and its images. Their project was intended to combine the world of computer games with this traditional art context.

In 2001, Suzung Kim from Korea National University of Arts created an interactive puppet theatre that allow users to control digital puppets on the screen using their hands. Users could easily and amazingly manipulate the digital puppets by wearing specially-prepared gloves and placing their hands inside a small box with curtains like that of shadow play performance. She proved that the shadow play puppets could be manipulated, controlled and moved without the strings attached to their limbs but by using the computer sensors and hands.

On the other hand, digital puppetry of Malaysian traditional wayang kulit Kelantan is comparatively lacking. One of the earliest examples would be the *Wayang Virtual* research project under Universiti Malaysia Sarawak (UNIMAS) in 1996. It is a combination or hybrid performance of traditional wayang kulit Kelantan with digital puppets using modern technology. The visuals of a live performance of traditional wayang kulit Kelantan were blended and used to interact simultaneously with a virtual puppet that was animated by a computer user. According to Abdul Wahid (2007: 4), the experimenter of this project, this project had successfully combined traditional arts with multimedia technology. In addition to that, Tan, Talib, & Osman (2008: 217) from University Sains Malaysia (USM) invented a new form of interactive digital puppetry that was able to simulate the visuals of wayang kulit in real-time environment. Recently, in 2011, Abdul Ghani from University Kuala Lumpur (UniKL) developed a new prototype of digital wayang kulit using a Computer-Generated Imagery (CGI) 3D virtual puppet.

However, these new forms of digital puppetry are not successful in preserving the visual aesthetics of traditional wayang kulit Kelantan. Therefore, this research

proposes a new form of digital puppetry to preserve the visual aesthetics of traditional wayang kulit Kelantan effectively.

1.2 PURPOSE OF THE RESEARCH

In reference to the background study, it is clear that there are still many possibilities and great potential yet to be discovered in the creation of digital puppetry of traditional wayang kulit Kelantan. Therefore, this research will look into some of these areas and provide constructive solutions and recommendations in detail.

The main research objectives of this research are:

1. To ascertain and discuss the processes and methods of using CG to capture the visual aesthetics of traditional wayang kulit Kelantan into digital media.
2. To determine how motion capture technology can be applied to capture the movements of the puppeteer and puppets of traditional wayang kulit Kelantan.

1.3 SIGNIFICANCE OF THE RESEARCH

There is an urgent need to preserve traditional wayang kulit Kelantan from dying out. Therefore, the major objective of this research is to help preserve its visual aesthetics into digital media using modern technology. This will be a contribution to revitalise the arts of traditional wayang kulit Kelantan for future generations.

1.4 STATEMENT OF PROBLEM

Modern entertainment media such as television, movies and online games has greatly distracted the audience from traditional wayang kulit Kelantan in Malaysia (Lim, 2011: 9). According to Sweeney (1972: 53), it was at one time fairly widespread and extremely popular, with the existence of more than 300 puppeteers in Kelantan. However, this number rapidly decreased to 37 in 1982 and 11 in 1999 respectively based on a survey done by the Department of Culture, Youth and Sports of Kelantan.

The same results were cited in the annual report of Culture and Tourism Centre Wilayah Timur in 1998 and Kajian Banci Persatuan on 2nd March 1999. Today, Pak Soh (personal communication, November 17, 2012) mentions that there are only three active professional puppeteers in Kelantan who are capable of performing authentic traditional wayang kulit Kelantan.

Hence, there is an urgent need to preserve this art form from dying out. According to Sheppard (1983: 73), vigorous efforts are being made in many countries to preserve their priceless shadow puppet theatre traditions and wayang kulit Kelantan is definitely deserves to be included in this inspired endeavour.

1.5 RESEARCH QUESTIONS

The main research questions of this study are:

1. What are the visual aesthetics of traditional wayang kulit Kelantan?

The answer to this question will provide the framework and guidelines for later computer experimentations in this thesis. The major visual aspects of wayang kulit Kelantan in terms of its puppet design and the quality of its shadow images have to be identified prior to the computer experimentations. These aspects are the essential guiding principles to ensure the authenticity of digital puppetry of traditional wayang kulit Kelantan.

2. To what extent can CG be used in capturing the visual aesthetics of traditional wayang kulit Kelantan into digital media?

This question will trigger the author to probe into the possibilities and limitations of using digital technology to capture and generate the visuals of traditional wayang kulit Kelantan on digital screen. As mentioned before, this theatre form is on the decline and it is not easy to find a qualified puppeteer of it today. Therefore,

it is important to find an alternative solution to promote and increase the accessibility of this theatre art. Computer experimentations will be conducted by the author to show the processes and methodologies of capturing and generating the visuals of traditional wayang kulit Kelantan solely in the digital environment without involving the actual puppeteer.

3. To what extent can motion capture technology be applied to capture the movements of the puppeteer and puppet of wayang kulit Kelantan?

The answer to this question will provide the methodology and solutions to capture and preserve the movements of both puppeteers and puppets in digital format. The motion capture experiment in this thesis serves to provide answers to this question. As most of the current puppeteers of traditional wayang kulit Kelantan are elderly (above 50 years old), the uses of motion capture technology and methodology are significantly important in preserving their ways and skills of puppet manipulation so that these skills and techniques can be preserved and disseminated for future generations.

1.6 LIMITATION OF THE RESEARCH

A traditional wayang kulit Kelantan performance comprises of five major and general elements. These five elements are (i) the theatre; (ii) the puppets; (iii) the puppeteer (*dalang*); (iv) the orchestra (together with the musicians); and (v) the repertoire of stories (Yousof, 1997: 62). The primary focus of this research relies mainly and solely on the visual aesthetics of wayang kulit Kelantan which includes mainly the theatre, the puppets and the puppeteer's art of manipulation. The later elements (orchestra, music as well as the narration and vocals of the puppeteers) are not within the scope of this study.

In addition to that, even though many innovations and alterations have been made to the current wayang kulit Kelantan, the emphasis of this thesis is placed upon the authentic traditional wayang kulit Kelantan with the use of the *Hikayat Maharaja Wana* repertoire. To be more exact, it solely focuses on the visual aesthetics of traditional wayang kulit Kelantan that have been performed by notable puppeteers such as Awang Lah, Hamzah Awang Amat or commonly known as Pak Hamzah (1940-2001), Pak Nasir, Yusoff Bin Mamat or commonly known as Pak Soh and Dain Muhammad Usman or commonly known as Pak Dain. All of them use the style as performed in the Tumpat district of the north-western Kota Bharu, the capital of Kelantan.

Many of the lesser characters in wayang kulit Kelantan depict a great level of variations and improvisations in their puppet designs, structures and forms. This happened due to the arbitrary inventions carried out by many puppeteers in the 1990s in order to meet the requirements of the changing social environment as well as their personal predilection. Therefore, this thesis places its primary focus on the main and representative puppets and characters in the *Hikayat Maharaja Wana* repertoire of traditional wayang kulit Kelantan as they possess similar standard in their designs and forms.

1.7 METHODOLOGY OF THE RESEARCH

This study covers three major areas, which are CG, digital puppetry and the visual aesthetics of traditional wayang kulit Kelantan (Figure 1.1).

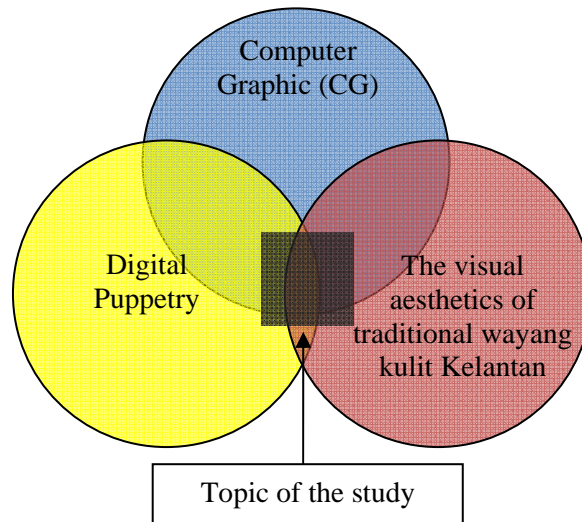


Figure 1.1: Coverage of the Study

The research approaches in this study include library-based study, observations, fieldwork, interviews, computer experiments and analyses.

The theories of visual aesthetics in different contexts are not the primary focus in this research; therefore they will be studied only in a general manner. Apart from printed materials and online publications in the library, the author will further examine the visual aesthetics of traditional wayang kulit Kelantan through several video recordings. These recordings in Video Compact Disc (VCD) and Digital Video Disc (DVD) formats include the following: *Wayang Kulit Siam- the Malay Shadow Play* (1995), *Siti Dewi Diculik* (2002), *Kusi and Serawi* (2002), *Dewek* (2002), *Wayang Kulit Kumpulan Anak Seri Baju Merah Machang Kelantan: Bunga Cempaka Rindu Malam* (n.d.) and *Wayang Kulit Saufi: Serama Dua* (2007). The author has also witnessed several live performances of wayang kulit Kelantan at ASWARA between December 2008 and December 2012.

In addition to that, the author will examine the puppets of wayang kulit Kelantan from four major sources, namely Dato' Professor Dr. Ghulam-Sarwar Yousof, Pak Nasir, Pak Soh and Pak Dain. The puppets of Yousof were collected from various

famous puppeteers of wayang kulit Kelantan in the 1980s, such as Pak Omar, Pak Hassan and Pak Hamzah. Pak Hamzah (1940-2001) was a master puppeteer of traditional wayang kulit Kelantan who was awarded the first Arts Award by the Yang-Pertuan Agong of Malaysia in December 2003. Pak Nasir who helms ASWARA's wayang kulit group is considered by many as Pak Hamzah's "heir" and the only representative apprentice. Pak Soh has more than 40 years of experience in learning and practicing the art of wayang kulit Kelantan and he was made a professional puppeteer (*tok dalang*) in 1981. Pak Dain is a professional puppeteer-cum-preservationist of traditional wayang kulit Kelantan who had learnt this art from three famous puppeteers, namely Pak Hamzah, Yusof Bin Hassan and Omar Yunus. He became a professional puppeteer in 1982 and is currently leading his wayang kulit Kelantan troupe named Wayang Kulit Melayu Traditional Kelantan (literally meaning Kelantan Malay Traditional Shadow Play) in Kampung Morak, Kelantan.

Moreover, the author has interviewed Pak Nasir, Pak Soh and Pak Dain between December 2008 and December 2012. Interviews with Pak Nasir were conducted at ASWARA on 4th February 2009 and 22nd September 2012. Interviews with Pak Soh and Pak Dain took place in Kelantan on 17th and 18th December 2012 to collect data as well as to identify and confirm the visual aesthetics of traditional wayang kulit Kelantan. In addition to that, the author also interviewed Pak Majid of Wayang Kulit Asun on 5th May 2012 to obtain more details on the current situation of wayang kulit in Malaysia.

In total, three experiments have been conducted by the author to capture the visual aesthetics of traditional wayang kulit Kelantan into digital media. The author used a multimedia laptop with three computer software, namely (i) Adobe Photoshop CS6, (ii) Adobe After Effect CS6 and (iii) Autodesk 3ds Max 2012 as well as an OptiTrack Arena motion capture system located at University Putra Malaysia (UPM) to conduct these experiments.

1.8 CONCEPTUAL FRAMEWORK AND RESEARCH DESIGN

The conceptual framework shown in Figure 1.2 serves as a guideline for this study. A literature review will be carried out to study the background and existing theories of wayang kulit Kelantan. Interviews will be conducted with puppeteers and fellow researchers to gather more information in order to have a more in-depth study on this art form. In addition, a detailed study will be conducted to identify the visual aesthetics of traditional wayang kulit Kelantan, focusing mainly on its puppet design and the quality of its shadow images.

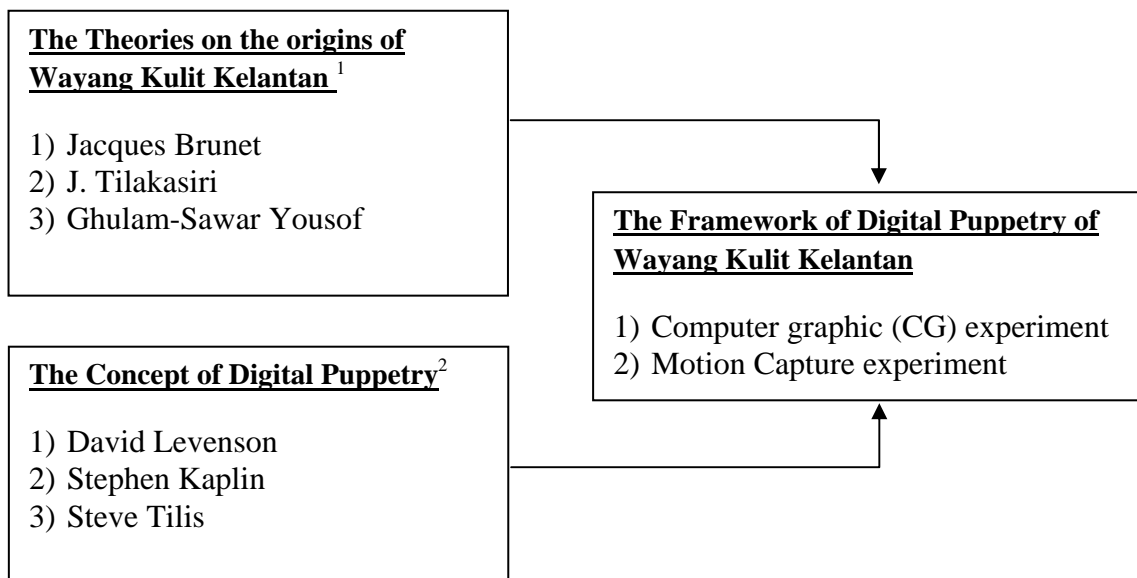


Figure 1.2: Conceptual Framework of the Research

Finally, computer experiments will be conducted to investigate and probe the possibilities, limitations and effectiveness of using modern and digital technology to preserve and capture the visual aesthetics of traditional wayang kulit Kelantan in the virtual environment. The results of these experiments will be presented and discussed to answer the research questions as well as to make conclusions of this research. Figure 1.3 shows the diagram and flow of the research design.

⁷ See Chapter 2.4, p. 27- 28 for details.

⁸ See Chapter 4.2, p. 122- 127 for details.

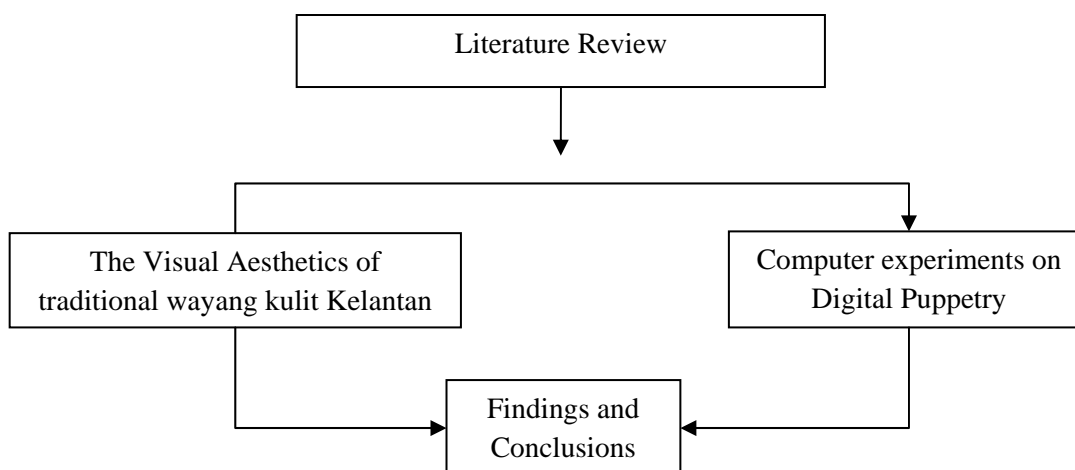


Figure 1.3: The Diagram of Research Design

1.9 DEFINITION OF TERMS

In this thesis, a number of terms are frequently used. The author therefore defines them in Table 1.1 to ensure better understanding for readers.

Table 1.1: Definition of terms

Term	Definition	Source
wayang kulit	The wayang kulit (Shadow Play) is a performance genre involving flat leather puppets casting a shadow over a white screen (<i>kelir</i>) illuminated by a lamp.	Lopez, A. (2004: 1419)
wayang kulit Kelantan	Also known as wayang kulit Siam or wayang Siam. This is the principal Malaysian shadow play and one of the oldest traditional art forms in Malaysia. It is based in Kelantan and there are about a dozen active puppeteers but this number is rapidly diminishing.	Yousof (2004: 99-100)

wayang kulit purwa	The most well-known form of wayang kulit in Indonesia and has undergone changes and improvements through the years, reaching its aesthetic climax in the puppets shadow play today. Among the many styles of wayang kulit purwa in Indonesia, the styles of Surakarta and Yogyakarta are the two most popular styles nowadays.	Indonesian Wayang National Secretariat (SENA WANGI). (2004: 16)
dalang	The master puppeteer of shadow play who manipulates the puppets, provides voices to the characters and develops the story through dialogue, narration, commentary and the use of songs.	Yousof (2004: 75-76)
Computer Graphics (CG)	Computer Graphics (CG) is concerned with all aspects of using a computer to generate images. Under this definition, CG includes the design of hardware such as displays, the algorithms that are necessary to generate lines on these displays, the software that is used by both the graphics system programmer and the application programmer, and the applications of computer-generated images.	Angel, E. (1990: 1)

Computer-generated Imagery (CGI)	Computer-generated imagery (CGI) refers to all image or images that are created with the aid of a computer.	(Derakhshani & Derakhshani, 2010: 2)
Two-Dimensional (2D)	Constrained to a plane having dimensions in only width and height; can only be viewed orthogonally.	(Ford & Lehman, 2002: 262)
Three-Dimensional (3D)	Having dimensions in width, height and depth. A 3D object can be rendered from different viewing angles.	(Ford & Lehman, 2002: 262)

1.10 ORGANISATION OF DISSERTATION

This thesis is organised into seven chapters. Chapter One presents a brief introduction to this study. It includes the background of the study, purpose of the study, significance of the study, problem statements, research questions, limitations of the research, description on the research methodology, conceptual framework, research design and the definition of terms.

Chapter Two reviews relevant literature of shadow puppetry theatre with emphasis on wayang kulit Kelantan. It starts with an overview and later goes through important literature with detailed discussions on theories from prominent scholars and experts in the related field.

Chapter Three presents and discusses the visual aesthetics of traditional wayang kulit Kelantan with primary focus on its puppet design, shadow images casted on screen and elements contributing to its quality. The author first reviews photographs of puppets of traditional wayang kulit Kelantan in publications such as those by Cuisinier (1957),

Scott-Kemball (1959), Kingham (1998), Osnes (1992), Ramli & Ibrahim (1996) and Linggang (2009). In addition to that, different sets of puppets from various notable veterans and puppeteers of traditional wayang kulit Kelantan such as Yousof, Pak Nasir, Pak Soh and Pak Dain have been used in this study. Comparative studies between puppets from different sources are made in order to identify similar features as well as differences in them. This chapter provides a better understanding on the visual aesthetics of traditional wayang kulit Kelantan to readers through studies on its puppet design as well as quality of its shadow images.

In the beginning of Chapter Four, a definition for digital puppetry is presented. Then, a brief introduction on the history and development of digital puppetry is provided. In addition to that, conceptual frameworks, research and experimentations on digital puppetry are presented and discussed in this chapter.

Chapter Five presents computer experimentations on the digital puppetry of traditional wayang kulit Kelantan. There are three computer experimentations conducted to justify and probe the potentials and limitations of using modern and digital technologies to capture the visual aesthetics of traditional wayang kulit Kelantan. This chapter presents and reviews on methodologies and techniques used in carrying out these computer experimentations.

Chapter Six discusses and analyzes the results of the computer experimentations in Chapter Five. Through individual itemised facets, components and explanations, this chapter justifies and confirms the abilities and limitations of the use of modern and digital technologies to capture the visual aesthetics of traditional wayang kulit Kelantan.

This thesis concludes with Chapter Seven, providing a framework and prototype of the digital puppetry of traditional wayang kulit Kelantan. Lastly, recommendations

for further studies in related research areas and fields are highlighted in the summary of this chapter.

CHAPTER TWO

LITERATURE REVIEW

2.1 OVERVIEW

This chapter presents related important theories and literature on the history and development of shadow play in Southeast Asia, with emphasis on traditional wayang kulit Kelantan in Malaysia.

Basically, this chapter is divided into three major parts. The first part provides a brief introduction on the shadow play in Southeast Asia and Malaysia. It then reviews available theories on various aspects of wayang kulit Kelantan.

The second part is divided into two sections. The first section examines the essential aspects of wayang kulit Kelantan such as its repertoire, theatre setting, performance standard and puppets. The second section reveals the causes and reasons that lead to its current critical situation in Malaysia, which is somehow related to its performance practices and standards. However, only brief and general information on its music ensemble is presented as it does not fall within the scope of this study.

The third part presents new inventions and modernisation found in today's wayang kulit Kelantan. In addition to that, this part also presents the use of the context of wayang kulit Kelantan in other media and art forms to further strengthen the importance and significance of wayang kulit Kelantan. Finally, a summary is provided.

2.2 SHADOW PUPPET THEATRE OF SOUTHEAST ASIA

The shadow puppet theatre is an ancient form of storytelling and entertainment using two-dimensional flat and often articulated puppets in front of an illuminated backdrop to create the illusion of moving shadow images on the screen (Taweethong, 2010: 2). This theatre form is particularly important and established in Southeast Asia. In Malaysia and Indonesia, shadow puppet theatre is referred to as *wayang kulit*,

whereby the word “*wayang*” itself means shadow and “*kulit*” means skin in Javanese and Malay. In addition to that, the word “*wayang*” can also mean image or imagination (Hastanto, 1998: 51; Kusumanugraha, Mikami, Ito, & Kondo, 2011: 147).

The Southeast Asian shadow puppet theatre stands out among world theatre traditions as a total theatre, providing entertainment, healing, balance, spiritual refinement, the appeasement of spirits and cultural education (Osnes, 2010: 13). The best-known example of Southeast Asian shadow puppet theatre is the classical Indonesian *wayang kulit purwa*, which was also active in the southern states of the Malay Peninsula, particularly in Johor as well as Singapore until recently. Evidence for its existence goes back to the 10th century and is one of the most ancient theatre forms. According to Brandon (1993: 2-3), the earliest records of Indonesian *wayang kulit* can be found on copper plates dated between 840 and 907. The shadow puppet theatre can be found in many countries in Southeast Asia such as Malaysia, Indonesia, Thailand, Cambodia and Philippines. The role of shadow puppet theatre in the history of theatre in Southeast Asia is so important and significant that any effort to minimize it is to pervert the facts of history (Tilakasiri, 1968: 7).

In general, there are three theories on the possible origins of Southeast Asian shadow puppet theatre. The first theory points the origin of Southeast Asian shadow theatre to India: a reference mainly to the source of its principal repertoire. The Hindu epics *Ramayana* and *Mahabharata* are two major sources that have been used in most of the repertoires of traditional shadow puppet theatre in Southeast Asia (Brandon, 1967: 15). Using this phenomenon as the only supporting point, many scholars have linked and pointed the origin of shadow puppet theatre in Southeast Asian to India. The scholars who support this theory include Otto Spies, Sabri Esat Siyavusgil and William Ridgeway (Talib, 2008: 1). Furthermore, Tilakasiri (1974: 22) mentions the connection of the clown characters in Javanese shadow puppet theatre, namely the *Punakawan*

(Semar, Gareng, Petruk, and Bagong) with the Hindu court jester character named Vidusaka. However, Yousof (2004: 130-134) points out that the Semar of Javanese shadow play theatre is actually an ancient character as well as a product of a centuries-old Javanese character emerging from pre-Hindu times. On the other hand, Brunet (1974: 127-129) supports this theory (that the Southeast Asian shadow play originates from India) by quoting that the small-sized puppets used in the Malaysian and Indonesian shadow puppet theatre show influence from the shadow puppet theatre in India. However, this theory lacks convincing evidence and support and appears merely as a speculation which always receives criticisms and debates.

The second theory mentions that the Southeast Asian shadow puppet theatre originated from China. In 121 BC, there is a record of a magician named Li Shao-Weng who had performed a shadow puppet performance to Emperor Han Wu Ti, showing a shadowy figure of his favourite consort Wang Li with the use of torches and curtains. This record was found in Ban Gu's dynasty history of Han, *Hanshu* 97A-B under "Account of the Families Related to the Emperors by Marriage" (Chen, 2003: 28). It was initiated as an effort to ease the sadness of Emperor Han Wu Ti after the death of his beloved consort Wang Li (Laufer, 1973: 27). During the performance, the emperor was able to see shadow images resembling Wang Li moving around within the curtains from a distance. This historical record is very suspicious as no matter how great Li Shao-Weng was at illusion, he could not possibly have conned the emperor merely by using a 2D shadow puppet with torches and curtains. Moreover, it was only during the early period of the Sung dynasty (960-1279 AD) that concrete evidences were available to prove the existence of shadow puppet theatre in China (Blackham, 1960: 2). Definite proof and evidence to support this theory are yet to be found.

The third theory suggests the shadow puppet theatre in Southeast Asia had its origins in Java which was developed during the reign of Raden Fatah (1478-1518)

(Mulyono, 1975: 105). Scholars of the shadow puppet theatre commonly agree that the Javanese wayang kulit purwa is probably the earliest example and prototypical form of the shadow puppet theatre in Southeast Asia (Yousof, 2004: 95). It is the preeminent art form in Java and could be the precursor to the Malaysian wayang kulit Kelantan.

In summary, Yousof (2004: 94-95) points that the origin and evolutionary history of the Southeast Asian shadow puppet theatre is, in all certainty, likely to remain clouded. However, evidence of influences from India, Java, China and the Middle East are found in them.

Despite its shadowy origin, the shadow puppet theatre is particularly important and established in Southeast Asia, connected to both court and popular tradition. It has evolved its own distinct form and aesthetics and has greatly refined these performances over the centuries. Hence, the Southeast Asian shadow puppet theatre is worthy of its own consideration apart from, but within the context of, the origins that have inspired it (Osnes, 2010: 13).

This shadow puppet theatre of Southeast Asia can be divided into two general varieties: one using small-sized puppets manipulated by a single puppeteer while the other making use of relatively big-sized puppets manipulated by multiple puppeteers. Most of the shadow puppet theatre in Southeast Asian fall into the first variety except for the Kampuchean *nang sbek thom* (also known as *nang sbek luong*) and the Thai *nang yai*.

2.3 MALAYSIAN SHADOW PUPPET THEATRE

The shadow puppet theatre only exists in peninsular Malaysia, especially in Kelantan, Terengganu, Kedah, Perlis and Johor. There is no record of local shadow puppet theatre in the states of Sabah and Sarawak in East Malaysia. The four main forms of shadow puppet theatre in peninsular Malaysia are wayang kulit Kelantan,

wayang kulit gedek, *wayang kulit purwa* and *wayang kulit Melayu* (Figure 2.1). All of these theatre use small-sized character puppets manipulated by a single puppeteer. According to Yousof (1997: 5-8), *wayang kulit Melayu* is strongly influenced by the Javanese *wayang kulit gedog* based on the popular mediaeval Panji romance; *wayang kulit gedek* is a derivative of the southern Thai *nang talung*; and *wayang kulit purwa* in actual fact is based on the classical Javanese shadow puppet theatre of the same name.



Figure 2.1: The Four Main Forms of Wayang Kulit in Malaysia; From Left: Wayang Kulit Kelantan, Wayang Kulit Gedek, Wayang Kulit Purwa and Wayang Kulit Melayu (Images Courtesy of the Ministry of Culture, Arts & Tourism, Malaysia).

Today, the extinction of Malaysian *wayang kulit purwa* and *wayang kulit Melayu* has been confirmed (Yousof, 2010: 156). Although Malaysian *wayang kulit gedek* is a derivative of Thai *nang talung*, it has undergone the process of localisation and modernisation. Apart from the introduction of new puppets and modifications found in the clown puppets, *wayang kulit gedek* today uses localised stories invented by the individual *dalang* rather than from the original *Ramayana* as the repertoire in performances.

Before coining the name *wayang kulit gedek*, this form of shadow puppetry theatre was initially performed by the Thai communities living in Kedah and Perlis, the two states in northern peninsular Malaysia. It uses similar puppets, musical instruments and common repertoire from the Thai shadow puppet theatre, *nang talung*, but has discarded its Buddhist ritual elements (Yousof, 2004: 97-99).

The first puppeteer who developed *wayang kulit gedek* was a Malay puppeteer named Mohd. Noh bin Mahmud, or commonly known as Pak Noh, in Kedah (Yahya, 1994: 11-14). Pak Noh (1924- 2002) had learnt the art of *wayang kulit* from Den Choon,

a Siamese dalang, in southern Thailand at the age of 16 (Figure 2.2) According to Yahya (1994: 13), Pak Noh had spent 10 years learning the art of wayang kulit from his Thai mentor who taught him solely the art of Siamese puppetry, including invocations, incantations, taboos, music and songs before he became a qualified puppeteer. He used Thai language in his wayang kulit performances for 20 years before he started to localise the repertoire and performance structure in order to suit the demands of and attracting the local Malay audience. According to Osnes (1992: 112-113), Pak Noh had modernised the protagonist puppet of Sita Dewi with modern hairstyle and relatively modern apparel in his 1990 Changlun wayang kulit gedek performances. Some modern inventions and elements had also been sported in performances such as the use of traditional songs that broke into popular rock tunes and English language expressions such as “no problem” (Osnes, 1992: 112).

Pak Noh replaced the entire Thai dialogues with local Malay dialogues in his performances gradually with the exceptions of invocations and probably one or two songs in the performances (Yahya, 1994: 13). This altered and amended genre of the shadow puppet theatre later gained its official name as wayang kulit gedek, given by the officer(s) of the Cultural and Arts Department in Kedah in 1986. According to Pak Majid, the second son of Pak Noh, he is the only successor of Pak Noh who is performing the authentic wayang kulit gedek in Malaysia (Majid, personal communication, 5 May 2012). The wayang kulit gedek musical ensemble makes use of a mixture of Malay and Thai musical instruments.



Figure 2.2: Pak Noh (First Right) and His Troupe Members of Wayang Kulit Gedek

Wayang kulit gedek in Malaysia has been remarkably reactive to changes in the local Malay society. Today, it is an eclectic blend of modernity and tradition art form. It also serves as a medium for social comments in villages in Malaysia. The traditional repertoire of wayang kulit gedek is a Thai version of *Ramayana* known as *Ramakien* which is no longer used in today's performances. Today, only modernised repertoires with local dialects and humours are found in wayang kulit gedek performances. Today, the most well-known wayang kulit gedek troupe in Malaysia is Wayang Kulit Seri Asun of Kedah lead by Abdul Majid bin Mohd. Noh or commonly known as Pak Majid. He was born on 24th January, 1949 and is the second son of Pak Noh. Although Pak Majid still practices the traditions of wayang kulit in terms of the material he uses to craft his puppets and rituals for the opening of performances, he has differed far in terms of his performances (Lim, 2011: 4-5). His troupe uses mostly comedy, music and popular "history" episodes in their performances to keep it alive. His modernised version of wayang kulit gedek performances have been well-received, especially by the younger audience and has been performed all over Malaysia as well as in many world cities such as Munich, Frankfurt, Bremen, Berlin, Milan, Sicily, Rome and Paris. Apart of making a living through actual wayang kulit gedek performances, Pak Majid also produces and sells recordings of his performances in VCD and DVD format which, according to him,

is very popular and also very helpful in promoting his actual performances (Majid, personal communication, 5 May 2012).

On the other hand, wayang kulit Kelantan is a local product of traditional Malay villages and its stylistic theatrical characteristics seem to be particularly evident (Matusky, 1997: 11-12). It is first and foremost a rural shadow play theatre performed almost invariably in Malay villages or in a field on its outskirts. Scholars and locals agree that the Malay ethnicity and wayang kulit Kelantan became interwoven throughout the centuries (van den Aardweg, 2006: 8). It has reached a certain status and is regarded as a form of “high culture” or even as “high ethnic culture” due to its long history and interests it has received from locals, tourists and social scientists (van den Aardweg, 2006: 9). According to Naziree (2003: 7), the wayang kulit in Malaysia has valuable and distinctive aesthetics. Norliza Rofli, the former director of ASWARA, also believes that wayang kulit is deeply embedded in Malaysian culture and traditions and Malaysians must keep these fine traditions alive if they do not wish to have a society without soul, moral value and dignity⁹. She further declares that Malaysians need to have the courtesy and responsibility to preserve this unique local theatre art.

Matusky (1997: 11-12) points out that the distribution and popularity of wayang kulit Kelantan in the 1900s included the stages of Kelantan, Terengganu, Kedah and at one time, Perak and Pahang in Malaysia as well as southern Thai provinces of Patani. The Kelantanese sometimes call this genre of shadow play as wayang kulit Siam or wayang Siam while in other southern Thai states, it is referred to as wayang Kelantan or wayang Siam Kelantan. Regional differences do exist in certain styles such as language, repertoire, orchestration and music, yet it is still possible to identify a basic wayang kulit Kelantan style in any given location (Matusky, 1997: 12).

⁹ See Tehrani, F. (2001, December 8). *Breathing life into Malaysian's dying arts*. Retrieved February 12, 2009, from kakiseni.com: <http://www.kakiseni.com/articles/people/NzI.html>

The puppets of wayang kulit Kelantan are made of cow skin and mounted on bamboo sticks. These are handled entirely by a single puppeteer. As a solo performer who represents all the heroes and heroines in the story, it is important to highlight that the puppeteer is the key person of the performance: a master producer, conductor, puppeteer, historian, comedian and storyteller.

Wayang kulit Kelantan is performed primarily and mostly as a form of entertainment in small towns and villages and for many people, it is an evening's diversion from the routines of daily life (Matusky, 1997: 13). Apart from the entertainment-oriented wayang kulit Kelantan performances, there is another highly important performance style known as *wayang kulit berjamu* in Kelantan. This highly ritual event in the wayang world is performed only for special occasions such as wedding celebration, circumcision, demolition of an old house, initiation of a new *panggung* (performance hall of wayang kulit) or release from a vow. Unlike the entertainment-oriented wayang kulit Kelantan performances, the ritual is the most outstanding and important element in the wayang kulit *berjamu* performances (Yousof, 1992: 10).

Some efforts and attempts have been initiated to make wayang kulit Kelantan emerge as one of the art forms to serve as a cause of national unity. It has acted as Malaysia's emissary abroad and troupes have been regularly sent to conclaves on Asian arts as the Malaysian presentation (Wright, 1980: 152). Together with *menora* and *mak yong*, wayang kulit Kelantan was brought and performed in Paris for a week-long 11th Festival *De L'Imaginaire* (Festival of Imaginations) in March 2007. During the festival, wayang kulit Kelantan was performed to a full house staged by Kumpulan Wayang

Kulit Anak Sri Baju Merah from Machang, Kelantan and the Malaysian Ambassador to France, Datuk S. Thanarajasingam, was among the VIPs who graced the event¹⁰.

2.4 THE ORIGIN AND HISTORICAL BACKGROUND OF WAYANG KULIT KELANTAN

The studies and theories on the origins of wayang kulit Kelantan have been bypassed and ignored by many early scholars and researchers in related fields. The early researches and theories on the origin and development of Southeast Asian shadow puppet theatre stopped short of reaching peninsular Malaysia and did not even take into consideration the origin and development of wayang kulit Kelantan (Yousof, 2004: 104). In the 1960s, Mubin Sheppard and Anker Rentse had explored and discussed the origin of the wayang kulit Kelantan to little avail but also with much inaccuracy (Wright, 1980: 11).

According to al-Almadi (1985: 109-111), wayang kulit has its existence in Kelantan during the reign of Long Senik Mulut Merah, or better known as Sultan Muhamad II, from 1837 to 1886. During this period, there was a puppeteer named Saman performing wayang kulit based on the *Ramayana* epic using bamboo leaves. He then disseminated the art of shadow puppetry to two of his apprentices from the region of Patani, namely Pak Erot and Mak Erot. The latter, according to some puppeteers in 1970s, had introduced wayang gedek (nang talung) which then became localised and was called wayang Siam or wayang kulit Kelantan (Sweeney, 1972: 47). This theory is supported by Sheppard, suggesting that this art form may have developed in Kelantan approximately 200 years ago (during the reign of Long Yunos) with the support of local folk history, mentioning currently active puppeteers in Kelantan who are seven to eight generation descendents of Mak Erok.

¹⁰ See Choi, T. W. (2007). *Toast of French*. Retrieved January 11, 2008, from Euro File with Choi Tuck Wo: <http://eurofilewithchoituckwo.blogspot.com/2007/03/toast-of-french.html>

However, internal evidence has clearly indicated that the art form is certainly older (as early as 14th century) based on extremely strong animism, shamanism and Hindu elements found in wayang kulit Kelantan (Yousof, 2004: 116). Both the Javanese and Malaysian shadow puppet theatre have strong connections with Indonesian animism prior to the introduction of Indian influence on Javanese religion (Rentse, 1947: 12-15). Based on detailed examination and analysis on five major aspects of wayang kulit Kelantan, namely (i) the near-naturalistic designs of the puppet, (ii) the significance of the pohon beringin puppet, (iii) the god-clown characters, (iv) the ritualistic functions of shadow puppet theatre and (iv) the importance of the *Murwakala* story in rituals, Yousof presents a more convincing theory on the origin of this theatre. According to Yousof (2004: 116), wayang kulit Kelantan was probably developed during the Majapahit period as a result of the spread to Kelantan of a proto- Javanese wayang kulit purwa shadow puppet theatre.

According to Yousof (2004: 109), the near-naturalistic puppet designs of traditional wayang kulit Kelantan originated from pre-Islamic Java with the possible spread of the proto-wayang kulit purwa to the northern part of the Malay peninsula. In addition to that, the significance and functions of the pohon beringin puppet in wayang kulit Kelantan are the same with the *kayon/gunungan* puppet in Indonesian shadow puppet theatre, establishing another strong link between wayang kulit Kelantan and Javanese wayang kulit purwa. Furthermore, the role and origin of the god-clown character in wayang kulit Kelantan, Pak Dogol, is parallel with the god-clown character of wayang kulit purwa named Semar. These god-clown characters do not exist in the original *Ramayana* or *Mahabharata* and there is no convincing evidence to connect them with the comic character Vidushaka in the classical Sanskrit theatre or any other clown characters in the Indian shadow puppet theatre. On the other hand, the many parallels and similarities between the ritual performance of wayang kulit Kelantan and

Balinese shadow puppet theatre further strengthens its connection. Last but not least, the story of *Bentara Kala* used in the ritual of wayang kulit Kelantan is an adaptation of Javanese *Lakon Murwakala*, providing another important evidence of the link that binds the Javanese, Balinese and Kelantanese shadow puppet theatre.

In a nutshell, although existing and ongoing research may have or had cleared some of the obscurity through convincing speculations and theories, the exact origin and early history of this shadow puppet theatre is likely to remain shadowy due to non-existence of reliable epigraphic records.

2.5 THE REPERTOIRE OF WAYANG KULIT KELANTAN

Traditional wayang kulit Kelantan tells the improvised epic tales of the ancient classical Hindu epic *Ramayana*. Its main repertoire (*cerita pokok*) is derived from *Hikayat Maharaja Wana* which is an adapted Malay version of Valmiki's *Ramayana*. The entire saga of *Hikayat Maharaja Wana* takes about 45 nights to complete (Yousof, 2004: 71). In the past, it was the core and fundamental component of a puppeteer's training and it is mandatory for all apprentices to be equipped with in-depth knowledge of it. However, most of today's puppeteers are not fully exposed to the entire saga and are also not well-versed in it as only some popular episodes that have been disseminated by their teachers orally during their training. Today, none of the puppeteers of wayang kulit Kelantan has experience in performing the full episode of *Hikayat Maharaja Wana*. Since the 1980s, there has been no record of any full and complete episodes of the *Hikayat Maharaja Wana* performance. The reasons for this decline and abandonment is the lack of sponsors who were initially willing to pay for the 45 nights of full performance and also not much of the audience were willing to watch the full episode. Therefore, only selected episodes from *Hikayat Maharaja Wana* were used in current performances and they are no longer as popular as the extensive collection of branch

stories. In addition to these repertoires, they are also many modern repertoires invented and performed by puppeteers of wayang kulit Kelantan in Malaysia today, which will be discussed and presented in Chapter 2.9.

In addition to that, local puppeteers have developed numerous extensions or branch stories (*cerita ranting*) of the *Ramayana* and many of them are considered classics in their own right and have become standard today (Yousof, 1997: 23-26). Each branch story is a single, complete and independent piece of work which happens after the death of the main villain of the main repertoire named Maharaja Wana. These stories feature the adventures of the main characters of *Hikayat Maharaja Wana* such as Seri Rama, Laksamana, Siti Dewi, Hanuman Kera Putih as well as their offspring in events that supposedly happen after the main repertoire of *Hikayat Maharaja Wana* and *Cerita Kusi Serawi*. The major influences and sources of these branch stories are the Panji tales. The Panji tales are Javanese pre-Islamic stories of Prince Panji that was indiscriminately borrowed from the *Mahabharata* and *Ramayana* epics with Hindu and Muslim components (Winstedt, 1981: 142). Although the branch stories are based on a shared framework of people and places, each of them is an individual story that can differ from others in many aspects. Some examples of these branch stories are *Kerak Nasi* (The Crust of Rice) and *Kera Mas* (The Golden Monkey). In addition to that, some of the branch stories also make use of traditional Malay folk-tales. In some cases, the major clown characters in traditional wayang kulit Kelantan, Pak Dogol and Wak Long, have also been developed and emerged as central characters in the plots of some of these branch stories. For example, the *cerita ranting* entitled *Wak Long Menjadi Raja* (literally meaning Wak Long becomes a King) is one of the popular repertoires using Wak Long as the centre character and has been widely used by puppeteers in Kelantan in the 1970s and 1980s (Matusky, 1997: 18). In this story, Wak Long is the central character and the main connection to the root dramatic repertoire while other *Hikayat*

Maharaja Wana characters do not feature prominently but only make occasional appearances.

2.6 THE THEATRE SETTING OF WAYANG KULIT KELANTAN

The theatre of traditional wayang kulit Kelantan is called *panggung* in Malay language. In the past, it was usually a small structure made of wood and bamboo about three to four feet above the ground. The measurement of a theatre is from 10 to 12 ½ feet wide by 12 to 14 feet long (Yub, 1974: 86). The front part of the theatre measures from 9 to 12 feet high from the floor level and slopes down at the back to about three to five feet above the floor. The eaves of the roof of a traditional theatre slant slightly forward so that the screen would face downwards towards the audience who usually sit on the grass or ground during the performances. A traditional theatre of wayang kulit Kelantan is supported by four main pillars and the central pillar is known as *tiang sari*. The *tiang sari* symbolically represents strength as it is the main pillar that supports the entire construction. In addition to that, these pillars is also the place where the spirits (*semangat*) of the theatre resides and everything that relates to space and direction in the context of traditional wayang kulit Kelantan performances such as the positioning of the puppeteer and musicians have to be aligned to it (Kingham, 1998: 194). These four main pillars are the essential component of the theatre and can be divided into three levels. The first level is their bottom part that is plagued under the ground. This level is believed to have the most powerful energy as it symbolically belongs to the spirits of underworld (*jin bumi*) and puppeteers have to place a portion of their offerings on the ground at the *tiang sari* during ritual performances. The second level of *tiang sari* is the enclosed wooden floor area inside the theatre where the musical instruments and puppets are placed upon. These musical instruments have to be cleansed ritually. The third level is the upper area towards the roof of the theatre which symbolises the sky. A plate that contains the following offerings: a boiled chicken's egg, a quid of betel leaf, a

Malaysian 25 cents coin, a small container of sweet water, tobacco, rolled cigarette leaves and raw cotton. This has to be hung on this level to get protection from the spirits and to prevent any harmful interference (Kingham, 1998: 261- 262). These three levels represent and symbolise the concept of the netherworld, the earth and the sky that are united by the four main pillars and therefore, formulate the theatre of wayang kulit Kelantan as a microcosm of the universe.

The entire theatre is fully concealed with the only access being a simple ladder fixed to a door on its right side. The setting of the theatre represents the shape of a sitting dog, namely *tenggong asu* where “*tenggong*” means squatting and “*asu*” is a common Indonesian word for dog (Yub, 1974: 86). In the past, there were many taboos in the construction, location, materials used and technical aspects of a theatre. However, many of them are no longer practiced by puppeteers today. In addition, the traditional methods of theatre construction also involve certain ritual ceremonies.

The screen in the wayang kulit Kelantan theatre is commonly known as *kelir* in Malay language. It is made of a white muslin cloth stretched completely open in front across the theatre. It is also known to some puppeteers as *dinding dunia* (wall of the world) and *awang biji tera*. To stretch the screen, the upper part and both sides of the white muslin cloth are slotted through by three bamboo sticks at its stitched edge and are lashed to the beam and posts of the theatre. The bottom part of the muslin cloth is sewn with a series of loops and through each of which a five-inch bamboo piece is fixed to the nearest banana stem. It is a taboo for any performer to sit or stand about with their back towards the screen. It may also display the name and address of its puppeteer or troupe prominently at the top portion of the screen.

Currently, in ASWARA, the only institution in Malaysia which still maintains several subjects in the teaching of wayang kulit Kelantan, the traditional *kelir* has been

replaced with modern portable screen mounted on metal frames (Figure 2.3). Most of the traditional taboos and elements are no longer applicable or have been practiced. For example, the portable modern theatre is no longer concealed by walls and a roof and the audience is able to watch not only the shadow images but also the performers behind the screen during the performances.

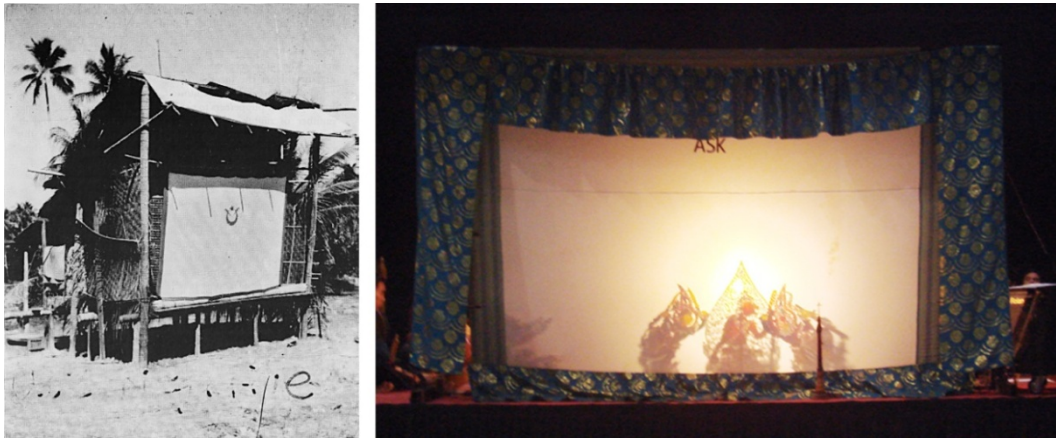


Figure 2.3: The Traditional Panggung (Left Image Courtesy of Sweeney) and Modern Panggung in ASWARA (Right)

The two essential items for a theatre are banana stems (*batang pisang*) and a lamp (*pelita*). Traditionally, a pair of banana stems of varying thickness is placed upright on the theatre floor behind the screen. These stems with varying thickness enable a puppeteer to arrange his puppets by piercing their handles into the stems in a manner reflective of the puppets' status. Noble and refined puppets are positioned on the thicker and higher stem and the lesser puppets usually have a place on the lower stem. In the past, the selection of banana stems has to follow and meet certain criteria; the variety of stem preferred is of benggala banana but other types of stems such as *pisang awak* or *pisang abu* is also acceptable. Stepping over the banana stems is strictly prohibited and it is believed that doing so will result in one's suffering from mental aberration or illness. When all performances have ended, these banana stems must be appropriately disposed (preferably into a river or sea) to avoid being stepped on by

human beings, for it is believed the person who does so will suffer from fever or convulsive fits.

Today, Pak Dain still uses the two banana stems in his theatre setting in Kampung Morak, Kelantan but Pak Soh of Kampung Laut uses only one banana stem. On the other hand, the modern wayang kulit Kelantan theatre setting in ASWARA has replaced the banana stems with sheets of Styrofoam, extended almost to the length of the performing screen (Figure 2.4). The borders and base of these sheets of Styrofoam were framed and attached to woods in order to add weight and fix its position when a puppeteer plunges and pulls his puppets out of it. Most of the traditional taboos and practices are no longer applicable or practiced in wayang kulit Kelantan theatre setting and construction today.



Figure 2.4: The Modern Theatre of Wayang Kulit Kelantan in ASWARA

The shadow images of puppets are cast by a lamp which is suspended from the top and roughly at the screen's centre behind the screen. The lamp symbolises the sun and its light symbolises superior knowledge and revelation or truth received by prophets and saints through revealed scriptures. Traditionally, only the master puppeteer can light it or put it off (Yousof, 1997: 62).

In the earliest wayang kulit Kelantan performances, the light is produced by the burning wick (*sumbu*) of the lamp. The wick (about six to seven inches long) is made of raw cotton and immersed in a row rimmed bowl which contains fuel from animals' fat or coconut oil. The wick is then kept in the bowl with a heavy material such as a piece of metal or stone and is placed on the hollow base of a wooden frame (about six to nine inches by 4 $\frac{3}{4}$ to 6 $\frac{1}{2}$ inches wide and $\frac{3}{4}$ to one inch thick). The "L" shaped wooden frame is made of heavy wood and the back of its stand (about 12 $\frac{3}{4}$ to 15 $\frac{1}{2}$ inches high by 5 $\frac{3}{4}$ to 10 $\frac{3}{4}$ inches wide) is shaped in the traditional pattern and some of them have grotesque figures of Jin Putrakala with long fangs, carved and painted in gold, red, black, white, yellow, blue and brown (Yub, 1974: 98-100). There is a hole of various designs such as circular, oval, diamond, square and heart-shaped in the wooden frame to enable the puppeteer to see whenever he manipulates his puppets. The wooden frame that holds the lamp in position also serves as a shield to prevent the light from shining directly onto the puppeteer's face. It is hung using a rope, fishing string or tree bark and attached to a metal hook fixed at the top of the stand or wound around the notches made at the top of the stand. The rope has both ends tied to the third and fifth rafters of the panggung at about four feet apart and hung in a "V" shape between two to three feet from the floor. The height and position of the wooden frame's hole has to be adjusted to the puppeteer's eye level and at a comfortable distance when he performing in a cross-legged gesture.

The use of the traditional hanging lamp has been gradually replaced with a cheaper kerosene or gasoline lamp and electric bulb. Today, the electric bulb has totally replaced the oil or paraffin lamp used in wayang kulit Kelantan performances (Figure 2.5), though some puppeteers and scholars agree that the dim light and the flickering effects of the burning wick gives a more dramatic effect to the shadow images on the screen.



Figure 2.5: The Light Source in a Modern Wayang Kulit Kelantan Performance

The performance is accompanied with an orchestra consisting of musicians who play on one quadruple-reed aerophone known as *serunai*; three pairs of drums called *gedumbak*, *geduk* and *gendang*; two sets of gongs called *canang* and *tetawak*; and two pairs of small hand cymbals known as *kesi*. The traditional troupe of wayang kulit Kelantan is exclusively a seven to eleven member male group (including the puppeteer) that does not include any woman. However, this practice is somehow being broken such as in 1991, an American researcher named Mary Beth Osnes came to Malaysia to learn the art of wayang kulit Kelantan from Pak Hamzah for her PhD study. Osnes performed the “Dalang Muda” episode of wayang kulit Kelantan at the Cultural Complex (Gelanggang Seni) in Kota Bharu. Her performance has surprised and thrilled the audience and was even praised by Pak Hamzah as a sensational performance because there has never before been a female puppeteer in a wayang kulit Kelantan troupe, not to mention that she was also a foreigner (Osnes, 2010: 164).

There are approximately 35 songs in traditional wayang kulit Kelantan performance. The puppeteer uses either vocal signals or a wooden clapper known as *pemetik* to hint his troupe members on the change in music and song during the performance (Yusof, 1997: 21). The puppet movement is dependent upon the music of the orchestra. In addition to that, it also makes the first contact with the intended audience before the performance begins. Prior to the commencement of the repertoire, the musical prelude starts off to alert the audience that a performance is about to begin

and to awaken a readiness for the experience as well as to generate excitement for the performance that is to follow (Osnes, 2010: 79).

2.7 THE PUPPETS OF WAYANG KULIT KELANTAN

According to Zahari (2008: 106), there are two major types of wayang kulit Kelantan's puppet design. The Sungai Kelantan is the border of these two different designs of wayang kulit Kelantan's puppets. The puppets of wayang kulit Kelantan from the west regions of Sungai Kelantan such as Pasir Mas, Tumpat and Tanah Merah resemble one type of design; while the puppets from the east regions of Kota Bharu, Bachok and Pasir Putih depict another design. This theory is yet to be confirmed as there is no mention of it in almost all publications of researchers and exponents of this field.

Puppets of traditional wayang kulit Kelantan are different in size; the shorter ones stand about six to nine inches in height while the taller ones can be over 24 inches (Yousof, 2004: 66). They are made of properly treated cowhide and mounted on bamboo sticks. Initially, the puppets of wayang kulit Kelantan cast only black shadows with reference to the 149 wayang kulit Kelantan puppets of Abas puppeteer which are still being preserved in Cambridge University (Zahari, 2008: 104). However, wayang kulit Kelantan puppets found today are carved out of thin cow skin and painted with batik colours which enable them to cast colourful shadows onto the screen. These colourful shadows are noticeable in wayang kulit Kelantan, wayang kulit gedek and Thai and Chinese shadow puppet theatre. However, the puppets in Javanese wayang kulit purwa are opaque and on the screen, they are seen as dark shadows articulated by precise lace-like perforations.

The puppeteer is the key person in the performances of traditional wayang kulit Kelantan. He is a master producer, conductor, puppeteer, historian, comedian as well as

storyteller. According Pak Nasir, it requires about 15 years of learning process to become a qualified and professional puppeteer of this traditional shadow puppet theatre genre¹¹.

In traditional wayang kulit Kelantan, the most important puppet among all is the pohon beringin puppet. This puppet is also found in Javanese and Balinese shadow play theatre and known as kayon, kakayona or gunung. It is a highly elegant tree or leaf-shaped puppet shown during all opening and closing performances. According to Kingham (2006: 68-70), there are two types of pohon beringin puppets; one is filled with arabesque designs of vegetal patterns on its entire surface and the other is designed and crated with motifs from natural environments such as birds, fish, crocodiles, elephants, monkeys, snakes, tree, branches and flowers on a shape of a large leaf, tree or mountain. Both sides of the pohon beringin puppet are a mirror image of the other. It has to be placed in the centre of the screen before a performance begins, separating the opposite groups of good and evil characters to the right and left of the puppeteer (Kingham, 2006: 2-3).

In wayang kulit Kelantan performances, the pohon beringin puppet represents the World Tree or Cosmic Mountain which links the earth and sky (Yousof, 2006: 109-110). It also symbolises the cosmos-like the main tiang sari in the theatre of wayang kulit Kelantan-with different levels of creation manifested in it. It encapsulates the essence of all things in the performance, reflecting all phenomena and objects in the natural world.

Most of the wayang kulit Kelantan puppets have only one articulated arm, the most famous principal puppets being Seri Rama, Laksamana, Siti Dewi and Maharaja Wana. In addition to that, almost all the male puppets are bare above the waist except

¹¹ See Tehrani, F. (2001, December 8). *Breathing life into Malaysian's dying arts*. Retrieved February 12, 2009, from kakiseni.com: <http://www.kakiseni.com/articles/people/NzI.html>

the modern creations. However, the clown and lesser characters usually have both arms articulated, and some even have movable jaws, eyebrows and legs.

The designs of these puppets depict the concept of refinement (*halus*) and coarseness (*kasar*), a concept used in the Javanese shadow play. In general, the refined or coarse puppets are always identifiable from their size or bulk, details such as the nose and mouth shapes and sizes of eyes, the length of their fingernails and their overall stances (Yusof, 2004: 107-109). Apart from that, the refined or noble puppets are always good- looking and gentle with slim and calm exterior (Figure 2.6Figure). In addition to that, the refined characters are always made with legs of slender dimensions placed close together while the coarse characters are always given a kind of vaulting posture.



Figure 2.6: The Concept of *Halus* (Left) and *Kasar* (Right) in the Puppets of Wayang Kulit Kelantan

However, although the physical appearance of the puppets may suggest the status of refinement and coarseness of certain characters, mainly the protagonists, it is not always true for the rest. Some refined characters may depict coarse visuals in their physical appearance and vice versa depending on their roles and which side they stand on in the repertoire. One of the examples would be the notable ape character Hanuman Kera Putih, who is the son of Seri Rama and Siti Dewi in ape form. Although his puppet

shows a coarse visual appearance and design elements of a bulky body size, broad and bulbous nose, big round eye and large mouth with teeth showing; he in fact belongs to the category of refined characters due to his divine origin and role in the repertoire.

The clown characters in traditional wayang kulit Kelantan, Pak Dogol and Wak Long, is a pair of special characters that fit neither the refined nor coarse category. They do not exist in the *Ramayana*. It is believed that they emerged from pre-Hindu times and possibly out of the animistic setting of a dark past. In wayang kulit Kelantan, puppeteers believe Pak Dogol is the incarnation of Dewa Sang Tunggal or Dewa Si Alam, a god superior even to Bentara Guru (Shiva), who descended to earth to serve and help the protagonists.

The complementary study on the visual aesthetics of the puppets of wayang kulit Kelantan is lacking. In addition to that, a proper system or method is yet to be developed in order to classify these puppets. Therefore, Chapter Three of this thesis performs a detailed study on these topics.

2.8 THE PERFORMANCE STANDARD OF WAYANG KULIT KELANTAN

In traditional wayang kulit Kelantan, there are two types of performances which are of normal entertainment-based and spiritual-based. Today, spiritual-based performances are rarely performed in urban areas. It is known as wayang kulit berjamu (feasting of the spirits) performances which can be of five kinds: (i) *pelimau* (bathing with limes) as a graduation of a puppeteer training, (ii) *menyemah* as a prophylaxis against cholera, (iii) *pelepas niat* as a fulfillment of a vow, (iv) *buka panggung* as the opening of a new theatre and (v) *semah angin* as the curing of ailing puppeteers. All of these forms of *berjamu* share similarities in their performance standards. The idiom and limelight of these performances is the ritual possession and trance of the puppeteer known as *main puteri* (Wright, 1980: 3). This type of performance commonly takes

three nights and four days. The first two nights are ordinary wayang kulit Kelantan performances, followed by a third night of a series of ritual preparatory for the feasting of the puppets and spirits. In the final part of berjamu performances (usually on the morning of the fourth day), main puteri session takes part to serve the purpose of inviting and bringing down the spirits of all possible categories for the purpose of “feasting” or “eating” of the offerings. The offerings for the spirits include: yellow glutinous rice (*pulut kuning*), parched rice (*bertih*), turmeric rice (*beras kunyit*), a fried egg, cakes, fritters, betel leaves, betel nuts, rolled cigarettes, tobacco, cotton thread, money for services rendered (*wang pengkeras*) and incense of benzoic (*kemenyan*).

The two major clown puppets in wayang kulit Kelantan, Pak Dogol and Wak Long, play the most importance roles in the trance sessions of main puteri. At this point, Pak Dogol symbolises the mythical original teacher of all puppeteers and Wak Long is the messenger and symbolised body of the puppeteer. The puppeteer uses the Wak Long puppet to invite the gods, spirits and demons for the feasting ceremony. In such performances, the spirits sometimes literally “eat” the offerings through the Wak Long puppet (Yousof, 2004: 54). After the feasting ceremony, both the clown puppets and Maharisi puppet have to be dipped into three pots of water and croton leaves in order to cast away the spirits.

Today, wayang kulit Kelantan performances are mainly performed for the purposes of entertainment, commercialism and tourism. Occasionally, it has also been used to spread and present messages and ideology of local authorities or opposing political parties. For example, the Ministry of Information inaugurated a programme in 1971, making agreements with the puppeteers to use the story of Maharaja Wana opposing Seri Rama to symbolise the invasion of local Communists into Malaya. In these performances, the clown characters were used to present and convey the government’s messages to audiences. The shadow puppet theatre troupe employed by

the government has to carry out its performances with written scripts in *kawasan hitam* (black regions) where communist terrorists were still active. These areas are located at the northern part of Malaysia, on the Thai-Malaysian border and in certain jungle areas, whereby the shadow play troupe is brought by boat or helicopter into more inaccessible areas. These performances are accompanied and monitored by Ministry official(s). The results and outcomes of these performances have been proven satisfactory and favourable by audiences (Wright, 1980: 157-158).

According to Yousof (1997: 49-50), a standard entertainment-based wayang kulit Kelantan performance usually begins at about 9 p.m. In the past, members of the troupe would have to gather and get themselves ready at the puppeteer's house prior to the departure to the performance theatre. They have to prepare all the items and equipment and would perform the opening signal piece (*lagu bertabuh*) as well as other pieces featured in the prelude to ensure that all essential equipments and musical instruments were present and available. Some of the performers believe that the music played at this moment will inform the unseen spirits that a performance was about to kick off and to seek their permission and cooperation in ensuring the safety and protection of the performance.

In general, a standard wayang kulit Kelantan performance consists of six major activities. These activities are: (i) the preparation of the stage, (ii) the theatre consecration or rituals, (iii) the musical interlude, (iv) the "Dalang Muda" episode (prologue), (v) the performance of the selected episode and (vi) the ritual closing of the theatre.

The first stage, which is the preparation of the stage, includes placing two banana stems on stage, fixing the screen, placing various instruments upon the stage in correct positions and planting the puppets onto the banana stems in proper hierarchy and

order. In traditional practices of wayang kulit Kelantan, these procedures must abide certain taboos.

A theatre consecration ritual is mandatory on the first night of traditional wayang kulit Kelantan performances. It is believed that the rituals consist of several significant meanings and purposes. One of its purposes is to ensure the safety of all performing members and audience during the entire performance. It is also believed that the consecration rituals can maintain the popularity and fame of the puppeteer and his troupe and keep a good relationship between the performers and supernatural forces by paying respect, salutation and feeding of these supernatural beings through offerings during the rituals. It consists of the recitation of the ritual formulae, preparation of special offerings intended for the immediate mentors of the puppeteer/ Ultimate Teacher, preparation and placement of offerings on the designated position on the theatre floor, initiation of musical instruments and lastly, commencement of the signal piece *lagu bertabuh* that marks the ending of the theatre consecration and the opening of a performance.

The musical interlude starts immediately after the theatre consecration in which a series of tunes from the musical repertoire are played continuously. It aims to gather the audience and, at the same time, allow the performers, especially the puppeteer(s), to complete any personal spiritual preparations before handling the puppets.

The “Dalang Muda” episode is normally performed only on the first night of the performance. However, some puppeteers tend to perform a shorter version in all their performance nights. Literally, *dalang muda* means apprentice puppeteer and this episode should be performed by an apprentice puppeteer to give him experience and bring him into contact with his future audience. Ironically, this episode is always performed by a senior and experienced puppeteer in the actual performance to attract

more audience. The “Dalang Muda” episode also has ritual significance which contains a prayer for the safety of the puppeteer, his troupe members and the audience. Two broad sections of this episode is the battle of the godlings with bows and arrows and the entry of Seri Rama. Each of these section consists of several sub-divisions. The full version of the “Dalang Muda” episode takes between 30 and 45 minutes of performance time.

The “Dalang Muda” episode is a microcosmic view of wayang kulit Kelantan performances, for it involves all the techniques, including intricate patterns of puppet manipulation like specific movements for battle; walking or parading characters of all types; the entrance and exit of characters, flying and descending from the heavens; the swaying and waving of pohon beringin; and the posture of obeisance (Matusky, 1997: 21-25). It depicts many unique visual aesthetics of wayang kulit Kelantan, including the distortion and exaggeration of the shadows of pohon beringin and the descending, fighting and ascending scenes of the two godlings, Dewa Panah Laki-Laki and Dewa Panah Perempuan, with bows and arrows.

After the “Dalang Muda” episode, the performance of the selected play will begin. The duration of the performance is determined by the sponsor or the length of the episode performed. Puppeteers tend to make appropriate amendments in their performances to accommodate time constraints. It is very common for them to create customised ranting episodes when performances are required for several nights in a public fair. In such circumstances, of course, the traditional repertoire or even portions of *Hikayat Maharaja Wana* are seldom the first choice.

Finally, the ritual closing of the theatre is indeed a very simple process. After the puppeteer completes his performance and before placing his puppets into the folio, he has to recite certain mantra into a fistful of turmeric rice which he then throws in

various directions on the stage, over the instruments, puppets and even his own body. This mantra consists of words expressing appreciation to the supernatural forces that have granted the safety of the performance.

2.9 THE SITUATION OF WAYANG KULIT KELANTAN IN MALAYSIA

In the 1980s, wayang kulit Kelantan was one of the most popular traditional art forms and theatre in Kelantan with the existence of more than 300 puppeteers (Sweeney, 1972: 53, Wright, 1980: 4). However, today there are only three active professional puppeteers in Kelantan who could perform traditional wayang kulit Kelantan (Pak Soh, personal communication, November 17, 2012).

One of the major factors for the decline of this traditional art is the process of modernisation which has effectively brought cinemas and videotape recorders to Malay villages (Yousof, 1997: 11). The patterns and styles of living in Malaysia have changed rapidly due to the development and advancement of science and technology in the country. As a result, this has brought along new alternatives of entertainment, such as television and cinema, which are more popular compared to traditional shadow puppet theatre. Nowadays, the modern home is usually equipped with electronic devices such as television, DVD player, video games and the Internet. In this information age, people prefer to watch modern characters on television such as SpongeBob and Ben10 compared to traditional characters such as Seri Rama, Siti Dewi or Arjuna in wayang kulit. Many people in this age of globalisation would rather watch musicals at the theatre, HBO, Akademi Fantasia and American Idol on satellite television, or Hollywood movies on their mobile phones than attend traditional wayang kulit

performances. As a result of the introduction of these modern entertainment alternatives, wayang kulit faces the predicament of fading from people's memory¹².

Wayang kulit Kelantan has its origin in Kelantan yet Kelantan is the only state in Malaysia where its performance has been banned for a period of time. It has been the main objective of Parti SeIslam Malaysia (PAS) to create an independent Islamic state in Malaysia (van den Aardweg, 2006: 4). Almost immediately after PAS was voted into power in Kelantan in 1990, wayang kulit Kelantan was declared un-Islamic. PAS perceives the stories and rituals in the traditional wayang kulit Kelantan performance as un-Islamic. In addition to that, PAS also points their finger at puppeteers when the latter honour their puppets during the opening of wayang kulit Kelantan performances and offer food to spirits in order to lure them onto the stage to perform. PAS denounces these rituals as blasphemous in Islam. Consequently, wayang kulit Kelantan is restricted to be performed only in private homes and permits need to be obtained to perform in public places. As a result of PAS's restrictions against wayang kulit Kelantan, many puppeteers decided to retire, most of them forced to look for second jobs in order to survive in Kelantan (van den Aardweg, 2006: 5-6).

Yusof (1992: 12) points out that another major problem faced by traditional wayang kulit Kelantan is the problem of disseminating these delicate skills. Based on a closed system of individual attachment or "discipleship", the art of puppeteer is traditionally passed down orally to the direct descendants of masters. It is not well-documented because on the whole, the older generations of practitioners of this art form have been reluctant to share their knowledge with outsiders. However, since wayang kulit performers cannot be self-sufficient on performances alone in Malaysia, not many venture into this traditional performance; even the offsprings of puppeteers are not too

¹² See Terengganu Tourism. (2008, September 19). *Stage Performance-Wayang Kulit*. Retrieved February 12, 2009, from terengganutourism.com: <http://terengganutourism.com>

keen to carry on with the arts (Said Nong, 2008: 134), one such example being the National Arts Award winner-cum-famous puppeteer of wayang kulit Kelantan, Pak Hamzah. He did not even wish his sons to become puppeteers after all the difficulties he had encountered and endured in addition to the lack of support from local authorities and audiences (Osnes, 2010: 159).

In addition to that, there is a lack of interest amongst Malaysians at nearly all levels of society in wayang kulit. Over the years, only a handful of local practitioners, scholars and researchers have emerged to establish themselves in this area. According to Osnes (2010: 166), Malaysians generally perceive the local wayang kulit art forms as nothing more than a mere rural form of entertainment localised in Kelantan and even most urban Kelantanese people do not take it seriously: it is at best a mere curiosity and frivolity.

The problem with the repertoire used in wayang kulit Kelantan is also one of the reasons for its decline in Malaysia (Yousof, 1992: 11-12). The major repertoire of wayang kulit Kelantan, *Hikayat Maharaja Wana*, may be appreciated and favoured in Kelantan and some neighbouring states but not to Malaysians outside these regions. Furthermore, the Kelantanese and Sanskrit dialects used in traditional wayang kulit Kelantan are also not comprehensible to most of the audience outside Kelantan.

Another element that lead to the decline of wayang kulit Kelantan in Malaysia is the ignorance on the importance of culture preservation among societies in Malaysia at the early stages after independence in 1957. According to Abdul Rahman (2000: 63), the growth of art and culture in Malaysia after independence was not as important and urgent as the growth of economical and political developments. The urbanisation projects were always top priority for the government. The immediate attention of Malaysian societies and government after independence was dedicated to eradicate

poverty among rural people and the government thought that the urbanisation of rural areas would help to increase the per capita income of every Malaysian (Abdul Rahman, 2000: 64). The Malaysian government took more than a decade to find out that economic stability alone would not be able to prevent racial conflicts after the May 13, 1969 incident. This statement was supported in a speech given by Tun Abdul Razak, the second Prime Minister of Malaysia. When Tun Razak officially opened the first National Congress of Culture in August 1971, he stressed that every Malaysian must always be guided by the aspiration to have a peaceful country, where all citizens are united and bound in a common cultural identity. Furthermore, this national identity must be based on the prospering and rich cultural heritage of indigenous Malays and also include the long-standing and suitable elements of migrant cultures. Nevertheless, Yousof (1992: 12) claims that the Ministry of Culture, Youth and Sports (KKBS) has taken very little positive action to stem the tide of decline that nearly lead to the extinction of wayang kulit Kelantan performances in later decades. In fact, many of the traditional theatre in Malaysia such as wayang kulit, mak yong and *bangsawan* suffered neglect and slow death after being withered off for about 20 years after independence. It is obvious that there were no significant attempts made at preserving traditional theatre in Malaysia (Said Nong, 2008: 134).

2.10 THE NEW FORMS OF WAYANG KULIT IN MALAYSIA

Given the current critical situation, Malaysian puppeteers have brought in many innovations and modifications into their performances in the past several decades to sustain both their livelihood and performances. These include innovations and new inventions in the design of puppets, music and performing repertoire. In addition to that, several new forms of wayang kulit have also been developed. Some puppeteers even

make their living depending upon the sales of recordings of their wayang kulit performances in VCD or DVD formats rather than actual performances.

In 1970s and 1980s, some puppets of wayang kulit Kelantan were made of less expensive materials such as plastic sheets or X-ray plates rather than rawhide (Osnes, 1992: 69; Sweeney, 1972: 35). It therefore resulted in very bright reflections and colourful shadow images on screen. However, many traditional and veteran puppeteers of wayang kulit Kelantan do not accept and tolerate such variation and innovation (Osnes, 1992: 69). Pak Hamzah mentions that this new form of shadow puppet theatre, in a teasing yet protesting mood, should be called as *wayang plastic* rather than wayang kulit.

In 1991, a different sort of puppeteer living in the village of Gunong named Hassan Bin Daud used cardboard instead of cowhide to make his own style of wayang kulit Kelantan puppets. According to Osnes (2010: 89), the design of his puppets was nearly an equal mix of traditional wayang kulit Kelantan styles with the design aesthetics of Pablo Picasso. He presented his wayang kulit Kelantan performances with all the traditional elements in miniature and more economically executed (Osnes, 2010: 90). He used a small screen, approximately one-fourth the size of a usual screen, and recorded wayang kulit Kelantan music so that he could carry out his performances without having an entire musical troupe. The portable setting of his performance enabled him to pack them onto his bicycle and perform anywhere. Osnes (2010: 90) names this one-of-a-kind form of wayang kulit Kelantan as *wayang kertas* (literally meaning paper shadow puppet theatre). Again, this new form of shadow play theatre is not accepted by both local veteran puppeteers and audience, some even referring to him as an insane puppeteer.

In the 1990s, some inventions have been carried out by puppeteers of wayang kulit Kelantan using characters from Islamic legends in their performances. One example is the story of Amir Hamzah (Matusky, 1997: 18-19). In these stories, puppets in full face wearing modern street clothes were used by puppeteers who were heavily influenced by southern Thai shadow puppet theatre in their performances.

Some puppeteers have made the effort to modernise wayang kulit Kelantan in Malaysia to lure younger audience. Today, most of them use modern repertoire that emphasises comedy rather than the traditional *Hikayat Maharaja Wana* repertoire (Yousof, 2007: 96). Puppeteer Saufi in Kelantan is one of the best-known puppeteers who has introduced modern repertoires and characters in his wayang kulit Kelantan performances. He had performed his new wayang story entitled *Demam Bollywood* (2001), featuring famous Hindustani movie star Shah Rukh Khan with a modern and naturalistic puppet. In addition to that, Saufi also collaborated with the Malaysian Philharmonic Orchestra (MPO) to present a short wayang kulit Kelantan episode accompanied by Western classical music in 2007.

In 1979, a new form of wayang kulit was developed by Ghulam-Sarwar Yousof and Pak Hamzah at Universiti Sains Malaysia (USM) in Penang, Malaysia. This new form of wayang kulit is given the name *wayang kulit Malaysia*. It aimed to enhance interest and appreciation amongst urban Malaysians in traditional Malaysian wayang kulit. Wayang kulit Malaysia adopted repertoire that was less controversial from the Malay *Hikayat Raja Muda*, the Indo-Muslim romance *Bunga Bakawali* and the Chinese *Monkey King* story. In addition to that, the story of the wily mousedeer, *Sang Kancil*, was developed exclusively for children. This new form of shadow puppet theatre adopted orchestra and some music from traditional wayang kulit Kelantan. However, even though the new puppets were interesting and performances were fairly successful, the project did not last beyond the semester.

Another new form of wayang kulit called *wayang kulit semangat baru* came into being in Kelantan in 2004. Although still using the same music and other techniques from traditional wayang kulit Kelantan, this new form of wayang kulit has completely abandoned the puppets of traditional wayang kulit Kelantan and made use of a set of totally new puppets. The new puppets portray a mixture of Malay and Middle Eastern visual aesthetics in an almost realistic configuration. This new genre of wayang kulit was invented to replace the controversial wayang kulit Kelantan and it had the tacit support of the Islamic-oriented Kelantan state government as well as financial support from the Dewan Bahasa dan Pustaka (Council for Language and Literature) or DBP. The one story used in performances and its repertoire was loosely based upon the Japanese invasion of Kelantan with Islamic teachings. Its debut took place in an International Seminar on the shadow play on 1st and 2nd of July 2004 at University of Malaya (UM) in Kuala Lumpur (Yousof, 2006: 14-16). However, only few performances of wayang kulit semangat baru have actually been performed.

In December 2003, a new form of shadow puppet theatre named *wayang kulit dewan bahasa*, sponsored by DBP, was developed in Kelantan. It was designed by the Kelantanese puppeteer named Nik Mat in co-operation with DBP (van den Aardweg, 2006: 7). This particular wayang kulit puppet theatre containing Islamic elements, and with figures designed in realistic manners and in Islamic costumes, was in fact officially sanctioned and favoured by the Kelantan state government.

Tintoy Chua, an award-winning character designer-cum-founder of the Action Tintoy Studio in Malaysia, has collaborated with Take Huat, a skillful designer, to combine puppets of traditional wayang kulit Kelantan with characters from the popular Western science fiction blockbuster movie *Star Wars* in their project entitled *Peperangan Bintang* (literally, Wars of the Star) in July 2012. One of the main objectives for this project was to revamp and promote the wonderful traditional art of

wayang kulit Kelantan to the public, especially to younger generations. They have intervened the features and design elements of the protagonists of both wayang kulit Kelantan and *Star Wars* movies. The character Darth Vader in *Star Wars* has been reinterpreted as the main villain Maharaja Wana and Luke Skywalker as Seri Rama in wayang kulit Kelantan (Figure 2.7). While incorporating some of the recognisable *Star Wars* elements into two of their fusion puppets, Tintoy Chuo also tried to stay as true as possible to the traditional details and essentials of wayang kulit Kelantan. These two hybrid-form puppets have their names in fusion as well: Maharaja Dah Vedeh and Perantau Langit. This new attempt received overwhelming favourable and enthusiastic response from the public and has further encouraged Tintoy Chuo and his team to design more fusion puppets based on both wayang kulit Kelantan and *Star Wars* themes as well as produce an actual *Peperangan Bintang* wayang kulit performance¹³. Tintoy Chuo and his team are now working on another new attempt: to create a new puppet by combining elements of the notable jester character of wayang kulit Kelantan and *Star Wars*, namely Pak Dogol and C3PO.



Figure 2.7: Maharaja Dah Vedeh and Perantau Langit puppets of Peperangan Bintang

¹³ See Cheang, M. (2012, September 29). *The Force is Stronger with This Unique Creative Project that Combines Traditional Wayang Kulit with Star Wars*. Retrieved January 11, 2013, from The Star Newspaper:
<http://www.thestar.com.my/story.aspx/?file=%2f2012%2f9%2f29%2flifeliving%2f12029873>

Overall, performances of all these new forms of wayang kulit in Malaysia are virtually at a standstill. In addition to that, the new creations of wayang kulit Kelantan puppets were less intricate compared to the traditional ones; even occasional revivals are not forthcoming (Yousof, 2007: 96). They were designed and carved within a short period of time to fit into the newly-developed stories and had only tenuous connections with the time-tested traditional puppet theatre. On the other hand, some puppeteers refused to give up on the traditional *Ramayana* epic stories, considered by them to be the only true and authentic version of wayang kulit Kelantan performance (van den Aardweg, 2006: 7). Osnes (1992: 37) reports that of the six active puppeteers of wayang kulit Kelantan in Kelantan, two of them (Abdullah Abraham and Hamzah Awang Hamat) are deceased and on the author's personal communication on 17th December 2012 with Pak Soh, the latter opined that at the moment, there are only three active professional puppeteers in Kelantan who could perform the entire *Hikayat Maharaja Wana* repertoire of traditional wayang kulit Kelantan.

2.11 THE CONTEXT OF WAYANG KULIT KELANTAN IN OTHER MEDIA

The context and themes of traditional wayang kulit have been important influences to the evolution of the visual arts of Malaysian artists and are still revered and treasured as national heritages (Naziree, 2003: 11). The themes of wayang kulit and its visual aesthetics have appeared in many masterpieces and artworks by local artists. Nik Zainal Abidin Salleh (1931-1993) was among the first Malaysian artists who drew inspiration from the wayang kulit tradition (Sabapathy, 1994: 43-44). As shown in Figure 2.8, he utilised the highly stylised shadow puppets and rearranged their colourful and dramatic forms within a flattened pictorial format that draws parallels with highly cultivated Southeast Asian traditions and art forms in the context of modern artistic creativity.



Figure 2.8: Nik Zainal Abidin's *Wayang Kulit Kelantan* (1959)

Nik Zainal Abidin's efforts to draw motifs and themes directly from wayang kulit had resulted in a highly distinctive approach towards creativity which he maintained throughout his life. He had produced at least 10 artworks in the collection of National Art Gallery Malaysia (Balai Seni Lukis Negara, BSLN) which infuses the visual aesthetics of wayang kulit. The titles of these artworks are: *Puja Pantai* (1958), *Wayang Kulit Kelantan* (1959), *Seni Melayu* (1959), *Maharaja Boma* (1960), *Salasilah* (1961), *Wayang Kulit 1* (1961), *Semar and His Lover* (1962), *Bangau* (1962), *Durupadi* (1970) and *Wayang Melayu* (1982). Nik Zainal Abidin incorporated many types of wayang kulit visuals in his artwork, including wayang kulit Kelantan, wayang kulit purwa and wayang kulit Melayu. The identity of Malaysian culture was shown by arranging the puppets of the wayang kulit on both sides of the kelir in his artworks in his own perceptions with no restriction to the originalities of wayang kulit performances (Zahari, 2008: 109). According to Sabapathy and Piyadasa (1983: 12), Nik Zainal

Abidin has made a number of customary alterations: when forms are taken from one art medium and used in another in order to render them adequate as pictorial motifs and to satisfy the conventions of painting. Today, he is regarded as a master painter who set an important trend in Malaysian arts and his works are still studied by the new generation of artists (Naziree, 2003: 9).

Another outstanding local artist who is also famous for utilising the visuals and context of wayang kulit Kelantan in his artworks is Yusoff Haji Abdullah (1926-2006). He was a classmate of Nik Zainal Abidin. Both of them were taught by the same art teacher, Nik Mahmod Nik Idris. Compared to the artworks by Nik Zainal Abidin, those by Yusoff Abdullah showed more originality of the actual wayang kulit (Zahari, 2008: 109-110). There is also a batik artwork by Yusoff entitled *Wayang Kulit* (1988) in the collection of BSLN. This drawing shows a puppeteer holding a Seri Rama puppet in his right hand and a Rawana puppet in his left hand, symbolising the battle between good and evil, together with the musical instruments of wayang kulit Kelantan on the floor. Yusoff's works demonstrates immense speciality as he shows his loyalty and faithfulness to the originality of wayang kulit Kelantan (Figure 2.9) without borrowing any visual elements from other wayang kulit performances in Malaysia such as wayang kulit Melayu and wayang kulit purwa (Zahari, 2008: 109).



**Figure 2.9: Yusoff Haji Abdullah's *Wayang Kulit* (1960),
Oil Painting on Canvas (70 x 85 cm)**

Apart from Nik Zainal and Yusoff Abdullah, there are also several Malaysian modern artists who utilise elements in wayang kulit in their artworks such as Romli Mahmud, Dr. Mohamed Najib Ahmad Dawa, Ismail Kadir, Abd. Rani Abd. Majid, Faizal Sidik, Yong Chien Chin and Termizi Mukhtar. Among the other artworks that utilises the visual elements of wayang kulit Kelantan are Romli Bin Mahmud's *Akhirnya ke Kamar Jua II* (1986) and Termizie Mukhtar's *Wak Long Menjadi Raja*. *Wak Long Menjadi Raja* is a popular branch story of wayang kulit Kelantan in the 1960s and 1970s. Termizie Mukhtar is a Kelantanese artist who depicts the visuals and elements of traditional wayang kulit Kelantan in most of his artworks. He had started practicing drawing the puppets of wayang kulit Kelantan from a well-known puppeteer in Bunut Susu, Pasir Mas, Puppeteer Ismail since he was in primary school (Zahari, 2008: 110-111).

In 2007, a group of Malaysian theatre artists, visual artists, musicians and writers initiated *Projek Wayang* to explore the potential of using wayang kulit Kelantan as a point of departure in their understanding of the development of shadow puppet theatre in Kelantan and to promote these theatre forms to the rest of Malaysia. The play from this group entitled *Dua, Tiga, Dalang Berlari* was performed in the summer of 2007 to engage art practitioners from various fields in an attempt to engage with the wayang kulit Kelantan tradition. The staging of the play inculcated the traditions of wayang kulit Kelantan with portions of scripts taken from the traditional wayang kulit Kelantan repertoire and based on the story of two famous puppeteers, Pak Hamzah and Pak Dollah Baju Merah. The major innovation of this play is the use of human figures rather than puppets to make shadows on the screen at the back of the playing space. In addition to that, the principal coordinators of the *Projek Wayang* experimentation group, Fahmi Fadzil and Azmyl Yunor, also performed their new wayang kulit creation entitled *wayang pasar* at Kuala Lumpur's CapSquare in 2009 using light bulbs. The humorous sketches were all in Bahasa Malaysia but was comprehensible even for those who did not know the language. In addition to that, Fadzil also used different materials and methods to create his own version of wayang kulit in a contemporary and cosmopolitan context such as *wayang rakyat* (2007), *wayang kancil* (2007), *wayang lampu* (2008), *wayang buku* (2008), *wayang cahaya* (2009), *wayang siang* (2010) and *wayang fajar* (2012).

In addition to that, a contemporary Malaysian artist, Ng Foo Cheong, has utilised the visual aesthetics of the wayang kulit Kelantan puppets, mainly pohon beringin, in many of his abstract drawings. The visuals of pohon beringin appear in many of his *Dynasty Series* artworks. His *Dynasty Series* is an intricate series of abstract works with truly Eastern aesthetics whereby he attempts to contrast a contemporary, expressionistic use of media with ornamental details and colours that evoke the

magnificence of a tremendous empire by engendering a unique dialogue between ancient art and modern cultures. Some of his artworks that instil the visuals and patterns of pohon beringin puppet are *Dynasty- Pohon Beringin* (2006), *Dynasty- Man behind the Screen* (2007), *Dynasty- Man behind the Screen* (2008) and *Know the Story* (2008). Recently, he also produced an artwork entitled *Wayang Kulit* (2011) featuring not only the pohon beringin puppet but also two ape warrior puppets of wayang kulit Kelantan (Figure 2.10).



Figure 2.10: The Artworks of Ng Foo Cheong (From Left: *Dynasty-Man Behind the Screen* (2008), *Know the Story* (2008), *Dynasty-Pohon Beringin* (2006) and *Wayang Kulit* (2011))

In the 20th century, it is noticeable that the elements of traditional wayang kulit Kelantan appear quite often in contemporary Malaysian music. Contemporary Malaysian music is an artistic phenomenon within Malaysia that has gained visibility and momentum, particularly in 2002 when the MPO programmed several works by Malaysian composers. In 2002, a Malaysian composer, Sunetra Fernando, reintroduces gamelan music in the opening scenes of traditional wayang kulit Kelantan performances, incorporating the sounds of cello, harp and clarinet with vocals. It was the first gamelan performance at MPO, with the debut of gamelan music in conjunction with Western orchestral instruments. Fernando is one of the first local music composers who was commissioned by a professional symphony orchestra in Malaysia.

In September 2007, the MPO commissioned and performed another new composition entitled *Empunya yang beroleh Siti Dewi*, composed by contemporary

Malaysian music composer Adeline Wong and adapting the music and repertoire of traditional wayang kulit. It features a local wayang kulit troupe in an East-meets-West presentation of folklore and fantasy, combining Western orchestra with a traditional wayang kulit troupe. This performance blends the aesthetics of wayang kulit tradition (musical and visual) with Western classical models. The result was a Western style orchestra interacting with traditional wayang kulit in a concert filled with folklore and fantasy.

An award-winning Malaysian contemporary music composer, Yii Kah Hoe, explores and uses both the music and visuals of traditional wayang kulit Kelantan in many of his works. For example, his award-winning piece, *Opening of the Stage (Buka Panggung)*, was inspired by the preliminary ceremony of the same name in traditional wayang kulit Kelantan. He also features the performance of wayang kulit Kelantan in some of his performances. In November 2008, he collaborated with the Singapore Chinese Orchestra and Istamuzika wayang kulit troupe for his *Bayang* performance. His innovation of blending the music of traditional wayang kulit Kelantan with modern approaches has not only made him famous; but also gained him some international recognitions and awards.

In Malaysia, for the first time in the history of filmmaking, traditional wayang kulit Kelantan became the topic for a feature film in 2008 (Muthalib, 2008: 11). Universiti Teknologi Mara (UiTM) in Malaysia produced its first feature film entitled *Wayang* in 2008. Its director, Hatta Azad Khan, admitted that the heritage of wayang kulit Kelantan is actually the gist of the movie. Nevertheless, the characters in the movie *Wayang* also provided comic relief to the movie. He also agreed that as a filmmaker, he had the responsibility to encourage the Malaysian audience to appreciate and support local films and movies, especially those with art, heritage or historical elements. Muthalib (2008: 2) compared the film's subject matter to great films and filmmakers

who are able to bridge generations, cultures and interpretations: films like Yasukiro Ozu's *Tokyo Story* (1953) and George Lucas's *American Graffiti* (1973), among others. This feature film won the Jury's Special Award in the 21st Malaysian Film Festival in 2008 for promoting this long forgotten heritage and culture on screen.

A Malaysian visual artist, Aris A. Yaacob, produced several paintings and performance art inspired by Malaysian wayang kulit. Yaacob's paintings are merely abstract representations or expressions and depict neither the actual form nor puppets in wayang kulit performances (Figure 2.11). In addition to that, his performance art entitled *Simulacra* (Latin for *Reflection*) also consist of none of the visuals of wayang kulit Kelantan but only himself presenting mundane objects and making them represent different meanings or things on the stage like sculpting a wire mesh to become a cave; moving water on stage to give the idea of a river in front of the audience through the use of different types of materials such as polythene sheets, Perspex, liquids and wire mesh. According to Yaacob, his *Simulacra* aimed to popularise the *Ramayana* as well as challenge in the traditional ways of presenting the traditional shadow puppet theatre ¹⁴.

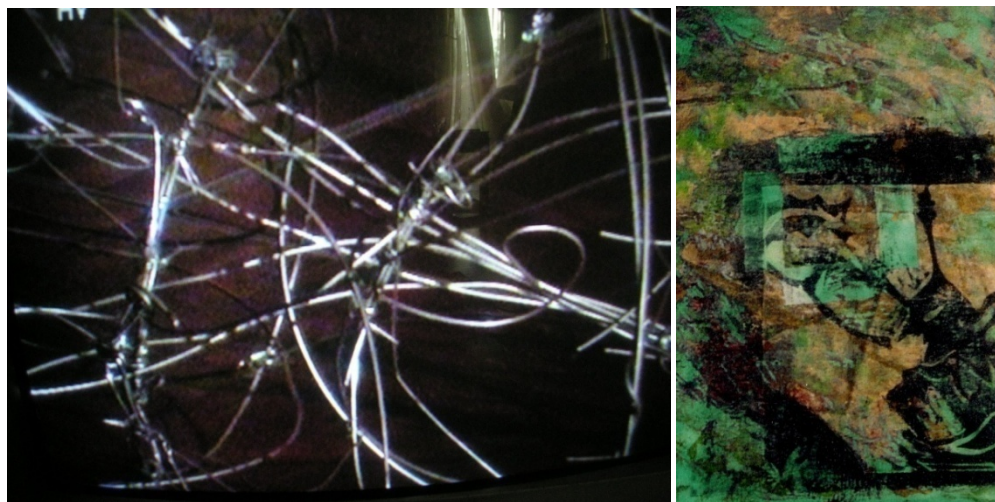


Figure 2.11: The Artworks of Aris A Yaacob. (From Left: *Visual Interpretation of Wayang Kulit* (2007) and *Sri Rama* (1995))

¹⁴ See Bhatt, H. (2004, May 30). *Defying old puppetry with magic*. New Straits Times (Malaysia) .

In July 2012, a Japanese music group, Taikuh Jikang, collaborated with a local wayang kulit Kelantan's trainee puppet master named M. Kamrulbahril Hussin in order to combine music, dance and wayang kulit puppets in a show entitled *Southeast Asian Project* performed at The Actors Studio in Kuala Lumpur. The show depicted many elements from wayang kulit Kelantan, including music, visual aesthetics and also one of its clown characters, Wak Long. Japanese traditional folk dance, *Bon-Odori*, was performed concurrently with wayang kulit Kelantan's music and puppets in the show. Apart from its commercial success, the objective of the performance was to explore new forms of artistic expression by mixing and blending modern and traditional Japanese and Southeast Asian art forms (Figure 2.12).



Figure 2.12: The Performance of Taikuh Jikang at The Actors Studio

In addition to that, the puppets of wayang kulit Kelantan have also inspired some of the artworks and installation in Malaysia. For example, the logo of ASWARA was inspired by the physical appearance of the pohon beringin puppet in wayang kulit Kelantan and a contemporary interior artwork entitled *Pohon Hayat/ Beringin* created by Mohd Noor Badar in Kelantan through the reinterpretation of the same puppet (Figure 2.13). In addition to that, Pak Dain, the puppeteer-cum-leader of his Wayang Kulit Melayu Traditional Kelantan troupe in Kelantan, uses the shape of pohon beringin as an inspiration for the logo of his wayang kulit troupe.



Figure 2.13: The Artworks Inspired by the Pohon Beringin Puppet of Wayang Kulit Kelantan (From Left: the Old, New Logo of ASWARA and Pohon Hayat/Beringin of Mohd Noor Badar).

Last but not least, the themes of wayang kulit Kelantan have also inspired and influenced graffiti art in Malaysia. For example, there are at least two graffiti art works surrounding Petaling Street in Kuala Lumpur depicting the visuals of traditional wayang kulit Kelantan (Figure 2.14). The graffiti artwork at Jalan Panggong depicts the visuals of the characters of Siti Dewi and Maharaja Wana of wayang kulit Kelantan in terms of their hand gestures, pinnacle crowns, the dragon-boat shaped vehicles on their feet and costumes. On the other hand, the graffiti art work at Jalan Sultan clearly depicts the visuals of the puppet of Pak Dogol, the notable god- clown character of wayang kulit Kelantan. The graffiti art work at Jalan Sultan is one of the 61 mural artworks initiated by a community project entitled *Preserve Our Campaign* sponsored by The Star newspaper and Dulux paint company on 15th October 2012. About 60 artists were given a mural space of 25x25 inch each to convey their message on the urgency of preserving local heritage. The mural art work is on a wall near the car park on Lot 49, Jalan Sultan, which has been exposed since the demolition of six pre-war shop houses, including the iconic Chik Sin Thong funeral parlour about 15 years ago.



Figure 2.14: The Graffiti Art Works Surrounding Petaling Street Influenced by Traditional Wayang Kulit Kelantan

Some of the famous graffiti artists in Kuala Lumpur who are inspired by the art of shadow puppet theatre include SHIEKO, KIOUE, THA-B, BIBICHUN and THEY. Among all of the mentioned artists, Khor Zew Wey aka BIBICHUN is the most well known currently active Kuala Lumpur graffiti artist who has produced many of his works with the focus on human figures, local animals, characters and repertoires of shadow puppet theatre (Novak, 2011: 10).

2.12 SUMMARY

As a summary to this chapter, it is evidently clear that the elements and context of traditional wayang kulit Kelantan, including its visual aesthetics, have been infused into many aspects of other disciplines and art forms. Naziree (2003: 11) points out that wayang kulit have been important influences on the evolution of visual arts among Malaysian artists and are still revered and treasured as national heritages. In addition to that, many hybrid forms of wayang kulit Kelantan are also found in contemporary stage performances, graffiti arts and film.

The use of aesthetics, themes, elements and art of traditional wayang kulit Kelantan by the younger generations of Malaysian visual and performing artists today as a way to explore the culture heritage is influencing the fate of this art form in the 21st

century. For example, Zhao Shutong, a sculptor in southwest China's Sichuan province, emphasised that as an ancient art, shadow puppet theatre must incorporate with modern artistic forms in order to survive¹⁵. He also mentions that Chinese cartoonists or artists could be inspired by the art form of Chinese shadow puppet theatre if they were researched thoroughly. Zhao's statement was supported by Xu Jiang, the Dean of the China Academy of Fine Arts in Hangzhou, who believed that the art of shadow puppet theatre was a very valuable resource for China's cartoon industry to learn from. Xu's academy established an Animation Department in 2002 and planned to set up a shadow play museum and research centre to build up resources of the ancient art for the Chinese cartoon industry. Xu hoped that his academy would endeavour to draw inspiration from shadow play and lure Chinese children away from foreign cartoons with excellent local productions.

However, research on the visual aesthetics of traditional wayang kulit Kelantan is still obscure and lacking. Although the visual aesthetics of this Malaysian shadow puppet theatre genre has been very inspiring, most of it is yet to be identified. Many artists are not familiar with the unique visual aesthetics of traditional wayang kulit Kelantan and they tend to confuse them with the Javanese and Balinese shadow puppet theatre genres. A common understanding and solid foundation of the visual aesthetics of traditional wayang kulit Kelantan is imperatively needed so that their historical and time endurance can be sustained and appreciated not only in its original form but also in other media and art forms.

¹⁵ See Beijing Time (2003, March 8). *Chinese Hope Ancient ShadowArt will Animate Cartoon Industry*. Retrieved December 2012, from http://english.peopledaily.com.cn/200303/08/print20030308_112954.html

CHAPTER THREE

THE VISUAL AESTHETICS OF TRADITIONAL WAYANG KULIT KELANTAN

3.1 OVERVIEW

In shadow puppet theatre, the quality of shadow images is always considered as the most attractive and important visual aesthetic. The quality of shadow images in a particular shadow puppet theatre is determined by the physical appearance of its puppets and light source. Hence, one needs to understand the design of puppets used in traditional wayang kulit Kelantan prior to appreciating the aesthetics of their shadow images.

Based on historical study, the puppet design of shadow puppet theatre in Malaysia and southern part of Thailand are inter-related (Taweethong, 2010: 3). In the area along the sides of the Thai-Malaysia border, the mixing of Thai and Malaysian theatre form is ordinary and apparent (Brandon, 1967: 57). This is a phenomenon due to the constant contact in that particular region through trading activities and migration for many centuries which cultivated cross-cultural influences on the development of shadow puppet theatre in this region intensely.

According to Linggang (2009: 102-106), it is clear that the puppets of traditional wayang kulit Kelantan contain influences from India, Indonesia and Thailand. The influence of Thai puppets, especially the Thai nang talung shadow puppet theatre, is particularly pre- dominating and distinctive from the puppets of wayang kulit Kelantan (Scott-Kemball, 1959: 76). Some researchers even believe that the influence of Thailand is stronger than Indonesia in traditional wayang kulit Kelantan (Kingham, 1998: 108).

Yousof (2004: 106) suggests that it is very likely that this shadow puppet theatre is derived from the Javanese wayang kulit purwa, brought into Kelantan towards the end

of the Hindu Majapahit period in the 14th century before the Javanese shadow puppet theatre underwent changes in iconography (refer to Chapter 2.4 for details). Hence, the puppets of wayang kulit Kelantan depict near-naturalistic features in design and share pronounced similarities with a Balinese shadow puppet theatre called wayang kulit *parwa* (Yousof, 2004: 107).

The in-depth study on the visual aesthetics of puppets and shadow images of wayang kulit Kelantan is still lacking (Linggang, 2009: 134-135). This chapter therefore presents an in-depth study on this aspect which consists of two major sections: the first examines the visual aesthetics of its principle puppets and the other examines its shadow images which also include factors that affect the quality of shadow images such as the setting of light source and screen. The final part of this chapter concludes with a summary.

3.2 THE VISUAL AESTHETICS OF TRADITIONAL WAYANG KULIT KELANTAN

The term “aesthetics” was first appropriated and coined by a German philosopher and educator named Alexander Gottlieb Baumgarten. He was the first to use the word “aesthetics” in his Halle Master’s thesis entitled *Meditationes philosophicae de nonnullis ad poema pertinentibus* (*Philosophical meditations pertaining to some matters concerning poetry*) which defines beauty as perfection and stresses such information as gathered through the senses in 1735¹⁶. The term itself is derived from the ancient Greek *aisthesis*, meaning sensation or perception. Baumgarten defined aesthetics as the science of sensible cognition (the theory of liberal arts, the logic of lower capacities of cognition, the art of thinking beautifully, the art of *analogue of reason*). Wayang kulit Kelantan reflects the mixture of Indonesian, Malay and Thai aesthetic values (Sweeney, 1972: 25-32).

¹⁶ See Guyer, P. (2007, January 17). *18th Century German Aesthetics*. Retrieved January 11, 2013, from Stanford Encyclopedia of Philosophy: <http://plato.stanford.edu/entries/aesthetics-18th-german/>

The Indonesian shadow puppet theatre consists of seven facets of aesthetic elements (Mulyono, 1981: 2). They are: (i) drama, (ii) painting, (iii) carving, (iv) literature, (v) voice, (vi) instrumental music and (vii) mimicry. Linggang (2009: 31) defines the Malay aesthetics found in wayang kulit Kelantan with four facets which are: unity in puppets (*keseimbangan dalam perwatakan*); finesse in craftsmanship (*kehalusan dalam ukiran*); the use of unique regional language in carving (*pengunaan bahasa daerah yang unik dan unggul dalam ukiran*) and moderation (*serdehana*).

In the interactionist viewpoint, the characteristics of an object and its perceiver interact in determining aesthetic pleasure and according to Moshagen & Thielsch (2010: 699), there are four facets of visual aesthetics which are simplicity, diversity, colourfulness and craftsmanship.

All of these mentioned facets of aesthetics have omitted one important visual element in shadow puppet theatre which is the quality of the shadow images on screen. In traditional wayang kulit Kelantan performances, the audiences are only able to watch these shadow images on the screen as the puppeteer and his groups of musicians are fully concealed in the theatre. The quality of shadow images or projections is therefore considered as major visual elements from the aspect of aesthetics in wayang kulit Kelantan and puppeteers use them to enhance their shadow puppet performances to attract Malaysian audiences (Osnes, 1992: 143).

Based on definitions given by various researchers and scholars, the author classifies the term “visual aesthetics” used in this thesis into three major facets, namely: (i) puppet craftsmanship, (ii) puppet design and (iii) shadow images on screen. The following sessions discusses and presents each facet in detail.

3.3 THE PUPPET CRAFTSMANSHIP OF TRADITIONAL WAYANG KULIT KELANTAN

According to Moshagen & Thielsch (2010: 692), one of the four facets of visual aesthetics is craftsmanship. The quality and design of puppets determine the standard for the entire performance in many ways. Unlike many countries in Southeast Asia, the Malaysian puppeteers design and make most or even all of their puppets (Osnes, 2010: 62). According to Osnes (2010: 52-54), the puppeteers of traditional wayang kulit Kelantan create and perform their personal puppet characters, giving it a complete interpretation seldom achieved elsewhere.

The puppets of traditional wayang kulit Kelantan are made of cowhide, the reasons being that the thickness of cowhide is just adequate rather than the goat hide which is too thin and the water buffalo hide which is too thick. The puppeteer first purchases the raw cowhide in rough shape with fur clinging to some parts. All the blood and fat have to be cleaned off before it is stretched, nailed and fixed on a wooden frame. It is later exposed under the hot sun for several days to dry out completely (Figure 3.1). The puppeteer then scraps off the fur from the cowhide using a thick Malay razor blade called *pisau raut*. A coarse brush is later used to rub and smooth out the surface of the entire hide. Lastly, after the smooth cowhide is washed and dried again under the hot sun, it is ready to be carved into the puppet(s) of wayang kulit Kelantan.



Figure 3.1: The Puppet Craftsmanship of Wayang Kulit Kelantan (Image Courtesy of Ramli & Ibrahim)

As shown in Figure 3.1, the outline of each puppet is drawn or traced onto sheets of white, thin tracing paper. These sheets are then attached onto adequately treated cowhides using home-made rice glue. Alternatively, some puppeteers use a wooden box with a light bulb inside and a glass cover, then place the puppet onto the glass with the cowhide over the puppet to trace and duplicate the outline and design of an existing puppet (Osnes, 1992: 52). The puppeteer then cuts out the cowhide based on the rough shape of the puppet with a thin knife. This cowhide is later refined, shaped, carved and punched with motifs using hammers, relatively simple chisels and carving tools. The most prominent motifs found in the puppets of wayang kulit Kelantan include locust teeth, a series of small regular dashes used for the outlines and pleats of garments, combinations of dots and dashes used for clothing and for hairdos, facial expressions and neck-lines. In addition to that, there is a chain motif of dashes and small cut curves used for necklaces or straps, a motif of flower petals called *garlang* used for hair ornaments or ear-jewels, a stylised daisy motif used mainly to adorn the headdress and a flower or leaf motif used to represent gold entrusting on crowns or on jewellery (Osnes, 1992: 53). Generally, the inner carving and motifs on the puppets of wayang kulit Kelantan are much bigger in design and less fine in detail than the puppets of Javanese and Balinese shadow puppet theatre, making them more visible and substantial in their shadow images. According to Osnes (1992: 166), the puppets of traditional wayang kulit Kelantan read much better and cast clearer, more wonderful shadow images than the Javanese and Balinese puppets in a performance setting.

Upon completion of the carving process, the puppeteer whittles and tapers the top and bottom portion of a thin rod of bamboo for the handle. The rod is then attached to the puppet by sewing strings around the rod and into the cowhide.

Puppets with movable parts have to be painted with colours that adhere to the tradition and practice of wayang kulit Kelantan before attaching those parts. The

puppeteers of wayang kulit Kelantan tend to use translucent water-based dye to paint their puppets so that the colours show through more in the screen during performances. One of the exceptions is the Wak Long puppet whereby the thick opaque red paint is used to paint the puppet so that it casts only black shadow images on the screen. After painting, the gold highlights are added to the swords and trimmings of costumes. In general, the puppets of wayang kulit Kelantan are much less gold ornamented than the puppets of Javanese shadow puppet theatre (Osnes, 2010: 64).

The final step in the puppetmaking process is to attach the sticks and strings that will enable puppeteers to articulate them precisely and plunge them on the banana stems or Styrofoam-type of puppet base during their performances. The articulated arms are tied together at the elbow and shoulder. Puppets with movable mouths, such as Maharisi, Pak Dogol, Wak Long and so on, have a spring made of a piece of buffalo horn that is sewn onto the faces of the puppets. A string is tied from the top of the spring to the jaw to hold it in place and another string is tied to the bottom portion of the jaw to pull the mouth open (Osnes, 1992: 56). There is a loop on the bottom part of the string, enabling the puppeteer to manipulate the mouth by slipping one finger through it and, at the same time, holding the puppet at its base with the same hand.

The process of puppetmaking is extremely time-consuming and laborious but the finished cowhide puppets are very durable. These puppets are expected to last up to one hundred years of regular use with minimal need of maintenance (Osnes, 1992: 52). Without a doubt, the puppets of traditional wayang kulit Kelantan are handicraft masterpieces with very high artistic and cultural value. The author cannot imagine and think of any industry, synthetic products or technology artificial creation, which can replace the traditional puppetmaking process in this shadow play genre.

3.4 THE PUPPET DESIGN OF TRADITIONAL WAYANG KULIT KELANTAN

Most of the puppets of traditional wayang kulit Kelantan depict near-naturalistic designs and configuration. On the other hand, puppets of Indonesian wayang kulit purwa depict non-realistic forms and shapes such as disproportioned long necks, long arms, thin and pointed noses with red, white, black and blue faces. The stylisation of wayang kulit purwa puppets to possess non-naturalistic physical proportions as found in human anatomy is introduced by Islamic religious teachers and, in particular, by the legendary nine saints (*Wali Songo*) of Demak in 1520 to counter the Islamic injunction against naturalistic representations of human form in puppets or idols (Mulyono, 1975: 84). With the arrival of the nine saints, whatever remained of the Javanese shadow puppet theatre underwent radical changes in both technique and function.

The whole appearance and shapes found in Javanese wayang kulit purwa are called *wanda*: depicting certain characters and attitudes under certain circumstances in certain acts in performances (Muljono, 1974: 63). In the concept of *wanda*, there are several puppets of wayang kulit purwa that have more than one *wanda*, which means more than one appearance in a performance. These puppets are called puppets with *wanda rangkap*. Each character with wayang rangkap characteristic may have four to 12 versions of puppets representing a different mood and distinguished by a particular bend of head, bend of body, degree of slant to the eyes and mouth, distance between the eyes and eyebrows, distance between the eyes and mouth, and colours used (Hastanto, 1998: 51). Even though traditional wayang kulit Kelantan depicts pronounced influences of Javanese shadow puppet theatre in many aspects, the concept of *wanda* does not exist here. All the characters in wayang kulit Kelantan depict only a single physical appearance and form and only a single puppet is used for a character throughout the entire repertoire of a performance.

Originally from the *Ramayana*, the main repertoire of traditional wayang kulit Kelantan, *Hikayat Maharaja Wana* depicts significant differences; results of attempts at localisation of the Rama story and influences of folk versions of the epic originating in India as well as in territories within Southeast Asia (Yousof, 2004: 140-141). Many of the original Hindu religious themes and teachings have been downgraded or removed completely with replacements of Islamic and Malay features. In addition to that, new characters and puppets have been introduced and integrated into the repertoire, showing distinctively strong Malay and Thai features and ornamentations. Some of these newly invented characters, such as Kusi and Serawi, may appear as lesser characters in the main repertoire but have emerged as the limelight and main protagonists in some of the branch stories of the performances.

Although it was not the primary focus of Sweeney's research in 1972, he did mention 32 puppets that possessed a fairly standard form and design in *Hikayat Maharaja Wana*. According to Sweeney (1972: 77), the content of the basic repertoire of *Hikayat Maharaja Wana* is rather fixed although regional differences do exist. Moreover, *Hikayat Maharaja Wana* of Awang Lah from Tumpat district in Kelantan is always considered as the most standard version of its kind due to its high rate of constancy as well as reputation, popularity and fame of the puppeteer. Awang Lah's *Hikayat Maharaja Wana* repertoire consists of 29 episodes and of these, Sweeney (1972: 82-84) lists out 32 characters that possess a fairly standard form.

These characters are: (i) Anila, (ii) Anak Amuk, (iii) Bentara Guru, (iv) Dewe', (v) Endeng & Epong, (vi) Hanuman Bongsu, (vii) Hanuman Ikan, (viii) Hanuman Kera Putih, (ix) Kusi & Serawi, (x) Laksamana, (xi) Lak Juna & Lak Palembang, (xii) Lela-bat & Lela-bet, (xiii) Mah Babu Kenung, (xiv) Mah Babu Sanam, (xv) Madudaki, (xvi) Mah Nerajit/ Nengajit/ Intrajit, (xvii) Maharisi Kala (Api)/ Maharisi Mata Api, (xviii) Mahasikul, (xix) Maharaja Wana, (xx) Pelela Angada, (xxi) Pak Dogol, (xxii) Raja Bali,

(xxiii) Saburanung, (xxiv) Sagariwa, (xxv) Sepit Bentala, (xxvi) Siti Dewi, (xxvii) Seri Rama, (xxviii) Tuan Puteri Ikan, (xxix) Tilam Tila Pujangga, (xxx) Wak Long, (xxxi), and (xxxii) Dewa Panah. However, only a few photographs of these puppets were shown by Sweeney as the primary focus of his study was on the Rama tree rather than the visuals of traditional wayang kulit Kelantan.

The earliest research and scholarly works on the design of the traditional wayang kulit Kelantan puppets include Cuisinier, Scott- Kemball, Osnes, Ramli & Ibrahim and Linggang.

Cuisinier (1957) depicts 14 black-and-white photographs of the traditional wayang kulit Kelantan puppets in his book entitled *Le Theatre D'Ombres a Kelantan* (Wayang Kulit of Kelantan). These puppets are: (i) Dewa Panah, (ii) pohon beringin, (iii) Garuda, (iv) a tiger, (v) Hanuman Kera Putih, (vi) Pak Dogol, (vii) Wak Long, (viii) Seri Rama, (ix) Ratu Kuripan, (x) Raden Ino Kertapati, (xi) Raden Galoh Tjandra Kirana, (xii) Mah Babu Kala Dermi, (xiii) Dewa Bentara Umar and (xiv) Sang Senehon Batara Guru. The last five puppets also exist in Javanese wayang kulit.

Ramli & Ibrahim (1996) show colour photographs of 24 puppets, namely: (i) Seri Rama, (ii) Siti Dewi, (iii) Maharaja Wana, (iv) Laksamana, (v) Maharisi Kala Api/ Toh Mah Sikor, (vi) Pak Dogol, (vii) Wak Long, (viii) Wah Yah, (ix) Samad, (x) Said, (xi) Hanuman Kera Putih, (xii) Hanuman Ikan, (xiii) Anila, (xiv) Angada, (xv) Pateh Jambu Awang, (xvi) Sagariwa, (xvii) Mah Babu Sanam, (xviii) pohon beringin, (xix) Pantara Baha, (xx) Burung Jentayu, (xxi) Puteri Pari, (xxii) Raksasa, (xxiii) Raja Bali and (xxiv) Ratu. However, the sources of these puppets are not mentioned in the book.

Scott-Kemball (1959) shows several puppets of two principal characters, Seri Rama and Hanuman Kera Putih, in different provinces of Malaysia as well as from neighbouring countries such as Indonesia and Thailand for her comparative study.

Linggang (2009) presents her descriptive study on the aesthetics of eight principal characters of traditional wayang kulit Kelantan, namely: (i) Seri Rama, (ii) Siti Dewi, (iii) Maharaja Wana, (iv) Pak Dogol, (v) Hanuman Kera Putih, (vi) Maharisi Mata Api, (vii) Ogre/Jinn and (viii) *orang kampung* (villagers).

None of the scholarly research mentioned above has demonstrated a complete and in-depth study on the visuals of puppet design of traditional wayang kulit Kelantan. A detailed description as well as photographs of the entire puppet repertoire in wayang kulit Kelantan performance are yet to be conducted. Hence, there is a need for more scholarly research to be carried out in related fields to identify the visual aesthetics of the traditional wayang kulit Kelantan puppets.

Furthermore, detailed scholarly works in the classification and characterisation of the traditional wayang kulit Kelantan puppets is altogether obscure and lacking. It is obvious that standardisation and coherence in the study of the wayang kulit Kelantan puppets do not exist in any of the research mentioned above. For example, in 1972, Sweeney classified the wayang kulit Kelantan puppets based on their voices into eight categories: (i) refined princes and typical wayang kulit Kelantan type demi-gods, (ii) women, (iii) coarse princes, (iv) apes, (v) ogres (vi) officers or ministers, (vii) sages and (viii) Javanese type gods. On the other hand, Ramli & Ibrahim (1996) classified the same puppets into 10 categories: (i) gods (*dewa- dewa*), (ii) knights (*satria*), (iii) ogres (*raksasa*), (iv) hermits (*para petapa*), (v) monkeys/ apes (*monyet/ kera*), (vi) warriors (*ampiak atau perajurit*), (vii) princesses (*golongan puteri*), (viii) weapons (*senjata*), (ix) animals (*binatang- binatang*) and (x) mountains (*gunungan*).

Both classification systems of Sweeney (1972: 55) and Ramli & Ibrahim (1996: 99) do not include or even take into consideration of the concept of refinement and coarseness. For example, there are refined and coarse princes as well as refined and

coarse ape warriors determined by their roles and which side they stand on in the repertoire of *Hikayat Maharaja Wana*. The author therefore presents a new classification system of traditional wayang kulit Kelantan puppets as presented in Table 3.1. In this classification system, the 32 characters based on Sweeney's list (1972: 82-84) are classified based on their role as well as the concept of refinement and coarseness (halus and kasar) in the repertoire of Awang Lah's *Hikayat Maharaja Wana*. In addition to that, it also includes scenic puppets such as pohon beringin, stage properties, animals, birds, weapons and props.

Table 3.1: Classification of the Puppets of Wayang Kulit Kelantan

<u>Scenic puppet:</u> <ol style="list-style-type: none"> 1. Pohon beringin 2. Props 3. Weapon 	
Refined character	Coarse Character
<ol style="list-style-type: none"> 1. Royal male 2. Royal female 3. Officers/ ministers 4. Hanuman Kera Putih and his lineage 5. Heavenly beings from upper-world 6. Hermit 	<ol style="list-style-type: none"> 1. Royal male 2. Royal female 3. Officers/ ministers 4. Ogres
<u>Special character:</u> <ol style="list-style-type: none"> 1. Demigods of bows 2. Hybrid form of human-animal/ mythical creatures 3. Clowns 4. Animal, bird and sea creatures 	

Based on Sweeney's name list and the classification of puppets presented in Table 3.1, several principal puppets of each category have been chosen for detailed examination and study in terms of their visual aesthetics.

Puppets from the collections of Yousof, Pak Dain, Pak Soh and Pak Nasir have been used as samples to examine their visual aesthetics as well as similarities and

differences. In addition to that, the author also presents the characteristics of each identified puppet in order to reveal their status of either refinement or coarseness.

3.4.1 SCENIC PUPPET



Figure 3.2: Two Types of Pohon Beringin; with Purely Flora Motifs (left) and with Animal Motifs (Right)

The most distinguished and important non-character type of puppet in all performances of traditional wayang kulit Kelantan is the pohon beringin puppet and it does possess a fairly standard structure, design and form. In his PhD thesis, Kingham has presented a detailed study on the pohon beringin (known as kayon or gunung and kekayonan in Java and Bali) puppet of shadow puppet theatre in the regions of Java, Bali and Kelantan, with focus on its visual and symbolic interpretation¹⁷. Based on the definition given by Kingham (2010: 1), the word pohon beringin means bayan tree in Bahasa Indonesia and Bahasa Malaysia and the tree motif is an essential design element in the appearance of all types of this puppet in Java, Bali and Kelantan.

The pohon beringin puppet is a highly elegant tree or leaf-shaped puppet shown during the opening and closing of all performances of many Malaysian and Indonesian

¹⁷ See Kingham, S. P. (2010). *A Comparative Study of the Kayon in the Shadow Puppet Theatre of Java, Bali and Kelantan: A Visual and Interpretive Understanding of its Symbols*. Penang: Universiti Sains Malaysia.

shadow plays theatre. It is usually considered the most important of all puppets and is placed in the centre of the screen before a performance begins, separating the opposite groups of good and evil characters to the right and left of the puppeteer (Yousof, 2004: 135-138). In addition to that, it is also considered as one of the most sacred puppets and must be cleansed or “activated” ritually before the commencement of a performance.

The pohon beringin puppet comes in one piece and there is no extra joint or parts within. In traditional wayang kulit Kelantan, the pohon beringin puppet appears in two types of configuration (Figure 3.2): one of purely floral motifs, and the other depicting reptiles, animals and birds set on a tree. The purely floral configuration is said to have Islamic influences and as such, there is no iconic representation (Kingham, 2006: 68). The second configuration depicts different creatures representing the different levels of creation in hierarchical order. This configuration can basically be divided into three levels representing the three spheres that exist in the universe. The first level is the handle of the puppets that plunged into the banana trunk that represents the concept of underworld. The second level is the layer or designs of the puppets that represents living life on earth and the final level is the apex of the puppet that represents the sky or heaven above (Kingham, 2010: 223-235). The birds that perches atop the tree at the top part of the pohon beringin puppet also said to symbolise the human soul.

On the other hand, the kayon or gunung puppet in Indonesian wayang kulit purwa consists of two parts: a mountain and a tree. The tree motif is rendered as a combination of two different trees: the fig tree rooted in heaven and the earthbound lotus plant rising from the water. The former, placed above, has implanted its root in the top of the stem of the tree-shaped lotus. Guardians stand on both sides of the stronghold to guard treasures and the elixir of life. A pair of huge wings flanks the upper building with closed doors.

This puppet representing the World Tree or Cosmic Mountain is linking the earth and sky. It also symbolises the cosmos, with different levels of creation manifested in it (Yousof, 2004: 136).

Both the pohon beringin and gunung puppet encapsulate the essence of all things in the performances, reflecting all phenomena and objects in the natural world.



Figure 3.3: Pohon Beringin in Thai Nang Talung

The pohon beringin puppet does not exist in the form of a single puppet in Thai nang talung but rather in a disguise form. It appears as a small fan-shaped prop on the non-articulated hand of the hermit puppet Reusi and does not contain any significant meaning (Figure 3.3). Its design is also much simpler than both the Malaysian wayang kulit Kelantan and Indonesian wayang kulit purwa.

According to Kingham (2006: 249-266), the overall structure, size, colour and composition of the pohon beringin puppets from Java, Bali and Kelantan exhibit individual characteristics that clearly distinguish one puppet from another. However, the pohon beringin puppet only appears as a disguise form and as a prop to Reusi in Thai nang talung without significant configuration, meaning and manifestation.



Figure 3.4: The Prop Puppets of Wayang Kulit Kelantan (From Left: Palace, Sejati Jawa Tree, Palm, Ocean and Flag)

There are several essential stage properties used in traditional wayang kulit Kelantan performances such the palace (*balai*), the sejati jawa tree and its palms (Figure 3.4). The palace puppet's first show is in the episode of "Dalang Muda" in wayang kulit Kelantan. On the other hand, the sejati jawa tree and its palms are used during the episode of "the Contest for the Hand of Siti Dewi". In addition to that, a stage property resembling the ocean is also found in the puppet collection of Pak Nasir.



Figure 3.5: Weapon Puppets of Wayang Kulit Kelantan (From Left: Arrow With a Twined Dragon, Malay Asymmetrical Dagger, Axe, Sword, Malay Big knife, Axe, Gun, Flower, Flag and Signboards)

The props of traditional wayang kulit Kelantan consist of weapons such as the arrow, Malay asymmetrical dagger (*keris*), axe, sword, knife, gun, flower, signboard, flag and others (Figure 3.5). The design of the arrow is twined by a dragon due to plots from the episode of "the Contest for the Hand of Siti Dewi" in the traditional repertoire. In this episode, Maharisi Kala Api creates and buries a dragon with 40 bends in its back.

He then causes 40 lontar palms to spout from the bends, formulating a curved line of palms. An arrow is further created and plunged into the sejati jawa tree by him. An announcement is then made that whoever could lift the arrow and shoot through the 40 palms will win the hand of Siti Dewi. Consequently, Seri Rama, with the help of his brother Laksamana, straightens the dragon so that he is able to shoot the arrow through all 40 palms in order to win the contest (Sweeney, 1972: 95-96).

3.4.2 REFINED ROYAL MALE

Two important refined royal male characters in traditional wayang kulit Kelantan, both depicting similar physical appearance, are Seri Rama and Laksamana.



Figure 3.6: Refined Royal Male Puppets in Wayang Kulit Kelantan (From Left: Seri Rama and Laksamana)

Two of these main refined royal male puppets portray almost similar design in terms of their slender body shapes, bent fingers, almond-shaped eye, mouths, noses and foreheads which are in a slightly concaved line (Figure 3.6). The main difference is the colour of their skin: Seri Rama is in green and Laksamana is in red. In addition to that, their weapons are also different; Seri Rama carries a bow in his unarticulated arm but Laksamana carries a sword. These two royal male puppets are naked above their waist

with tail-like feature belts and standing on a dragon-shaped “vehicle”, which could be a symbol of their royal status or influence from the episode “The Contest for the Hand of Siti Dewi”, in which Seri Rama emerges victorious in making a dragon’s body straight by pulling its head while Laksamana holds the tail. It is also noticeable that there is a dragon twined on the arrow of Seri Rama (Figure 3.7). This special weapon of arrow and bow is exclusively found in the Seri Rama puppet.



Figure 3.7: Seri Rama Puppet in Wayang Kulit Kelantan

Seri Rama is the principal character in the *Ramayana* epic. In the original Hindu *Ramayana* epic by Valmiki, he is an incarnation of the Hindu god Vishnu and is an ideal and perfect human being. However, the concept of perfect a human being is contrary to Islamic teachings. Hence, in the Malay *Hikayat Maharaja Wana*, although he is an incarnation of the Dewa Berembum god and a refined prince, he does portray many human-like failings and personalities such as lacking wisdom in making decisions, impatience, insensitivity, effeminacy, petulance, harshness and lacking resources. Moreover, he is no longer loyal to his wife Siti Dewi.

According to Scott-Kemball (1959: 75), the structure of Seri Rama’s face is basically constant and standard with a small nose, mouth, almond-shaped eye and forehead in a slightly concaved line in profile with his configuration. The skin of the Seri Rama puppet is always painted green in keeping with Hindu symbolism. The blue-

green skin of Seri Rama is a symbol of a divine being in the *Ramayana* (Osnes, 2010: 63). Referring to Figure 3.7, the puppet of Seri Rama is slim and tall with a slender body and highly decorated costume. His slim and calm exterior is an index to his inner spiritual qualities. Seri Rama wears a typical Thai pinnacle crown with a single articulated arm that is jointed at the shoulder, elbow and wrist. His backward bent fingers hand gesture portrays possible influence from the Hindu *mudra*, a systematic and rich repertoire of symbolic hand gestures developed in India. This hand gesture is called *pataka* in *mudra*, and it can denote an ideal king, a succession of good deeds and equality¹⁸.

The Seri Rama character in wayang kulit Kelantan carries a special bow on his non-articulated arm. He is bare from the waist up with tail-like feature belts on his waist called *ekor burung* (bird tail) or *hang hoong* in the costumes of principal performers in the Thai theatre *menora*. In addition to that, he also stands on a boat or dragon-shaped vehicle. The bow and dragon-shaped vehicles are two major props found in the character Seri Rama. His refined characteristics in wayang kulit Kelantan also include the use of a delicate voice and movements in small, slow gliding steps with subtle swaying of the body and gentle movement of the arm. The Seri Rama puppet in wayang kulit Kelantan always represents the finest physical appearance of a refined prince.

Both Seri Rama and Laksamana are the sons of the ruler in the country of Siusia Mendarapura, Sirat Maharaja and Cahaya Bulan. In addition to that, Sirat Maharaja's second wife, Madudari, also gives birth to two sons named Semardan and Chardan but both never play any role in *Hikayat Maharaja Wana* (Sweeney, 1972: 89-126). When Seri Rama and Laksamana were small children, they were taken to Gunung Sahpian to be accepted as pupils by a hermit who lives there named Nenek Ajar Sahpian.

¹⁸ See Nandan, A. (2007, September 21). *Online Bharatanatyam*. Retrieved November 11, 2012, from Online Bharatanatyam: <http://onlinebharatanatyam.com/2007/09/pataka-hand-gesture-mudra/>

The puppets of Balinese shadow puppet theatre are distinguished by their stylised hand gestures, which is also based on mudra (Hobart, 1987: 20). However, the hand gestures of the refined royal members of wayang kulit Kelantan (Seri Rama, Laksamana and Siti Dewi) are not found in the puppets of Balinese and Javanese shadow puppets.

The differences between the Seri Rama puppet in wayang kulit Kelantan and that of Indonesian wayang kulit purwa are noticeably apparent. In contrary to wayang kulit Kelantan, the Seri Rama puppet in wayang kulit purwa has a long and pointed nose and his eyes are shaped like soybeans. He looks downwards, a reference to self-control and humility. There is no record of green colour skin in any Seri Rama puppet of Indonesian wayang kulit. Usually, gold is the dominating colour of Seri Rama in Indonesian wayang kulit genres and his face is black in colour. In addition to that, he has two articulated arms jointed at the shoulders, elbows and wrists but carries no weapon and the dragon-shaped vehicle does not exist.

Apart from Hanuman Kera Putih, Seri Rama and Siti Dewi also have two sons named Lat Juna and Lat Palembang. Both of them do not appear in Hikayat Maharaja Wana but are protagonists in the branch story “Kusi and Serawi”.

The male heads of the traditional Thai nang talung puppets are always presented in profile (Chalermpong-Koanantakool, 1989: 36). Based on Broman’s book on Thai Nang Talung in 1996, Phra Ram (a localised Thai name for Seri Rama) in the Thai nang talung depicts similar features and designs of Seri Rama in wayang kulit Kelantan such as wearing a Thai pinnacle crown, standing on a dragon-shaped vehicle on one of his legs and holding a bow in both hands. His appearance of the profile head in a slightly concaved line and the chest thrust in a well-forward pose are similar to the Seri Rama puppet in wayang kulit Kelantan. One distinctive feature of both the Seri Rama in

wayang kulit Kelantan and Phra Ram of nang talung is the bow that is never found on a Javanese, Balinese or Indian Rama puppet. However, the characteristic of the swiveling of upper body between the hip bones of the Phra Ram puppet is not found in the puppet of Seri Rama in wayang kulit Kelantan (Scott-Kemball, 1959: 75).

Overall, Seri Rama in Malaysian wayang kulit Kelantan and Thai nang talung show more realistic and naturalistic designs as a representation of human beings compared to the same character in the Indonesian wayang kulit purwa.

3.4.3 COARSE ROYAL MALE

Rawana is the King of Demons and the main villain in the *Ramayana* performed in many shadow play theatre in Southeast Asia.



Figure 3.8: Maharaja Wana of Wayang Kulit Kelantan

The character Rawana is known as Maharaja Wana in traditional wayang kulit Kelantan or Tosakanth in Thai *Ramakien*. He wears a pinnacle crown with several small faces motif on it. In the episode of “Birth and Youth of Rawana” in *Hikayat Maharaja Wana*, this main villain of the story is able to sprout 12 heads and 20 arms in fighting (Sweeney, 1972: 93). The Maharaja Wana puppet in wayang kulit Kelantan is always painted red in his face in three-quarter profile (Figure 3.8). According to Yousof (1997:

18), this feature denotes his fiery origin that was influenced by Javanese or Middle Eastern Islamic concepts. The body of the puppet is positioned frontally with both feet pointed in the same direction and his face carved in three-quarter profile. He exhibits a physical appearance of rough or coarse characteristics with a broad and bulbous nose, big round eye and a large mouth with long, pointed canine teeth showing. His non-articulated arm holds a special weapon of cudgel. The pinnacle crown shows distinctive Thai influences. The puppet has only one articulated arm, jointed at the shoulder, elbow and wrist. Both the ring on his articulated hand and the boat or dragon-shaped vehicle on his feet could be a symbol of his royalty status. The voice quality of this character is always loud and boisterous and his movements are generally fast, large and often jerky in nature with large gesticulations of the single moveable arm (Matusky, 1997: 16-18).

The other coarse royalty male characters in *Hikayat Maharaja Wana* include the brother and sons of Maharaja Wana. Maharaja Wana has two brothers, Maharaja Babu Kenung and Mah Babu Sanam; the latter joins the camp of Seri Rama and therefore becomes a refined character. Mah Babu Kenung lives in Bukit Gunung Setaman Alas and is the last vassal of Maharaja Wana to be defeated by Seri Rama's team. He is defeated and killed by Hanuman Kera Putih in the battle. Although this puppet is not found in Pak Nasir's collection of puppets, both Sweeney (1972: 82-84) and Pak Soh (personal communication, November 17, 2012) mentioned that there is no specific puppet for this character but the author managed to view one such puppet in the collection of Pak Dain (personal communication, November 18, 2012). In addition to that, Maharaja Wana has two sons with supernatural powers, Nerajit (has six heads and ten hands) and Raja Lebis.



Figure 3.9: Coarse Royal Puppets of Wayang Kulit Kelantan (From Left: Mah Babu Kenung, Nerajit and Raja Lebis; Puppets Collection of Pak Dain)

All the coarse royal male puppets shown in Figure 3.9 are holding cudgels, the same weapon of Maharaja Wana, in their non-articulated arms. In addition to that, all of them wear tall pinnacle crowns with fiery red skin colours. There is no record of obvious tiny head motifs found in their pinnacle crowns. It is also noticed that only the Mah Babu Kenung puppet, the brother of Maharaja Wana, stands on the dragon-shaped vehicle. All their feet are of human size, placed frontally and close to each other. The body and hand gestures are rather standard and fix.

Maharaja Wana also has sexual relationships with many creatures such as a dragon, tiger and elephant. He therefore has several sons in hybrid forms of human-creatures. These characters are Gangga Masur Seri Berhaman (has a human body with a dragon's head), Belang Maharaja Rimau (has a human body with a tiger's head) and Raja Gajah (has a human body with an elephant's head). He also has a sexual relationship with a jinn from below the earth named Maya Bumi and the latter gives birth to a son called Maula Tani who has 500 heads and 5,000 arms. The puppets of these character are shown in Figure 3.10.



Figure 3.10: The Sons of Maharaja Wana with Animal Features (From Left: Gangga Mansur Berhaman, Belang Maharaja Rimau, Raja Gajah and Maula Tani; Puppets Collection of Pak Dain)

Overall, almost all the puppets of coarse royal male are painted in red skins. There are two major categories of coarse royal male puppets: one depicting human-like appearance and the other showing hybrid forms of human-creatures. The dragon-shaped vehicle feature is found only in the puppets of Maharaja Wana and Mah Babu Kenung. The common weapon for this group of puppets is the cudgel.

3.4.4 REFINED ROYAL FEMALE

Siti Dewi is the main heroine character in *Hikayat Maharaja Wana*. In wayang kulit Kelantan, she is the incarnation of the goddess Siti Andang Dewi. The structure of the face of the Siti Dewi puppet is basically constant and standard with a small nose, red mouth, almond-shaped eye and forehead in a slightly concaved line in profile of her configuration (Figure 3.11). She has a single moveable articulated hand, while the stagnant hand holds a symbol of flower. The skin of Siti Dewi is unpainted (unlike her husband, Seri Rama, who is always painted in green) except for the details of her face features, dress and ornaments. She is clothed in a highly filigreed costume, decorated with flowers and highlighted with gold paint due to her lofty princess status in the epic. She has extended, backward bent finger nails with a ring on her articulated arm. She also stands on a boat or dragon-shaped vehicle like Seri Rama and other royal characters. Her size is relatively small, almost two-third the height of the Seri Rama puppet.



Figure 3.11: Siti Dewi of Wayang Kulit Kelantan (From Left: Puppet Collection of Pak Hamzah, Puppet Collection of Pak Nasir and its Details)

Even though some differences in details, motifs and ornaments have been found between the puppets of Pak Hamzah and Pak Nasir, the overall styles and standardisation of Siti Dewi is still distinctive and identifiable in any given situation.

3.4.5 COARSE ROYAL FEMALE

The official wife of Maharaja Wana is Madudaki. In the episode “Maharaja Wana Gains a Queen”, Maharaja Wana successfully defeats Sirat Maharaja (the father of Seri Rama) and demands to take away his wife, the beautiful queen Cahaya Bulan. Reluctant to be taken away, Cahaya Bulan soothes Sirat Maharaja Wana and retires to bathe in the palace pool. With the assistance of the gods, she rubs the dirt from her body pores and form to create a woman of identical appearance called Madudaki. This creation was then given to Maharaja Wana and she becomes the queen of Langkapuri, the country of Maharaja Wana. According to Pak Dain and Pak Soh (personal communication, November 17 & 18, 2012), there is no puppet for Madudaki as they use the puppet of Sita Dewi to resemble her as and when needed.

Prior to his marriage to Madudaki, Maharaja Wana has sexual relationships with many creatures as well as princesses. These princesses include Princess Mayang and the

Pari princess. The Pari princess then gives birth to Princess Mata Api, who is capable of burning everything into cinders with her field of vision.



Figure 3.12: Coarse Royal Females of Wayang Kulit Kelantan (From Left: Pari Princess Puppet of Ramli & Ibrahim (1996), Pari Princess and Tuan Puteri Mata Api Puppet of Pak Dain)

The author found out that all the Pari princess puppets of Pak Dain and Pak Soh are crafted in *en face*. The Pari princess puppet depicted by Ramli & Ibrahim (1996: 113) is also in *en face* configuration but with lesser details and motifs (Figure 3.12). Despite their royal status, all the Pari princesses' puppets and Tuan Puteri Mata Api do not stand on dragon-shaped vehicles even though there are flower motifs found on the terminals of the pieces connect their feet. Although there is no puppet of Madudaki in the collections of Pak Nasir, Pak Soh and Pak Dain, Sweeney (1972: 5) mentions that the Madudaki puppet is always in *en face* configuration. Judging from the point that the only female puppets available in *en face* configuration are Pari princess and Tuan Puteri Mata Api, the author therefore believes that the Madudaki puppet mentioned by Sweeney in 1972 should depict similar appearances as the puppets shown in Figure 3.12.

Apart from Siti Dewi, Tuan Puteri Api (Figure 3.12) is the only daughter of Maharaja Wana and she sides him in the battle against Seri Rama. She lives with seven Pari princesses in Gua Mahaliku. The Pari princesses are able to resemble *jembalang* (souls or spirits) and are able to possess individuals, causing them madness. Upon being summoned by Maharaja Wana, they agree to fight against the army of Seri Rama. In the battle, the army of Seri Rama manages to obtain help from the heavenly being, Dewa

Bentara Guru, by wearing a magic gem to protect the wearer from the burning gaze of Tuan Puteri Mata Api. Consequently, the army of Seri Rama defeat Tuan Puteri Mata Api and the seven Pari princesses.

3.4.6 HANUMAN KERA PUTIH AND HIS LINEAGE

Hanuman Kera Putih and his lineage in *Hikayat Maharaja Wana* are a very special category of characters that deserves to be a subject of study on its own. Furthermore, the puppets of this category are also very much different than the Javanese and Balinese shadow puppets as well as others.

Hanuman Kera Putih (Figure 3.13) is the king of apes in the repertoire of *Hikayat Maharaja Wana*. He is the son of the protagonists Seri Rama and Sita Dewi. He is a character of loyalty, intelligence and courage who risks his life to join and help Seri Rama in his journey to seek and rescue Siti Dewi.



Figure 3.13: Hanuman Kera Putih of Wayang Kulit Kelantan (Puppet of Pak Nasir)

The original name of Hanuman Kera Putih is Kera Beleh. When he was a child, he chases after the sun, thinking it is a delicious fruit and was burnt to cinders, leaving only one strand of white hair by the god of the sun, Dewa Sinar Matahari. Knowing that he accidentally killed Kera Beleh, Dewa Sinar Matahari resuscitates him and reveals to

him the real identity of his parents: Seri Rama and Siti Dewi. Prior to joining Seri Rama's adventure, he has learnt magic powers and knowledge and has also gained enormous strength from Dewa Sinar Matahari, leading him to be given many names such as Raja Hanuman Kera Putih, Orang Mulia Raya, Setia Raja, Pejawatan Raja Seri Rama and Hulubalang Bisnu (Sweeney, 1972: 98).

The power and strength of Hanuman Kera Putih is apparent in many episodes of *Hikayat Maharaja Wana*. One of them is "The Burning of Langkapuri" episode, in which Hanuman Kera Putih allows himself to be captured by Maharaja Wana. Maharaja Wana then soaks Hanuman Kera Putih in oil and burns him. The burning Hanuman Kera Putih then leaps onto the roofs of houses and palace, consequently burning the whole country of Langkapuri. The fire has no harm on his body but the tip of his tail was on fire. He was then told by Dewa Sirat Maharaja, a god living in *kayangan* (upper-world), to place his tail into his mouth to extinguish the fire (Sweeney, 1972: 110-111). The tip of his tail is therefore painted red to commemorate this incident. During his journey to rescue Siti Dewi, he managed to kill many of the vassals of Maharaja Wana such as Raja Gajah, Raja Rimau, the three Raja Gagak, Kapan Putih, Mah Babu Kenung and Gangga Masur.

Apart from his strength and power, Hanuman Kera Putih is also a wise character which is not a common phenomenon for ape characters. In the episode "The War: the Death of Maharaja Wana", he volunteers and manages to enter the wat of Maharaja Wana by trickery.

Overall, Hanuman Kera Putih in *Hikayat Maharaja Wana* is a character with diverse qualities. Based on plots, he can be classified as a sacred and refined ape character in spite of his rough physical appearance. The puppet of Hanuman Kera Putih exhibits rough or coarse characteristics with his broad and bulbous nose, big round eye

and large mouth with sharp pointed foretooth showing. According to Pak Dain (personal communication, November 18, 2012), the skin of Hanuman Kera Putih was initially painted white but due to its black opaque shadow appearing on screen, the late puppeteer, Omar Hassan, started to let his skin unpainted and painted his face red to give a more colourful shadow image of him. In addition to that, Osnes (2010: 63) mentions that Pak Hamzah purposely painted the face of his Hanuman Kera Putih puppet in red to show his aggressive nature (Osnes, 2010: 63). Figure 3.14 depicts the four puppets of Hanuman Kera Putih from different collections.



Figure 3.14: Hanuman Kera Putih Puppets (From Left: Image Courtesy of Ramli & Ibrahim (1996), Puppet Collection of Yousof, Pak Dain and Pak Soh)

The posture of the puppet of Hanuman Kera Putih seems to be frozen in the act of punching on enemy and his knees are bent showing that he is ready for action. The big feet with claws feature are exclusively apparent in Hanuman and his lineage. The structure of his face is rather standard. His long protruding tongue is a feature not found in the Thai and Indonesian wayang kulit genres (Scott-Kemball, 1959: 76). He has one articulated arm with extended claws and long sharp nails while the non- articulated arm clenches a sword.



Figure 3.15: Hanuman Kera Putih with Outline Configuration (Puppet Collection of Pak Soh)

In addition to that, the author also discovered an innovative effort made on the puppet of Hanuman Kera Putih by Pak Soh. Figure 3.15 shows one of the recent innovations and improvisations on the puppet of Hanuman Kera Putih done by Pak Soh. According to Pak Soh (personal communication, November 17, 2012), the only way to make Hanuman Kera Putih appear “white” on its shadow image is to “cut out” its skin; making its outline in puppet design. The author has to admit that the shadow image of this puppet is distinctively unique and aesthetically pleasing compared to other puppets.

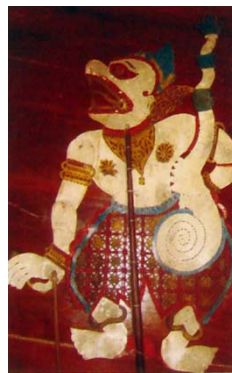


Figure 3.16: Another Version of Hanuman Kera Putih Puppets (From Left: Puppet Collection of Pak Soh and Pak Dain)

Although all Hanuman Kera Putih puppets depict rather fixed and standard in their designs and structures (with the only exception in skin colour), a greater variation is found in the collections of Pak Soh and Pak Dain. Referring to Figure 3.16, there are at least four distinctive features of this version of Hanuman Kera Putih which are different from the standard design: (i) star motifs in mouth, (ii) both legs facing outward, (iii) rolled-up tail and (iv) no weapon in both hands. According to Pak Soh (personal

communication, November 17, 2012), this type of puppet is only used in the eastern region of Kelantan, which covers Kota Bharu, Bachock, Pasir Putih and Machang. On the other hand, Pak Dain (personal communication, November 18, 2012) points out that the design of this puppet is influenced by Thai shadow puppets and is considered unauthentic.

Similar to Maharaja Wana, Hanuman Kera Putih also marries or has sexual relationships with several sea creatures and animals, resulting in his sons (Hanuman Kera Putih does not have any daughter) to appear in hybrid forms of ape and other animals.

Hanuman Kera Putih marries (or has a sexual relationship with) a mermaid (a female character who has a human form with a fish tail) called Tuan Puteri Ikan and she gives birth to a son called Hanuman Ikan. The design of the Hanuman Ikan puppet is unique as he depicts the hybrid form of an ape and a fish: his face and body look like an ape warrior but with a long fish tail rather than an ape tail (Figure 3.17). He inherits his father's facial structure and features such as the broad and bulbous nose, big round eye, large mouth with teeth showing as well as the long protruding tongue. However, his body gesture is different from his father's.



Figure 3.17: Hanuman Ikan of Wayang Kulit Kelantan (From Left: Puppet Collection of Pak Nasir, Pak Soh and Pak Dain)

Apart from Hanuman Ikan, Hanuman Kera Putih also has three additional sons in his latter adventures and they are Hanuman Bongsu, Hanuman Sapu Angin and Hanuman Tegangga. All of these ape characters wear low crowns with similar face structures and design.



Figure 3.18: Hanuman Bongsu (Puppet Collection of Pak Dain)

One of the notable sons of Hanuman Kera Putih who appears in many branch stories is Hanuman Bongsu. He is the son of Hanuman Kera Putih and Tuan Puteri Ilek Sari who was initially the wife of Nerajit but is given to Hanuman Kera Putih upon the death of her husband and Maharaja Wana. Although Hanuman Bongsu only exist in the final episode of Hikayat Maharaja Wana, he has been made into the protagonist in many of the following branch stories. Both Pak Soh and Pak Nasir use the Hanuman Kera Putih puppet for the character Hanuman Bongsu but Pak Dain (personal communication, November 18, 2012) mentions that he uses a smaller sized puppet which depicts almost the same appearance as his father for this character. The Hanuman Bongsu puppet of Pak Dain depicts no weapon and also a different design of the tail (Figure 3.18).



**Figure 3.19: Hanuman Layang Putih
(From Left: Puppet Collection of Pak Soh and Yousof)**

In the collections of both Pak Soh and Yousof, there is a lineage of Hanuman Kera Putih named Hanuman Layang Putih. This character does not exist in Sweeney's research yet he mentions one of the lineage of Hanuman Kera Putih with the name of Hanuman Sapu Angin. According to him (1972: 157), Hanuman Layang Putih is the son of Hanuman Kera Putih and Tuan Puteri Bayu Angin, the daughter of a heavenly being named Dewa Berembun. However, both Pak Dain and Pak Soh (personal communication, November 17 & 18, 2012) have no idea who the character Hanuman Sapu Angin mentioned by Sweeney is. In addition to that, there is no such puppet found in the collections of Pak Dain, Pak Soh, Pak Nasir or Yousof. Looking from the perspective and origin of Hanuman Sapu Angin mentioned by Sweeney, he should be a hybrid creature of an ape and a heavenly being. As most puppeteers are not well-educated and the art of puppeteer is disseminated orally, there is a great possibility that some of them might have confused or changed the names of certain characters. On the other hand, other names might be used for the same character by puppeteers in different provinces. As shown in Figure 3.19, Hanuman Layang Putih is a hybrid creature of ape with wings. There is no record by Sweeney (1972: 89-126) that Hanuman Kera Putih was having any sexual relationship with a bird or any flying creature. The author therefore believes that the wing feature of this character denotes its heavenly status and he should be the Hanuman Sapu Angin character mentioned by Sweeney (1972: 157). Based on Pak Soh (personal communication, November 17, 2012), he is the son of

Hanuman Kera Putih and Tuan Puteri Layang Putih. Although the overall design of the puppets of Yousof and Pak Soh depict certain degrees of differences, the hybrid element is standard: he is a hybrid creature of ape and bird or flying creature.

Based on the study of Sweeney (1972: 157, 189, 247), there are three varieties found on the origins of Hanuman Tegangga. In the repertoire of Daud Berek, a puppeteer in Kota Bharu, he is the son of Hanuman and Tuan Puteri Tenggara Muda on Gunung Merchu. However, in another version by Daud Sein of Patani, he is the son of Seri Rama (when he became a monkey) with another monkey. The third version mentions that Hanuman Tegangga is a different son of Hanuman and a fish, different from Hanuman Ikan. The puppets of Hanuman Tegangga have been found in the collections of Pak Nasir, Pak Soh and Pak Dain. Referring to Figure 3.20, it is obvious that Hanuman Tegangga depicts the same fish tail feature as Hanuman Ikan. Even though many features and design elements of these three puppets are quite different, the postures and their long curly tails are the same.



Figure 3.20: Hanuman Tegangga (From Left: Puppet of Pak Soh, Pak Dain and Pak Nasir)

As a conclusion to the visual aesthetics of Hanuman Kera Putih and his lineage, the most common and distinctive features are their face structures, low crowns, curly tails and big feet with extended claws and long nails.

Most of the lineage of Hanuman are readily recognisable not because of their stability of structures but rather due to their physical abnormalities, or their hybrid form

of ape with other creatures. For example, Hanuman Ikan and Hanuman Tegangga are ape creatures with fish tails and Hanuman Sapu Angin/ Hanuman Layang Putih is an ape creature with a pair of bird wings.

3.4.7 COARSE OFFICERS/ MINISTERS

Most of the coarse officers or ministers in *Hikayat Maharaja Wana* have consanguinity relationships with Maharaja Wana. One of the exceptions is the coarse character named Raja Bali. Raja Bali is the son of Dewa Cahaya Bulan (literally meaning the god of moonlight) and Siti Chendana and brother to Raja Sekeba (named as Sagariwa after he joins the army of Seri Rama). Raja Bali is the ruler of a city in a jungle called Pakian and has white blood and great strength, even more powerful than the main villain Maharaja Wana. In the episode “Raja Bali and his Wives”, he is able to defeat Maharaja Wana twice and kidnap Madudaki into his palace. Although he is not a vassal of Maharaja Wana, he later fights his brother Sagariwa with the help of Seri Rama. In exchange for gaining obeisance and support from Sagariwa to join his rescue mission of Siti Dewi, Seri Rama helps him kill Raja Bali with his arrow in a battle engaging both brothers. Due to his confrontation with Seri Rama, he is therefore considered a coarse character in *Hikayat Maharaja Wana*.



Figure 3.21: Raja Bali of Wayang Kulit Kelantan (From Left: Image Courtesy of Ramli & Ibrahim, Puppet Collection of Pak Nasir and Pak Dain)

Ramli & Ibrahim (1996: 113) depict a colour photograph of Raja Bali puppet in their book entitled *Wayang Kulit*. In addition to that, the author manages to identify and photograph the Raja Bali puppet in the collections of Pak Nasir and Pak Dain. Referring to Figure 3.21, it is obvious that both puppets of Ramli & Ibrahim and Pak Nasir depict similar design and structure. However, the Raja Bali puppet of Pak Dain depicts a great deviation in designs and structures from the other two puppets. Due to the reputation, lineage and recognition of Pak Nasir in the context of wayang kulit Kelantan, the author therefore perceives the Raja Bali puppet of Pak Dain as unauthentic and it could be of the latter's own innovation or creation.

Referring to both puppets of Ramli & Ibrahim and Pak Nasir in Figure 3.21, the puppet design of this character exhibits similar visuals with ape warriors of Seri Rama in terms of facial features, body gestures, hands and weapon. He has a broad and bulbous nose, big round eye, large mouth with teeth showing and a long protruding tongue. The most distinctive and unique feature of Raja Bali is his tall and layered pinnacle crown. This special design of pinnacle crown is exclusively found in the Raja Bali puppet only. It is the main feature of apparel to distinguish the Raja Bali puppet from other ape warrior puppets.

In addition to that, there are also several puppets representing general coarse kings (*raja kasar*). They are the vassals of Maharaja Wana. Most of them do not possess standard forms, designs and structures.

3.4.8 REFINED OFFICERS/ MINISTERS

There are two general categories of ministers of Seri Rama; first are the astrologers and the other are ape warriors. The most famous astrologer of Seri Rama is Mah Babu Sanan. Mah Babu Sanan is the youngest brother of Maharaja Wana and Mah Babu Kenung and initially, he was on the side of Maharaja Wana. One day, Maharaja

Wana has a dream in which an old man informs him that a human king is making a causeway to his country, Langkasapuri. With doubt and insecurity, he consults Mah Babu Sanan on the content of his dream. Using his book of divination, Mah Babu Sanan tells his brother that the dream is true and that the human king is Seri Rama. However, Maharaja Wana refuses to believe this and is enraged. He then accuses Mah babu Sanam of lying, kicks him severely and later puts him into banishment at the sea. Hanuman Kera Putih found Mah Babu Sanan and the latter elects to serve Seri Rama and then help him defeat Maharaja Wana.



Figure 3.22: Mah Babu Sanan of Wayang Kulit Kelantan (From Left: Puppet Collection of Pak Nasir, Pak Soh and Yousof)

Mah Babu Sanan is a skilled astrologer and an officer of Seri Rama. The puppet of Mah Babu Sanan depicts distinctive Malay designs in his profile face, crown and costume. He has a mustache and beard, a common phenomenon of most Muslim males as keeping a beard is an adherent practice according to Islamic teachings. In addition to that, he also wears a Malay head dress which is a crown-like feature known as *tengkolok*. These features are not found in any puppets of Indonesian and Thai shadow puppet theatre. According to Pak Dain and Pak Soh (personal communication, December 17 & 18, 2012), he holds a clutch on his non-articulated arm. This is due to the result of being kicked and trampled by his brother, Maharaja Wana, so severely it causes his back to become crooked. In addition to that, the articulated hand's gesture of the Mah Babu Sanan puppets of Pak Soh and Pak Dain are facing up, which is not seen in other puppets. The similar hand gestures were also found in the colour photograph of the

same puppet character in Ramli & Ibrahim's book *Wayang Kulit* (1996: 112) and two puppets of Mah Babu Sanan in Yousof's collection (Figure 3.22). In addition to that, several scenes of *Wayang Kulit Siam- the Malay Shadow Puppet* (1995), a documentary video produced by Yousof, also features shadow images of Mah Babu Sanan with the same hand gesture. Based on Pak Soh (personal communication, December 17, 2012), the reason is because Mah Babu Sanan has to plead with Maharaja Wana to show mercy and spare his life before he was abandoned and cast away by the latter.

Mah Babu Sanan plays an important role in the repertoire of *Hikayat Maharaja Wana* and therefore, in the final episode after the defeat and death of Maharaja Wana, Seri Rama installs him as the ruler of Langkasapuri, a kingdom once belonging to Maharaja Wana.



Figure 3.23: Sagariwa of Wayang Kulit Kelantan (From Left: Puppet Collection of Pak Nasir, Pak Soh, Pak Dain and Yousof)

The majority of the refined officers who serve Seri Rama are ape warriors. The most famous among them is Sagariwa. He is the brother of Raja Bali and thus both depict similar physical appearances. Initially, he rules the kingdom of Pakian with Raja Bali and his name was Sag. In the episode “the Mad Buffalo and the Death of Raja Bali”, he mistakenly perceives that his brother, Raja Bali, was killed by a mad buffalo character named Anak Amok before taking the three wives of his brother and sleeps with them. His action provokes the return of Raja Bali who beats him in the jungle and

banishes forever. When Seri Rama, Laksamana and Hanuman Kera Putih tramp through the jungle, Hanuman Kera Putih finds him and restores him with a magic antidote. Sag is then elected as a servant to Seri Rama and helps him defeat Raja Bali. Upon the defeat and death of Raja Bali, Sag is officially given the name Sagariwa and is promoted to the chief minister of Seri Rama (Sweeney, 1972: 103-106). Raja Bali and Sagariwa are of almost identical appearances. The most distinctive feature of the Sagariwa puppet is his tail, which curves and twines around the weapon held by his non-articulated hand (Figure 3.23).

Judging from the portrayals of Mah Babu Sanan and Sagariwa, it is obvious that the refinement and coarseness of both characters in the context of wayang kulit Kelantan does not merely rely on their consanguinity but rather dependent on which side they stand on in the battle between Seri Rama and Maharaja Wana. If they are with Seri Rama, then they are considered refined characters and vice versa.

Apart from Sagariwa, there are other refined warriors of Seri Rama such as Maharaja Kera Saburanang and Tilam Tila Pujangga (also known as Raja Tilam). They are brothers and co-rulers of Bukit Gunung Lega Pisang. They are forced to pay obeisance to Seri Rama by licking his arrow. If they ever commit treason, the arrow will kill them.



Figure 3.24: The Brother Characters of Wayang Kulit Kelantan (From Left: Lela-bat and Lela-bet; Anila and Pelela Angada, Puppets Collection of Pak Nasir)

Apart from Maharaja Kera Saburanang and Tilam Tila Punjagga, there are also other pairs of ape warrior puppets of almost similar appearance as they are brothers or intimate kinship in the repertoire. Other well-known pairs are Lela-bat and Lela-bet (or also called Lang Lobat and Lang Lobet) and Anila and Pelela Angada (also known as Angada). Lela-bat and Lela-bet are sons of Maharaja Kera Saburanang and Tilam Tila Punjagga. Anila and Pelela Angada are brothers of the same father, Raja Bali, but different mothers. Pelela Angada's mother is Madudaki and Anila's mother is Tuan Puteri Pandan Wangi.

For such characters, the design, structure and motifs are almost the same and the only difference is the colour of their faces, bodies and costumes (Figure 3.24). It is also noticed that contrasting colours such as red and green have been used on these pair of puppets and this is a possible reason for easy recognition. Based on Pak Soh and Pak Dain (personal communication, November 17 & 18, 2012), the main features that distinguish these puppets are their tails and weapons. In addition to that, Pak Soh (personal communication, November 17, 2012) mentioned that different designs of nasal hair are used to distinguish the puppets of Angada and Anila. However, the author found out that not all puppeteers follow the same rule as Pak Soh failed to identify all the puppets of Pak Nasir in this category when the author showed them to him.

In general, the warriors of Seri Rama depict ape features such as broad and bulbous noses, big round eye, and a large mouth with teeth showing and a long protruding tongue in its profile face with an upward raised tail. Most of the ape warriors have their faces painted in red colour, a possible reflection of their aggressive nature. The most distinctive difference between these monkey warriors, notably of Hanuman Kera Putih and his lineage, is their feet: the first showing human-like toes but the latter showing ape-like claws.

On the other hand, the astrologer officers and ministers of Seri Rama show human-like features with near-naturalistic profile faces, Malay crowns, ornamentations and costumes.

3.4.9 HEAVENLY BEINGS FROM UPPER- WORLD

According to Sweeney (1972: 89-91), the majority of heavenly beings from the upper- world—such as Sang Alam Tunggal, Sang Yang Kenung, Sang Yang Tunggal, Dewa Berembun, Dewa Cahaya Bulan, Dewa Empat, Bentara Baha, Dewa Bentara Omar, Dewa Bentara Indera and Siti Chendana and Siti Anyang Dewi—in wayang kulit Kelantan do not portray a standard design, structure and form. It is often impossible to identify specific characters from the upper-world as their design is far from standardisation. It is common for a puppeteer to recognise his own puppets from this category but will often be unable to identify corresponding puppets of other puppeteers.



Figure 3.25: The Bentara Guru Puppet, a God from the Upper-World (*kayangan*), Puppet Collection of Pak Nasir

The only exception of this instance is the Bentara Guru puppet. The word *bentara* is derived from the Sanskrit word *bhattara*, meaning “noble lord”. It is a title given to major Hindu divine beings in Indonesian shadow play theatre and sometimes it is also assumed as a title by certain rulers (Singaravelu, 1974: 38). However, the Bentara Guru character is associated specifically with the Hindu deity Shiva in his aspect as the King

of gods, Teacher and Ascetic and is regarded as the greatest divine being in *Hikayat Maharaja Wana*.

In the episode “The Origin of Pak Dogol”, Bentara Guru and his brother, Dewa Begawan Nerada, are the rulers of the East and West of the lower level of the upper-world (kayangan). They are the superior-gods of the other five gods known as Dewa Bentara Omar, Dewa Bentara Indera, Bayu, Dewa Kerga and Kerga Dewa.

The Bentara Guru puppet of wayang kulit Kelantan distinctively portrays strong influences from Javanese shadow play in terms of its structure, form and design (Figure 3.25). The non-realistic stylisation of the Bentara Guru puppet includes his beak-like noses that slope down, two articulated and elongated arms that nearly reach its feet and highly angular shoulders. The Bentara Guru puppet and possibly the entire god puppets from the upper-world are merely a direct adaptation or import from the Javanese wayang kulit.

The hand gesture of the Bentara Guru puppet is also different from other puppets. This hand gesture is found in many puppets of Javanese and Balinese shadow theatre. The name of this hand gesture is *sacro-mudra* in the Balinese shadow puppet theatre and is found mainly on warriors of the Pandawa camp in the *Mahabharata* (Hobart, 1987: 25).

3.4.10 HUMAN-ANIMAL HYBRID CREATURES

In the repertoire of *Hikayat Maharaja Wana* of traditional wayang kulit Kelantan, there are several human-animal hybrid creatures that do not belong to either refined or coarse categories. One of these creatures is the Sepit Bentala (literally meaning dragon

king) character. Sepit Bentala is the king of dragon who lives in the sea. Throughout the entire repertoire of *Hikayat Maharaja Wana*, he remains a neutral character and has refused the request from Maharaja Wana to join the battle fighting against the army of Seri Rama.



Figure 3.26: Sepit Bentala of Wayang Kulit Kelantan (From Left: Puppet Collection of Pak Nasir and the Shadow Image of the Puppets of Pak Soh)

The author has discovered three puppets of this character: one from Pak Nasir's collection and two from Pak Soh's collection. These three puppets' depiction is rather standard in their design and structure. They depict a dragon head carved in three-quarter profile with a human-like body and one leg in a kneeling posture (Figure 3.26). They have a single, articulated hand jointed at the elbow and shoulder. A cudgel weapon is found on his non-articulated hand and no weapon is grasped on his articulated hand. He has horns on his nose and head. In addition to that, he does not have a tail.



Figure 3.27: Tuan Puteri Ikan of Wayang Kulit Kelantan (From Left: Puppet Collection of Pak Dain and Pak Soh)

Referring to Figure 3.27, Tuan Puteri Ikan is a mermaid character that depicts a female body with a fish tail. In the repertoire of *Hikayat Maharaja Wana*, she and a turtle king named Raja Labi initially agreed to help Maharaja Wana destroy the causeway to Langkasapuri (the country of Maharaja Wana) which was built by Seri Rama's army. However, Hanuman Kera Putih rebuilt the destructed causeway and catches her and Raja Rabi when they came to attack the causeway again. Hanuman Kera Putih kills Raja Rabi. However, Tuan Puteri Ikan, under the captive of Hanuman Kera Putih, insists he accompanies her to her abode with the condition to not destruct the causeway again. Reluctantly, Hanuman Kera Putih follows her and is coerced into marrying her, resulting in the birth of Hanuman Ikan.

3.4.11 HERMIT

The most famous hermit character of wayang kulit Kelantan is Maharisi. He is the adoptive father of Siti Dewi and has magical power. The Maharisi puppet depicts the physical appearance of an old man with a long beard and hunched back. His upper body is naked with drooping breasts and his skin is red in colour. Only one articulated arm is found in this puppet and his non-articulated hand grasps a serpent-head crook crutch. In addition to that, he also has movable jaws and eyebrow (Figure 3.28).

Apart from his hermit role in *Hikayat Maharaja Wana*, Maharisi also plays an important and different dual role in the “Dalang Muda” episode. The first 30 to 45 minutes of the “Dalang Muda” episode features the Maharisi puppet overlapping on the pohon beringin puppet at the screen centre and is flanked by the two demigods of bows puppets (Dewa Panah Perempuan puppet on the right side and Dewa Panah Laki-Laki on the left side of the screen facing each other in relation to the puppeteer’s point of view). According to Pak Nasir (personal communication, February 4, 2009), in the “Dalang Muda” episode, these four puppets resemble symbolic meanings: Dewa Panah Laki-Laki represents evil desires in human beings; Dewa Panah Perempuan represents decent thoughts; Maharisi represents the ability of humans to think (*akal*); and pohon beringin represents the World or Universe (*alam*). The puppeteer uses the Maharisi puppet as the Mahari Burung Jerijit character to recite a protective mantra in the Southern Thai dialect in order to cast away any evil influences that may affect the host of a performance as well as all participants and members of the audience in the “Dalang Muda” episode (Yusof, 2004: 85). In addition to that, this mantra is also believed to be able to bring wishes or desires of fulfillment.



Figure 3.28: Maharisi of Wayang Kulit Kelantan (puppet collection of Pak Nasir)

In performances of traditional wayang kulit Kelantan, apart from being used as Maharisi Burung Jerejit in the “Dalang Muda” episode, it is common for the same puppet to be used as other hermit characters such as Maharisi Kala, Maharisi Kala Api and Maharisi Mata Api.



Figure 3.29: Maharisi Puppets in the Collection of Yousof

Referring to Figure 3.29, it is interesting to notice that the three Maharisi puppets in Yousof’s collection depict fairly standard physical appearances as mentioned above but the distinctive differentiations is that all of them carry prayer beads on their non-articulated arms. Apart from Islamic influence, it could also be the influence of Hinduism and Buddhism in either India or Thailand that are yet to be identified.

3.4.12 THE DEMIGODS OF BOWS

The demigods of bows are a pair of special puppets appearing only in the “Dalang Muda” episode of wayang kulit Kelantan performances. They come in pairs with contrasting representations and meanings: one representing good or refinement and the other evil or coarseness. The good demigod of bow is called Dewa Panah Perempuan or Dewa Panah Baik and the evil demigod of bow is called Dewa Panah Laki- Laki or Dewa Panah Jahat (Figure 3.30).

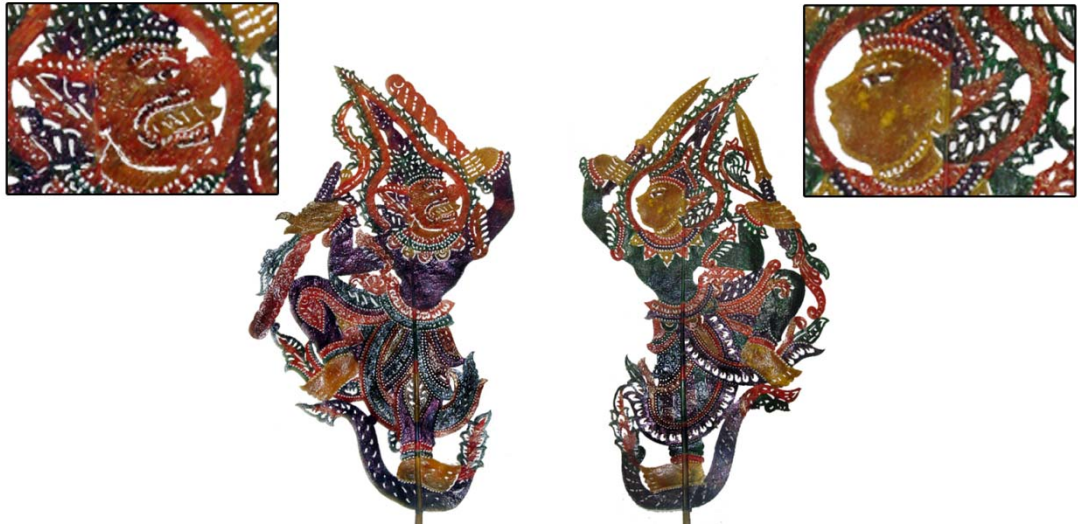


Figure 3.30: The Demigods of Bows Puppets of Wayang Kulit Kelantan (From Left: Dewa Panah Laki-Laki and Dewa Panah Perempuan, puppets collection of Pak Nasir)

Their designs and forms are almost off-symmetry and the only distinctive exception is their faces. The structure of Dewa Panah Perempuan's face is basically standard with a small nose, mouth, almond-shaped eye and forehead in a slightly concave line in profile of her configuration: she represents refined characteristics. On the other hand, the Dewa Panah Laki-Laki's face is usually constant with a broad and bulbous nose, big round eye and large grinning mouth with sharp teeth showing in profile of his configuration: he represents the coarse characteristics. Both of them are in fighting postures which is not a common feature in other puppets. According to some puppeteers in Kedah, the demigods of bows originated from the Thai nang talung (Sweeney, 1972: 212). Their fighting postures as well as pinnacle crowns are common features found in the Thai nang talung puppets.

3.4.13 CLOWNS



Figure 3.31: The Clown Puppets of Wayang Kulit Kelantan (From Left: Pak Dogol and Wak Long, Puppets Collection of Pak Nasir)

All clown characters of *Hikayat Maharaja Wana* are not derived from the original *Ramayana*. The two major clown characters of wayang kulit Kelantan are Pak Dogol and Wak Long. They were initially the servants of Maharaja Wana but after the defeat of the latter, they join Seri Rama. Pak Dogol is the most important among all clown characters (Yusof, 2004: 112-113). He is considered as a god-clown character. In the episode “the Origin of Pak Dogol”, it is mentioned that Pak Dogol is the incarnation of the supreme deity named Dewa Sang Yang Tunggal but at the same time, he is also the most humble yet ugly person (Sweeney, 1972: 97). After Dewa Sang Yang Tunggal descends to earth using Pak Dogol’s body, he proclaims that he needs a companion and therefore creates Wak Long using dirt from his body. Both of them depict humble appearances but with divine origins. The process of the supreme deity Pak Dogol creating a soul of life from an original substance, out of which develops something which becomes useful for the maintenance of mankind, is purely an animistic idea similar to the planting of the paddy seed in a muddy rice-field (Rentse, 1968: 13). Pak Dogol is regarded as too important to be kept in the file with all the other puppets and so, he is respectfully placed on the wall with offerings of jasmine flowers.

Although most of the researchers in the related field have paralleled the physical appearance of Pak Dogol puppet with the god-clown puppet, Semar of Javanese wayang kulit purwa, al-Almadi (1985: 121-122) mentions another theory. According to him, both clown puppets in traditional wayang kulit Kelantan were invented by the puppeteer, Saman, during the reign of Sultan Muhamad II (1837/ 8- 1886). The design of the Pak Dogol puppet was inspired by a round tombstone seller in Kampung Mentuan who had a comical physical appearance: bald, protruding buttocks, with a pair of loose trousers made of coconut fibres. He was crippled due to his ulcers. On the other hand, the Wak Long puppet was inspired by a longan seller named Wak Long Sulung in Kampung Sungai Budur, though he did not have a chin and sloppy shoulders. However, this theory is not supported by most researchers as well as practitioners of this traditional theatre art form.

The Pak Dogol puppet of wayang kulit Kelantan is always painted black and the Wak Long puppet is painted red (Figure 3.31). The only exception of this standard was found in one of the Pak Dogol puppets of Pak Soh. During a visit by the author and Yousof to Pak Soh's wayang kulit Kelantan hut in Kampung Laut, he showed a puppet of Pak Dogol with unpainted skin (Figure 3.32). According to him (personal communication, November 17, 2012), the initial skin colour of Sang Yang Tunggal or Pak Dogol was not black. As the most supreme heavenly deity living in the upper-world, Sang Yang Tunggal is like the sun and if he descends to the earth without any cover up, he will burn and destroy the entire earth. Therefore, Sang Yang Tunggal or Pak Dogol has to cover up his entire body with mud in order to conceal his real identity or skin colour. In addition to that, he later uses the mud of his body to create his companion, Wak Long.



Figure 3.32: The “White” Version of Pak Dogol, Puppets Collection of Pak Soh

Although Wak Long is painted red, he casts only black shadow on screen. Both the clown puppets appear completely opaque due to their contrasting characteristics. Even though they represent the highest incarnation of god, they are meant to appear humble and inconspicuous. According to Osnes (1992: 161), the solid black shadow images of the clown puppets make them appear mortal and grounded.

Both puppets exhibit coarser and comical characteristics with their broad and bulbous noses, round eyes, pot-bellies, large buttocks and sarong-clad torsos. The Pak Dogol puppet has a bald head with two teeth in his mouth and the Wak Long puppet has a small tuft of hair on the top and at the back of his head, also with two teeth in his mouth. Both of them have only one piece of clothing, a pair of loose trousers, hanging over their protruding buttocks and under their big tummies and umbilicus. The eye of Pak Dogol is red in colour but Wak Long’s is black. Their speech patterns are usually vulgar to the extreme with comical and nasal voices punctuated by quick, jab-like movements of their movable arms (Matusky, 1997: 17-18). The voice of Pak Dogol is always easy to distinguish as it is husky and animated in its delivery. The Pak Dogol puppet holds a Malay knife-shaped weapon (*palang*) in one of his movable hand but there is no weapon for the Wak Long puppet.

The Wak Long puppet only has a few fingers. According to Pak Soh (personal communication, November 17, 2012), this is because in the event of creating him using the dirt of Pak Dogol, Pak Dogol ran out of dirt on his body and is therefore unable to create all his fingers. However, the author found out that this feature is also apparent in the leading clown puppet of Thai nang talung named Ai Teng. The major difference is that the pointed finger of the latter is purposely shaped like a penis for sexual puns but Wak Long's pointed fingers is of normal appearance. Although sexual puns are a dispensable part of clown speech of Thai nang talung, it is not a common practice in the performances of wayang kulit Kelantan. According to Renker (1968: 3), the jokes passed between Pak Dogol and Wak Long may on occasion be quite crude but they never exceed the limit of appropriate decency, which would be regarded as a breach of custom in Malay society.

Apart from being the clown characters in the *Hikayat Maharaja Wana* repertoire, both puppets have been used in many rituals and are considered as powerful ritual mediums. Hence, they are treated with respect and caution with dual purposes. For the use of ritual purposes, the necks and waists of both puppets must be wrapped with a white cord (*benang mentah*) as a symbol of their divinity and sacredness.

Both of them have movable lower jaws and eyebrows controlled by strings. Their feet are connected with a simple plate without any motif. Both clown puppets are quite standard in design and any change in their designs is not tolerated and accepted.

3.4.14 OGRES



Figure 3.33: The Ogre Puppets of Wayang Kulit Kelantan, Puppets Collection of Pak Nasir

Most ogre puppets in wayang kulit Kelantan are nameless and there are no consistencies and standardisations in their designs (Figure 3.33). However, it is noticeable that most of them are comparatively large in size. In addition to that, their physical appearance and designs depict strong influences from Javanese shadow play. The faces and skin of ogre puppets are often painted red and this is a possible reflection of the Islamic worldview based upon the Holy Quran, which holds that jinns originate from smokeless fire (Yousof, 1997: 18).

3.4.15 ANIMAL, BIRD AND SEA CREATURES



Figure 3.34: Animal, Bird and Sea Creature Puppets of Wayang Kulit Kelantan (Puppet Collection of Pak Nasir and Yousof)

The essential animals and birds that exist in traditional wayang kulit Kelantan is a golden barking deer called *Kiang Mas*, a gigantic bird called *Jentayu* and a buffalo called *Anak Amok*. Figure 3.34 shows nine puppets of animal, bird and sea creature used in *Hikayat Maharaja Wana*. Both the golden barking deer and gigantic bird appear in

the episode “The Kidnapping of Siti Dewi”. The golden barking deer is the transfigured form of the villain Maharaja Wana in his conspiracy to kidnap Siti Dewi. Initially, the Jentayu and *Jentayan* birds are two servants of the god Dewa Berembum that live in kayangan. They have been ordered by Dewa Berembum to watch over kayangan before the latter descended to earth and incarnated to become Seri Rama. However, in later episodes, there is no mention of Jentayan but Jentayu becomes a pet and servant of Siti Dewi and Seri Rama (Sweeney, 1972: 101). When the Jentayu bird sees its mistress, Siti Dewi being kidnapped, it fights with Maharaja Wana. However, it loses in the battle and dies.



Figure 3.35: Anak Amok of Wayang Kulit Kelantan (Puppet Collection of Pak Soh)

All animal puppets consist of no joints except the Anak Amok puppet (Figure 3.35). Anak Amok is a buffalo puppet with a moveable head. It only appears in one episode in *Hikayat Maharaja Wana* entitled “The Mad Buffalo and the Death of Raja Bali”. With the help of heavenly beings, Dewa Empat (literally meaning four gods), he manages to gain enormous power with Dewa Empat, enters his four hooves and succeeds in killing his barbarous father. However, he becomes blood-lusted and runs amuck to seek for fights. He is then led by ants to Raja Bali in Pakian for a good fight. Raja Bali fights Anak Amok in a cave and succeeds in killing it after Dewa Empat feels insulted and leaves its hooves after denying Anak Amok from receiving external help.

In addition to that, there are also animal puppets of tigers, chameleons, frogs, fishes, turtles and birds (Figure 3.34). The armour-plated frog and lizard characters

appear in the episode “The Aftermath” and they were killed by Dewe’ (also known as Dewek, son of Pak Dogol) and Sulung (also known as Wak Long Sulung, son of Wak Long) (Sweeney, 1972: 122- 126).

3.5 THE SHADOW IMAGES OF WAYANG KULIT KELANTAN

In traditional wayang kulit Kelantan, there are three elements affecting as well as contributing to the quality of its shadow images. These elements are: (i) the translucency of puppet, (ii) the quality and movements of light source and (iii) the materials and vibrations of the screen. The following sessions explain all these elements individually in detail.

When considering the visual aesthetics of wayang kulit, most sources give detailed assessments of puppets but not of the quality of its shadow images (Osnes, 1992). Compared to the notable Indonesian wayang kulit purwa, the Malaysian wayang kulit Kelantan not only casts colourful shadows but also produces greater shadow distortions amplified by movements of the light source and touching of the screen (Figure 3.36). The puppets of Javanese and Balinese shadow puppet theatre are filled with thick paint so that no colour would come through in their shadow images. In addition to that, there is even an undercoat of black paint to keep any light from casting through the puppets.



Figure 3.36: The Shadow Image of Wayang Kulit Kelantan (Left) and Wayang Kulit Purwa (Images Courtesy of the Ministry of Culture, Arts and Tourism, Malaysia)

The wayang kulit Kelantan performances depict distinctive shadow distortions in many scenes, especially in the “Dalang Muda” episode, and fighting scenes. Somehow, this is rarely seen in other wayang kulit performances (Osnes, 2010: 74).

The distortions of shadows are different between wayang kulit Kelantan and Indonesian wayang kulit purwa too. It is very obvious when comparing the swaying and waving of the pohon beringin/kayon/gunungan in both wayang kulit performances.

Another reason that the Indonesian wayang kulit purwa does not show the level of distortions of shadow images as much as wayang kulit Kelantan due to the fact that its light source is suspended above the puppeteer’s head and far away from the screen. As a result, it cannot create the visual effects of shadow distortions similar to wayang kulit Kelantan.

The light source of wayang kulit Kelantan is a lamp suspended on the top near the screen centre. It was held in position by a wooden frame tied to the extruded parts from the top corners of the screen’s border frame. It is suspended slightly above the the puppeteer’s head when he performs sitting cross-legged or about 50 cm from both the ground and the screen based on the settings in ASWARA.



Figure 3.37: The Light Source of Wayang Kulit Kelantan (From Left: The Traditional Oil Lamps, Image Courtesy of Ramli & Ibrahim, and the Modern Light Source used by the Troupes of Pak Nasir and Pak Soh)

According to Sheppard (1983: 58), initially the light source of wayang kulit Kelantan was provided by lighting a wick of raw cotton about six inches long submerged in coconut oil in a shallow China bowl with its end hung down outside the bowl. The bowl was later replaced with a small paraffin lamp (Figure 3.37). In the past, oil or paraffin lamps were used as the only light source in wayang kulit Kelantan performances but both have been completely replaced with electric bulbs (Yousof, 1997: 16). The use of one light source in traditional wayang kulit Kelantan enables the audience to focus their mind on the screen as all shadow images seem to evolve from and revolve around only this point of light.

The wooden frame which held the light source also acted as a shield to prevent the direct glare and heat of the lamp to fall onto the face of the puppeteer. Veteran observers of the shadow puppet theatre think that the visual effect created by the oil lamp is aesthetically superior (Yousof, 1997: 16). It not only projects softer images but also gentle movements on the screen during performance with the flicker of the flame providing an altogether more pleasing appearance. Pak Nasir (personal communication, December 15, 2008) said that the light source should only be moved intentionally when there are no movements of the puppets during performances and where some of the puppets are placed slanting on the screen. The movement of light source thus gives an impression of very diminutive movements of the puppets. Recently, the author discovered that Pak Soh uses a high-intensity halogen bulb as the only light source for his wayang kulit Kelantan performances. Due to its high intensity, the shadow images are distinctively apparent, clear and vivid, even in the afternoon in his wayang kulit Kelantan hut in Kota Bharu (Figure 3.37).

On the other hand, the light source in Indonesian wayang kulit purwa is a special brass oil lamp (*blencong*) often shaped like the mythical bird namely *garuda* hung above the puppeteer's head. The light from the lamp projects the images of the puppets

on the screen. The light source in wayang kulit purwa is fixed in an unmovable position. Compared to wayang kulit Kelantan, the distance between the light source and screen in wayang kulit purwa is greater as well. This allows the wayang kulit purwa to have lesser shadow distortions than wayang kulit Kelantan.

The puppeteer projects the shadow images of his puppets on the screen during his performances. According to Sheppard (1983: 58), the size of the screen is about 11 feet by eight feet. On the other hand, Pak Nasir (personal communication, February 4, 2009) said the size of the screen should be 12 feet by 10 feet but Nasuruddin (2000: 12) mentions that the width of the screen should be 12 to 14 feet and the height 10 to 13 feet. In addition to that, Matusky (1997: 15) mentions that the size of the screen in wayang kulit Kelantan may be very small (about one by two meters) or medium to large (about two by three meters) However, the author found out that the screen in ASWARA is only 8.3 feet (250cm) by 6 feet (180cm). Up to now, there is no valid supportive documentation to confirm the standard size of the screen. Hence, the size of the screen in ASWARA wayang kulit Kelantan theatre setting is used as the standard in this thesis. This screen is mounted on a wooden or metal frame in such a manner that it tilts outwards slightly (77 degrees according to ASWARA theatre setting) and facing downwards from the puppeteer's side to enable him to lay his puppets upon. The screen is usually completed with decorated border, tassels or other decorative features. Pak Nasir (personal communication, December 15, 2008) in ASWARA points out that the screen is the symbol for the World and it should only be touched and vibrated during fighting scenes by pressing the puppets towards it. At other times, it should remain flat and calm and only sensational touches are allowed.

In general, the size of the screen used in wayang kulit Kelantan theatre setting is comparatively smaller than most of the shadow puppet theatre in Southeast Asia. Wayang kulit Kelantan therefore depicts distinctive vibrations of the screen when it is

hit by its puppets. In addition to that, only a small area of the total screen space is used as a performing area. Puppeteers always keep their puppets in the lower-middle portion of the screen so that the shadow images will be clearly casted and also make distorted exits and entrances using the full screen that is much more impressive by comparison. This is one of the distinctive and unique visual aesthetics of traditional wayang kulit Kelantan.

3.6 SUMMARY

This chapter discusses and defines the visual aesthetics of traditional wayang kulit Kelantan through detailed descriptive studies on its puppet craftsmanship, designs, styles, shadow images, screens and light sources.

Although the puppets of wayang kulit Kelantan are less ornately carved and painted than that of the Javanese, this does not preclude it to emerge as a high ethnic culture theatre form. There is a wealth of information and meanings concealed in the designs and appearances of the puppets of wayang kulit Kelantan. This visual form of language has set the standard for wayang kulit Kelantan and makes it stand out distinctively and idiosyncratically from other genres of shadow puppet theatre.

In addition to that, understanding the process of puppetmaking and rationale behind can provide greater and deeper understanding of the performance possibilities in this art form. By knowing the style of constructions and designs for standard puppets and character types in traditional wayang kulit Kelantan, we can identify and appreciate the visual aesthetics of this dying art form without confusing it with other genres of shadow puppet theatre like many previous researchers and scholars.

All elements of the visual aesthetics found in wayang kulit Kelantan discussed in this chapter is carried forward to the next chapters, as guiding principles and measurement standards for the framework of digital puppetry of wayang kulit Kelantan.

CHAPTER FOUR

DIGITAL PUPPETRY

4.1 OVERVIEW

The term and definition “digital puppetry” is a subject of debate among puppetry practitioners, CG designers and computer animators. Digital puppetry is found in two broad contexts, namely puppetry in digital media and digital puppetry in live performance theatre.

This chapter firstly presents various definitions and theories of digital puppetry as proposed by several scholars in related fields. Taking these definitions into rational consideration, the author presents his own definition of digital puppetry used in this thesis. The author also presents and discusses several examples and case studies of digital puppetry in this chapter to provide readers with a simple context and better understanding of debates related to digital puppetry. In addition to that, this chapter also presents digital puppetry in live performance theatre. Lastly, the author presents currently available research and creations of digital puppetry of traditional wayang kulit Kelantan.

4.2 DIGITAL PUPPETRY

The term “digital puppetry” in this thesis mainly refers to the puppetry in digital media that undergoes a process of mediatisation or remediation. In communication studies or media studies, “mediatisation” refers to the meta-process through which almost all areas of social and cultural life are affected by the increasingly dominant role of modern media (Wang, 2010: 8). Based on the broader conceptual phenomenon of mediatisation put forwarded by Hjarvard (2008: 133-134), the term “mediatisation” here refers to the transfer, migration or transformation from traditional theatrical performing art of puppetry to modern digital media. On the other hand, Bolter & Grusin (2000: 19)

define “remediation” as a medium that remediates using appropriate techniques, forms and social significances of other media and attempts to rival or refashion them in the name of the “real”. The term “real” here means not only realism but also the aesthetics, institution, sociology and phenomenology of a particular older media that has been captured and transferred into a new media product. According to Tillis (1999: 183), digital puppetry offers the greatest challenge to conventional puppetry theory. Unlike live puppetry performances, puppetry in digital media is lacking in its presence in time and space, its unique existence at the place where it happens to be and its aura of performance (Benjamin, 1969: 20-21). In addition to that, all digital puppetry, whether created from scratch on computers or converted from recordings of live puppetry performances, are composed of digital code; they are merely numerical representations on digital screens.

Therefore, some theatre theorists might question and doubt the legibility of digital puppetry to be categorised or described as a new genre in performance art and its relation to performance studies. However, based on the performance theory suggested by Richard Schechner and Jean-Francois Lyotard, Wang (2010: 15) mentions that digital puppetry is undoubtedly a new genre in performance. Further, Wang (2010: 15) also mentions that anything distinctive within the study of digital puppetry should be achieved by applying concepts from performance studies.

It is without a doubt that digital puppetry is much more advantageously positioned in the marketplace when it competes directly with theatre and other forms of live performance (Wang, 2010: 6). The earliest example of remediation of puppetry is the recordings of its actual performances. It captures live performances of puppetry into recorded media formats so the audience can watch these performances on media screens such as television and computer anytime without being present at a particular time and

place instead. The early television has successfully promoted traditional puppetry and has increasingly brought this performing arts theatre to wider audiences.

Scholarly attempts in defining the term “digital puppetry” are obscure but at least three were found from the 1990s that defines “media puppetry”, an early term used for digital puppetry (Wang, 2010: 21-25). In 1991, the Board of the North American Center for the Union Internationale de la Marionette (UNIMA-USA) introduced a new definition of “live” puppet performance—a citations category of “puppetry in video”—referring it mainly to puppetry in all recorded media. According to the definition given by Mark Levenson, the Chairman of the UNIMA-USA Citations Committee, technology must only be used to record puppetry rather than create it. This means that puppetry performances must, at all times, be under the control of a live, human puppeteer performing in “real-time”. This kind of puppetry performance is recorded and the recordings may be edited or manipulated prior to showing it to the audience (Tillis, 1999: 175). The term “real-time” in this definition refers to a synchronicity between a puppeteer’s control and his puppet’s resultant result but not vocal performance. Obviously, this form of media puppetry refers only to recordings of live-performance puppetry that is shown in television, film and video. It also includes animatronic puppets or performing objects if their movements or animations were created by a human operator in real-time. One example of this form of media puppetry is the famous American-British variety show produced by puppeteer Jim Henson entitled *The Muppet Show*. The definition given by Levenson is in such a narrow sense that he has totally ignored the CG virtual puppetry at all, which Kaplin (1994: 37-39) and Tilis (1999: 174) have included in their later definition of media puppetry.

Despite drawing a strict line between puppetry and virtual puppets or performing objects, Kaplin (1994: 37-39) mentions four types of puppetry in digital media that are contradictory to the definition given by Levenson. These four types of puppetry, which

Kaplin calls as “emerging sub-genres” of media puppetry, are: (i) docu-puppetry, (ii) virtual puppetry, (iii) hyper-puppetry and (iv) cyber-puppetry. The docu-puppetry mentioned by Kaplin is similar to the definition and concept of digital puppetry put forwarded by UNIMA-USA which makes use of “sampling, cropping, and re- editing” of media images and involves the “depiction in puppet performance of factual and authoritative material, illustrating historical, social and cultural phenomena”. However, the remaining three sub-genres of Kaplin are diametrically against the theory of UNIMA-USA, as he includes the computer-based and cybernetic technology-simulated virtual puppetry as digital puppetry. The second sub-genre, virtual puppetry, involves “performing objects that exist only within the computer. They are generated out of digitised bitmaps, given highly controlled behaviour parameters and linked by manual controls from the outside, human world”. This is, in essence, a description of computer-generated virtual puppets. The third sub-genre, hyper-puppetry, is a collective extension or a corporate entity of a computer-generated puppet created out of merged energies of both users and participants. The fourth sub-genre, cyber-puppetry, is a networked-based computer puppetry with an online, interactive dimension that enables the artists or users to participate in performances as collaborative creation(s) with the audience. All these four sub-genres are basically inter-related; they are variations of virtual puppetry.

However, apart from these four subgenres, Tilis (1999: 178) mentions that there seems to be an implied definition of digital puppetry in Kaplin’s theory, which states: if the significance of life can be created by people, then the site of that significance is to be considered as a puppet. This concept expands the realms of puppetry beyond all definitions that center upon the materiality and existence of a puppet. Using this concept as fundamental, Tilis (1999: 182-183) proposes another theory on digital puppetry in the age of media production, classifying it into three categories: (i) digital puppetry using tangible puppets or performing objects that are tangibly moved or manipulated (in this

case, it is the same as the definition of Levenson and the docu-puppetry of Kaplin), (ii) digital puppetry using virtual puppets or performing objects (which is similar to the virtual puppetry, cyber-puppetry and hyper-puppetry mentioned by Kaplin) and (iii) digital puppetry using tangible puppets or performing objects that are intangibly moved or manipulated (also known as stop-action puppets). The concept of tangible puppet in Tilis' theory refers to puppets that are capable of being touched physically and this also includes their conventional and digital films or video images because they are a direct reference to the original materials or corporeal objects, notwithstanding the ways in which directors and editors might make use of them (Tilis, 1999: 179). The concept of "intangibly moved or manipulated" here refers to the use of only computer input devices such as the keyboard and mouse to move, control and manipulate puppets without involving the human puppeteer's participation and operation.

Most of the digital puppetry is inevitably and naturally related to CG. Based on Sinha & Udai (2008: 1), there are two main divisions of CG: non-interactive and interactive. Non-interactive or passive CG is a form of CG which only allows one way of relaying information in which observers have no control over the images. The familiar forms of non-interactive CG include microfilm recorders, ink pen recorders, plotters and printers. In contrast, interactive CG allows users to interact with it. An example of this type of CG is a game of chess whereby the user makes a move before waiting for the computer to make its move. Non-interactive CG can be as equally useful as interactive CG depending on the application and purpose. In many instances, a picture can be made on an interactive system and then turned into passive CG for viewing (Lewell, 1985). One such example is printed digital photograph, which only allows passive viewing by viewers but many of them still exist as electronic data that can be amended and manipulated digitally using appropriate graphic software.

Although the definitions of digital puppetry proposed by Levenson (1992: 1), Kaplin (1994: 37-39) and Tilis (1999: 180-183) are, in essence, in disparity with one another with little likenesses, none has consider the theory of CG. As the primary focus of this research is to preserve traditional shadow puppet theatre of wayang kulit Kelantan using digital technology and CG, the author therefore proposes a new definition and classification of digital puppetry in a broader sense that appears throughout this thesis and is based on existing theories and definitions mentioned above. Unlike marionette puppetry, the essence of shadow play puppetry is its shadow images on screen. Although the shadow images in shadow puppetry are indeed images similar to that on a computer screen, the puppets are tangible performing objects. The tangible puppets are the material entities and the direct referents of their shadow images cast on screen. Therefore, certain terminologies and ideas of marionette puppetry is applicable in this thesis.

The main objective of this thesis is to study the methods and potentials of using modern technology and CG to capture and promote the visual aesthetics of traditional wayang kulit Kelantan in digital media. From here, the author will refer to the term digital puppetry used in this thesis in a broader sense: to all types of puppetry that exist in digital media which include the use of tangible and intangible computer-generated virtual puppets. Besides that, although it is not the primary focus of this thesis, the author will also discuss and present several examples of the use of digital puppets in live performance theatre, giving the audience a clear picture of the influences of digital media and technologies on traditional arts of puppetry.

4.3 PUPPETRY IN DIGITAL MEDIA

The author classifies puppetry in digital media based on materiality of puppets and its own existence in computer technology and art performance (for example, the

dealings between humans and puppets, real time technology, input mechanism, etc). Therefore, the author proposes four main categories of digital puppetry. These categories are: (i) recordings of live puppetry in digital media that may be edited or manipulated; (ii) stop-action puppetry in digital media, (iii) non-interactive virtual puppetry in digital media that uses intangible digital puppets or computer-generated puppets to simulate movements and visuals of puppetry theatre in a linear storytelling manner and (iii) interactive virtual puppetry in digital media that uses intangible digital puppets or computer-generated performing objects in an interactive manner (for example, the audience can manipulate or control digital puppets or visuals on media screen).

The following sections provide detailed discussions and case studies on each of the four categories of digital puppetry. Although, in essence, all of them are puppetry in digital media, they are different in their materiality and interrelationship between humans or puppeteers and technology. Certain examples have been highlighted to give a full picture of the similarities and differences among each of them. In addition to that, the author also presents brief historical backgrounds, impacts and contributions of each category towards society as well as traditional puppetry. This will provide some guidance and clues on how to make use of digital puppetry of wayang kulit Kelantan to preserve, promote and revive the actual art form.

4.3.1 RECORDING OF PUPPETRY IN DIGITAL MEDIA

First, the author presents some highlights, major trends and landmarks as well as case studies on the use of recordings of live puppetry in digital media. Although the recordings of puppetry performance might not necessarily be in digital format, this statement is no longer valid today. The digital revolution of computing and communication technology that has taken place since the 1980s has resulted in a rapid switch from analogue mechanical to digital technology. During the beginning of the

1990s, it was already time to affirm that digital was the emerging dominant media form, replacing analogue televisual and technology (Wang, 2010: 38).

The emergence of television puppetry has contributed significantly to the success of the puppetry industry in the United States. It was a major contribution to the visibility of puppeteers and viability of puppetry as a way to earn a living. The television was first showcased and presented formally in 1939 at the New York World's Fair where the power of this new medium was hailed as a new way of reaching many people simultaneously over great distances. Immediately after the emergence of the television technology, the demands of television puppetry increased tremendously that airtime can be filled and buyers of television sets can watch something on their television screens. Live performances of puppetry had been mediated into television screens and puppeteers managed to find a way to make a place for themselves on airwaves (Stoessner, 2008: 28-29). The first television puppetry programme of the United States was *Kukla, Fran, and Ollie* by Burr Tillstrom. It was broadcasted five times a week for 15 minutes a day nationally in 1949 and gained enormous success. Although the programme depicted only the recordings of glove puppets from a single operator, it was a hit and the show ran in several incarnations from 1947 until 1975. This television puppetry programme was so popular at one point that families in the United States planned their dinners around its airtime and bars often stopped serving beers during the show so those without televisions at home could watch it with their children at the bars instead (Stoessner, 2008: 32). In the 1950s, puppetry became a successful industry and enterprise in the United States with tributes of popular early televised puppetry programmes presented daily such as *Kukla, Fran, and Ollie*, *The Howdy Doody Show* and *Life with Snarky Parker*. *The Howdy Doody Show* was the first television programme to reach 1,000 and then 2,000 episodes during its 13-year run (Stoessner, 2008: 32-33). Apart from its entertainment purpose, television puppetry

programmes such as *The Shari Lewis Show* in 1960 was used to educate children in the United States.

According to Stoessner (2008: 43), Jim Henson (1936-1990) was the person in the 20th century to revolutionise puppetry in the United States today. Early television puppetry were merely direct recordings of live puppetry performances that were later put on television airtime and the puppets were never custom-made based on characteristics and constraints of the television medium. However, Henson's puppets were different from previous puppets that had appeared on television (Stoessner, 2008: 47). He had created a new type of puppet, referred to as "Muppet-style puppets", which uses soft materials to allow performers to manipulate their jaws in coordination and synchronisation with the lyrics of songs and to make facial expressions. Furthermore, Henson also developed some performing styles as well as made adjustments and amendments to ensure his Muppet-style puppets look realistic and attractive on television screen. These include the Henson Punch performing style that incorporated lip-sync for puppets and the removal of the puppet stage and proscenium so his puppets can move about freely on the television screen. In addition to that, he used several human performers, all dressed in black fabric, to operate a single puppet character invisibly onto a computerised camera. This style of puppetry is similar to *bunraku*, a traditional puppetry of Japan. Also known as *ningyo joruri* (literally meaning puppets and storytelling), *bunraku* is a form of traditional Japanese puppet theatre founded in Osaka in 1684 and has been a documented traditional activity for Japanese for hundreds of years¹⁹. In a nutshell, Henson focused and emphasised more on the appearance of puppets on television screen rather than their actual performance. He changed the way puppetry was produced on television screen by breaking boundaries and merging the

¹⁹ See Johnson, M. (1995, August 14). *A Brief Introduction to the History of Bunraku*. Retrieved January 1, 2013, from The Puppetry Home Page: <http://www.sagecraft.com/puppetry/definitions/Bunraku.hist.html>

arts of puppetry for its use in television. By 1978, Henson's *The Muppet Show* was seen by 230 million viewers in 106 countries. The Muppets characters of Henson were brought into a pre-school children's educational television programme entitled *Sesame Street* in November 1969 whereby they interacted with humans as if they were real people also living in the neighborhood (Stoessner, 2008: 59). Apart from television puppetry, Henson also produced six *The Muppet Show* movies and fantasy films entitled *The Dark Crystal* (1982), *Labyrinth* (1986) and *The Storyteller* (1988). In addition to that, he also crafted the character Yoda for *The Empire Strikes Back* (1980), the second film in the initial *Star Wars* trilogy.

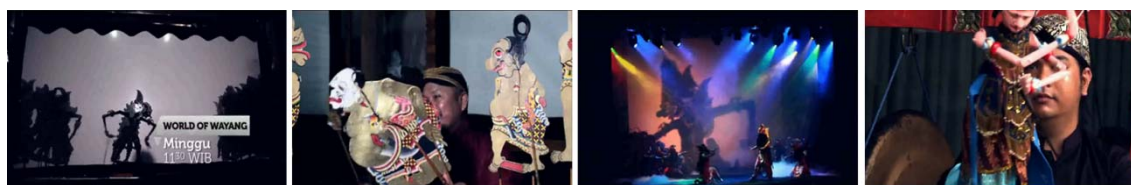


Figure 4.1: Screenshots of *World of Wayang* (Images Courtesy of Kompas TV)

According to Brown (2001: 250), the Indonesian wayang kulit became institutionalised in Indonesia through local television. Television programmes of local performing arts and puppetry such as *Humor Ludruk*, *Humor Ketoprak* and *Wayang Wong Humor* were shown weekly on Indonesian national television. The first Indonesian television puppetry, *Si Unyi*, appeared for the first time in April 1981 on television broadcasted by TVRI, a national television company in Indonesia. It was a children's television series that used hang puppets resembling physical appearances of ordinary Indonesians and their common habiliments. Apart from its entertainment purpose, this television puppetry contained Indonesian wayang philosophy. In addition to conveying mythical tales and mysticism, the Indonesian wayang also has its own philosophy. It represents the whole Javanese philosophy of vagueness and their idea of man and God. The Javanese use the wayang kulit to illustrate their concept of the invisible world and spirits of their ancestor in order to convey the meaning of life and

the destiny of man. The wayang philosophy implants in the Javanese mind that everyone has a role to play in society and therefore, must realise and carry out their respective role (Lee, 1999: 3). Therefore, the Indonesian television puppetry *Si Unyi* propagated underlying messages of patriotism, nationalism, health, the environment, armed forces, family planning, art and culture as well as children's fantasy such as folk stories, fables and fairy tales²⁰. On the other hand, a publicly owned Indonesian national television company, Indosiar, focused strongly on promoting and popularising its local shadow puppet theatre by broadcasting performances of Indonesian wayang kulit every Saturday night. These programmes of Indonesian wayang kulit were accompanied with modernised musical ensembles, repertoires and adapted humorous jokes. According to Tanudjaja (2006: 2), they were more favoured by city audiences who preferred to watch in front of their television screens at home than live performances as they seldom have the opportunity to watch traditional live wayang kulit performances in urban areas. Recently, on 1st August 2012, PT Bank Central Asia (BCA), the largest private lender in Indonesia, collaborated with Indonesian Puppeteers Association (Pepadi) and Kompas TV to broadcast an educational television programme entitled *World of Wayang* to promote its traditional puppet theatre (Figure 4.1). It was one of the efforts of BCA under *BCA untuk Wayang Indonesia* (BCA for Indonesian Wayang) to revive the Indonesian wayang kulit, which was undergoing a marked decline. According to the President Director of BCA, Jahja Setiaatmadja, it is the responsibility of all Indonesians to promote and uplift the interest and appreciation among the diverse, local younger generations for the sake of continuity and preservation of their wayang tradition²¹. *World of Wayang* has been airing on Kompas TV every Sunday starting 8th July 2012.

²⁰ See Suyadi. (2007, February 17). *Unyi: The Puppet that won the heart of Indonesian Children*. Retrieved January 7, 2012, from Internet Archive Wayback Machine: <http://web.archive.org/web/20070217202617/http://www.unicef.org/puppets/pupindo.html>

²¹ See Advi. (2012, August 1). *BCA Dukung Kelestarian Wayang Indonesia*. Retrieved January 7, 2013, from Berita BCA: <http://www.shnews.co/beritabca/detile-859-bca-dukung-kelestarian-wayang-indonesia.html>

Apart from television puppetry, there have been many Western films and videos that used recordings of live puppetry for many decades. Jouvanceau (2004: 31-32) mentions Segundo de Chomon (1871-1929) and Emile Cohl (1857-1938), two notable early filmmakers, who have used recordings of live puppetry in some of their films. Segundo de Chomon was a Spanish film director who has been considered as one of cinema's first great masters of optical effects and the most influential and international Spanish filmmaker of his period. In *La Maison bantee* (1960), Segundo de Chomon shows scenes of the supernatural acted in silhouette against a translucent screen using life-sized puppets either operated by a puppeteer or mechanical rig.

On the other hand, Emile Cohl was one of the most important pioneers of the art of animated cartoon and an innovative contributor to popular graphic humour at a critical moment when it changed from traditional caricature to modern comic strip (Crafton, 1992: 2). As a French cartoonist and animator, Cohl is often referred to as "the father of the animated cartoon". However, he was interested in shadow puppet theatre before moving on into animated cartoons (Jouvanceau, 2004: 24). Between February and May 1908, Cohl created *Fantasmagorie*, considered the first fully animated film ever made. Cohl's animation entitled *En Route* (1910) showed a puppet sitting by the roadside watching all existing forms of transport pass by in chronological order.

In the 1990s, brothers Chris and Vincent Huang from Pili International Multimedia Company in Taiwan developed a new style of digital puppetry combining various elements from popular cultural genres from China, Japan and the United States (Silvio, 2007: 289). The elements of computer-simulated animation and special effects were incorporated into recordings of live puppetry performances in Taiwan's "digital video knights-errant hand-puppetry" (*Shuwei Wuxia Budaixi*) series produced by Pili. This series of digital puppetry successfully provided a platform for young Taiwanese puppeteers to tell their classical stories with modern technology and ensuring that it can

be marketed effectively in the global market. They blended and embedded recordings of traditional southern Chinese hand-puppet puppetry with the frenetic editing of Hong Kong action cinema, photographs, CG images, line drawings and computer-generated animation (Silvio, 2007: 285). The digital puppetry series produced by Pili was famous for their dazzling special effects, aesthetics of their tangible puppets as well as the complexities of its narratives and characters. This so-called “remediation” product of the local tradition of Chinese puppetry with the technology of new media has successfully earned them a global audience. The Pili Company also released its first feature puppetry film entitled *Legend of the Sacred Stone* (*Sheng Si Chuan Shuo*) in 2000. According to Deslandes, this feature film is a convergence of the ancestral and the modern, bringing together traditional mythology and present-day special effects possibilities of cinema. Peripheral in nature, it dwells at the border of the East and West, challenging the boundaries of the traditional and the modern, the portions of colonial legacy and Taiwanese national cultural identity²².

Apart from conventional tangible puppets manipulated by human puppeteers, there are also computer-controlled tangible puppets and performing objects used mostly in filmmaking called animatronics (Kerlow, 2004: 270-271). These animatronics can be controlled and animated in real-time using motion control systems with their mechanical and electronic parts that usually consist of a metal-jointed armature covered with synthetic skin that is moved with servomotors. In brief, they are mechanised puppets that may be pre-programmed or remotely controlled from a distance by human puppeteer(s) to perform particular actions or movements. The external control of an animatronic can be achieved with a cable or radio signal and it may be done in real-time or recorded and played back later on a digital screen.

²² See Deslandes, J. (2000, November 1). *Dancing Shadows of Film Exhibition: Taiwan and the Japanese Influence*. Retrieved February 5, 2013, from Screening The Past: <http://www.latrobe.edu.au/screeningthepast/firstrelease/fr1100/jdfr11g.htm>



Figure 4.2: The Spinosaurus Animatronics in *Jurassic Park III*. Images Courtesy of Stan Winston Studio

One example of well-known animatronics are the dinosaurs in the *Jurassic Park* feature film series. Stan Winston Studio (SWS) was commissioned to create Spinosaurus, an animatronic dinosaur for *Jurassic Park III* (Figure 4.2). There are four main parts of this Spinosaurus animatronic, namely (i) mechanical, (ii) electronic, (iii) structural and (iv) surface. The mechanical systems of Spinosaurus were mostly hydraulic, built and designed by mechanical engineers. Another group of electronic engineers developed the electronic control systems needed to operate the animatronic devices. They started from scratching and creating custom circuit boards to building giant remote-controlled dinosaurs using specialised remote-control systems known as telemetry devices. The electronic and mechanical components were attached to the structural component of the Spinosaurus and therefore could be used to control it. The structural component of this Spinosaurus consisted of a plastic and steel skeleton frame largely comprising of graphite, a synthetic material known for its strength and lightness to resemble the real skeleton of the beast. The surface or skin of the Spinosaurus is made of foam rubber, which is a very light, spongy rubber made by mixing air with liquid latex rubber before curing it. Parts of the frame are embedded with the foam rubber at certain points. To further strengthen the skin, a piece of fabric was cut to size and embedded into the foam rubber after it is poured into the mould. Each piece of skin was pulled from its mould once it is cured.

In terms of the application of shadow puppetry in digital media, Jouvanceau (2004: 24) points out that films are cinema's silhouette (shadow theatre) that was founded on the same principle. The basic elements of shadow puppetry such as light,

screen, puppeteer or animator and puppets eventually became early cinema. The Indonesian wayang kulit is known to have had great influence in the making of some present-day films in Indonesia²³. For example, Indonesian film director Djadug Djajakusuma has delved into and learnt the art of wayang kulit to discover its dramatic systems and later apply them to filmmaking. Prakosa stressed that it is a noteworthy attempt to produce Indonesian types or forms of films that projects Indonesia's cultural identity. He believes that the attempt should be continued by the coming generations. It appears that the themes of wayang kulit have been explored several times by D.Djakusuma. Two of his famous films are *Lahirnya Gatutkaca (The Birth of Gatutkaca)* in 1960 and *Bimo Kroda (The Anger of Bima)* in 1967.

For the past few decades, CG technology has become an area of proven artistic and commercial potential and has contributed significant impacts on non-interactive puppetry in digital media. Today, many recordings of live puppetry performances have been refined and blended with visual effects and computer animations prior to their releases. The article “*Gap: Sound of Color*” (2008) mentions that Chris Do and his team of Blind Inc, a multi-disciplinary motion graphics design studio located in Santa Monica and New York City, created a music video entitled *Sound of Color* for Danish post-punk duo Sune Rose Wagner and Sharin Foo, better known as The Raveonettes, using recordings of shadow puppetry in 2008. The video showed an innovative mix of live shadow puppetry videos and animation as 2D puppet characters come to life in a colourless world (Figure 4.3). According to the article, most of the elements used in the video were shot in-camera and puppeteers' hands and rigging are often left in the shots to create a more spontaneous and organic aesthetic. Lights and shadows were used to depict opposing themes of the piece which include love and hate, life and death, young and old, daydream and nightmare and ugliness and beauty (“*Gap: Sound of Color*,”

²³ See Prakosa, G. (2003, 12 8). *Animasi Indonesia di Tengah Kemegahan Animasi Dunia*. Retrieved February 11, 2009, from majalah.tempointeraktif.com:

2008). This music video received gold awards in both the Broadcast Design Association (BDA) Music Video Award and ADDY Award in 2009.



Figure 4.3: The Making and Screenshots of *Gap: Sound of Color* (2008). Images Courtesy of Blind Inc.

Apart from digital shadow puppetry that uses 2D, flat and tangible puppets, there are also some examples of using recordings of hand shadows in digital media. Also known as cinema in silhouette, hand shadowgraphy is a genre of shadow play where shadow images and videos are created using human hands²⁴. Although hand shadowgraphy technically does not belong to the category of shadow puppetry, the terminology and visual aesthetics of both performing arts are the same. The author therefore presents two case studies on the use of hand shadowgraphy in digital media. One example is the one-and-a-half minute Volkswagen Phaeton TV advertisement entitled *Glanty Show* released in 2006. Grabarz and Partner Werbeagentur, an advertising agency in Hamburg, Germany, produced their Gold award-winning TV advertisement (the International Advertising Awards 2007 and Creative Award in Eurobest 2007) for the Volkswagen Phaeton using recordings of hand shadowgraphy (Figure 4.4). This commercial was filmed in black and white and later blended multiple recordings of hand shadows to create universe of swans, blooming plants and other ethereal creatures. Then, the montage showed simple shadows of hands revealing the question “Isn’t It Beautiful What Hands Can Do?” The hands then closed in on the phrase and opened to reveal the Volkswagen Phaeton car and the text “Phaeton. Hand Made Perfection.”

²⁴ See Monika. (2011, October 13). *Hand Shadowgraphy: An Unique and Amazing Art*. Retrieved February 5, 2013, from oddstuffmagazine.com: <http://oddstuffmagazine.com/hand-shadowgraphy-an-unique-and-amazing-art.html>



Figure 4.4: The TV Commercial of Volkswagen Phaeton. Images Courtesy of Grabarz and Partner Werbeagentur.

Using similar concepts and techniques of Grabarz and Partner Werbeagentur, Kirk Hendry, a London-based filmmaker, has produced several videos and animation works that feature the exclusive use of recordings of hand shadow puppetry. His six-minute silhouette animated film called *Junk*, produced in 2010, has been screened at over 70 film festivals and won many awards. He also produced and directed several award-winning commercial videos and music videos using the visual aesthetics of shadow play, the best known being *Round* (2008) for British Broadcasting Corporation (BBC) and *Save the Cerrado* (2011) for World Wildlife Fund (WWF) in United Kingdom. Both were shot entirely using hand shadow puppetry and later composited using computer software and animation techniques.

Digital media has been used not only to produce and create puppetry but also as a practical medium of preservation. The development of television and archiving of recorded broadcasts provide an excellent way to document puppetry performances (Stoessner, 2008: 8). For example, numerous shadow theatre performances wrote or produced by Ludwig Achim von Arnim (1781-1831), Johann Wolfgang von Goethe (1749-1832), Justinus Kerner (1786-1862), Eduard Mörike (1804-1875) and a part of the vast Chinese repertoire have been preserved in film format before they disappear in the course of 20th century (Jouvanceau, 2004: 25).

4.3.2 STOP-ACTION PUPPETRY IN DIGITAL MEDIA

Stop-action puppetry in digital media is also known as stop-motion animation or stop-motion photography (Kerlow, 2004: 270). It consists of moving tangible puppets or performing objects and recording their different positions on a single frame each.

Although theoretically any tangible object can be used as a performing object of a stop-action puppetry animation, it generally consists of three major categories: jointed 3D marionette puppets, 2D paper cut outs and clay objects.

The jointed 3D puppets or models for stop-action puppetry are made of latex, silicone or silicone skin with a wire armature. This technique was used to create the special effects for some classic live-action blockbuster feature films such as *King Kong* (1933) and *Jason and the Argonauts* (1963) and their influence is still apparent in today's filmmaking industry (Priebe, 2011: 1-2).

The pioneering stop-action puppetry filmmaker who has made several films by manipulating jointed puppets frame by frame is Ladislav Starewitch (1882-1965) from Russia. *Cameraman's Revenge* (1912) was his first known narrative short film using stop-action methods with embalmed insects rigged with wires (in this case, these are his jointed puppets). Due to the time-consuming nature of this technique, budget constraint and its jerky quality, the stop-action puppetry only existed in early short films or brief sequences in feature films (Priebe, 2011: 4). It was only in 1930 that the first feature-length stop-action puppet film entitled *Le Roman de Renard (The Tale of the Fox)* was completed by Ladislav Starewitch. This film depicted 75 individual marionette puppets ranging from one inch to three-and-a-half feet tall that involved 273,000 different movements (Priebe, 2011: 5). However, the first stop-action puppetry feature film that received worldwide distribution and strong success is Tim Burton's *The Nightmare Before Christmas* in 1993 (Figure 4.5). Some of the later examples of latest stop-action puppetry feature films include *Corpse Bride* (2005), *Mary and Max* (2009), *Panique au Village* (2009), *Fantastic Mr. Fox* (2009), *Coraline* (2009) and *ParaNorman* (2012).



Figure 4.5: *The Nightmare Before Christmas* (1993). Images Courtesy of the Animazing Gallery/ Touchstone Pictures.

The stop-action puppetry that uses performing objects made of modeling clay is known as Claymation, a generalised term for clay animation. The term Claymation was coined and trademarked by Will Vinton in 1976. Vinton (born November 17, 1947) is an Oscar-winning claymation animator and director who used modeling clay to make all of his on-screen puppets, props and sets. After producing many award-winning Claymation short films, he finally produced his first Claymation feature film entitled *The Adventures of Mark Twain* (renamed *Comet Quest* in the U.K.) in 1985. He is famous for fluid lip-sync and clay morphing in his Claymation works. According to Priebe (2011: 30), his first Claymation feature film was an important step of bringing Claymation short film productions towards a feature-length film production and its inventive visuals was praised by many animation professionals. Other examples of well-known Claymation works include *Creature Comforts* (1989), *The Wrong Trousers* (1993), *A Close Shave* (1995) and *Chicken Run* (2000), all of which were directed by British award-winning directors Nick Park and Peter Lord (Figure 4.6).

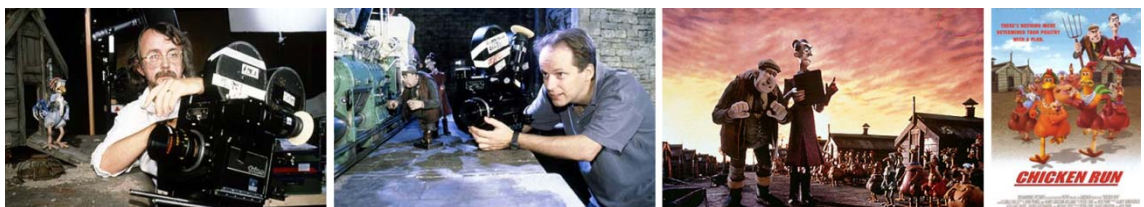


Figure 4.6: The Making and Promotional Still of *Chicken Run* (2000). Images Courtesy of DreamWorks/ Pathe/ Aardman.

Stop-action puppetry film and animation that uses 2D cut-outs was influenced by the development of shadow theatre in Europe. Shadow theatre was introduced in Europe in the 17th century and underwent many changes known as *ombres chinoises*, French for

"Chinese Shadows" (Jouvanceau, 2004: 19). The early European shadow puppets were designed based on European cut-out traditions and were absolutely opaque, casting solid black shadows. According to Jouvanceau (2004: 32-33), the first stop-action puppetry film to use 2D cut-outs was *The Sporting Mice* (1909), directed by British filmmaker Charles Armstrong. In 1926, Lotte Reiniger (1899-1981), a German animator, created the first feature stop-action puppetry film entitled *Die Abenteuer des Prinzen Achmed* (*The Adventures of Prince Achmed*) using tangible cut-out puppets and techniques of shadow puppet theatre (Figure 4.7). As a teenager, young Reiniger used to produce shadow plays using her own handmade cut-out silhouette pictures (Jouvanceau, 2004: 28). According to Deneroff (2004: 26-27), Reiniger's first love was Chinese shadow theatre and she first used this technique in *Das Ornament des Verliebten Herzen* (*The Ornament of the Lovestruck Heart*) in 1922. This feature animation was made by Reiniger with her film director husband Karl Kach using the silhouette technique she invented.



Figure 4.7: Lotte Reiniger and Screenshots of *The Adventure of Prince Achmed* (1926). Images Courtesy of Comenius-Film GmbH

Die Abenteuer des Prinzen Achmed is a remarkable Arabian story revolving around a poor tailor, Achmed, who was inspired by his passion for a princess. He then goes in search of a magic lamp, thwarting monsters and devils en route. In this feature animation, Reiniger manipulated cut-outs made of cardboards and thin sheets of lead under the camera to create an Arabian Night world of delicate, filigree backgrounds and intricately jointed figures. Multiple sheets of glass were added to the rudimentary animation stand to hold extra background materials. The technique she used for the

camera is similar to shadow puppet theatre though her animations were animated frame by frame and not in live-action (Jouvanceau, 2004: 39). According to Tillis (1999: 180), the stop-action figures (in this case, the 2D cut-outs made of cardboards) are material objects in precisely the same sense as the actual tangible puppets but cannot be operated or manipulated in real-time. The press was full of praise for the film after its premiere in Berlin. Later, the film ran for three months at a legitimate theatre in Paris before it was transferred to another theatre where it ran for another six months. It was shown in almost every country in the world with great success. It was very encouraging that *Die Abenteuer des Prinzen Achmed* was praised by Bela Balazs, a Hungarian poet and film critic, as being an absolute film (Deneroff, 2004: 26-27). Reiniger continued her career as a puppeteer in parallel with her animation works. In later years, she concentrated on presenting lectures and workshops on shadow animations after settling down in England in 1936.

On the other hand, Bruno J. Bottge (1925-1981), also from Germany, showed the same passion and love for silhouette film as Reiniger. In fact, he learned the basics of silhouette film production and techniques by watching Reiniger's films (Jouvanceau, 2004: 45). To a certain extent, he later reinvented the technique of animated silhouettes by analysing a print of Reiniger's silhouette animation called *Doctor Dolittle* (1928) and therefore released his first silhouette film, *Der Wolf und die sieben Geisslein* (*The Wolf and the Seven Young Goats*), in 1953 using the visual aesthetics of shadow puppet theatre. The following year, his third silhouette film, *Die Bremer Stadtmusikanten* (*Town Musicians of Bremen*), won several awards at Mannheim, Leipzig and Montevideo. Bottge devoted his whole life almost exclusively to this art form and genre, directing nearly 50 silhouette films until his death in 1981.

In the early 20th century, directors and performers reevaluated the allure of the puppet as an ideal actor (Stoessner, 2008: 5). Edward Gordon Craig, Bertolt Brecht and

Antonin Artaud all expressed interest in puppetry for various reasons and to different effects. While these innovators were considering puppetry in Europe, performers in the United States were making changes to the art form that would alter the way puppetry was approached by puppeteers and received by audiences. Artists such as Remo Bufano, Ralph Chessé and Tony Sarg were producing challenging and innovative work that brought attention to puppetry as a viable mode of theatrical performance. Anthony Frederick Sarg, or known professionally as Tony Sarg (1880-1942), was a well-known and skillful puppeteer in the United States who produced 17 episodes of *Tony Sarg's Almanac* television shadow puppet series using tangible cut-outs of shadow puppets in 1921. Sarg was the first celebrity puppeteer in the United States and was called the “Father of Modern American Puppetry” in the Mazzarella documentary (Stoessner, 2008: 16). Apart from his marionette theatre plays, his first silhouette series, *The First Circus* (1921-1923), gained him enormous acclaim and worldwide recognition (Jouvanceau, 2004: 38).

Apart from Western animation and film directors, another inspired artist from Japan, Noburo Ofuji (1900-1961), produced *Kujira (The Whale)* using cut-outs of shadow puppets and *chiyogami*, a traditional translucent paper which perfectly evoked the underwater world and created visuals of shadow puppetry in 1927. He then introduced colours to his animation by replacing black chiyogami with coloured cellophane in 1952. The cut-outs were stacked on a multi-plane animation table to produce highly complexed layerings of forms and visuals. He was one of the first Japanese animators to earn international recognition for his work. His film *Kujira* was selected to be shown at Cannes Film Festival in 1952 and 1953. Even the notable artist, Pablo Picasso, praised the quality and standard of *Kujira* (Patten, 2004: 214). He enjoyed considerable success within the foreign arts community and was famous for his innovations in silhouette and cut-out animation and the use of traditional Japanese

materials that gave his work a unique look and distinctively Japanese appearance compared to others. In 1962, the annual Mainichi Film Festival created the Noburo Ofuji Award for innovative excellence in animation in his honour.

4.3.3 NON-INTERACTIVE VIRTUAL PUPPETRY IN DIGITAL MEDIA

Non-interactive virtual puppetry here refers to puppetry in digital media that uses intangible virtual puppet(s) or performing object(s) that does not engage interactivity with the puppeteer and audience. Virtual puppets are sometimes called avatars, animated characters and digibodies, among others, that have surface in virtual environment but no substance in the physical world. These digitally-created intangible puppets are literal hollowness and they are products of mathematical persuasion that are as deep as a surface but not as an interior (Masura, 2007: 58). Unlike real puppets, virtual puppets are not bound by natural and physics laws and are able to distort, float and contort in any manner that may be unnatural to their physical versions.

The virtual puppets can be controlled or manipulated by animator(s) using computer keyboard or other input devices without the participation of recognised conventional puppeteer(s). Rafaeli (1988: 134) defines “interactivity” as an expression of the extent that in a given series of communication exchanges, any third (or later) transmission (or message) is related to the degree to which previous exchanges referred to even earlier transmissions. In a general expression, this non-interactive virtual puppetry can only be viewed and the audience has no control on it. It is a product or service on digital computer-based systems that cannot respond to the user’s actions.

Virtual puppets share certain similarities with tangible puppets. Both are constructed with articulated points that is then given surface design elements and features. According to Tillis (2001: 179), both are artificial human constructs designed for manipulation (of one sort or another) by human puppeteers or animators. Some

researchers and scholars mention that there is a strong connection between traditional puppetry and media animation.

There are two types of virtual puppets used in digital media, namely 3D and 2D virtual puppets. Today, animations and films using 3D virtual puppets are prominent in the market but most of the time, these puppets are called computer-generated or digital characters rather than puppets due to their realistic appearances on digital screens. Most of the audience perceives these virtual puppets (or characters) such as Stuart Little in *Stuart Little* (2002), Gollum in *The Lord of the Rings* film series and Jar Jar Binks in *Star Wars* film series as “characters” rather than “puppets”. It is due to the profound visual capabilities of computer and digital technologies that are able to create and produce hyper-realistic virtual puppets that look very real and convincing. However, early computer-generated virtual puppets such as Woody, Buzz Lightyear, Rex, Mr. Potato Head and Bo Beep in *Toy Story* (1999) undoubtedly look physically similar to marionette puppets, the only difference being they were created and manipulated in virtual environments (Figure 4.8). A more detailed historical background and technical development on this type of digital puppetry can be obtained in many available books in the market, two of them being *The Art of 3- D Computer Animation and Effects* (2003) by Isaac V. Kerlow and *Inspired 3D Character Setup* (2002) by Michael Ford and Alan Lehman.



Figure 4.8: The 3D Virtual Puppets in *Toy Story* (1999), From Left: Woody, Buzz Lightyear, Rex, Mr. Potato Head and Bo Beep. Images Courtesy of Pixar Inc.

When mentioning non-interactive digital puppetry using 2D virtual puppets, an excellent example would be *Princes et Princesses* (*Prince and Princesses*) produced in

1999 by Les Armateurs and released to French cinemas on 26th January 2000. *Princes et princesses* comprises of six episodes of edited *Ciné si* (literally meaning We Are the Star), a 1989 French silhouette animation television series directed and produced by Michel Ocelot using virtual 2D silhouette puppets. The series was produced in two years starting in 1987 with animation done at La Fabrique, an animation production company in Saint-Laurent-le-Minier, in the summer and post-production done in Paris in winter. It premiered in various animation festivals in 1989, receiving favourable acclaims and awards for Best Anthology Series at Annecy and Best Children's Series at Ottawa.

Anthony Lucas of Australia produced his award-winning animation short film entitled *The Mysterious Geographic Explorations of Jasper Morello* in 2005 in which he combined the use of virtual, opaque, black shadow puppets, object animation and CG²⁵. In this short film, the virtual 2D silhouette characters (or puppets) move about in a malevolent, gothic, virtual 3D computer-rendered world. It is an interpretation of the multiple genres that make up the steam punk style, combining the old with the new. This short film has won more than 10 international awards and was nominated for the 2006 Academy Award for Animated Short Film.

In 2008, United States director-cum-animator Nina Paley wrote, directed, produced and animated an animated film entitled *Sita Sings the Blues* based on events of an episode from the *Ramayana*. This short animation contains illustrated, conversation scenes between Indonesian and Malaysian wayang kulit puppets, musical interludes and scenes from Paley's own life²⁶. The film uses several different styles of animation to separate and identify parallel narratives. The virtual puppets of Indonesian and

²⁵ See Lumsden, I. (2008, 12). *Anthony Lucas "The Mysterious Geographic Explorations of Jasper Morello*. Retrieved January 1, 2010, from Animation Blog: <http://www.animationblog.org/2008/12/anthony-lucas-mysterious-geographic.html>

²⁶ See Paley, N. (2008). *Sita Sings the Blues*. Retrieved January 1, 2011, from Sita Sings the Blues: <http://www.sitasingstheblues.com/>

Malaysian wayang kulit that were used in retellings of Valmiki's *Ramayana* also linked the episode of the *Ramayana* with other parallel stories (Figure 4.9). Besides, it also provided a context and commentary for the story which has innumerate incarnations and regional variations. This animated feature film has won more than 15 international awards, including Cristal Grand Prix for Best Feature Film in Annecy, France (June 2008), Honorable Mention for Best Animated Feature in Ottawa International Animation Festival, Canada (September 2008) and People's Choice Award in Silk Screen Film Festival, Pittsburgh, the United States (May 2009).



Figure 4.9: Screenshots of *Sita Sings the Blues* (2008).

In China, Ma Kexuan and Wu Meikun of Shanghai Animation Film Studio claimed that their animation studio had produced at least two animations entitled *The Golden Seashell* in 1963 and *Zhang Fei Judged Watermelon* in 1980 using the virtual Chinese shadow puppets (Lent, personal communication, January 19, 2009). According to Deneroff (2004: 298-299), *Zhang Fei Judged Watermelon*, directed by Qian Yun-Da and Ge Gui-Yun, exhibits the influence of Chinese opera and Chinese shadow puppet theatre. The use of Chinese local folklores and visual styles in its animations showed the determination of Te Wei, the Chinese master animator, who received an AISFA award in recognition of his contribution to animations. In Te Wei's opinion, Chinese animations should reflect distinctive Chinese characteristics and flavours after his animation entitled *Why Crows Are Black?* (1955) was mistaken at the 1955 Venice Festival for a Soviet animation (Patten, 2004: 245).

In 2006, Chen Ming of Global Digital Creations Holdings Limited in China used and combined 2D virtual puppets with a variety of artistic techniques such as traditional

Chinese ink and free style painting to produce a 17-minute award-winning short animation entitled *The Legend of Shangri-la* (also known as *The Lost Utopia*, *Story of Peach Blossom Village* and *Tao Hua Yuan Ji*). This short animation depicts distinctive visuals of the Shan Xi shadow puppet theatre. It won numerous awards, including Best Chinese Short Film Grand Prize, the top animation prize of China in 2006, and 14th TBS DigiCon6 Awards in Tokyo in 2012²⁷.

Apart from animating virtual puppets manually by human animators, some experiments have been done on the use of digital technology to simulate the movements of virtual puppets. In China, Zhu, Li and Shen (2003: 1) from Fudan University, in collaboration with Stompel and Ma from University of California at Davis, digitalised traditional Chinese shadow puppet theatre by creating computer models and developing a rendering technique based on the photon method (Figure 4.10). Their objective was to transform Chinese traditional shadow performances into digital forms so they could become more accessible and can be preserved. They presented their paper entitled “A New Form of Traditional Art- Visual Simulation of Chinese Shadow Play” at the Association for Computing Machinery’s Special Interest Group on Graphics and Interactive Techniques (ACM SIGGRAPH) 2003 in San Diego, United States.



Figure 4.10: Computer-Simulated Chinese Shadow Puppetry. Courtesy of Beijing Institute of Graphic Communication

²⁷ See CDC. (2012, December 18). *The Legend of Shangri-la will be presented at The 7th Asia Pacific Triennial of Contemporary Art*. Retrieved January 12, 2013, from Global Digital Creations Holdings Limited: <http://www.gdc-world.com/en/news/legend-shangri-la-will-be-presented-7th-asia-pacific-triennial-contemporary-art>

All the examples of digital puppetry mentioned above are lacking in interaction with the audience. The following section presents interactive virtual puppetry in digital media.

4.3.4 INTERACTIVE VIRTUAL PUPPETRY IN DIGITAL MEDIA

Interactive virtual puppetry in this thesis refers to digital puppetry that uses intangible computer-simulated virtual puppets that has the ability to interact with the audience. The author first presents several cases studies of interactive virtual puppetry that uses common computer input devices such as keyboards, mouse and handheld hardwares to interact with the audience. In 2007, Ozcan, Thomassen, Baumann, Holmgren and Lindell from Malardalen University, Sweden, presented their research paper entitled “The Role of Traditional Shadow Play on Creativity in Interactive Design” involving 10 projects that engaged 40 European design students. These projects proved that the interactive virtual Karagöz puppetry has successfully inspired their students to defer from generic graphical interfaces and web design. The paper concluded that interaction design education, especially in ubiquitous computing, context aware computing and ambient interaction should take advantage of a cultural frame that draws students from generic graphical user interfaces and web appliances into exploring newer, more creative and innovative approaches of interaction design.

Moreover, Shu-Wei Hsu and Tsai-Yen Li from National Chengchi University presented their research paper entitled “Motion Planning Techniques to Generate the Secondary Motions in Shadow Play Animations” at ACM SIGGRAPH in 2005. Using merely a computer keyboard and mouse, the audience can assign certain actions such as jumping and walking to virtual puppet(s) and the computer is able to simulate its secondary motions. It is the beauty and unique features of Chinese shadow puppet theatre that have motivated them to preserve their traditional Chinese art into a digital

form (Hsu & Li, 2005: 9). In their research, they have successfully modified the RRT-Connect algorithm to generate secondary motions of the lower bodies of their virtual puppets.



Figure 4.11: The Puppet Studio, an online interactive digital puppetry of AERSEDGE

In 2007, an online interactive shadow puppetry was created by ARTSEDGE, an educational media arm of Kennedy Center for Performing Arts. Apart from providing information on ancient Chinese Shan Xi puppetry in text and video formats, this website also provides extended interactive functions to the audience. The Puppet Studio in this website enables the audience to select their own virtual puppets and set up a screen and lights to create their own digital shadow plays. First, the audience uses computer input devices such as a keyboard and mouse to select and choose their own virtual puppets (a maximum of two), virtual props (a maximum of five) and virtual background sets. Then, they assign the first and second actions to these virtual puppets before them and the chosen virtual props are placed onto the diagram of the virtual puppet stage. Finally, they select a soundtrack for their digital puppetry play and the computer will simulate the visuals of Chinese Shan Xi shadow play based on the chosen choices (Figure 4.11).

Another approach towards interactive virtual puppetry was done by Gudukbay, Erol and Erdogan from Bilkent University of Turkey. They have designed a modern framework to animate the virtual Karagoz shadow puppet characters in 2000. Gudukbay, Erol and Erdogan (2000: 264-265) claim that the long-neglected Karagoz shadow puppetry was energized and revived again in their modern framework. They also

believe that their digital puppetry of Karagoz shadow puppetry was an exemplary for media technologies turning old forms into new possibilities in art production.

A group of Indonesian artists have initiated and launched a website to promote an interactive virtual puppetry of Indonesian wayang kulit²⁸. They labelled this type of puppetry as “e-wayang”. The website features an audience sitting in front of a computer laptop, manipulating and moving a virtual puppet of Semar (the notable god-clown character of Javanese shadow puppetry) using the touch pad of his laptop.

On the other hand, interactive virtual puppetry has been used as a teaching aid in children’s education. Puppetry performances are an effective teaching and communication tool to maintain and direct the attention of students²⁹. Widjajanto, Lund and Schelhowe from Bremen University presented a new approach to design story authoring using visual elements from traditional Indonesian wayang kulit to enhance children’s imagination and self-expression in 2008. In Widjajanto, Lund, Schelhowe, Subramani and Friedrich’s (2008: 464-467) paper entitled “Wayang Authoring-A Tool to Enhance Children’s Creativity and Self-Expression”, they believe that traditional Indonesian wayang kulit is full of visual characters and symbolic images. During a performance, the imagination of the audience is required to interpret stories and their images. Their project intended to combine the world of computer games with this traditional art context.

Recently, a group of researchers in Universiti Utara Malaysia (UUM) invented a prototype of an interactive digital puppetry called *e-WayCool* (electronic wayang kulit) to help students learn mathematics of the Primary School Standard Curriculum (*Kurikulum Standard Sekolah Rendah, KSSR*) in Malaysia. Based on results and

²⁸ See KRIYA. (2011, July 11). *Netra Suci Ambabah Jagad Maya*. Retrieved January 27, 2013, from e-wayang.org: <http://www.e-wayang.org/indonesia/archives/category/kriya>

²⁹ See Peyton, J. L. (2001). *Elements of Puppet Media*. Retrieved January 31, 2012, from puppetools: <http://puppetools.com/library/pdf/Puppetanatomy.pdf>

analysis, the students perceived *e-WayCool* as useful, fulfilled their satisfaction in learning mathematics and also showed that it has great potential to be used in the preservation of Malaysian wayang kulit (Jasni, Zulikha, & Mohd Amran, 2012: 162).

In China, Fei, et al., (2011: 1923) have used interactive virtual puppetry to promote creativity and collaboration among pupils in a public primary school in Beijing. The pupils used ShadowStory (a digital storytelling system created by the researchers) with a Tablet PC, a projector and six wireless WiTilt v3.0 orientation sensors, to freely create their own virtual puppets and later use them to produce their own stories. The students used the handheld sensor hardware (2.20 x 2.81 x 0.73 inch) to control the positions and orientations of virtual puppets on a digital screen. The findings of this research project have confirmed that the approach of using interactive virtual puppetry to promote creativity and traditional arts and culture among children was successful in achieving these goals.

Apart from digital puppetry in television, computer, video and film, video games is another type of digital puppetry whereby the audience can control virtual puppets in a video game for performance: a phenomenon similar to puppeteers controlling their tangible puppets in puppetry performances. Wang (2010: 49) mentions that the game-like environment is the same with theatre operations where various levels are engaged by video game players who interact among themselves through the Internet or computer network.

A new means of creating digital puppetry emerged in the early 1990s named *machinima*. It is a new type of digital puppetry that is able to collect associated production techniques using 3D CG power and technology platform or game engine to create short videos (Wang, 2010: 59). Using machinima, the human performers or players can control their virtual puppets as well as use them to interact with other virtual

puppets in real-time to produce short videos. In addition to that, the human performers or players can add their own voices to their virtual puppets or use subtitles to produce visual narratives such as parodies of the virtual world or individual commentaries on the physical world. Some famous examples of machinima works include *The French Democracy* (2005), *Taking Mt. Doom by Strategy* (1997) and *Q4U* (2002).

Apart from using common computer input devices such as the keyboard, mouse, handheld hardware or game engine and consoles to control and interact with virtual puppets in real-time, there are other approaches with different input devices and technology. The most famous and commonly used input device and approach in interactive digital puppetry is the motion capture as some computer technology experts simply employ the term "motion capture" when referring to digital puppetry or computer puppetry³⁰.

Motion capture is a prominent technology used in digital puppetry, combining qualities of puppetry, live-action, stop-action puppetry, game intelligence and other forms into an entirely new medium. Sturman (1998: 38) defines "motion capture" as the combination of the art of puppetry (animating inanimate objects through direct manipulation) with computer animation. In short, motion capture involves measuring an object's position and orientation in physical space, then recording that information into a computer-usable form³¹. Objects of interest include human and non-human bodies, facial expressions, camera or light positions and other elements in a scene. The recorded data can be in a form as simple as body movement up to as complex as the deformations of the face and muscle masses (Zainal Abidin, 2003: 19). According to Leite (2012: 364), the common approaches used in motion capture technology include digital strings

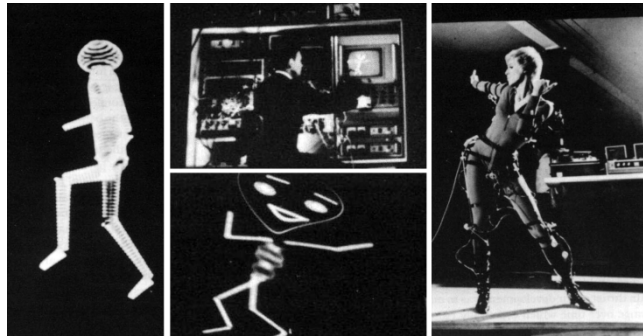
³⁰ See deGraf, B., & Yilmaz, E. (1999, February 11). *Puppetology: Science or Cult?* In *Animation World Magazine*. Retrieved January 1, 2013, from <http://www.awn.com/mag/issue3.11/3.11pages/deggrafmotion.php3>

³¹ See Dyer, S., Martin, J., & Zulauf, J. (1995, December 12). *Motion Capture White Paper*. Retrieved January 2011, 2012, from Reality SGI: http://reality.sgi.com/employees/jamsb/mocap/MoCapWP_v2.0.html

to control virtual puppets using a digital glove, computer vision to track colour or sensor marks in an object that controls virtual puppet movements, using a multi-touch surface for direct manipulation of 2D-shaped virtual puppets, hand gesture recognition using fingers to move virtual puppets simulating a string controller, a motion capture system for performance-driven with gesture recognition to trigger behaviour animation for virtual theatre using an extra joystick for expanding the movement area. A motion capture system is capable of detecting, digitising, and recording the motions of a full body, including the hand(s) and face of a human performer(s).

The history of experiments on motion capture started in 1967 with Lee Harrison using analog circuits and the first real-time interactive graphics systems called *SCNIMATE* to animate virtual objects (mostly television logos) in real-time (Wu, Boulanger, Kazakevich, & Taylor, 2010: 3). It was the first approach of motion capture using a rig of potentiometers inside an armature of Tinker Toys that were used by a human performer to control and manipulate virtual objects in real-time (Figure 4.12). Although it was used to produce most of the flying television logos in American television programmes from the late 1960s to the early 1980s, this technology eventually became outmoded since it could not compete with the slicker imagery produced by computer animation applications using key-framing technique (Weng, 2005: 9). The first interactive digital puppetry that a puppeteer or audience is able to animate a virtual head in real-time is *Mike the Talking Head*, developed and presented at the 1988 SIGGRAPH by Brad deGraf and Michael Wahrman. The audience or performer used the *DataGloves* input device that adopted similar manners of live hand puppetry to control the features and parameters of a virtual head such as its mouth, eyes and eyebrows as well as lip-syncing and head rotations using hand movements. In the same year, Pacific Data Images (PDI) created “Waldo C. Graphics”, a customized

mechanical arm and computer solutions to enable human puppeteers to control the positions and mouth movements of a low resolution virtual puppet in real-time.



**Figure 4.12: The Motion Capture System developed by Lee Harrison (1962-1969).
Image Courtesy of Lee Harrison, III**

The term “Waldo” was first used in a short story by Robert Heinlein about a disabled scientist named Waldo who managed to build devices that would amplify his strength and later went on to replicate bigger machines. Today, this term also refers to an electro-mechanical rig worn by a human performer that makes a virtual puppet (whether it is a 3D or CGI "electronic puppet") mimic his or her movements³².

With the use of “Waldo C. Graphics”, the computer generated virtual puppets may be controlled in real-time in concert with real puppets. The virtual puppet animations were mixed with the video feed of live recordings and re-rendered in full resolution afterwards with a few additional dynamic elements on top of the performed motion³³.

In 1991, to further explore the potential of using motion capture technology in digital puppetry, a French video and computer graphics producer, Videosystem, invented a real-time character animation system to produce a virtual puppet character

³² See The Character Shop, I. (2011). *The Waldo*. Retrieved January 21, 2012, from The Character Shop: <http://www.character-shop.com/waldo.html>

³³ See Sturman, D. J. (1999, March 13). *A Brief History of Motion Capture for Computer Character Animation*. Retrieved Jan 10, 2012, from siggraph: www.siggraph.org/education/materials/HyperGraph/animation/character_animation/motion_capture/history1.htm

called *Mat the Ghost*. With this motion capture system, a human performer or puppeteer can now use DataGloves, joysticks, Polhemus trackers and MIDI drum pedals to interactively control the title character in real-time.

The following year, a computer simulation company in California, SimGraphics, invented a facial tracking system called “SimGraphics Facial Waldo”. Compared to Waldo C. Graphics facing tracking system which uses DataGloves, this system is more advanced. Rather than using special designed gloves, “SimGraphics Facial Waldo” is a helmet look-like virtual reality device with sensors detecting movements at multiple points along the brows, cheeks, lips and jaw of a human performer. This system enabled a performer to manipulate all the facial expressions of a virtual character just by miming facial expressions of him or herself in, as Sturman describes it as a perfect natural interface³⁴.

Apart from using motion capture technology to control virtual human characters on television or computer screens, deGraf invented *Alive!* motion capture system in 1992 and it was used to animate Moxy, a virtual computer generated dog who hosts a show for Cartoon Network. The *Alive!* motion capture system consists of a special hand device with five plungers actuated by the human puppeteer’s fingers and also a tracking system with sensors on the hands, feet, torso and ears of the performer. The captured motion data and visuals have to be post-rendered before broadcasted to the public.

A high-performance optical motion tracking system that was able to track up to a hundred points simultaneously in real-time was developed by Acclaim, a game company in United States in 1993. According to Sturman, the realistic two-character animation done using motion capture technology invented by Acclaim amazed

³⁴ See Sturman, D. J. (1999, March 13). *A Brief History of Motion Capture for Computer Character Animation*. Retrieved Jan 10, 2012, from [siggraph.org/education/materials/HyperGraph/animation/character_animation/motion_capture/history1.htm](http://www.siggraph.org/education/materials/HyperGraph/animation/character_animation/motion_capture/history1.htm)

audiences at SIGGRAPH 1993. Their motion capture technology was designed and invented exclusively for virtual character animations of video games.

Early motion capture technology and facilities required unintuitive handling and laborious fine-tuning. Hence, researchers have continued to invent and seek for alternative approaches and devices that were much more user-friendly and with better quality for real-time interaction (Wang, 2010: 32). Leite & Orvalho (2011: 65) presented Anim-Actor, a low-cost, performance-driven, full-body motion capture technique to control both 2D and 3D virtual puppets in real-time. An affordable and easy-to-use Microsoft Kinect device depth camera based on PrimeSense technology was used to track and capture the movements of a human performer rather than costly body markers. Based on results and analysis, it is proven that the Anim-Actor was well-accepted by participants, demonstrating the minimum needed performance of digital puppetry when using motion capture technology (Leite & Orvalho, 2011: 65).

In 2008, a group of artists from Kitchen Budapest in Hungary developed an interactive virtual shadow theatre entitled *Reverse Shadow Theatre* using Animata (Agoston, Gabor, & Andras, 2010: 165). Animata is an open source real-time animation computer software that was designed to help users create animations, interactive background projections for concerts, theatre and dance performances in real-time. The 2D virtual puppets of Indonesian wayang kulit purwa in *Reverse Shadow Theatre* were manipulated synchronously by mimicking the movements of a human performer in real-time (Figure 4.13). The producer of this interactive virtual puppetry emphasized on the elaborate virtual puppets rather than their shadow images, a situation reverse to the Indonesian shadow puppet theatre.



Figure 4.13: The *Reverse Shadow Theatre* (2008). Images courtesy of Agoston, Gabor, & Andras.

In 2001, Suzung Kim from Korea National University of Arts created an interactive puppet theatre that allows audience to control virtual puppets on screen using their hands. An audience could easily and amazingly manipulate virtual puppets on screen by wearing specially-created gloves and putting their hands inside a small box with curtains like that of shadow puppet theatre (Figure 4.14). The movements of hand would then be captured and transformed into digital data to manipulate and control the virtual puppets in real-time.

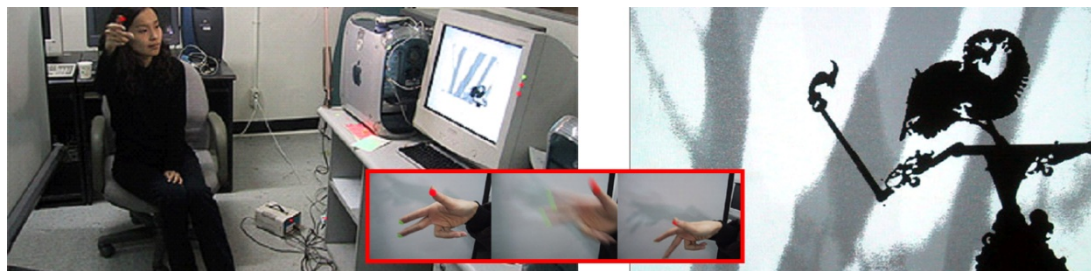


Figure 4.14: Interactive Puppet Theatre by Suzung Kim using Special Gloves. Images Courtesy of Kim.

Bottoni, Malizia, Faralli, Pierro, Labella and Ryu (2008: 341) presented *CoPuppet*, a framework used to develop performances of virtual puppets in their paper entitled “CoPuppet: Collaborative Interaction in Virtual Puppetry” during the 2007 Digital Art Week symposium. The CoPuppet framework uses virtual sensors that are able to recognise patterns and detect motions of a human puppeteer in the near distance. Through this framework, the audience is able to control various body parts of the virtual puppets and interact with them by producing gestures which are captured by its video devices and translated into control parameters for virtual puppets’ movements. This is an example of using computer vision to track sensor marks in an object that controls movements of virtual puppet as mentioned by Leite (2012: 364).

Early motion capture technology and facilities required unintuitive handling and laborious fine-tuning. However, today's CG machines have become faster and more affordable and at the same time, with low-cost inventions and approaches towards latest motion capture devices, this technology is somewhat common and becoming widely available in digital puppetry.



**Figure 4.15: The Uber-Marionnetes (Avatar) Virtual Puppets in Avatar (2009).
Images Courtesy of 20th Century Fox.**

Before ending this section, the author would like to introduce a superior digital puppetry named *Uber-Marionette*, mentioned by notable theatre theorist Edward Gordon Graig in 1956. Graig is one of the greatest European theatre director, theorist, designer, educator and publisher of the early 20th century (Cohen, 2007: 339). The Uber- Marionette mentioned by Graig is able to communicate directly for the playwright or puppeteer without interpretation or contamination of the artist's original ideas. Today, Uber-Marionette can refer to the avatar, a type of digital puppet that lies in the relationship between a human player's organic ego and the digital or virtual representation of the human player shown on the computer or game console screen (Masura, 2007: 55). One example of Uber-Marionette is clearly demonstrated in the movie *Avatar* (2009) directed by James Cameron whereby remote human actors and actresses were controlling their respective virtual avatars, a race of 10-foot tall, blue-skinned, sapient humanoids that appear only on digital screens by using motion capture facilities (Figure 4.15).

4.4 DIGITAL PUPPETRY IN LIVE PERFORMING THEATRE

Seligmann (2001: 6) mentions that digital technology has serious impact in today's live performing theatre and is very helpful in reinventing it in even more fundamental ways than previous technologies advances ever had. The live digital theatre mentioned by Seligmann (2001: 9) includes the use of digital puppetry with human performers and audiences in different locations around the world who interact simultaneously among themselves in a live performing theatre at the same time. In other words, the images of moving, 2D virtual puppet cut-outs were captured and composed with live performance videos from different human performers of various locations using Internet as well as live digital encoding and conferencing technologies. In a live multimedia theatre production of Gertrude Stein's *The Silent Scream of Martha Hersland* (2001), audiences are able to watch projecting digital images that consist of multimedia paintings, video images from various remote performance spaces sent over the Internet, images of tangible 2D puppet cut-outs and collages of two video images at the same time on a digital projector screen.

The art and aesthetics of shadow puppet theatre, mainly Balinese, has inspired Californian contemporary theatre artist Larry Reid to create his live intercultural theater productions by integrating elements of traditional Balinese wayang kulit with digital technologies. Reid is one of few United States theatre directors who has been trained in Balinese shadow puppet theatre and has collaborated with artists of diverse backgrounds and traditions such as those from Tibet, China, Indonesia and the United States. He integrated Balinese wayang kulit puppets and human actors within a single theatrical performance in his own innovative live performing theatre called *wayang listrik*. His wayang listrik style employs Western cinematic concepts and uses digital technology to produce spatial and temporal montages that allow the blending of live human performances with shadow puppetry images. Multiple high-intensity light sources are

used to extend shadow images into a clearer and larger-scaled cinematic experience from a distance and therefore allow greater ranges of scale and perspective manipulations. In addition to that, he also employs split-screen technique to allow multiple areas of activity within the screen space at the same time. According to Dulic (2006: 143), Reed's work is not merely a simple transference of shadow play techniques by bringing in new technology into a ritual context but has successfully extended the tradition of Balinese shadow play theatre into modern theatre. His success made an impact on contemporary Balinese puppeteers who are interested in innovation and experimentation with new technologies increasingly present in many aspects of life (Dulic, 2006: 153). In addition to that, Reed also directed and produced a documentary on the theme of a family of puppeteers of Balinese wayang kulit entitled *Shadow Master* in 1979. The film has high historical and cultural value and has aired in both the Public Broadcasting Service (PBS), a non-profit American public broadcasting television network, and Discovery Channel as well as being the official selected film in the 2008 Thin Line Film Festival.

Another California-based artist, Maria Bodmann, produced her first contemporary shadow play theatre entitled *Alice in the Shadow* in 2002. It is a digitally enabled live theatre production mixing elements of Balinese and Chinese shadow puppet with Western theatre approach. She also integrated Balinese ritualistic and stage elements as well as Western theatrical lighting with a present-day rock concert into the dramatic structure of the play. Both Reid and Bodmann have expanded the possibilities for a contemporary expression of traditional Balinese wayang kulit performance by employing digital technologies and modern approaches.

A leading Indonesian contemporary artist, Heri Dono, developed a contemporary digital live performance using digital imaging, music, sound art, video, remote web-streaming, and installation during his residency at Western Front on 29th

November 2006. Dono is considered to be one of Indonesia's most important contemporary installation artist and much of his work is located at the border of theatre and visual art (Cohen, 2007: 310). According to the artist, the idea of contemporary digital shadow puppet theatre refers to the merging of traditional forms with new paradigms, both socio-political and technological. His contemporary digital wayang (shadow play) reinterprets the traditional form of Indonesian wayang kulit as an interactive, digital environment within a globalised, post-9/11 social context. Heri Dono learned traditional Indonesian wayang kulit performance from Sukasman, the creator of *wayang ukur* of Indonesia, which is a new style of leather puppet that has been used in shadow puppet theatre in Indonesia, Canada, Holland, Germany and United States. Heri Dono stands out as one of the most prolific artists and contributors to the international art community over the last 25 years³⁵. He is an internationally successful representative of a new generation of Indonesian artists respecting and representing the local while fusing it with the contemporary. Heri's video and installation works have been widely exhibited, in addition to Indonesia, in Australia, Asia, Europe and the United States.

Rajendran (2006: 2) from Singapore indicated that nowadays, theatre educators (including herself) perform between shadows and screens in an increasingly digitised manner. She incorporates the concepts of shadow puppetry in some of her classes by asking students to construct dialogues for the shadows created by them moving around between the projector and screen. According to Rajendran (2006: 2), this process allows students to become their own puppeteers by playing with the images on screen together with ideas and shadows that they are screening and ensuing. This teaching methodology has received positive feedback from her students (Rajendran, 2006: 2). Thus, this has spurred her to consider using similar strategies in her teaching modules. Furthermore,

³⁵ See Bjerkem, B. (2009, January 12). *Heri Dono*. Retrieved February 21, 2010, from DSV Artist Bank: <http://du-store-verden.no/artister/artist.php?2007012309142494552&language=en&PHPSESSID=7102047447ea413a5e0d8513aad28896>

she also suggests that theatre teachers need to develop the aesthetics of teaching that embodies forms and cultural contexts, such as traditional shadow puppetry.

4.5 DIGITAL PUPPETRY OF WAYANG KULIT KELANTAN

The earliest example of the remediatisation of traditional wayang kulit Kelantan onto media screen is its recordings in videos. One example is the approximately 21-minute documentary video entitled *Wayang Kulit Siam- the Malay Shadow Play* produced by Yousof in 1995 (Figure 4.16). It is an excellent example of docu-puppetry mentioned by Kaplin (1994: 38) that matches the definition of puppetry in video by Levenson (1991: 1). It makes uses of sampling, cropping and re-editing of recordings of traditional wayang kulit Kelantan performances that involve depictions in puppet as well as ritual performances of factual and authoritative materials, illustrating historical, social and cultural phenomena. In addition to that, ASWARA produced a series of wayang kulit Kelantan DVD entitled *Siti Dewi Diculik*, *Kosi and Serawi* and *Dewek* in 2002 featuring the recordings of three popular episodes of wayang kulit Kelantan performed by famous puppeteer Pak Nasir. Moreover, for entertainment purposes, some scenes in these DVDs depict only the backstage scenarios and some are split into half horizontally where the top portion of the screen shows the backstage scenario and bottom portion shows the wayang kulit Kelantan performance (Figure 4.16).



Figure 4.16: The Docu-Puppetry of Wayang Kulit Kelantan; From Left: *Siti Dewi Diculik* (Courtesy of ASWARA) and *Wayang Kulit Siam-the Malay Shadow Play* (Courtesy of Yousof)

In 1996, under Universiti Malaysia Sarawak's short-term grant, a research project known as *wayang virtual* was established as an experimental version of the traditional wayang kulit from technological perspectives. The 'virtual' version of the traditional puppetry or 'shadow' was combined with a 3D animated figure and controlled by the puppeteer using a mouse on SGI machine while the visuals were projected onto a white screen. This project was presented to the public and gained good response at the National Art Gallery, Kuala Lumpur, in 1997. According to Abdul Wahid (2007: 7), the experimenter in this project, wayang virtual had successfully combined arts and multimedia technology. At the same time, it also helped to promote and preserve Malaysian culture and identity.

During the "Of Shadows and Images" art exhibition at the Malmo Konstmuseum, Sweden in 2003, a multimedia experiment entitled *Borrower of Light* was undertaken by USM with Hasnul Jamal Saidon at the helm. It incorporated new edge cyberpunk, science fiction with traditional wayang kulit Kelantan.

Animations or films in Malaysia that show the visuals of traditional wayang kulit Kelantan are very limited (Lent, personal communication, January 12, 2009). In 2008, the ArtMedia Production located in Kota Bharu, Malaysia claimed that it was amongst the first production houses in the world to produce wayang kulit Kelantan styled animations by showing *Jala Emas Jala Perak*. However, it only displayed the narration (voiceover) recorded by puppeteer Saufi, who always received criticism on purism of his works. Instead of preserving its original visual aesthetics, this production has transformed the characters of wayang kulit Kelantan from flat puppets into Japanese manga style characters (Figure 4.17).



Figure 4.17: Screenshots of *Jala Emas Jala Perak* (2008). Images Courtesy of ArtMedia Production

In addition, Chee and Abdullah Zawawi bin Talib from USM presented a framework for virtual storytelling using Malaysian wayang kulit in 2006. According to Chee and Abdullah Zawawi bin Talib (2006: 6), the virtual environment of technology has emerged as a great structure for virtual storytelling with the support of multimedia interaction. Their paper presented the potential of incorporating Malaysian wayang kulit into a virtual storytelling environment by exploring and investigating the possibilities of developing a virtual storyteller that integrated elements of Malaysian wayang kulit. In the conclusion of their paper, a framework that maps traditional wayang kulit onto virtual storytelling environment, including their proposed method for such an undertaking and endeavor, is also discussed.

Two years later, in November 2008, Tan, Abdullah Zawawi bin Talib, and Mohd. Azam, who are also from USM, presented their paper entitled “Real-Time Visual Simulation and Interactive Animation of Shadow Play Puppets Using OpenGL”. This paper described a method of modeling a wayang kulit puppet using sophisticated CG techniques available in Open Graphics Library (OpenGL) to allow interactive play in real-time environment. OpenGL is a cross-language, multi-platform Application Programming Interface (API) for rendering 2D and 3D CG. Tan, et al. (2008: 217) proposes a novel real-time method that allows interactive virtual wayang kulit using texture mapping and blending techniques. Special effects such as lighting and blurring effects for virtual wayang kulit environment were also developed. However, it is

noticeable that their research used only puppets from Indonesian wayang kulit purwa and did not employ any aesthetics of wayang kulit Kelantan (Figure 4.18).



Figure 4.18: Real-Time Visual Simulation and Interactive Animation of Shadow Play Puppets using OpenGL by USM Researchers. Images Courtesy of Tan, et al.

Baharuddin & Abdul Rahim (2010: 4-9) from UiTM Malaysia designed and created two animation prototypes to interpret certain symbolisms in wayang kulit. These animation prototypes were created with CG techniques to achieve the puppets' movements, visual effects and atmosphere. The wayang kulit genre and visuals used in these experiments also clearly belong to the Indonesian wayang kulit purwa.



Figure 4.19: The 3D Puppet of Abdul Ghani. Images Courtesy of Abdul Ghani

In 2011, Dahlan Abdul Ghani from Univesiti Kuala Lumpur (UniKL) developed a prototype design on wayang kulit in CGI environment (Figure 4.19). Based on his survey conducted among people in Klang Valley, Malaysia, the result shows that people

prefer wayang kulit in traditional manner (with the usual texture and crafted puppet) compared to his CGI 3D model puppet. Ironically, the CGI 3D model wayang kulit puppet created by Abdul Ghani lacked the visual aesthetics of wayang kulit Kelantan even though his aim was to preserve this traditional shadow puppet theatre.

Up to date, the author could only manage to find one online website with detailed information and photographs of traditional wayang kulit Kelantan. This website was initiated by Pak Dain of Wayang Kulit Melayu Traditional Kelantan troupe in Kampung Morak, Kelantan³⁶. The website depicts only the puppets from Pak Dain's collection and the information is either his personal statements or opinions. This is a personal website that intends to promote the wayang kulit troupe and himself. The digital puppets in the website lack interactivity and most of them are merely digitised photographs or information.

4.6 SUMMARY

The findings of Baharuddin and Abdul Rahim (2010: 11-12) indicated that wayang kulit will not lose its function as a means of transferring values when using the new media approach. They also discovered that digital wayang kulit can give a great impact to the younger generations compared to its traditional live performance. The digital media can be a great medium in conveying traditional values to the public. The shadow enhancements in the second prototype of wayang kulit animation created by Baharuddin and Abdul Rahim confirmed the effectiveness and viability of using digital technology in helping to preserve the culture of wayang kulit.

On the other hand, interviews were carried out by Farah (UiTM) in 2005 with Pak Nasir and Mohd. Kamrulbahri Hussin (Mr. Kamrul) on the issue of preserving wayang kulit Kelantan. During the interviews, both interviewees agreed that the information and

³⁶ See <http://wayangpakdain.com/galeri-wkmtk/>

promotion of wayang kulit Kelantan in Malaysia is not effective enough to preserve this dying traditional art form. Mohd Kamrul pointed out that the Malaysian society still could not accept and appreciate the values and aesthetics of traditional wayang kulit Kelantan. He also believed that the digital form of wayang kulit Kelantan is more interesting than its printed form. In his personal opinion, the digital medium is more efficient in the promotion of wayang kulit Kelantan. Both of them also strongly agreed that the Internet is an important medium in delivering information and promotion for wayang kulit Kelantan. During an interview between Pak Nasir and the researcher on 15th December 2008, even though he strongly agreed that traditional wayang kulit Kelantan should be made popular using digital media such as the Internet and television, he strongly opposed to any effort to modernise or alter the arts of traditional wayang kulit Kelantan. He stressed that the originality and authenticity of the visuals of traditional wayang kulit Kelantan should be preserved without any modifications or changes. The rise and emergence of new media and technologies can also be perceived as an opportunity and an advantage in the promotion, preservation and remediation of our traditional culture and heritage with proper application and implementation, rather than merely a threat.

However, on preserving the traditional wayang kulit Kelantan using digital media and technology, it is obvious that most of the efforts made paid no heed to its traditional visual aesthetics. According to Chee and Talib (2006: 8), the existing approaches of digital puppetry are not very straightforward in the styles and language of traditional wayang kulit. Most of the so-called digital puppetry of wayang kulit Kelantan depicts the visual aesthetics of Indonesian wayang kulit purwa (Figure 4.18 & Figure 4.19). Digitisation attempts and efforts made by many local researchers are rarely related to the traditional wayang kulit Kelantan. For example, even though Tan, Talib and Osman (2008) from USM pointed out that there is a need for Malaysians to

revitalise the dying wayang kulit to preserve this traditional theatre by using advanced technologies, puppets of wayang kulit purwa were used in their research. The results of their research therefore did not depict any visual aesthetics of traditional wayang kulit Kelantan.

On the other hand, Jamal Saidon's multimedia experiment entitled *Borrower of Light* neglected the visual aesthetics of traditional wayang kulit Kelantan. It transformed the art, metaphors and visuals of wayang kulit Kelantan by incorporating new edge cyberpunk and science fiction with the video recordings of traditional wayang kulit Kelantan (Naziree, 2003: 34). Hence, this multimedia experiment showed visuals that were varied and different from the traditional wayang kulit Kelantan performance.

UNIMAS's research project, *Wayang Virtual*, was a virtual version of the traditional wayang kulit Kelantan combined with a 3D animated virtual puppet named Mat Virtual (Abdul Wahid, 2007: 5). This project was similar to a live traditional wayang kulit Kelantan performance in concurrence with real-time animations. The 3D virtual puppet, Mat Virtual designed by Khairul Aidil Azlin, is an alien character in the performance, depicting contrastive visual appearance and aesthetics compared to the 2D puppets of traditional wayang kulit Kelantan (Figure 4.20).



Figure 4.20: Wayang Virtual (1997) of UNIMAS (From Left: the Performance Set-Up, Mat Virtual-the 3D Virtual Puppet and Shadow Images of the Puppets of Traditional Wayang Kulit Kelantan and Mat Virtual. Images courtesy of UNIMAS.

The self-proclaimed first wayang kulit Kelantan animation entitled *Jala Emas Jala Perak* by ArtMedia Production only captured the narration (voiceover) by Saufi, a puppeteer who adapted the story (*Ramayana*) in wayang kulit Kelantan. The characters

of traditional wayang kulit Kelantan were transformed into animated Japanese style characters and the overall animation lacked the visual aesthetics of traditional wayang kulit Kelantan. Even though some scenes showed shadow images of several principal puppets of wayang kulit Kelantan, they were colourless, without shadow distortion and movement of light source that are the visual aesthetics of traditional wayang kulit Kelantan.



Figure 4.20: The Virtual Puppet of *e-WayCool*. Image courtesy of Jasni *et al*.

Also, the virtual puppets used in *e-WayCool* of Jasni et al (2012:164) undoubtedly belong to Indonesian wayang kulit purwa rather than Malaysian wayang kulit Kelantan (Figure 4.20). Ironically, one of the objectives of *e-WayCool* is to preserve the local wayang kulit Kelantan from dying out. The question is, how can this interactive digital wayang kulit preserve the Malaysian wayang kulit Kelantan when they are introducing and using the virtual puppets and visuals of Indonesian wayang kulit purwa?

In summary, research and experimentations of digital puppetry that emphasize mainly on the visual aesthetics of traditional wayang kulit Kelantan are lacking. On the other hand, most local researchers tend to confuse the visual aesthetics of wayang kulit Kelantan with Indonesian wayang kulit purwa. In future, if traditional wayang kulit Kelantan were to become extinct as some researchers forecast, our future generations would not be able to appreciate this traditional theatre except from television or

computer screens. Thus, new methods and efforts have to be discovered fast to ensure the traditional wayang kulit Kelantan will still be alive and accessible to our future generations, even digitally.

CHAPTER FIVE

DIGITAL PUPPETRY OF WAYANG KULIT KELANTAN

5.1 OVERVIEW

This chapter presents the framework and methodologies in the production of digital puppetry of traditional wayang kulit Kelantan, focusing mainly and primarily on its visual aesthetics. It aims to examine the possibilities and potentials of using digital technology and CG to capture the visual aesthetics of traditional wayang kulit Kelantan. This chapter begins by elaborating and explaining the objectives of the computer experiments, followed by its limitations as well as hardware and software requirements.

In total, three computer experiments have been carried out by the author in this chapter. These computer experiments are generally divided into two sections: one using the computer animation with key-framing techniques and the other using the motion capture facilities. There are two computer animation techniques presented using two different computer applications; the first has its limit in distorting the virtual puppet and the latter has proven to be more effective but also more time consuming and more computer resource demanding than the first technique.

Detailed explanations of the procedure and techniques of these computer experiments are presented in this chapter. Finally, it ends with a summary, providing comprehensive summary from these experiments.

5.2 OBJECTIVES OF THE COMPUTER EXPERIMENT

These computer experiments serve the following objectives:

1. To study the capabilities of CG application in capturing the visual aesthetics of traditional wayang kulit Kelantan.
2. To probe into the potentials of CG applications for content improvement by the manipulation of digital wayang kulit Kelantan puppets and shadows.

3. To identify the potentials of capturing the arts of traditional wayang kulit Kelantan (the movements of puppets and puppeteers) with the use of a motion capture facility.

Apart from Wak Long animation in experiment II, all the settings of the computer experiments are based on the “Dalang Muda” episode in traditional wayang kulit Kelantan performances. This episode of wayang kulit Kelantan performance was selected for the following reasons and criteria:

- It is the essential part of a traditional wayang kulit Kelantan performance.
- It is the same in dramatic and musical content each time it is performed (Matusky, 1997: 21-27).
- It is a microcosmic view of traditional wayang kulit Kelantan performances, for it involves all the techniques, including intricate patterns of puppet manipulation such as: specific movements for battle; walking or parading by characters of all types; the entrance and exit of characters, flying and descending from the heavens; the swaying and waving of pohon beringin; and the posture of obeisance (Matusky, 1997: 21).
- It contains a lot of unique visual aesthetics of wayang kulit Kelantan, including the distortion of the shadows and fighting scenes of the godlings with bows and arrows.

The “Dalang Muda” episode consists of two broad sections:

- 1) The battle of the godlings with bows and arrows (*Dewa Panah Perang*) and
- 2) The entrance before Seri Rama (*Babak penghadapan Seri Rama*)

Only the first section was selected for the experiments. This section consists of eight sub-divisions as follows:

- 1) The removal of Dewa Panah Laki-Laki, Dewa Panah Perempuan and Maharisi
- 2) The movement and removal of pohon beringin
- 3) The movement of Maharisi
- 4) The invocation by Maharisi
- 5) The descent of Dewa Panah Laki-Laki and Dewa Panah Perempuan
- 6) The repetition of Maharisi's invocation and his exit
- 7) The battle of Dewa Panah Laki-Laki and Dewa Panah Perempuan
- 8) The walking of Dewa Panah Laki-Laki and Dewa Panah Perempuan and their exit

5.3 SCOPE OF THE COMPUTER EXPERIMENTS

These computer experiments examined the possibilities and potentials of using modern and digital technologies to capture the visual aesthetics of traditional wayang kulit Kelantan. They concentrated solely on the visual aesthetics that were identified and explained in Chapter Three: the movements of digital puppets and shadows; the colours of computer-generated shadows (translucency of digital puppets); the movement of the virtual light source; the distortion of the virtual shadow; the vibration of the virtual screen; and the movements of the eyebrow, mouth and string of virtual puppets. There is no audio involvement in these computer experiments. The first broad section of “Dalang Muda” episode performed by Pak Nasir and his students at ASWARA on 13th and 14th December 2008 (Figure 5.1) was used as the main reference in these computer experiments.



Figure 5.1: The “Dalang Muda” Episode Staged at ASWARA on 13th and 14th December 2008

5.4 HARDWARE AND SOFTWARE

The computer experiments for this study have been developed using a multimedia laptop with hardware specifications listed below:

- Lenovo B450/ T4300
- Intel Pentium® Core™ Duo Processor T4300 @ 2.1GHz
- 2GB DDR2 RAM
- Windows ® 7 (English) operating system
- 250GB (5400 RPM) Hard Drive
- nVidia GeForce G 105M video graphic
- 14.1 inch WXGA Display (1280 x 800)

The types of application software available and used in today’s computer animation and visual effect studios are diverse and may include 3D computer animation, image compositing, motion capture and digital ink and paint (Kerlow, 2004: 49). Many of them use turnkey software (also known as off-the-shelf software) that is commercially available from a variety of vendors and is ready to use on computer platforms. The three turnkey software used in this chapter are Adobe Photoshop CS6, Adobe After Effects CS6 and Autodesk 3ds Max 2012.

In computer experiment I, Adobe Photoshop CS6 was used for image editing while Adobe After Effects CS6 was used for visual simulation, animation and post-editing. In computer experiment II, Autodesk 3ds Max 2012 was used for visual

simulation and animation. Computer experiment III utilised a motion capture facility with the same software as computer experiment II.

Adobe Photoshop CS6 and Adobe After Effect CS6 are well-known computer graphic softwares developed and published by Adobe Systems. Adobe Photoshop CS6 is used mainly by computer designers or artists to manipulate visual images on a computer. On the other hand, Adobe After Effects CS6 is used primarily in the post-production process of filmmaking and television production. Its main uses are the origination of 2D and 2.5D (“two-and-a-half-dimensional”), 2D graphical projections and similar techniques used to enable a series of images to simulate the appearance of being 3D when in fact they are not animation, visual effects compositing and finishing (image adjustment, color correction etc.). This computer software can also be used as a basic non-linear editor and a media transcoder.

The last computer software used in this chapter is Autodesk 3ds Max. Formerly known as 3D Studio Max, Autodesk 3ds Max is a 3D computer graphic software for producing 3D animations, models and images. Developed and produced by Autodesk Media and Entertainment, it has modeling capabilities, a flexible plug-in architecture and can be used on the Microsoft Windows platform. It is frequently used by video game developers, TV commercial studios and architectural visualisation studios. It is also used for movie effects and movie pre-visualisation.

However, the author believed the same or similar results can also be achieved with other hardware and software programs which have similar features and functions.

5.5 METHOD AND PROCEDURE

According to the framework of digital puppetry proposed by Chee and Talib (2006: 10), the first component to be considered in the production of digital puppetry is the puppets. It is also clearly mentioned in Chapter Three that the puppets of traditional

wayang kulit Kelantan have reached a high level of artistic value and also depict highly skillful craftsmanship that cannot be replaced. Therefore, all the digital puppets used in these experiments are based on the photographs of the actual puppets of traditional wayang kulit Kelantan. It is the only way to preserve and capture the authenticity and visual aesthetics of the puppets. These virtual puppets were used to simulate their shadow images on digital screens.

The second component mentioned by Chee and Talib (2006: 10-11) is the setting of environment which consists of three elements: light source, the material of the puppets and the material of the screen. Although Chee and Talib (2006: 10-11) mentioned that the intensity and colour of the light greatly affect the quality of the shadow images, the movements of the light source has to be taken into consideration in the context of wayang kulit Kelantan performances.

Computer experiment I comprised of several major procedures and steps as listed and explained briefly below:

1. **Preparation of the virtual puppets**

The relevant tangible puppets of the experiments have been imported into the computer through capturing of their real-world images (photographs) and image scanning. These photographs were later cleaned and touched up using Adobe Photoshop CS6.

2. **The set up of virtual theatre of wayang kulit Kelantan in Adobe After Effects CS6**

Adobe After Effects CS6 was used to generate the visuals of traditional wayang kulit Kelantan. The virtual setting of the traditional wayang kulit Kelantan theatre was established in Adobe After Effects CS6 using its features and functions. The digitalised virtual puppets with their parts were

linked and animated in Adobe After Effects CS6. A primary virtual light source was created in the virtual wayang kulit Kelantan set up in Adobe After Effects CS6. The “cast shadow” and “receive shadow” functions of the virtual light source were activated in order to simulate the virtual shadow.

3. **The simulation of visual of traditional wayang kulit Kelantan**

The primary virtual light source in the virtual wayang kulit Kelantan was animated during the beginning of the “Dalang Muda” episode, with four of the virtual puppets laid motionless on the virtual kelir. First, all of the virtual puppets, except virtual pohon beringin, were removed from the virtual kelir. Then, the virtual pohon beringin was animated to create distortions of shadows at a great level before it was removed. After that, the virtual Maharisi re-entered and exited the virtual kelir. The virtual Maharisi re-entered the virtual kelir and “read” an invocation. The movements of the movable jaw, mouth and string of the virtual Maharisi were simulated. After the exit of the virtual Maharisi came the episode of the battle between the virtual Dewa Panah Laki-Laki and Dewa Panah Perempuan. During this battle scene, the author simulated the vibration of the virtual kelir when it was hit by these virtual puppets.

In order to give a clearer picture, the following sections provide an in-depth explanation about the process and procedure of the first experiment.

5.6 PREPARATION OF VIRTUAL PUPPETS FOR COMPUTER EXPERIMENT I

The first task of these computer experiments was to import the digital photographs of the puppets into Adobe Photoshop CS6. Only four puppets were involved in the early broad section of “Dalang Muda” episode on the battle of the

godlings with bows and arrows (*Dewa Panah Perang*). These puppets were: (i) pohon beringin, (ii) Maharisi, (iii) Dewa Panah Laki- Laki and (iv) Dewa Panah Perempuan.



Figure 5.2: The Puppets Involved in Computer Experiment I (From Left: Pohon Beringin, Dewa Panah Laki-Laki, Maharisi and Dewa Panah Perempuan)

The sizes of the virtual puppets were adjusted to accurately meet those of the actual puppets (Figure 5.2). Among these four puppets, only the Maharisi puppet had movable body parts like the arm, hand, eyebrow and mouth. Therefore, the virtual puppets of pohon beringin, Dewa Panah Laki- Laki and Dewa Panah Perempuan were merely cleaned and touched up in Adobe Photoshop CS6 (Figure 5.3) and there was no need to separate them into parts.

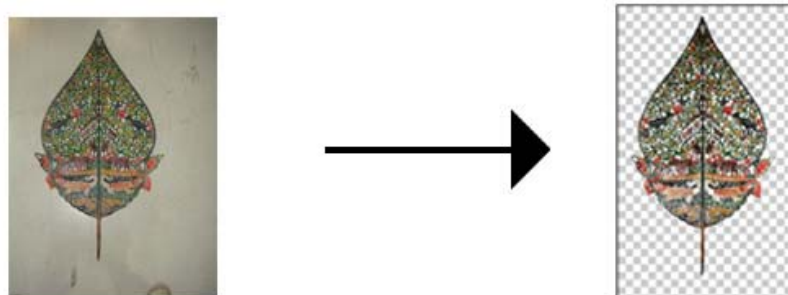


Figure 5.3: The Digitisation of Pohon Beringin Virtual Puppet

The virtual Maharisi was further separated and layered into parts such as the body, arm, hand, stick and lower jaw according to its joints in the wayang kulit Kelantan performances. This process was crucial so that the hierarchical transformation could be applied in order to allow animation for the separated parts.

The virtual Maharisi with all its parts were imported into Adobe After Effects CS6 with its layers information. All the joints and parts of the virtual Maharisi had to be activated into 3D mode so that they could rotate and move in a 3D environment. These parts were linked to its body. All the virtual puppets were laid tilted slightly on the virtual kelir, which was a 3D solid layer that would be created later.

5.7 THE SET UP OF VIRTUAL THEATRE OF WAYANG KULIT KELANTAN IN ADOBE AFTER EFFECTS CS6

A virtual 3D solid layer was created to function as the virtual kelir in order to receive the virtual shadows cast by the virtual puppets. All the virtual puppets were laid behind a virtual kelir which was purposely tilted forward (77 degrees based on the setting in ASWARA) in reference to the actual kelir in the wayang kulit Kelantan performances. A virtual “Spot Light” was created behind the virtual puppets acting as the main light source. In order to view the virtual wayang kulit Kelantan from the audience’s angle, a virtual camera was created on the other side of the virtual kelir (Figure 5.4).

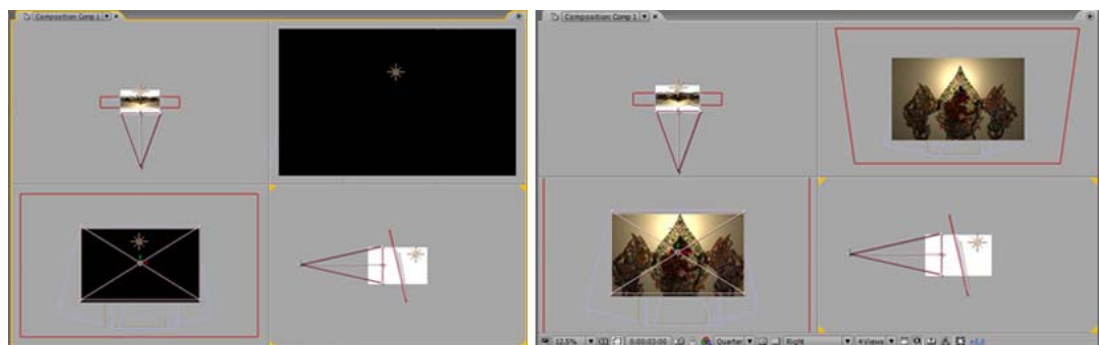


Figure 5.4: The Setting of a Virtual Theatre of Wayang Kulit Kelantan Before (Left) and After (Right) the Simulation of Virtual Shadows

The virtual settings were designed and “set up” to mimic the actual traditional wayang kulit Kelantan performances as accurately as possible in order to achieve the best effect. Hence, the measurements and proportions of the virtual environment were

established to make it as precise as possible to conform to the wayang kulit Kelantan performances in ASWARA.

In order to simulate the virtual shadow, the cast shadow function of the virtual light had to be activated. This was followed by enabling the “accept shadow and light” functions for all the virtual puppets and kelir. This enabled the shadows of the virtual puppets to be shown on the reverse side of the virtual kelir in dark colour. The shadows’ diffusion function would control the softness its edges.

To allow the colours of the virtual puppets to appear on the kelir or control the translucency of the virtual puppets, all the virtual puppets and virtual kelir had to allow light transmission from the virtual light. This enabled the casting of colourful shadows on the virtual kelir. It was optional to adjust the opacity of the virtual kelir so that it could be slightly seen from the camera located at the opposite side of the virtual kelir.

In actual traditional wayang kulit Kelantan performances, the light source should only be moved when there are no puppet movements (Pak Nasir, personal communication, February 4, 2009). This happens during the beginning of the “Dalang Muda” episode with four of the puppets lying motionless upon the kelir, overlapping one another. However, the light source will inevitably move slightly during the performance as it is hung by strings and its position is not fixed. In addition to that, the puppeteer will intentionally move the light source during this moment to create the so-called “liveness” illusion on the shadow images of motionless puppets (Pak Nasir, personal communication, February 4, 2009). There is no need to simulate the strings of the light source because they are invisible to the audience but the simulation of the movement of the virtual light source is essential because it affects the visual aesthetics of the cast shadows. Hence, the virtual light had to be able to move backward and forward or left and right depending on the visual intended for the virtual wayang kulit

Kelantan environment in Adobe After Effects CS6. It was moved more during the scenes when the puppets were still and only little movements were allowed when the virtual puppets were in their motion.

All the virtual puppets in computer experiment I were animated with key-frames and computer-generated “tweening” technique. The term “tweening” in computer animation software means the animator creates the key-frames (important frames of a sequence), such as the starting and ending position of the pohon beringin puppet, after which the computer animation software will smoothly translate the object from the starting point to the ending point. The animator can correct the result at any point, shifting the key-frames back and forth to improve the timing and dynamics of a movement or change an 'in between' into an additional key-frame to further refine the movement.

For movements of the virtual puppets of pohon beringin, Dewa Panah Laki-Laki and Dewa Panah Perempuan, the author first moved and assigned their pivot points to the top parts of each of them, which are the parts that will hit or touch the virtual kelir. These virtual puppets were animated in ways similar to if they were removed from the virtual kelir. The virtual Dewa Panah Laki-Laki and Dewa Panah Perempuan were removed at the same time by moving and rotating them to the bottom part of the virtual kelir using the key-frames and computer-generated tweening techniques. This was followed by the exit of virtual Maharisi. The only virtual puppet left on the virtual kelir was the pohon beringin and it was animated to sway and wave.

The swaying and waving of pohon beringin puppet in the “Dalang Muda” episode portrayed the distinctive shadow distortions. This visual effect was generated by rotating, moving and animating the virtual pohon beringin closer to or further from the virtual light source and virtual kelir (Figure 5.5).



Figure 5.5: The Shadow Movements and Distortions in Computer Experiment I

After the swaying and waving of the virtual pohon beringin, this virtual puppet was gently removed from the virtual kelir. Then, the virtual Maharisi puppet re-entered and exited the virtual kelir. In order to simulate these movements, the articulated arm and handstick of the virtual Maharisi puppet were linked to its body. Prior to this, the author had to adjust the pivot points of these joints so that they would rotate and move correctly during the animation process.

The author animated the movements of the virtual Maharisi by turning on the “stop watch” button and rotating its articulated arm, hand and handstick accordingly (Figure 5.6).



Figure 5.6: The Movement Simulation of Virtual Maharisi Puppet in Computer Experiment I

The movements of the eyebrows and mouths of the actual puppets are controlled by strings. The movable eyebrow is actually a bent bamboo attached to a string. By pulling the string downward and releasing it to its original position, the puppet’s eyebrow and mouth move instantly, such as during the invocations by Maharisi in the “Dalang Muda” episode.

To simulate the above visual, both the strings and eyebrows of the photograph of the Maharisi puppet were erased using Adobe Photoshop CS6. They were replaced with a virtual string in Adobe After Effects CS6. The lower jaw of the virtual Maharisi was animated to create the illusion of talking. Besides that, the shape of the virtual string and eyebrow were animated spontaneously with the movements of the virtual Maharisi's mouth, creating the illusion of a movable mouth, eyebrow and string (Figure 5.7).



Figure 5.7: The Movement Simulation of Eyebrow, Mouth and String of the Virtual Maharisi puppet

In order to simulate the visuals of the kelir's vibration, especially during the fighting scenes that portray this dramatic visual style to the fullest, an animated fighting scene was rendered and extracted from the "Dalang Muda" section. It was the battle scene between the Dewa Panah Laki-Laki and Dewa Panah Perempuan (godlings with bows). Later, "ripple" and "distortion" effects were applied to this video. The author then animated and adjusted these effects to achieve the closest possible visual imitation to the actual wayang kulit Kelantan performance.

5.8 THE SET UP OF COMPUTER EXPERIMENT II

In addition to computer experiment 1, the author also conducted a second computer experiment using different computer software. As each computer software has its own unique features and limitations, the author chose to use another computer software called Autodesk 3ds Max 2012 for computer experiment II. Compared to the Adobe After Effects CS6 software used in computer experiment I, the Autodesk 3ds Max 2012 software used in the computer experiment II has more features and controls

of the virtual objects in the virtual 3D environment. However, this software is also more complicated than Adobe After Effects CS6 and needs more time to learn and master. In addition to that, it also requires more computer resources and higher computer specifications. Using computers with common specifications will result in time-consuming rendering output. For example, the author had to wait for nearly an hour for a three-second render of an animation featuring the swaying of the pohon beringin puppet.

Computer-generated Imagery (CGI) is the application of the field of computer graphics, or more specifically 3D computer graphics, to special effects in art, video games, animations, films, television programs, commercials, simulators and simulation generally, and printed media. The visual scenes may be either dynamic or static.

The objectives of experiment II are basically similar to computer experiment I, which is to study and observe the capabilities and limitations of 3D computer-generated imagery in capturing and simulating the visual appearance of the wayang kulit Kelantan on screen.

Two wayang kulit Kelantan puppets were chosen to carry out computer experiment II: the pohon beringin and Wak Long.

As mentioned earlier in Chapter 3.4.1 of this thesis, there are two types of pohon beringin in wayang kulit Kelantan. The first type is filled with the arabesque designs of vegetal patterns on its entire surface and the second type is designed and created using motifs from nature such as birds, fish, crocodiles, elephants, monkeys, snakes, tree, branches, flowers, etc. on the shape of a large leaf, tree or mountain. Both sides of the pohon beringin are mirror images of the other. The author used the second configuration of pohon beringin puppet in computer experiment I. Therefore, a pohon beringin puppet

with the first configuration was chosen and used for this computer experiment (Figure 5.8).

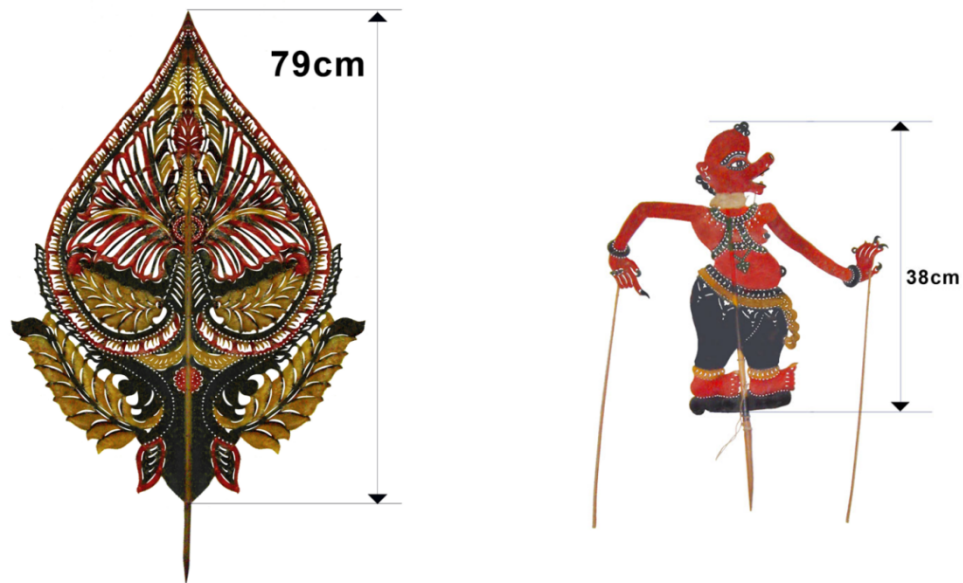


Figure 5.8: The Main Puppets of Computer Experiment II, From Left: Pohon Beringin and Wak Long

Pak Dogol and Wak Long are the main clown puppets in wayang kulit Kelantan performances. They are probably the most important comic characters not derived from the original *Ramayana* epic (Matusky, 1997: 17). In traditional wayang kulit Kelantan performance, Wak Long is always painted red and displays a coarser and comical characteristic with his broad, bulbous nose, round eye, pot-belly, large backside and sarong-clad torsos. Among all the wayang kulit Kelantan puppets, Wak Long is one of the puppets that contains the most sophisticated joints including two movable articulated arms, movable mouths and eyebrow.

First, the photographs of both puppets were digitised, retouched and cleaned up using Adobe Photoshop. For the Wak Long puppet, the different joints and movable parts such as jaw and limbs need to be separated into different layers. In addition to that, the opacity map (grayscale) files were also created to specify areas of opacity and transparency of the puppets. The pure white areas of the opacity map will allow the corresponding areas of the puppets to be visible while pure black areas caused the

corresponding areas of the puppets to be transparent. The level of transparency in the materials was controlled and determined by the level of darkness in the opacity map.

Both puppets were modeled in Autodesk 3ds Max 2012. The digital photographs of puppets were mapped into the puppets according to their opacity files (Figure 5.9).

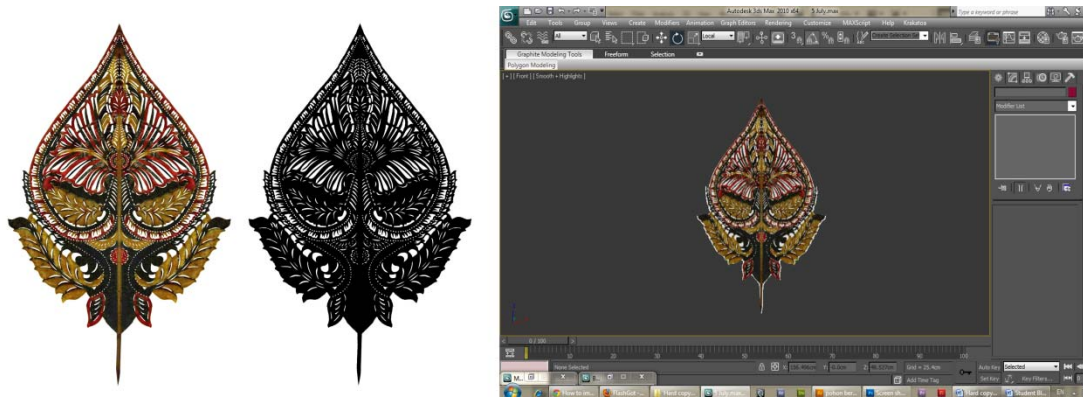


Figure 5.9: The Texture Image (left), the Alpha Image (centre) and the Final Virtual Puppet of Pohon Beringin (right)

In the final setting up stage of virtual wayang kulit Kelantan in Autodesk 3ds Max 2012, a virtual kelir was created measuring 250cm (width) x 180cm (height) with 77 degrees tilting forward (as in the actual setting of wayang kulit Kelantan performance). A virtual light source was then added in the virtual wayang kulit Kelantan environment. It was animated to create the swinging effects as normally is in actual performances.

The traditional wayang kulit Kelantan uses paraffin oil lamp as its only light source. The dramatic flickering of the lamp sets the atmosphere over the performance (Van Ness & Prawirohardjo, 1980: 46). The shimmering soft light of the lamp casts a mysterious atmosphere over the performance area and because of the flickering, the puppets seen from the shadow side often appears as if they are alive and breathing. In recent years, the use of the electric light bulb for this purpose often resulted in a loss of this natural quality (Van Ness & Prawirohardjo, 1980: 46). In order to simulate similar visual effects, a virtual light source was added in the virtual wayang kulit Kelantan environment in Autodesk 3ds Max. It was animated to create the swinging effect of the light source as should be in actual wayang kulit Kelantan performances. To further

simulate the visual styles of traditional wayang kulit Kelantan (using paraffin oil lamp as light source), the intensity of the virtual light source needed to be animated and artificial flickering flame effect has to be created and superimposed onto the visuals of the virtual wayang kulit Kelantan (Figure 5.10).

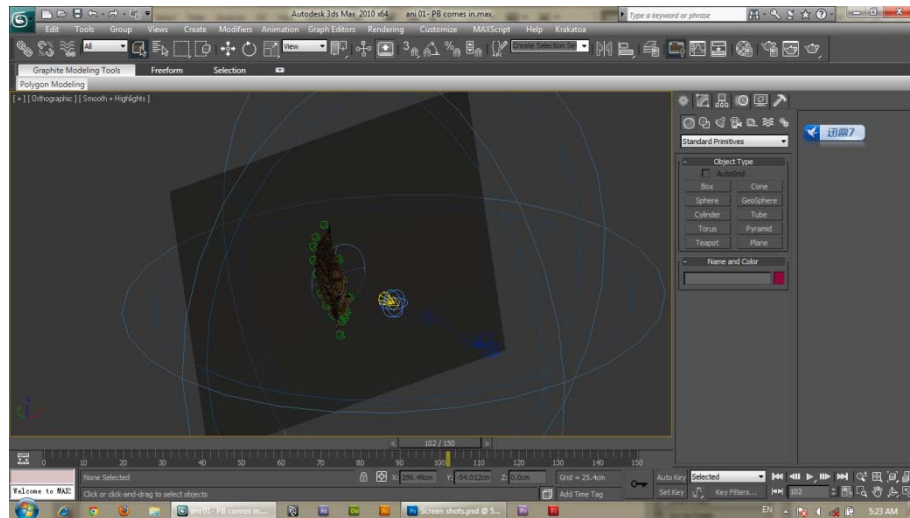


Figure 5.10: The Setting of Virtual Wayang Kulit Kelantan in Autodesk 3ds Max 2012

In virtual 3D computer environment, a series of dummy objects were created in order to control the different parts of the pohon beringin puppets. These dummy objects are invisible on rendering or output and were linked to proper hierarchy in order to control the distortion of specific parts of the pohon beringin puppet (Figure 5.11).

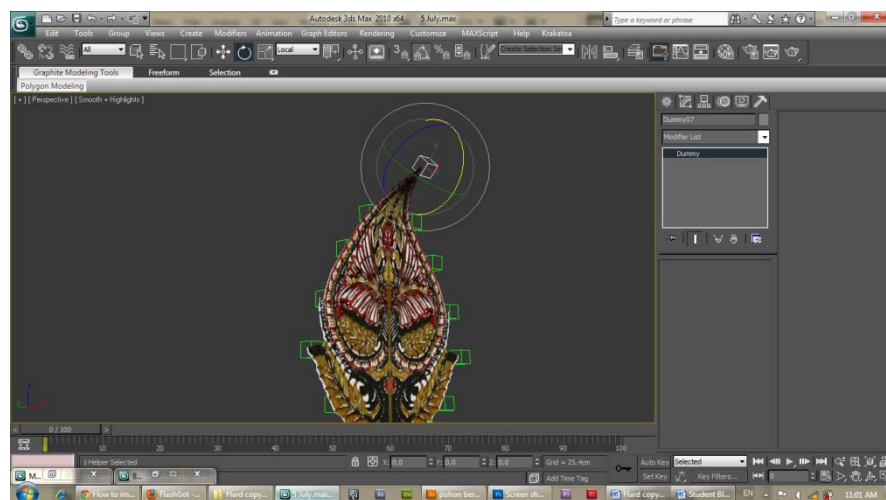


Figure 5.11: The Virtual Pohon Beringin with Its Controlled Dummy Objects

The pohon beringin puppet was animated with key-frames and computer-generated tweening technique to perform an arc movement from right to left and touches the centre of the screen during the half-way of the movement. When the puppet touches the screen, the top part of the puppet was distorted and this effect was achieved by moving and rotating the dummy object on the top part of the puppet. Throughout the arc movement of the puppet, different parts of it were distorted by manipulating the relevant dummy objects.

In addition, a cloth modifier was added to the virtual pohon beringin puppet and virtual kelir to enable the simulation of vibration of virtual kelir when the top part of the virtual pohon beringin touches the virtual kelir. The parameters of the virtual kelir such as its stiffness and softness have to be adjusted accordingly to achieve the final outcome as shown in Figure 5.12.

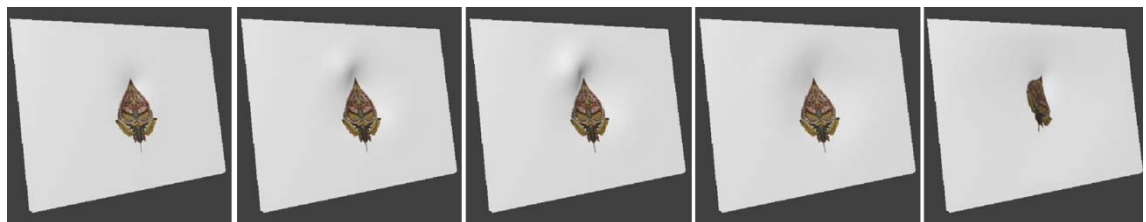


Figure 5.12: The Computer-Generated Vibration Effect of the Virtual kelir

Generally, the computer-generated shadow images have two important functions: controlling the transparency of the shadows and the softness of its edges. The area shadow function created a soft edge that becomes more noticeable as the distance between the object and the shadows increases. The softness of the shadows' edges was determined by the sizes of area shadow. The larger the area shadow, the more distinctive the softness of the shadows' edges is (Figure 5.13).

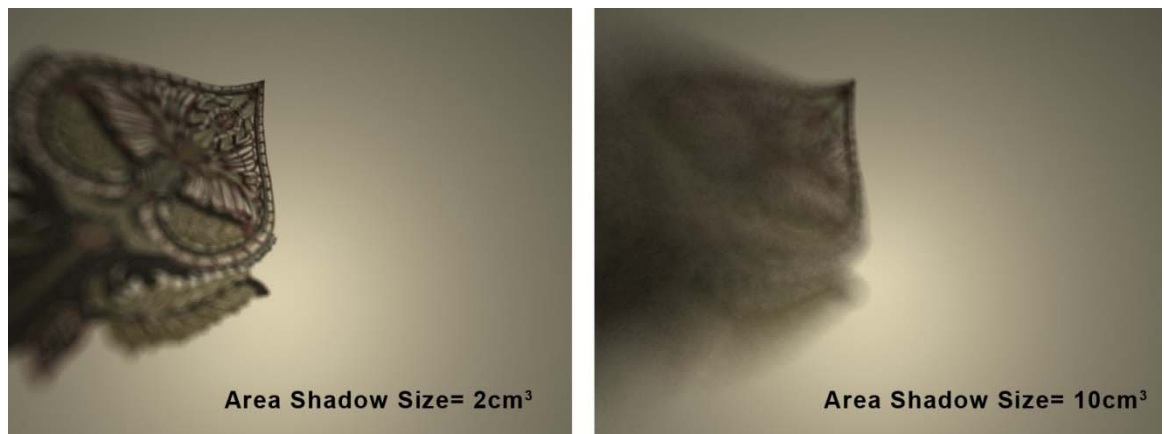


Figure 5.13: Area Shadow Size Determines the Softness of the Edge of the Shadow

Both functions were activated and adjusted in this experiment. In addition to that, the “cast colourful shadows” function in the materials of the virtual puppets also needed to be activated.

The Wak Long puppet consists of two movable articulated arms. The puppeteer controls and moves the puppet’s arms by manipulating the sticks connected to the end of each articulated arm. Each arm of the Wak Long puppet consists of two movable parts. In virtual wayang kulit Kelantan environment, all these movable parts were modeled and texture-mapped using the same method as the virtual pohon beringin puppet. They were later arranged, positioned and linked with proper axis points and hierarchy. These parts were later rotated and animated to create the movements of Wak Long puppet in virtual wayang kulit Kelantan (Figure 5.14).

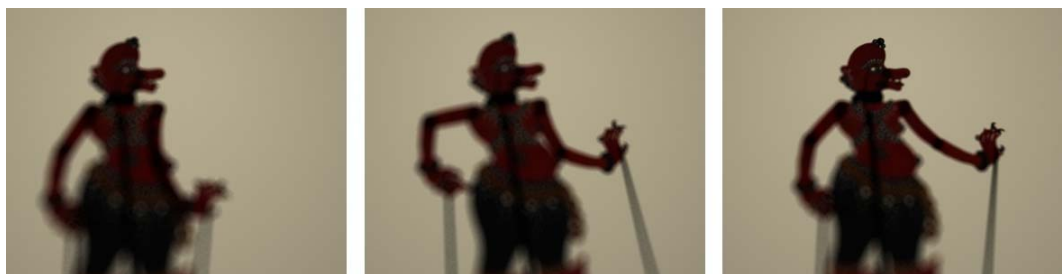


Figure 5.14: The Movements of the Virtual Wak Long Puppet and Its Hands

In actual wayang kulit Kelantan performances, the movements of the Wak Long puppet’s eyebrows and mouth were controlled by strings. The movable eyebrow of Wak

Long puppet is actually a bent bamboo attached to a string. By pulling the string downward and releasing it to its original position, the puppet's eyebrow and mouth were moved instantly and synchronously.

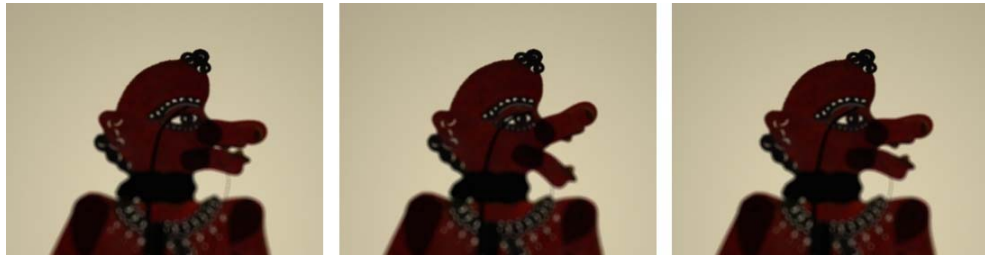


Figure 5.15: The Movements of the Mouths, Eyebrow and String of Virtual Wak Long Puppet

To achieve the above mentioned visual effect, a virtual bent thin stick was model in virtual wayang kulit Kelantan in order to operate as the eye brow of the puppet with a virtual string attached to it. The elasticity of the stick was manipulated and animated synchronously with the movement of its mouth and string, creating the illusion of a movable mouth, eyebrow and string (Figure 5.15).

5.9 COMPUTER EXPERIMENT III: DIGITAL PUPPETRY OF WAYANG KULIT KELANTAN USING A MOTION CAPTURE FACILITY

The objective of computer experiment III was to study and observe the capabilities and limitations of using motion capture facilities in capturing the movements of puppets and puppeteers in wayang kulit Kelantan performance.

The author used the OptiTrack Arena motion capture system located at University Putra Malaysia (UPM) for this experiment. It is an optical motion capture system with sixteen cameras set up, easy skeleton creation, multiple actor, prop-tracking, real-time solving and streaming, editing tools and flexible data export options for full-body, motion capture, prop-tracking function integrated with real-time Skeleton Solver software.

Due to its significance, the pohon beringin puppet in wayang kulit Kelantan was once again chosen as a subject of this experiment. A total of five reflective markers were placed on the tangible pohon beringin puppet while the author wore the standard motion capture suit strapped with reflective markers (Figure 5.16).



Figure 5.16: The Motion Capture Objects, From Left: Pohon Beringin Puppets and the Author

5.9.1 THE SET UP OF VIRTUAL WAYANG KULIT KELANTAN

This computer experiment used the virtual pohon beringin puppet as well as virtual theatre setting in computer experiment II presented in Chapter 5.8. A virtual biped humanoid structure was created in the virtual environment in Autodesk 3ds Max 2012 computer software. A biped is a virtual predefined, initial humanoid structure. It is one of the three basic components of Character Studio, a system built into 3ds Max to help automate the creation and animation of a character. Initially, the term biped refers to Merce Cunningham's choreography for a computer software with the same name, for his lifelong interest has been to figure out all that a body with two legs can do (Wang, 2010: 38). The biped humanoid structure in Autodesk 3ds Max can transfer and manipulate data from motion capture session on the joints and body parts of the human performers, and allow the movements to be digitally combined, interrelated or reversed in a computer virtual 3D environment. In this experiment, the virtual biped humanoid

structure represented a virtual puppeteer that portrayed an absolute synchronicity in movements and actions from a human puppeteer (Figure 5.17).

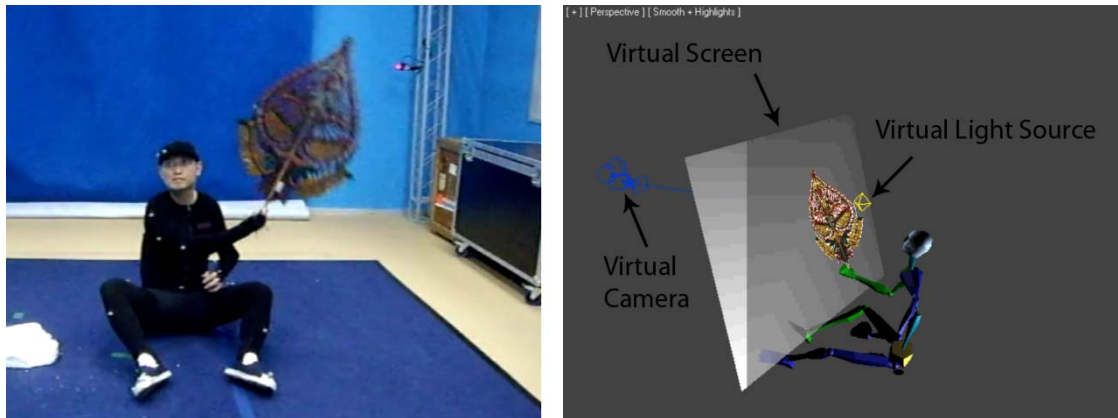


Figure 5.17: The Motion Capture Experiment (Left) and The Setting of Virtual Wayang Kulit Kelantan (Right)

5.9.2 SIMULATION OF THE SHADOW IMAGES ON COMPUTER SCREEN

The captured data of the pohon beringin puppet and puppeteer were transferred and mapped into the virtual puppet and biped into the virtual environment. Afterwards, the author rendered a video from the view of a virtual camera, located on another side of the virtual screen in full resolution. Figure 5.18 shows the results of computer experiment III.

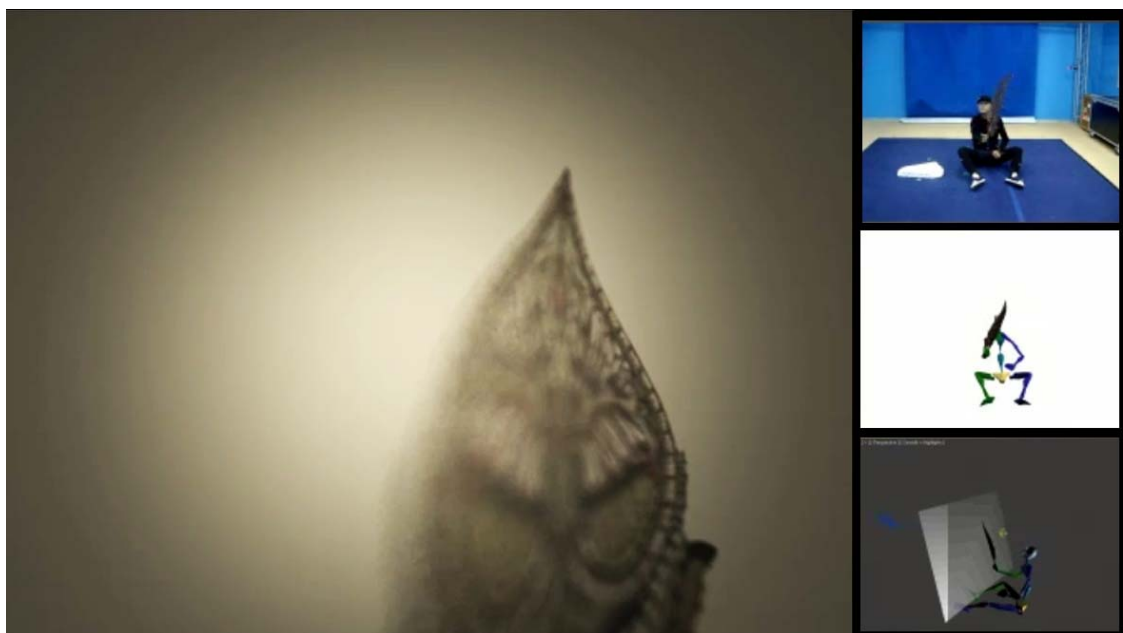


Figure 5.18: The Results of the Motion Capture Experiment

5.10 SUMMARY

Three computer experiments have been carried out in this chapter to explore and create frameworks for digital puppetry of traditional wayang kulit Kelantan. The first two computer experiments involve computer animation techniques without involving the puppeteer. Both have shown that the computer animation techniques are able to capture and simulate realistic shadow images of traditional wayang kulit Kelantan. However, these computer experiments needed competent animators who know the visual aesthetics, or hopefully the proper art of traditional wayang kulit Kelantan to animate, move and distort the digital puppets, light source and screen in a proper manner.

The final computer experiment involves the use of a motion capture facility to capture the movements of puppets and puppeteers in real-time and later transfer the information onto the digital puppets and puppeteer. This process does not require a skillful animator; anyone can be the puppeteer in this computer experiment.

As a summary to this chapter, issues relating to the use of computer graphics and modern technology to capture the visual aesthetics of traditional wayang kulit Kelantan were mostly answered based on the results of the computer experiments.

In addition to that, these computer experiments also investigated the capabilities of computer graphics and modern technology in controlling and manipulating the visuals of the digital puppetry of wayang kulit Kelantan. As a result, the author found that not only could the visuals of wayang kulit Kelantan listed above be captured but all of them could be controlled, adjusted and animated as well. In comparison, during actual wayang kulit Kelantan performances, the puppeteer can only control the movements of puppets and the light source: the colours and the softness of shadows'

edges, intensity of the light source, vibration and transparency of the screen are completely beyond their control.

CHAPTER SIX

RESULTS, FINDINGS AND DISCUSSION

6.1 OVERVIEW

The aim of Chapter Six is to present and discuss the results of the computer experiments conducted in Chapter Five. To avoid the mistakes done by many researchers in their attempts in creating digital puppetry of wayang kulit Kelantan without substantial knowledge on the visual aesthetics of traditional wayang kulit Kelantan, the author presented the visual aesthetics of traditional wayang kulit Kelantan in Chapter Four.

The experiment results discussed in this chapter reveals that with the emergence of new technology, it is possible to capture the visual aesthetics of traditional wayang kulit Kelantan using CG and digital technology such as motion capture. These visual aesthetics are listed down with details and explanations. In addition, the findings also show the potentials and capabilities of using CG to adjust, amend and animate the visuals of traditional wayang kulit Kelantan in digital environments.

6.2 RESULTS AND FINDINGS OF COMPUTER EXPERIMENT I

Computer experiment I used two computer turnkey softwares called Adobe Photoshop CS6 and Adobe After Effects CS6. Based on the results, the visuals of traditional wayang kulit Kelantan that were successfully captured in computer experiment I are: (i) the visuals of the puppets; (ii) the colours of shadow on the kelir; (iii) the distortions of shadow; (iv) the movements of light source; (v) the vibration of kelir; and (vi) the movements of the movable jaw, eyebrows and string of the puppet.



Figure 6.1: Comparison Between a Photograph of Traditional Wayang Kulit Kelantan (Left) and a Rendering of Digital Puppetry Wayang Kulit Kelantan (Right).

The differences between the visual styles of computer-generated wayang kulit Kelantan and the actual wayang kulit Kelantan are subtle. Figure 6.1 shows the comparison of a rendering of digital puppetry of traditional wayang kulit Kelantan with an original photograph taken during the “Dalang Muda” performance in ASWARA on 13 December 2008 .

In addition, the elements in the shadow images such as the lighting intensity, lighting colour, softness of a shadow’s edge, translucency of a puppet and transparency of the screen can be manipulated, adjusted and animated. It is very difficult or almost impossible for the puppeteer(s) to control such elements in any actual performance.

However, one of the main limitations of using Adobe After Effects computer software is that the virtual puppets exist in 2D rigid form which cannot be distorted in shape. The actual tangible puppets of traditional wayang kulit Kelantan is made of cowhide and they are soft (but not too soft). Therefore, the shape of these tangible puppets will be distorted or bent accordingly if they have been pushed forward on the kelir or moved too fast. However, in the virtual theatre of Adobe After Effects, the shape of all virtual puppets are fixed in 2D and they cannot be distorted or bent freely.

Another limitation of using Adobe After Effects CS6 to set up the virtual theatre of wayang kulit Kelantan is the simulation of a realistic flame and kelir vibration effects. The effects of kelir vibration and flame can only be achieved by applying these effects

to the post-rendered video of digital puppetry of wayang kulit Kelantan. Therefore, these effects are not synchronised and affected by the movements of virtual puppets (although the animator can adjust these effects so that they look synchronised).

Due to these limitations, the author therefore recommends readers to use this computer software and the methodology presented in Chapter 5.6 only to produce the still images of digital puppetry of traditional wayang kulit Kelantan rather than animation. Both the computer software and methodology are also recommended for novice computer animators and users.

6.3 RESULTS AND FINDINGS OF COMPUTER EXPERIMENT II

Computer experiment II used two turnkey softwares called Adobe Photoshop and Autodesk 3ds Max. The results of this computer experiment show that Autodesk 3ds Max software provides more flexibility in distorting the 2D virtual puppets in its virtual environment.

The results of the experiment show realistic and convincing visuals of traditional wayang kulit Kelantan. By rotating, moving, distorting and animating the virtual puppets and light source, the distinctive shadow's colours, distortions and softness of edges can be achieved convincingly on digital screen. In addition to that, the software is able to simulate a realistic flame effect and vibration effects of the virtual kelir (Figure 6.2).

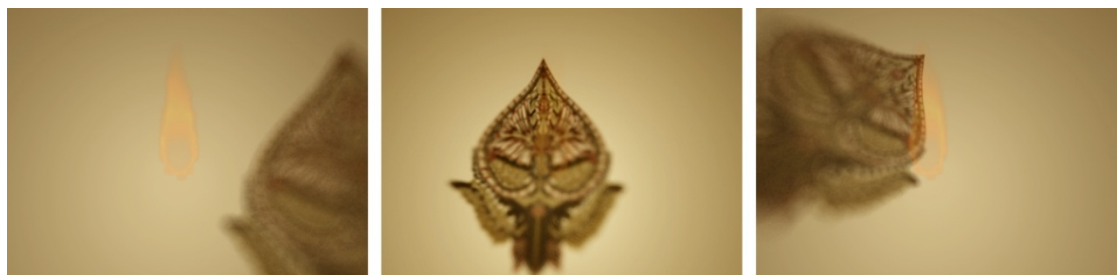


Figure 6.2: The Computer-Generated Flame Effect using Autodesk 3ds Max 2012

This experiment also investigated the advantages of using CGI in controlling the visuals of wayang kulit Kelantan. From the experiment results, the author found that all visuals of digital puppetry of wayang kulit Kelantan can be manipulated, adjusted and animated. It is very difficult or almost impossible for the puppeteer to control the visuals of shadow images in actual wayang kulit Kelantan performances such as the colour and intensity of light source, the softness of the shadows' edges as well as the transparency of the screen. However, they can be animated easily in the digital puppetry of wayang kulit Kelantan.

The only limitation of computer experiment II is that all the animations were done not in "real time", meaning that there is a lack of synchronicity between the puppeteer's control and the puppets' resultant movements. Even though the animation process used in this experiment eliminated human errors, it also disconnects the interaction between the human puppeteer (in this case, the animator) and his virtual puppets.

6.4 RESULTS AND FINDINGS OF COMPUTER EXPERIMENT III

Computer experiment III used the same turnkey computer softwares as in computer experiment II with a motion capture facility in UPM. Based on the results, this experiment has successfully captured and transformed the movements of the tangible puppets and puppeteer onto a virtual puppet and biped. These data were later used to simulate the visuals of the shadow images as in virtual wayang kulit Kelantan performances. The movements of both the puppets and puppeteer in this experiment were done in "real-time", meaning that the virtual puppets' and virtual puppeteer's resultant movement were synchronised with the tangible puppets and human puppeteer's control.

The movements of digital puppets and puppeteer(s) can be fine-tuned using computer technology. In addition to that, the virtual puppets can be created in colourful designs or models and dissolved in and out of the focus system that creates variations of shadow. In fact, the computer experiment results showed that not only can the visuals of traditional wayang kulit Kelantan be captured and generated using the CG and motion capture technology but all of them can also be amended and adjusted accordingly. For example, the intensity and colour of the virtual light source can be animated and adjusted to create visuals and effects that are almost impossible to achieve in any actual wayang kulit Kelantan performance.

To be exact, the author has identified six facets of visuals in digital puppetry of wayang kulit Kelantan that can be adjusted and animated. These facets are: (i) the intensity and colour of the virtual light source (Figure 6.3); (ii) the transparency and translucency of the virtual puppets which affect the colours of shadows on the virtual kelir directly; (iii) the transparency and colour of the virtual kelir, (iv) the softness of the shadows' edges; (v) the materiality of virtual kelir and (vi) the shape of virtual puppets.



Figure 6.3: Animation of the Colour and Intensity of Virtual Light Source

In reality, all of the above-mentioned facets of visual are almost impossible to amend or adjust during actual wayang kulit Kelantan performances. Hence, these could be the evolutionary advantages for digital puppetry of traditional wayang kulit Kelantan that is to be able to amend, control and animate these visuals that are impossible to achieve in actual wayang kulit Kelantan performances.

6.5 SUMMARY

The computer experiments presented three methodologies to remediate the traditional wayang kulit Kelantan. In these experiments, the traditional wayang kulit Kelantan underwent the processes of remediation and its aesthetics were successfully captured and transferred into a new media product³⁷. To be compelling, a new media product must capture the psychic and social experiences of a particular time and place and these include the experiences of older media as well as the hopes and anxieties regarding the introduction of new media technologies themselves (Silvio, 2007: 286).

The results of the computer experiments show that CG can be used to capture the realism of shadow images of traditional wayang kulit Kelantan, which is the main aspect of its visual aesthetics. In addition to that, the motion capture facility is able to capture the puppeteer and puppets' movements of a particular time and space. This remediated form of traditional wayang kulit Kelantan manages to retain and preserve its original visual aesthetics as well as the puppets' and puppeteer's movements on digital screen.

³⁷ See Chapter 4.2, p. 123- 128 of this thesis for the concept and processes of remediation.

CHAPTER SEVEN CONCLUSIONS

7.1 OVERVIEW

The aim of this study is to examine the possibilities and potentials of using CG and modern technology to capture the visual aesthetics of traditional wayang kulit Kelantan. Therefore, the visual aesthetics of traditional wayang kulit Kelantan have to be identified prior to the computer experiments.

Chapter Two of this thesis highlighted the related important theories and literature on the history and development of shadow puppet theatre in Southeast Asia, with emphasis on wayang kulit Kelantan in Malaysia. This chapter also presented the essential aspects of traditional wayang kulit Kelantan such as its repertoire, theatre setting, performance standards and puppets as well as revealed the causes and reasons that led to its current critical situation in Malaysia. New forms of wayang kulit in Malaysia as well as the use of the context of wayang kulit Kelantan in other media and art forms are also presented in this chapter.

Chapter Three identified the visual aesthetics of traditional wayang kulit Kelantan which consists of two major sections: the first examined the visual aesthetics of its principle puppets and the other examined its shadow images. This chapter also discussed the factors that affect the quality of the shadow images of traditional wayang kulit Kelantan such as the setting of light source and screen. In summary, this chapter presented comprehensive design issues and guidelines of the visual aesthetics of traditional wayang kulit Kelantan.

Chapter Four presented the various definitions of digital puppetry proposed by scholars and exponents in related fields. Digital puppetry is found in two broad contexts, namely puppetry in digital media and digital puppetry in live performance theatre. It is obvious that the term and definition of digital puppetry are subjects of debate among puppetry practitioners, computer graphic designers and computer animators. Taking these definitions into rational considerations, the author presented the definition of digital puppetry used in this thesis. The examples of digital puppetry are later presented and discussed in this chapter to provide the reader with a simpler context and better understanding in the discourses related to digital puppetry. In addition to that, this chapter also presented digital puppetry in live performance theatre as well as current available research and creation of digital puppetry of wayang kulit Kelantan.

Chapter Five presented three computer experiments conducted by the author. These computer experiments aimed to examine the possibilities and potentials of using digital technology and computer graphics to capture the visual aesthetics of traditional wayang kulit Kelantan. This chapter begins by elaborating and explaining the objectives of the computer experiments. Then, the limitations of the computer experiments as well as its requirements (hardware and software) were listed. These computer experiments are generally divided into two sections: one using the computer animation with key-framing technique and the other using motion capture technology. There are two computer animation techniques presented using three computer applications: the first has limitation in distorting the digital puppet and the latter has proven to be more effective but also more time consuming and more computer resource demanding than the first technique.

The computer experiment results discussed in Chapter Six reveal that, with the emergence of new technology, it was possible to capture the visual aesthetics of traditional wayang kulit Kelantan using computer graphics. In addition to that, it is also

proven that the motion capture technology can be used to capture and preserve the movements of the puppets and puppeteer.

These visuals were listed down in detailed explanation. In addition, the findings also show the potentials and capabilities of using computer graphics to adjust, amend and animate the visuals of traditional wayang kulit Kelantan in virtual environments.

This final chapter seeks to answer the research question posed in Chapter One of this study, followed by discussion of the limitations of study. Next, some recommendations are presented for future developments and research. The final part of this chapter completes this research study with a summary and conclusion.

7.2 RESEARCH QUESTIONS: FINDINGS AND DISCUSSION

The current study aspires to add knowledge to the limited research and study on both the visual aesthetics of traditional wayang kulit Kelantan and its digital puppetry. Based on the results of the computer experiments, the author attempts to answer the research questions that were posed earlier in Chapter One of this thesis.

The three research questions of this study were:

1. What are the visual aesthetics of traditional wayang kulit Kelantan?
2. To what extent can Computer Graphics (CG) be used in capturing the visual aesthetics of traditional wayang kulit Kelantan into digital media?
3. To what extent can motion capture technology be applied to capture the movements of the puppeteer and puppets of wayang kulit Kelantan?

7.2.1 WHAT ARE THE VISUAL AESTHETICS OF TRADITIONAL WAYANG KULIT KELANTAN?

Based on the descriptive study presented in Chapter Three, the answer to the above question consists of three major broad facets: the craftsmanship of the puppet, the design and style of the puppets and the performance setting of traditional wayang kulit Kelantan (light source, screen and shadow images).

Firstly, the physical appearance and design of the wayang kulit Kelantan puppets are distinctively unique and different from other shadow puppet theatre. This includes their single articulated arms with their non-articulated arms holding weapons or flowers and the refinements of the noble characters' visual styles with small noses, mouths, almond-shaped eyes and slender bodies. Some of the puppets have their own colour symbolism, such as Seri Rama, Laksamana, Pak Dogol and Wak Long.

On the shadow images projected on screen, most of the wayang kulit Kelantan puppets, especially the principal puppets, are made of thin cowhide and cast colourful shadow images. Traditional wayang kulit Kelantan performance also contain distinctive shadow distortions, especially during the "Dalang Muda" episode. Besides that, the movement of the light source also produces very slight movements and distortions of shadows during wayang kulit Kelantan performances. The primary light source in wayang kulit Kelantan performance is intentionally moved by the puppeteer when there is no movement of puppets in order to create subtle movements of shadow images. A greater shadow distortion appears when the puppeteer presses his puppets onto the kelir to vibrate it on some occasions, especially during fighting scenes.

7.2.2 TO WHAT EXTENT CAN CG BE USED IN CAPTURING THE VISUAL AESTHETICS OF TRADITIONAL WAYANG KULIT KELANTAN INTO DIGITAL MEDIA?

Based on design issues and the results of computer experiments, the answer to the research question above is positive. All the results from computer experiments have shown that CG can be used in capturing and generating visual aesthetics of traditional wayang kulit Kelantan.

With indiscriminating eyes, the results of these computer experiments have achieved the objectives, providing that CG and modern technology can be used to create digital puppetry of traditional wayang kulit Kelantan which consists of the following visual aesthetics:

1. The Aesthetics and Craftsmanship of the Puppets

- All virtual puppets were reproduced and touched up from the photographs of actual wayang kulit Kelantan puppets. The results of computer experiments show that the virtual puppets resembled the actual puppets on screen. This result proves that CG can be used to capture the physical appearances of puppet designs in virtual wayang kulit Kelantan performance.

2. The Colours of Shadow Images on the Kelir

- It is shown that not only can digital puppetry of wayang kulit Kelantan capture the colours of the cast shadow, the translucency of the virtual puppets can also be adjusted and animated to control the colours of the shadows on the kelir.

3. The Distortion of the Shape of Virtual Puppets

- It is shown that certain computer softwares such as Autodesk 3ds Max is capable of distorting the shapes of 2D virtual puppets similar to the real conditions of these tangible puppets in actual performances.

4. The Distortion and the Softness of the Edges of Shadow Images

- It is shown that digital puppetry of wayang kulit Kelantan can capture distortions of shadow images by moving and animating the virtual puppets to and from the virtual light source. This visual style has the same appearance of actual wayang kulit Kelantan performances.

5. The Movement of Light Source

- It is shown that CG can be used to capture and generate the movement of the light source. Furthermore, the intensity and colour of the virtual light source can be adjusted and animated as well.

6. The Vibration of kelir

- It is shown that CG can be used to capture and simulate the vibration of the kelir when it is hit by puppets, especially during fighting scenes.

7. The Movements of the Movable Jaws, Eyebrows and Strings of the Puppets

- It is shown that CG can be used to capture and generate the movements of movable jaws, eyebrows and strings of the virtual puppets of wayang kulit Kelantan.

These results have shown that the visual aesthetics of traditional wayang kulit Kelantan can be captured, simulated and digitalised into the digital world and be shown on computer screens without the involvement of skillful puppeteers.

7.2.3 TO WHAT EXTENT CAN MOTION CAPTURE TECHNOLOGY BE APPLIED TO CAPTURE THE MOVEMENTS OF THE PUPPETEER AND PUPPETS OF WAYANG KULIT KELANTAN?

In this research, the author has conducted an experiment to capture the movements of a puppeteer and his puppets using a motion capture technology. These real-time movements were captured and transformed into a virtual puppeteer and puppets successfully. The results of this experiment clearly show that the motion

capture technology can be used to capture not only the movements of the puppeteer, but also the puppets. At the moment of writing this thesis, the author has yet to find any other digital puppetry project or experiment that uses motion capture technology to capture the movements of a shadow play puppeteer and 2D flat puppet(s). The final output of the computer experiments was a number of motion capture data files in Biovision Hierarchical Data (BVH) format. The BVH format is currently one of the most popular motion data formats and has been widely adopted by the animation community (probably because of its simple specifications). In addition to that, there are also a series of computer-generated videos in Audio Video Interleave (AVI) format. The computer experiment results show satisfying levels of success and confirmed that motion capture technology can be used to capture the authentic movements of the puppeteer and puppets of traditional wayang kulit Kelantan. The author hopes the results of this experiment will inspire other researchers to use motion capture technology in a broader context and carry out a detailed study on the art of movements in wayang kulit Kelantan performances.

7.3 LIMITATIONS OF THE STUDY

This study was limited in several ways. First, since only three computer softwares were employed for computer experiments, the results could not be generalised to other software packages. However, the results and findings from this study are still valid for other computer visual effects software that have similar functions and characteristics to the software used in this study.

Furthermore, the role of the author was as a participating observer to traditional wayang kulit Kelantan performances rather than an actual practitioner of the art. Although it should be minimal, prejudiced judgments and opinions on its presentations will somehow be unavoidable.

7.4 FINDINGS AND DISCUSSION

In digital puppetry of wayang kulit Kelantan, the movements of digital puppets can be “beautified” using computer animation and technology. In addition to that, the virtual puppets can be created in colourful designs or models and be dissolved in and out of the focus system to create variations of their shadow images. In fact, the computer experiment results show that not only can the visuals of wayang kulit Kelantan be captured and generated using CG but they can also be amended and adjusted accordingly. For example, the intensity and colour of the virtual light source can be animated and adjusted to create visuals and effects that are almost impossible to achieve in actual wayang kulit performances.

The visual effects that can be adjusted and animated in digital puppetry of wayang kulit Kelantan are the intensity and colour of the virtual light source, the transparency and translucency of virtual puppets that directly affect the colours of shadows on the kelir, the transparency and colour of the virtual kelir and the softness of the edges of shadow images.

In reality, all of the above-mentioned visual effects are almost impossible to amend or adjust during actual wayang kulit Kelantan performances. Hence, these could be the evolutionary advantages of digital puppetry of wayang kulit Kelantan: to be able to amend and animate visuals that are impossible to achieve in actual wayang kulit performances.

7.5 RECOMMENDATIONS AND SUGGESTIONS FOR FUTURE RESEARCH ON THE VISUAL AESTHETICS OF WAYANG KULIT KELANTAN

The author has presented and identified the visuals of the puppets of 34 characters in *Hikayat Maharaja Wana* used traditional Wayang Kulit Kelantan in Chapter Three of this thesis. To be exact, these characters are (i) Seri Rama, (ii) Laksamana, (iii) Maharaja Wana, (iv) Mah Babu Kenung, (v) Nerajit, (vi) Raja Lebis,

(vii) Gangga Mansur Berhaman, (viii) Belang Maharaja Rimau, (ix) Raja Rajah, (x) Maula Tani, (xi) Siti Dewi, (xii) Tuan Puteri Mata Api, (xiii) Pari Princess, (xiv) Hanuman Kera Putih, (xv) Hanuman Ikan, (xvi) Hanuman Bongsu, (xvii) Hanuman Layang Putih, (xviii) Hanuman Tegangga, (xix) Raja Bali, (xx) Mah Babu Kenung, (xxi) Sagariwa, (xxii) Lela- bat, (xxiii) Lela- bet, (xxiv) Anila, (xxv) Angada, (xxvi) Bentara Guru, (xxvii) Sepit Bentala, (xxviii) Tuan Puteri Ikan, (xxix) Maharisi, (xxx) Dewa Panah Laki- Laki, (xxxi) Dewa Panah Perempuan, (xxxii) Pak Dogol, (xxxiii) Wak Long and (xxxiv) Anak Amok. In addition to that, the author also presented two *pohon beringin* puppets with different configurations, five prop puppets, nine animal, bird and sea creature puppets and 10 weapon puppets. These puppets are from the collections of Yousof, Pak Nasir, Pak Soh and Pak Dain.

Although the author identified most of the characters and puppets used in the Hikayat Maharaja Wana repertoire, many characters in the *cerita ranting* that remain to be fully discovered. The author therefore puts forward a recommendation to further study and identify the protagonist and important characters as well as puppets used in the *cerita ranting*.

In addition to that, the author also discovered that several puppets of traditional *wayang kulit* Kelantan depict stylised and standard hand gestures. As mentioned by Hobart (1987: 20), the puppets of Balinese shadow puppet theatre are distinguished by their stylised hand gestures based on *mudra*. There seems to be some kind of connection and similarity between the hand gestures of both Kelantanese and Balinese *wayang kulit* puppets as well as the Hindu *mudra*. However, the study on this aspect is lacking and a considerable amount of research work remains to be undertaken. The author therefore recommends another future research focusing in this area.

As mentioned in Chapter 3.1, the shadow puppet theatre of Malaysia, Indonesia and Thailand influence each other. The puppets of traditional wayang kulit Kelantan depict strong influences from Thai and Javanese puppets and vice versa. However, an in-depth and detailed comparative study of the puppets in wayang kulit Kelantan with Thai and Indonesian shadow puppet theatre has yet to be conducted. The results of this research will probably reveal some interesting facts and might clear some of the obscurity regarding the origins of these shadow puppet theatre.

7.6 RECOMMENDATIONS AND SUGGESTIONS FOR FUTURE RESEARCH AND DEVELOPMENT OF DIGITAL PUPPETRY OF TRADITIONAL WAYANG KULIT KELANTAN

Although the results of the experiments have shown a certain level of success in using CG and modern technology to capture the visual aesthetics of traditional wayang kulit Kelantan and also using the motion capture facility to capture the movements of puppets and puppeteers, there is still room for improvement in the creation of digital puppetry of wayang kulit Kelantan. There are other areas that need to be looked into to ensure the effectiveness of capturing the visual aesthetics of traditional wayang kulit Kelantan. Therefore, future research is recommended to extend this research to other areas of wayang kulit Kelantan, which are:

- The arts of “puppeteering” in traditional wayang kulit Kelantan, such as how to handle, move and place the puppets, should be studied and well documented. These information will provide a better understanding and be a useful guide for future researchers or computer artists to produce digital puppetry of traditional wayang kulit Kelantan in all its authenticity.
- Different techniques or computer softwares should be used to test and investigate their effectiveness in capturing and producing more credible, truthful and realistic visuals of traditional wayang kulit Kelantan.

- Modern technology should be discovered or invented to enable interactions between the shadow images of virtual puppets of wayang kulit Kelantan with its audience in real-time.
- Computer special effects, animations, dazzling cinematography and video editing techniques and styles could be incorporated into digital puppetry of traditional wayang kulit Kelantan to make it more appealing for marketing purposes.

Other areas of study on traditional wayang kulit Kelantan performances that could be beneficial with implementations or applications contributed by the findings of this research are:

- The possibilities of producing educational CDs, DVDs or interactive games to provide a new channel to introduce and promote the arts of traditional wayang kulit Kelantan to the public
- The integration of visual aesthetics of traditional wayang kulit Kelantan into local animations and movies to create local identity in Malaysian animations and movies
- The investigation of possibilities of modern media, especially the Internet, in taking up challenges and responsibilities to promote digital puppetry of traditional wayang kulit Kelantan as well as to preserve its actual theatre form
- The accompaniment of authentic wayang kulit music in future digital puppetry of traditional wayang kulit Kelantan as the present experiments contain no soundtrack
- More comprehensive and detailed studies on incorporating the aesthetics of traditional wayang kulit Kelantan into the identity of Malaysia and Malaysians

7.7 SUMMARY

In summary, this research provided strong and convincing evidence of how the visuals of traditional wayang kulit Kelantan can be digitalised and captured into digital media so they can be watched on media screen using CG and motion capture technology. These digitalised materials and outputs could be published in modern media such as television, cinemas, VCD/DVD and the Internet to increase accessibility and publicity of traditional wayang kulit Kelantan. In addition, it was also evident that digital puppetry of traditional wayang kulit Kelantan has more control on its visuals compared to its recordings.

The major contributions of this thesis are a thorough and detailed presentation and analysis of the overall, limited research on the visual aesthetics of traditional wayang kulit Kelantan and its capturing methods using CG and a motion capture system. It is hoped that the results and experiments forwarded in this study fulfill the interests of readers and also those who have the desire to further enhance this section into the next phase of development for the purpose of traditional wayang kulit Kelantan's preservation into digital media.

However, although the computer-generated visuals of wayang kulit Kelantan have more functions and capabilities that are almost impossible to have in actual wayang kulit Kelantan performances, it will never succeed in replacing its traditional performing art form. The author hopes that these computer experiment results will boost more creation of wayang kulit Kelantan visuals in movies, animations, games and short films. It is also hoped that with the application of digital media and modern technology, the simulation of digital puppetry of wayang kulit Kelantan will become more user-friendly and accessible compared to the traditional art of puppeteering in wayang kulit Kelantan. The author hopes that this study will draw in more people and perhaps even inspire others to explore the possibilities of modern technology and make their own

digital puppetry of wayang kulit Kelantan. Both art forms share similarities in their visual appearances on digital screen and the author believes they can coexist and benefit each other.

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